MICROFILM DIVIDER

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DESCRIPTION

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10/3/03
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2003 HOUSE JUDICIARY

HB 1354

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2003 HOUSE STANDING COMMITTEE MINUTES

BILL/RESOLUTION NO. HB 1354

House Judiciary Committee

❑ Conference Committee

Hearing Date 2-12-03

Tape Number	Side A	Side B	Meter #
1	xx		00-end
2		xx	28-31.4
Committee Clerk Signature			

Minutes: 13 members present.

Chairman DeKrey: We will open the hearing on HB 1354.

Wayne Stenehjem, AG: Introduced the bill (see attachments) I am here in support of HB 1354. When the ND Commission of Drug and Alcohol Abuse, conducted its eight public meetings across the state of ND, we were presented with a tremendous amount of information at some of these hearings; not just about meth. problem but with an additional problem that we're seeing arising here in the state of ND in recent years. That has to do with abuse by very young people of a substance known as dex, which is a substance you will find in products like Robitussen and Coricidan. A huge number of ND young people are using this substance in an effort to get high. It produces effects, I'm told, similar to that of marijuana or LSD; including hallucinations and cartoon like hallucinations of different types. We found this is becoming a huge problem, and then I went up to Plaza Drug and got into a conversation with the pharmacist at Plaza Drug, who thanked me and you for the efforts you are putting forth with regard to the meth. problem, but she

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said there is another extremely problem here in ND, and that is with dex. These products are good products when used correctly, but are being abused. We need to work together to try and improve the lives of our citizens. (read from the article about the ABC Good Morning America show). There are web sites out there that tell these kids how to do this, how to get pills, how to take enough pills, etc. This is a serious problem.

Chairman DeKrey: Thank you. Further testimony in favor of HB 1354.

Jan Mayer, Pharmacist: Support. We have having problems with Robitussen and Coriciden packages being stolen, especially right before any middle school dances.

Chairman DeKrey: Thank you. Further testimony in support.

Pamela Sagness, LSW, Jamestown: Support. There may not be a physical addiction but there is a psychological addiction.

Chairman DeKrey: Thank you. Further testimony in support.

Deb Davis, Licensed Addiction Counselor, Grand Forks: Support. I have been worked with addiction counseling for over 20 years. We have also been working with the Drug Court Program. The problem with the cough syrup and pills is that when you test the juvenile for drugs, these products don't know up.

Chairman DeKrey: Thank you. Further testimony in support.

Vicki Angen: Support. Her daughter has had problems with abuse and suffered mental problems, as well.

Chairman DeKrey: Thank you. Further testimony in support.

Jennifer Angen: Support. She has abused these products for the past few years, and has tried rehab programs. She wants to keep these products away from the younger children.

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Deanna Hollweg 10/3/03
Operator's Signature Date

Chairman DeKrey: Thank you. Further testimony in support.

Craig Davis, Licensed Addiction Counselor, Grand Forks & Fargo: Support.

Chairman DeKrey: Thank you. Further testimony in support.

Harvey Hanel, R.Ph., President of ND State Board of Pharmacy: Support (see attached testimony).

Chairman DeKrey: Thank you. Further testimony in support.

Galen Jordre, R.Ph., Exec. President, ND Pharmaceutical Association: Support (see attached testimony and amendment), we need to look at penalties for these infractions.

Chairman DeKrey: Thank you. Further testimony in support. Testimony in opposition?

Nancy Bukar, Director of the State Coalition for the Consumer Health Care Association: Opposed. Our products are not illegal, they are good products, highly effective cough suppressants. We are willing to provide education about the results of misusing these products.

Chairman DeKrey: Thank you. Any further testimony in opposition. Questions.

Rep. Eckre: These products can be purchased over the internet?

Ms. Bukar: Yes, you can buy in bulk.

Rep. Eckre: Can I buy just one package over the internet.

Ms. Bukar: Yes.

Rep. Delmore: I'm sure that one component of this is education. You talked about being on the internet when kids do searches. You mentioned that you would be the first thing that they could see when they went into a search. How can you guarantee that the website you are designing will be #1 on the search engines.

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Ms. Bukar: The public affairs people tell us that the more dollars you pay, the higher you are in the search engines. We oppose the illicit use of legitimate over-the-counters.

Chairman DeKrey: Thank you.

Rep. Klemin directed question to AG: One of the comments that we have heard a number of times this morning, and something that appears a number of these publications is the problem with shoplifting these drugs. This bill makes it illegal to sell to somebody under 18, but it seems like security is a bigger problem than selling it to someone under 18. What can we do about the shoplifting. Can we require this to be in a more secure area.

Mr. Stenehjem: That is an excellent point, excellent question. Shoplifting is a big problem. Kids are going into stores wearing sweatpants with elastic around the ankles, cut out the bottom of the pocket and slip the medicines into their pockets, load up, and walk out the door. I think this is the approach we should take for us here in North Dakota, that we can get enacted with a minimum of inconvenience to the customers and to the stores. The stores will have to make decisions based on the economics, what do they need to do to protect their inventory.

Rep. Klemin: In regard to the penalty, could we look at making this an infraction instead of Class B misdemeanor, would you have any comment on that.

Mr. Stenehjem: I mentioned in my testimony, that I was aware that they were going to make that proposal. I don't have an objection to that. We think education is going to help the most, and if somebody at a store inadvertently violates the statute, an infraction is fine knowing that a subsequent violation of the statute provides for an infraction penalty, becomes a class B misdemeanor, so that if there are repeat offenses, we can deal with it now, not later. I hope not to

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have to deal with it in the criminal courts, because I know that our stores in ND want to deal with this in a responsible way. They want to be part of the solution.

Rep. Grande: In this, can we put something in as we did with the meth. bill, for the young mother, the emancipated minor that can still at least be able to participate in purchasing their medicine from the counter.

Mr. Stenehjem: The problem is that with ephedrine, there are baby formulas that have lesser amounts of the substance in it. I think this is different, I don't know of any baby formula for DXM.

Rep. Grande: But you have kids 16 years old living on their own.

Mr. Stenehjem: We don't have a statute for emancipation of minors in ND.

Rep. Grande: But I know there are children who are living on their own, 16, 17 or 18 years old, because of their family situations, they live on their own.

Mr. Stenehjem: If you had some wording, I wouldn't have an objection to trying to work that through.

Chairman DeKrey: We are going to close the hearing on HB 1354.

(Reopened later in the afternoon session.)

Chairman DeKrey: What are the committee's wishes in regard to HB 1354.

Rep. Maragos: I move the amendment.

Rep. Klemin: Seconded.

Voice vote: Carried.

Rep. Maragos: I move a Do Pass as amended.

Rep. Delmore: Seconded.

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10 YES 0 NO 3 ARSENT **DO PASS AS AMENDED** **CARRIER: Rep. Kingsbury**

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Attorney General

Amendment to HB 1354

Page 1, line 14, delete "class B"

Page 1, line 15, delete "misdemeanor" and immediately thereafter insert "infraction"

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10/3/03
Date

38294.0101
Title.0200

Adopted by the Judiciary Committee
February 12, 2003

VR
2/13/03

HOUSE AMENDMENTS TO HOUSE BILL NO. 1354 JUD 2-13-03

Page 1, line 14, replace "a class B" with "an infraction."

Page 1, remove line 15

Renumber accordingly

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Date: 2/12/03
Roll Call Vote #: 1

2003 HOUSE STANDING COMMITTEE ROLL CALL VOTES
BILL/RESOLUTION NO. 1354

House Judiciary Committee

☐ Check here for Conference Committee

Legislative Council Amendment Number 38294.0101 .0200

Action Taken Do Pass as Amended

Motion Made By Rep. Maragos Seconded By Rep. Delmore

Representatives	Yes	No	Representatives	Yes	No
Chairman DeKrey	✓		Rep. Delmore	✓	
Vice Chairman Maragos	✓		Rep. Eckre	AB	
Rep. Bernstein	✓		Rep. Onstad	AB	
Rep. Boehning	✓				
Rep. Galvin	✓				
Rep. Grande	AB				
Rep. Kingsbury	✓				
Rep. Klemin	✓				
Rep. Kretschmar	✓				
Rep. Wrangham	✓				

Total (Yes) 10 No 0

Absent 3

Floor Assignment Rep. Kingsbury

If the vote is on an amendment, briefly indicate intent:

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REPORT OF STANDING COMMITTEE (410)
February 12, 2003 11:08 a.m.

Module No: HR-28-2563
Carrier: Kingsbury
Insert LC: 33294.0101 Title: .0200

REPORT OF STANDING COMMITTEE

HB 1354: Judiciary Committee (Rep. DeKrey, Chairman) recommends **AMENDMENTS AS FOLLOWS** and when so amended, recommends **DO PASS** (10 YEAS, 0 NAYS, 3 ABSENT AND NOT VOTING). HB 1354 was placed on the Sixth order on the calendar.

Page 1, line 14, replace "a class B" with "an infraction."

Page 1, remove line 15

Renumber accordingly

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2003 TESTIMONY

HB 1354

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DRUG ENFORCEMENT ADMINISTRATION
UNITED STATES DEPARTMENT OF JUSTICE
OFFICE OF DIVERSION CONTROL
DRUG & CHEMICAL EVALUATION SECTION

DAVID V. GAUVIN, Ph.D.
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NATIONAL ASSOCIATION OF
CHAIN DRUG STORES

February 12, 2003

To Chairman DeKrey and Members of the Judiciary Committee:

On behalf of the five member companies of the National Association of Chain Drug Stores operating 41 pharmacies in North Dakota, the National Association of Chain Drug Stores ("NACDS") submits this testimony to the Judiciary Committee on House Bill 1354. This bill seeks to impose age limits on the retail over-the-counter sale of products containing dextromethorphan and dimenhydrinate.

NACDS and our retail members operating in North Dakota appreciate the legislature's concerns about the intentional abuse of over-the-counter products containing dextromethorphan and dimenhydrinate. However, we object to the application of age limits to the retail sale of these lawfully marketed products. These products are FDA-approved for use in persons under-18 years of age, and the FDA has not seen fit to impose restrictions on who may purchase the products. It is certainly foreseeable and reasonable for persons under eighteen years of age to need and purchase these products for themselves or as an errand to assist their parents. Retail employers in the state will have to train their sales clerks, often young people themselves, to identify customers' ages. Moreover, this legislation would penalize those sales clerks who improperly guess a customer's age.

If there must be such restrictions, it is critical that retailers have one compliance standard and that more restrictive local ordinances are preempted. Varying laws and ordinances would create overwhelming and unnecessary complications for businesses and law-abiding citizens.

We thank you and the Committee for consideration of our comments. If you would like additional information, or have questions, we would welcome the opportunity to address the Committee.

Diane L. Darvey, Pharm.D., JD
Director, State Pharmacy Affairs

Nicole Valentine
Regional Manager, State Government Affairs

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NORTH DAKOTA PHARMACEUTICAL ASSOCIATION

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Bismarck, ND 58501-4700
Tel. 701-258-4968
Fax 701-258-9312
e-mail ndpha@nodakpharmacy.com

Testimony before the House Judiciary Committee
HB 1354
Wednesday, February 12, 2003
Galen Jordre – Executive Vice President

On behalf of the North Dakota Pharmaceutical Association (NDPhA) an organization that represents the 700 pharmacists practicing in the state I want to indicate our support HB 1354.

We realize that the provisions of HB 1354 related to the retail or over-the-counter sale of dextromethorphan and dimenhydrinate to persons under the age of eighteen will place additional requirements on our members and may cause slight inconvenience to the public that we serve. However, we feel that in the effort to reduce access to these products as gateway drugs to the youth of our state we all need to make some sacrifice.

The youth of our state can find information about illicit use of these products through the Internet and other sources. These sources often give inaccurate and harmful information about the doses needed to obtain a high and can lead to very harmful results. Dextromethorphan is commercially prepared in combination with other products such as acetaminophen, antihistamines, and decongestants. These combinations can be particularly toxic when taken in excessive doses.

If there are youth who suffer medical conditions that require chronic use of these products, they would be able to obtain them through a prescription by their physician. While the limitation of sales to persons under the age of eighteen may inconvenience some, there are always opportunities for that age group to obtain the products through parents or other caretakers.

While we do support this legislation, we will ask the committee to make an amendment to the legislation regarding the penalties for illegal sale of these products. Page 1, line 14 outlines the penalty of a class B misdemeanor for sale. The penalty for illegal sale of the methamphetamine precursor drugs as contained in HB 1353 is an infraction as is the penalty for sale of tobacco to a minor. Because of the wide range of products available with dextromethorphan and the fact that it is an approved drug, we feel that the misdemeanor penalty is too high for inadvertent sale.

We view this bill as an attempt to protect the youth of our state and feel that the publicity surrounding the legislation and its implementation will raise public awareness to this health problem. If we can help to prevent any toxic event that might arise from these products, we are happy to assist with the effort.

OFFICERS 2002 - 2003 | BOB TREITLINE, R.Ph. President | WADE BILDEN, R.Ph. President-Elect | CURTIS McGARVEY, R.Ph. Vice-President | GALEN JORDRE, R.Ph. Executive Vice President

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BOARD OF PHARMACY
State of North Dakota

John Hoeven, Governor

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House Bill 1354
Judiciary Committee
8:00 am on February 12, 2003

Chairman DeKrey, members of the Judiciary Committee, for the record I am Harvey J. Hanel, PharmD, R.Ph., President of the North Dakota State Board of Pharmacy.

Thank you for the opportunity to speak with you today. The North Dakota State Board of Pharmacy supports prohibiting the sale of over-the-counter drugs with a potential for abuse to a person under the age of eighteen years old.

The first drug addressed in this bill is dextromethorphan, a chemical relative of morphine used for cough suppression. This is found in such over-the-counter products as Robitussin Maximum Strength Cough Suppressant, Vicks 44 Cough Relief, and Robitussin DM but is often referred to on the street as DXM, robo, or poor man's PCP. This final name in essence gives an insight into its extracurricular use. This cough-suppressant is safe and effective at the recommended doses of 1/6 to 1/3 ounce containing 15-30 mg of drug. However, according the National Institute of Drug Abuse, at much higher doses of four or more ounces it causes dissociative effects in the body very similar to PCP and ketamine. These effects can range from distorted visual perceptions all the way to a sense of complete dissociation from one's body. In addition to the danger these effects can present, this abuse can also lead to brain damage, seizures, bromide poisoning, and toxicity from other agents that may be combined with dextromethorphan in commercial products.

The second drug included in this bill is dimenhydrinate, which is an antihistamine used to prevent nausea, vertigo, and vomiting associated with motion sickness. This is commonly found in Dramamine but can also be referred to on the street as DMH. At the recommended dose of 1-2 tablets, dimenhydrinate is safe and effective to prevent the symptoms of motion sickness. However, at high doses, approximately 8-12 tablets, it can cause acute effects such as euphoric sensations and a "dream" state with auditory, visual, and, sometimes, olfactory hallucinations. If the dosage is sufficiently large, this medication can lead to convulsions, respiratory depression, and coma.

Given the consequences of ingesting massive quantities of these drugs, it seems fitting to limit their sale to persons over the age of eighteen years old. Though the restriction may cause some inconvenience to a mother who intended to send her teenager to pick up the product for the family, it should be manageable once patient education has been provided.

Thank you for you time.

Sincerely,

Harvey J. Hanel PharmD, RPh

Harvey J. Hanel, PharmD, R.Ph., President

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10/3/03
Date

June 16, 2002

To Whom It May Concern:

I am the parent of a 17 year old child in Grand Forks. My son is a drug addict. During the last eight months, through several rounds of chemical dependency treatment, it has come to my attention that Grand Forks teenagers frequently abuse over-the-counter Dramamine. Often, they do not have money to buy the drug, so they steal it from area businesses. Coricidin HBP is also abused, but Dramamine is used more often because it is more widely available.

Taken in smaller quantities, Dramamine and Coricidin produce a "high", and, taken in mass quantities (44 to 48 pills at a time), the person taking it doesn't even know who or where they are. It can also cause seizures, and, if abused, can cause life-long liver damage.

A common method of shoplifting these medications is to remove the contents of a package of over-the-counter medication and place the empty package back on the shelf. The medication can be stashed elsewhere in the store for later retrieval. The merchandise can also be taken out of the store by wearing lined pants (such as Russells), with a hole inside the pocket. The medication can then be dropped through the hole in the pocket so that it falls around the ankle. Even if asked to empty all pockets, nothing will be found.

In the interest of my family's privacy, I am sending this letter anonymously. If you have questions, you may contact me at the following e-mail address (antidrammom@yahoo.com). I am by no means an expert on the use of Dramamine, but will gladly share the information I have learned through my family's experience. I am not asking that you remove Dramamine from the shelf. My hope is that by raising awareness of the problem, we are able to prevent a source of inventory loss for your store and also keep my son and other Grand Forks youth safer.

Sincerely,

A Concerned Grand Forks Mom

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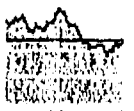

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Posted on Mon, Sep. 02, 2002

PIONEER PRESS

Danger in the medicine cabinet

BY ANGELA MACIAS
St. Paul Pioneer Press

Just a few weeks ago, Dr. Von King knew little about teenage abuse of cough syrup.

But when two of the three patients admitted to the Hazelden Mental Health Center in Plymouth on the same day happened to be abusers of the drug, the clinic psychologist got a crash course in its effects.

"I have been surprised at the number (of users)," King says. "It isn't the No. 1 drug of choice (but) when they can't find anything else, they go to the cough syrup."

King has found that cough syrup abusers are relatively easy to treat. However, the availability of the drug may be the hardest thing to conquer, she says.

Twin Cities drug experts say they hear more and more stories like King's, detailing teenage misuse of the over-the-counter cough suppressant dextromethorphan (DXM).

And the number of those getting a cheap high from cough syrup continues to rise.

In the October 2001 Hazelden Foundation report that outlines abuse for the year in the Twin Cities area, the Hennepin Regional Poison Control Center reported 62 calls relating to DXM overdoses. There was only one recorded overdose in the June 1998 report.

In 2000, 2,189 people nationally were admitted to emergency rooms after taking too much of the synthetic drug, which is similar to codeine. That number compares with 1,282 cases in 1999.

"This reflects a growing trend that kids look for mood-altering substances in all kinds of places," says Carol Falkowski, author of the

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Hazelden report.

But the actual number of abusers is difficult to pinpoint. As a drug found in nonprescription cough syrups, DXM is legal. Therefore, people seeking medical treatment could have legitimately taken the wrong amount or improperly mixed it with other medications, she says.

Although abuse of cough syrup dates to more than 30 years ago, Falkowski saw its revival on the drug scene in the late 1990s during her surveys of students and interviews with counselors.

It even led one University of Minnesota sophomore to commit suicide in 1998 by taking a lethal dose of an extracted powder form of DXM, her family says.

Teens generally get high from cough syrup because of its easy accessibility in medicine cabinets and along pharmacy aisles. Falkowski's report details instances of some students for about $5 purchasing pills containing DXM powder that had been extracted from cough syrup.

Some users also assume they are taking the designer drug "ecstasy," when really they get a pill containing powdered DXM, says Dr. Alan Trachtenberg, a doctor working with the federal Substance Abuse and Mental Health Services Administration.

Especially popular among younger people at dance "raves," DXM users feel anything from slight intoxication to intense hallucinations when "roboing" or "robotripping" — slang derived from Robitussin cough syrup that users sometimes call "tuss."

Falkowski says she first heard of the drug during the 1980s, when it was used as a way to numb the body while slam dancing to punk music.

The drug now has slithered into today's lyrics, where rappers spotlight the drug in songs, music videos and album titles.

The 2000 hit "Sippin' on Some Syrup" by rap group Three 6 Mafia glorifies the drug, with verses explaining the drug's effects: "Nyquil will slow me down, something that keep me easy... will knock you down, knock you out, make you fall asleep when you're on them wheels...."

Last November, DJ Screw — known best for his ability to slow down popular rap songs — died from using a prescription form of "syrup," composed of a codeine cough syrup combination. Just before DJ Screw's death, protégé Big Moe named his album after the elixir, calling it "Syrup City."

Despite the sweet words rappers say about "syrup," Trachtenberg

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advises that DXM is incredibly harmful.

"(DXM), when it is taken in an adequate dose to get high, is significantly more toxic than LSD," he says.

With similar effects on the brain as the widely used hallucinogens ketamine and PCP, it blocks a receptor in the brain, inducing a high much like DXM's illegal counterparts.

Trachtenberg classifies a DXM trip as a "dangerous variety of hallucinations."

Abusers' addiction to the drug stems from a compulsion, rather than a physical dependence. Seizures, memory loss, delusions and paranoia are side effects sometimes seen immediately or long after abusing the drug, he says.

Ron Pray, a South Dakota high school counselor whose daughter committed suicide while attending the University of Minnesota, informs parents today of DXM's ill effects based on his own encounter with the drug.

He and his wife, Teah, began to notice their daughter Summer's agitation and inability to deal with stress during her freshman year at Montana State University.

The valedictorian of her Lead, S.D., high school class, Summer Pray became increasingly interested in 1960s drug icon Timothy Leary and ideas of mind expansion.

But the Prays never thought their daughter, a strict vegetarian and adamant opponent of alcohol, would be abusing a drug as harmful as DXM.

During spring 1998, they found out otherwise, when Summer Pray took too much DXM powder and was admitted to a Bozeman, Mont., hospital.

Immediately, they worked with their daughter and several clinicians to end the abuse.

The young woman, described as sensitive and with a history of depression, refused to accept that DXM was affecting her disposition.

"She was obsessed with it," Ron Pray says. "It was her way of dealing with the depression."

He says the drug his daughter thought to be "harmless" eventually took over her life.

During the months following her parents' discovery, therapists'

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attempts at putting Summer Pray on antidepressants failed, and her depression worsened.

While at her parents' home in Deadwood, S.D., during the summer break, she took another overdose of the drug, again resulting in hospitalization.

She was checked into Hazelden Clinic and remained in outpatient treatment with counselors as she entered her sophomore year at the University of Minnesota.

Ron Pray assumed that her health had improved and her attraction to the drug had ended.

However, the 20-year-old turned to the pills one last time to commit suicide on Sept. 18, 1998.

"The grief and agony never seems to go away, even after four years," Ron Pray says.

Looking back on his daughter's death that began with a simple fascination, he urges parents to take DXM abuse seriously.

"I think that if you took the DMX out of the equation, she would have dealt with her depression," Ron Pray says. "As long as that was in the picture, it really destroyed her."

FYI

To learn more about DXM abuse, check out the Web site www.forreal.org/textversion/know/syrup.htm or call the National Clearinghouse for Alcohol and Drug Information at (800) 729-6686.

SIGNS OF ABUSE

DXM's easy accessibility means that parents, peers and counselors need to look out for early warning signs of teenage drug abuse, experts say.

They list these signs:

- Unexpected change in school performance.
- Sudden personality changes.
- Bruises or other physical trauma.
- Appearance of being "high" or drowsy.
- Purchasing more than one bottle of cough syrup at a time.

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- Children bringing home their own cough syrup.
- Family supply missing.

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Deanna Hallvaitis 10/3/03

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February 17, 2000:
Drug and Poison Information Center Issues Drug Abuse Alert

Use

Feb. 17, 2000

Contact: Jim Feuer, jfeuer@chmcc.org

CINCINNATI -- The Cincinnati Drug and Poison Information Center (DPIC), a service of Children's Hospital Medical Center of Cincinnati, has noted an alarming new drug abuse trend: teenagers and young adults, mostly 13- to 19-years-of-age, are deliberately ingesting large amounts of Coricidin® HBP™ for Cough and Cold. Some take as many as 15 or more tablets at one time.

The teenagers are seeking what they describe as an LSD-like "high" from dextromethorphan, a non-prescription cough suppressant. Most discovered the practice on the Internet or from friends at school.

Reported symptoms included increased heart rate, elevated blood pressure, increased pupil size, drowsiness, dizziness, slurred speech, unsteady gait, hallucinations, confusion, and nystagmus (involuntary rapid, rhythmic movement of the eyeballs).

At least 28 calls about abuse of dextromethorphan, 22 specifically about Coricidin®, have been reported to the Cincinnati DPIC between Jan. 1 and Feb. 14. Nineteen of the 28 calls were ingestions, and 12 of the 19 were treated in hospitals.

Most other calls were from health professionals, school officials and law enforcement officials seeking information about multiple cases of drug abuse or shoplifting of Coricidin®, or from parents who discovered that their children were abusing Coricidin® or other dextromethorphan-containing products.

Dextromethorphan abuse is not new. Large amounts of Robitussin®-DM and other similar dextromethorphan-containing liquids have been uncommonly abused for years. Most contain up to 15 mg of dextromethorphan per teaspoon. This new trend of Coricidin® abuse is an attempt to avoid drinking four to eight ounces or more of cough syrup at one time, which frequently causes nausea.

The most common product involved in the current trend is Coricidin® HBP™ for Cough and Cold. The product contains 30 milligrams of dextromethorphan per tablet. It also contains four milligrams chlorpheniramine, an antihistamine, per tablet. As a result, anticholinergic toxicity may result from large ingestions. Signs and symptoms of anticholinergic toxicity include an increased heart rate, elevated blood pressure, elevated temperature, hallucinations or delirium, dry mouth, increased pupil size, and constipation.

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Large doses of dextromethorphan may cause hallucinations, confusion, excitation, increased or decreased pupil size, nystagmus, seizures, coma and decreased breathing. An excessively large amount of either agent could be fatal. An additional risk for teens is choosing the wrong Coricidin® product.

Some of the other Coricidin® formulations include other ingredients such as acetaminophen (the active ingredient in Tylenol®) and/or phenylpropanolamine (a decongestant). Overdoses of acetaminophen can cause liver damage. Large doses of phenylpropanolamine are toxic to the heart and central nervous system.

It is likely that this sharp increase in calls is representative of a large increase in abuse in the Cincinnati, Youngstown and Akron areas that the DPIC serves. Pharmacists, emergency department physicians, retailers, counselors, school nurses, teachers and parents need to be aware of this new trend. Children should be warned that this drug abuse practice can be dangerous.

For more information or for interviews, please all Dr. Karen Simone at the Cincinnati Drug and Poison Information Center, 513-636-5111.

Contact:

Other Articles for February:

- Children's Hospital Medical Center of Cincinnati Studies Focus on Diaper Rash

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513-636-4200 | 1-800-344-2462
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Serving infants to adolescents, Cincinnati Children's Hospital Medical Center is an international leader in pediatric health care, research and education.

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17.12.2002:

Teenagers call it Robo-tripping, the deliberate overdose of the common cold medicati which brings about a euphoric high.

The Drug Enforcement Agency says abuse of the over-the-counter medication is gaining among teenagers nationwide.

The ingredient that's responsible for the euphoric feeling is dextramethoraphan, or DM. It' variety of cold and flu medications. DM is a synthetic derivative of morphine, typically harmless unless an overdose is taken, or it is taken with alcohol.

The harmful side effects of abuse include confusion, heart problems and breathing difficult abuse can result in liver damage.

Howard Stark, a local pharmacist, calls the drug abuse "a shame," and said it may lead to c being put behind the counter.

"It's the same reason we took codeine off the shelves and made them prescription-only ite the abuse of the codeine," Stark said.

Last year, 14 people died after deliberately overdosing on cold medicines, and h hospitalized, officials said. Robitussin abuse apparently goes back 30 years, but for some through a resurgence.

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RFG's "Beginner's Guide to DXM (dextromethorphan)"- Version 2.53

DISCLAIMER:

If you are reading this, presumably you are thinking about using DXM (dextromethorphan) recreationally, or at least interested about its use. This document is intended as a brief overview of the drug, its effects, how it is available in pure forms (that don't contain other, possibly deadly, drugs) legally in the US (and, many other countries.) This document does NOT deal with all the risks. For those, you'll have to read The Dextromethorphan FAQ, and the long list of them. Dextromethorphan is a fairly high risk drug, and can be fatal if used with other drugs, and it can also be fatal or dangerous if you have certain medical conditions. You need to make sure you are NOT in one of those groups. This document assumes that you have already determined that you aren't in a high risk group, or if you are and still planning on using, that you assume responsibility for the great peril you face. All these dangers can be found in William White's "The Dextromethorphan FAQ" at http://www.erowid.org/chemicals/dxm/faq/dxm_faq.shtml. William White's Dextromethorphan FAQ is an extremely well written piece of work, and you will find all the risks, and a lot more else, there. This document is just a brief overview of dextromethorphan used recreationally. The Dextromethorphan FAQ has just about everything you could want to know about dextromethorphan, and likely more. Also, I do NOT mean to suggest or recommend that anyone attempt recreational usage of dextromethorphan. In fact, I honestly feel that most would do well to avoid such use of DXM. If you do, of your own free will, choose to use dextromethorphan recreationally, you are responsible for checking whether or not such use is legal in whatever jurisdiction you are in.

What is DXM (dextromethorphan)?

DXM is in a class of drugs known as dissociative anaesthetics. Many of these have powerful psychedelic effects at sufficiently high doses. Coincidentally, Dextromethorphan also suppresses the cough reflex. This is WHY a powerful psychedelic is sold legally OTC in pharmacies and grocery stores throughout the US, and many foreign countries. About the only reason why I can see DXM isn't a prescription controlled substance is that the only real alternative drugs for cough suppression are the opiates/opioids. THOSE have a much greater abuse potential, and government regulators took the lesser of 2 evils. Unlike opiates, relatively few find dextromethorphan appealing recreationally. According to William White's data, 1/3 of all who ever try DXM recreationally HATE the effects, 1/3 are indifferent and feel there are better drugs to have fun with, and only 1/3 actually enjoy dextromethorphan enough to use it repeatedly. There are at least several reasons for this. One is that about 7% of all Caucasians (the rate varies with other ethnic groups) have a genetic mutation known as CYP2D6 deficiency. This is a liver enzyme that is critical in metabolizing DXM. It turns out if you are one of the unlucky 1 in 14 or so that have this mutation, dextromethorphan at recreational doses will likely be an unpleasant, psychotic nightmare. Other reasons are that the effects of dextromethorphan are not what many want in a drug, nasty side effects, unpleasantness of drinking cough syrup, and other downsides. These factors, and the availability of better drugs on the street, have kept DXM's recreational use relatively low.

The effects of dextromethorphan are not really like any other drug. The closest comparisons would be to other dissociative anaesthetics, such as ketamine or PCP. DXM is closer to ketamine in effects, but is still more different than similar to that. The effects of dextromethorphan cannot reasonably be compared with other psychedelics, such as the serotonergics (LSD, magic mushrooms, etc.) Both can make you hallucinate and alter your states of consciousness, but in much different ways.

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Who should NOT use DXM (dextromethorphan)?

This is complex, but there are many for whom recreational dextromethorphan use is a bad idea, and possibly very dangerous. For all the warnings in detail, one really needs to read William White's aforementioned FAQ in its entirety. However, certain specific warnings: NEVER use DXM with, or up to two weeks before or three weeks after, a MAOI (Monoamine Oxidase Inhibitor), which are certain drugs that are usually prescribed for depression (although, rather rarely today), and also certain recreational MAOIs like harmaline. Mixing dextromethorphan with MAOIs has in fact been FATAL to humans. NEVER use DXM with yohimbe, as this is a MAOI and also may well be fatal. NEVER use dextromethorphan with the antidepressants Desyrel (trazodone) or Serzone (nefazodone), as this may cause liver damage. NEVER use with the antihistamine terfenadine (Seldane), as this could be fatal. Also, dextromethorphan should be avoided if taking any of the SSRI antidepressants (Prozac, etc. If you are taking an antidepressant and don't know if it is an SSRI, ask your pharmacist.) This risks serotonin syndrome. Tricyclic antidepressants (again, ask a pharmacist if using any antidepressant), lithium, or the diet drugs the diet drugs phentermine and fenfluramine used with DXM also risk serotonin syndrome, so don't use dextromethorphan if taking any of these.

NEW WARNING ABOUT TAKING DXM WITH MDMA ("Ecstasy"): Based on the best currently available data I have about interactions when DXM is simultaneously used with MDMA ("Ecstasy"), I am currently strongly advising against such use. If used together in a dangerous setting, such as a rave or nightclub when dancing, this combination has routinely resulted in hyperthermia and hospitalizations. Even if dextromethorphan and MDMA are taken together in a temperature controlled setting with no exercise, some reports I have suggest that even that might be very dangerous. As such, my recommendation is DON'T use DXM and MDMA at the same time, or within 96 hours of using the other drug.

NEVER use DXM if pregnant or nursing a baby. DXM should NEVER be used if you have any liver or kidney disorders, hypertension (high blood pressure) or other heart problems, epilepsy, seizures, or ulcers.

*****Also, NEVER use dextromethorphan if you suffer from any mental illness. DXM most definitely tends to exaggerate the symptoms of any mental disorder. DXM at hypermedical doses is known for being psychotomimetic (causing psychosis-like symptoms), so definitely it should NOT be taken if you suffer from any psychotic mental illness, such as schizophrenia. SPECIAL WARNING: DXM tends to amplify ones mood. Not necessarily a bad thing if you are in a happy mood. However, if you are depressed, DXM will tend to make the depression worse. Recently, there has been a charlatan on the Internet making absurd claims that DXM is an effective antidepressant. Utter rubbish, and there is absolutely no credible scientific evidence to back up such absurd, irresponsible, and dangerous claims. If you suffer from depression, then contact a competent medical professional for treatment. Do NOT try self-prescribing DXM to treat your depression based on the claims of Internet kooks who portray DXM as being some snake-oil "cure" for depression. Prescribing drugs for treatment of mental disorder should be left to competent medical professionals, and not kooks who suggest drug therapies for mental illnesses on the Internet.*****

Recreational Effects of DXM (dextromethorphan).

DXM is peculiar in that unlike most drugs, where higher doses just cause stronger effects, dextromethorphan is different. For most people, dextromethorphan exhibits "plateaus" where at increasingly higher doses the overall effect of the drugs changes dramatically. Within a given plateau, higher doses mean stronger effects, but once you move into another plateau, other effects tend to dominate. Dextromethorphan has four actual plateaus. (There is something called "Plateau Sigma", which involves taking huge amounts and in divided doses. This is ignored in this guide, which is introductory. Plateau Sigma is reserved only for very experienced DXM users who take great risks, including death and brain damage.) These plateaus are based on mg/kg dosing. For those unfamiliar with dosing drugs this way, you calculate a mg/kg dose by taking the total amount of dextromethorphan ingested, and dividing that by your weight in kg. (If you only know your weight in pounds, divide that by 2.2 to get your weight in kg.) These are averages, and can vary from user to user. Also, a small

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percentage of DXM users don't notice a sharp change in effects as they move from plateau to plateau. However, most people do notice the plateau effect. Also, effects do vary from person to person as to what happens at these plateaus. For example, MOST DXMers find third plateau either way too psychotic, way too intense, or both; and the first use is the last. A small percentage, however, really do enjoy third (and fourth) plateau doses. The reasons for these variations are likely many, and probably much of it is due to genetics, and how your brain is wired. In simple English, some people by genetic luck of the draw find upper plateaus of dextromethorphan enjoyable, while others don't. This is true not only for DXM, but lots of other drugs. One example, which actually is related to dextromethorphan, is codeine. Most find codeine a good pain killer and quite fun to take. However, about 7% of people lack a key liver enzyme that converts codeine into morphine in the body, and these unlucky souls find codeine just makes them sick. Coincidentally, the enzyme used by the human body to covert codeine to morphine, CYP2D6, is also one of the 2 liver enzymes that are key to metabolizing DXM. CYP2D6 converts DXM to DXO, which is an active metabolite that also makes you trip (DXM itself is also psychoactive.) Without the proper CYP2D6 gene, almost no DXM is converted to DXO, which makes for a hellish, unpleasant experience. Probably genetic variation in how human brains are actually wired is the other main reason for the difference in reaction to dextromethorphan. Thus, based on genetics and other factors, YMMV (your mileage may vary).

First plateau (1.5-2.5 mg/kg).

Above around 1.5 mg/kg, recreational effects of DXM start becoming apparent. Most describe the sensation as sort of like being a little drunk and a little stoned at the same time. No hallucinations occur at this level. Only psychedelic effects are that some notice that colors seem "different", such as deeper or richer. Some also notice sound is changed. Some people like the effect dextromethorphan has on sound, and particularly with music. This is known as music euphoria. However, others find DXM makes music sound terrible, sort of tinny and distorted. Only way to know for you is to listen to music on dextromethorphan and see if you like it. At this plateau one isn't overly intoxicated, and could possibly even enjoy DXM use at this level in social situations. Moving about is quite easy, and some enjoy this on first plateau. Again, this is a matter of taste, and may not be true for you. For most people, nothing really bad will happen at this level, unless they do something stupid like get behind the wheel of a car, or use where they are in an unsafe environment. Strangely, relatively few recreational DXMers report usage at first plateau levels. However, for some it is fun, and beginners may enjoy it more than the experienced user.

Second plateau. (2.5-7.5mg/kg).

THIS plateau is the where most recreational dextromethorphan usage takes place. Particularly, this is the level where the visual hallucinations begin to occur, and are enjoyed the best by most. DXM visual hallucinations aren't like those of any other drug. Certainly dextromethorphan is vastly different in effects than LSD or 'shrooms. With DXM, hallucinations are only really noticeable in a dark room with eyes shut (of course, if the room is totally pitch black, then it doesn't make a difference whether your eyes are open or not.) These are known as CEVs, or closed eye visual hallucinations. These consist of sheets, swirls and blobs of color that move about. Rarely is anything that looks "real" seen. Sort of a light show in your head. The exact nature of what is seen varies from person to person, and this is hard to put into words. Many find these hallucinations enjoyable, but they can get boring if you do dextromethorphan too often. It is these hallucinations that are the most appealing aspect of DXM for most.

At second plateau levels, some feel a "body high" that is pleasant, while others don't get this effect. Unfortunately, negative physical effects, like nausea, often tend to overwhelm the pleasant body buzz. Many a DXMer has puked from using the drug. No way of knowing how fun the body buzz will be until you try DXM at these levels.

At second plateau levels, physical coordination is impaired. You may stagger around a bit. Also, double vision is a

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hallmark of dextromethorphan at second plateau, so if you have to move, shut one eye. Most users at this level don't need a sober trip sitter, although it can't hurt to have one, particularly with early usage at a given level until you know the effects. If you don't have a sitter at second plateau, just make sure you won't knock anything over, and the environment you are in is safe and controlled

Third plateau (7.5-15mg/kg)

At third plateau, the psychotomimetic (psychosis like) effects of dextromethorphan take over. Hallucinations are still there, but it is likely the altered state of consciousness will be the dominating factor of the experience. Sensory input can be seriously impaired, particularly vision. Logic and causality easily break down once you get to the third plateau levels. Notions that are totally bizarre may seem to make perfect sense. It is very east to become extremely delusional and disoriented. One might also recall forgotten or repressed memories at these levels. The effects vary so greatly that there is no "typical" third plateau trip. Just expect it to be overwhelming. Depending on how things go, this could make for a good or bad trip. Unfortunately, for most, at this level trips tend to go bad. Although, ironically, it is often the case that the bad trips are the ones that you learn the most from. Needless to say, one can see the importance of a sober trip sitter at this level. Many still can move about at third plateau levels, and unintentionally or intentionally harm themselves. The sitter at third plateau is mostly there to make sure the tripper doesn't do anything stupid. Something serious possibly could come up that would require calling an ambulance, but it is unlikely that this would be needed at third plateau.

Fourth plateau (15-30 mg/kg; although dosing beyond 20 mg/kg is not advisable, nor needed, for most people.)

At this level, total mind/body dissociation occurs. The tripper loses some or all contact with his external senses, and is unable to move or respond to stimuli. He/she is in his own imaginary universe, while the sitter is watching to make sure the tripper doesn't choke on his/her own vomit, go into seizures, or otherwise need medical attention. As for what the experience is, anything is possible. Some have hallucinated contacts with god(s), alien beings, seeing bizarre worlds, and other strange effects, along with completely irrational thinking. Dosage at this level is far from safe, and should done only by those who have taken dextromethorphan at third plateau levels before, and have done so with positive outcomes. Even in that case, considering the known risks of dextromethorphan with respect to brain damage (and the fact this risk is greatest at fourth plateau levels), remember the brain you may be frying will be yours. Thus, don't even think about use at these sorts of doses unless you fully understand and accept the high risk involved. Also, NEVER, EVER use at this level without a SOBER trip sitter.

Comment regarding plateaus and physical intoxication on DXM (dextromethorphan).

These "plateaus" refer mainly to the mental ("tripping") effects of dextromethorphan, and what can be expected at various doses. They don't really apply to the physical effects of dextromethorphan. Basically, as dose of dextromethorphan increases, the physical intoxication effects (most notably involving motor control; difficulty in walking, slurred speech, etc.) pretty much increase in a linear fashion with dose. In the first plateau range, there is very little impairment worth mentioning. However, definitely don't drive or operate heavy machinery even at this dose, as reaction time might be reduced enough that in a hazardous situation, this could be a problem. As one goes through second plateau, motor control starts to be impaired, and increases gradually. At the high end of second plateau, most observers would clearly notice you are high. However, throughout second plateau you should be able to walk, talk, etc. You might seem somewhat intoxicated to someone else, but you should still be able to walk around and communicate. Once you get to the third plateau level, *then* this starts becoming a serious problem. Specifically, inability to walk, control hands, etc. Talking shouldn't be difficult, at least

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physically. No guarantee that you won't be babbling in a psychotic manner, however. At fourth plateau, forget moving around. Communication may be impossible with the outside world also, although some trippers in fact can maintain some communication with their sitters while on fourth plateau. Physical impairment while using DXM recreationally may be particularly important if someone is concerned that other people around them will know they are using the drug recreationally. DON'T assume, and delude yourself, that others won't notice that you are on something. This is particularly a concern in the second plateau range. While at very low first plateau some people could pass as straight to others, by the time you get to the upper end of second plateau, assume that anyone who sees you will know you are high. If concealing dextromethorphan use is a concern for you, if you are around other people who may observe you, and you don't want them to know you are using anything, then you are pretty much limited to first plateau, and perhaps lower second plateau. Even then, remember that you aren't the only one out there who has ever done drugs or been around drug users. Lots of other people know how to recognize the signs; particularly if they know well exactly how you act sober (such as family members or close friends.) Put simply, if concealing use is a concern, you'll have to stay to the very lowest recreational doses, or time your usage such that you only do it at times where you are damn sure nobody will be around that you don't want to know that you are using dextromethorphan.

Special warning about possible brain damage from DXM (dextromethorphan) use.

If you read the Olney's lesion section report of the Dextromethorphan FAQ, this is explained in greater detail. The issue is that #1) Based on theoretical concerns, recreational DXM use may well risk brain damage; and #2) There have been anecdotal reports by people who have used dextromethorphan recreationally that sounds like they really DID damage their brains. Obviously, this is not a good thing. The problem is, it is very unclear what the level of risk is, and precisely who is at risk. The data is still not fully in, and the jury is still out on this. HOWEVER, I've seen a number of reports from dextromethorphan users that leads me to believe that HAVE developed brain damage from DXM use. All that I have read have been from heavy users, and also upper plateau (third and fourth.) My best guess, at this point, is that one is unlikely to experience this if they do the following: #1) ALWAYS have at least one week per plateau rest between uses; and #2) Limit use to lower plateaus (first and second). I'm not saying that if someone occasionally uses at upper plateaus they will get brain damage. However, I suspect it is a cumulative process. In other words, each use at upper plateaus may do some brain damage. But, the harm from a single use is so small that it is unnoticeable. Only after a number of repeated uses does it reach the level where it becomes noticeable, and a problem. A little like radiation exposure. One X-ray from a doctor is harmless. However, if one had themselves X-rayed many hundreds of times, THEN it becomes a problem. As such, if you must venture into the upper plateaus, do so sparingly. As for lower plateau use with at least a week per plateau rest between uses, if brain damage occurs from that, it probably takes a large number of uses before it becomes a concern. However, I COULD BE WRONG. It may be that some people, even if they stick to such lower plateau use, may get brain damage. In particular, there may be an unknown genetic susceptibility. Since brain damage tends to be permanent, all are advised to keep this danger in mind, and proceed cautiously.

One additional comment I'd like to make here. While I do believe that some people have suffered brain damage from heavy usage/abuse of DXM, personally I am not convinced that the mechanism is necessarily Olney's lesions. Olney's lesions is definitely one possibility, but it is quite possible that something else is happening. There really hasn't been any laboratory testing of high doses of DXM in animal models, and this lack of data doesn't help. Amongst the possibilities, it occurs to me that since high doses of DXM cause respiratory depression, hypoxia to the brain leading to damage could be an issue. However, while the mechanism isn't clear, there are just too many reports suggestive of brain damage from doing DXM at high recreational doses that they are hard to ignore.

Warning: Recreational DXM use has already killed some people!

YES, recreational dextromethorphan use could kill you, and already has resulted in at least 3 deaths that I can

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confirm. The first involved using pure dextromethorphan powder at high doses without a sober trip sitter. The second was a teenage Coricidin user who also didn't have a sober trip sitter. The third death is someone bizarre, and involved accidental homicide of one Coricidin user by other Coricidin users who were too fucked up on Coricidin and asphyxiated him after he freaked out. They seem to have failed to remember he needed to breathe. While I haven't been able to confirm it, I strongly suspect one other person who used to post on the Usenet drug newsgroups also has died of DXM overdose. You can learn more about these deaths at the following link: www.dextromethorphan.ws/dxmdeaths.htm

So, I know the risks, and still want to use DXM recreationally. Now what?

OK. You've read William White's Dextromethorpan FAQ, and about all those nasty things like ending up in a mental hospital after a psychotic break on dextromethorphan, fried brains with Olney's lesions, drug interactions, etc. and still insist on doing it. Well, it's your life and your brain, so if you must, do it the safest way possible. Since this guide is for beginners, I'll assume you will be starting with OTC cough products (pure DXM HBr powder can be ordered legally in many countries from chemical resellers, but that is only for the serious user.) Let me make this as simple as possible for you. You need a syrup or pill that has DXM, and ONLY DXM, as the active ingredient. NOTHING else. Have I made myself clear? OK. If you live outside the US, you might be lucky enough that dextromethorphan only pills are sold in your country. If you are this fortunate, those are what you'd want to take. In the US, there is only one pill/capsule that contain dextromethorphan as the only active ingredient. It is sold under the name Dexalone, and is a gelcap that has 30 mg DXM per gelcap. It tends to be very hard to find, and expensive if you do find it. US DXMers typically have to drink disgusting tasting cough syrup. Such is life. In the US currently, the notable name brands of choice are Robitussin Maximum Strength Cough syrup, which is 3 mg/ml strength, and Vick's 44 Cough syrup, which is 2 mg/ml strength. Make ABSOLUTELY sure that it isn't the "Cough and Cold" variety (I call that one "Stroke in a Bottle"), as it contains pseudoephedrine which could easily kill you at high doses. The Robitussin Maximum Strength Cough syrup is usually preferable, since you have to drink less because it is 50% stronger. Generics are OK (usually, they will be Robitussin Maximum Strength Cough syrup generic equivalents), although inactive ingredients in some generics are often more likely to cause vomiting. Thus, I'd recommend you start with the name brand. If later on you find a generic that doesn't make you puke, feel free to switch. Don't use Delsym, which contains dextromethorphan polystirex. This is a time release form, and not suitable for recreational use. NEVER, EVER drink a cough syrup that is NOT a DXM only one. NO other active ingredients. Many of the other active ingredients found in cough syrups will likely KILL you in overdose. At best you will just puke your guts out if you are lucky. Specifically, acetaminophen (which is in NyQuil, along with some other brands of cough syrup) can cause slow, painful death from liver failure, pseudoephedrine can give you a heart attack or stroke, various antihistamines will result in you ending up dead or psychotic depending on your luck, and guaifenesin will result in projectile vomiting. Since DXM only syrups are easy to find (at least in the US) this isn't an issue. Some foreign countries may not have any dextromethorphan only syrups. In that case, you will have to extract the dextromethorphan, if possible. SPECIAL WARNING FOR THOSE IN THE U.S.: Do NOT even THINK of using Coricidin Cough and Cold pills recreationally. They also contain an anticholinergic (chlorpheniramine maleate) that is VERY dangerous at high doses, and worse yet interacts with dextromethorphan in a harmful matter. There have already been documented deaths from Coricidin abuse, and MANY hospitalizations. Coricidin at high doses is dangerous and quite possibly deadly. See http://www.dextromethorphan.ws/coricidindeadly.htm for more about this, and also the home page of this site for possible updates.

Once you have a dextromethorphan only syrup, to use DXM recreationally you need start at low doses, and slowly work up. Maximum first time recreational dose is 100 mg (about 1/3 of a 118 ml bottle of Robitussin Maximum Strength Cough Syrup), which is about 1.5 mg/kg for a person weighing 65 kgs. This is the bottom end of first plateau. Odds are, you won't feel much of anything. Which is what you should hope for. If for some reason dextromethorphan really seems powerful at a 100mg dose, then likely you have CYP2D6 deficiency, or are otherwise hypersensitive. If a 100 mg dose of DXM is disagreeable, that just means you are one of those that DXM isn't for, and move on to other drugs. If you have no trouble with this initial 100 mg dose, you can increase by no more than 50 mg each time (about 1/6 of a 118 ml bottle of Robitussin Maximum Strength Cough Syrup), with at LEAST one week between trips. The earlier doses get you used to the first plateau effects. Try to have

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fun, see if you like listening to music on dextromethorphan, etc. Once you get into the second plateau doses, you'll start noticing the CEVs in the dark. Look carefully, and see how they change as you gradually increase doses on later trips. First, they will be barely there. Then, as you move up to higher doses, they will become more and more intense. By moving up to gradually higher doses, you'll also learn to see how it affects your ability to move about. You'll also notice if the side effects are getting too bad for you if you move up slowly. It is unlikely that by gradually incrementing doses, any allergic or hypersensitivity reactions that might develop would suddenly become serious. Also, if you follow this gradual incrementing of doses method, then you might not need a trip sitter through the second plateau level. Although, it is always best to have one. If you slowly nudge doses up on later trips, then next trip will likely never be much stronger than the last. And, if it does get a little too intense, it'll only be at the peak and you can likely keep your senses until the drug wears off.

If you make it through up toward the top end of second plateau and find you enjoy DXM a lot, then you will have to consider whether you want to try upper plateaus. If so, then it is definitely time to line up a trip sitter. The trips likely will start getting wacky, and if you go into that territory without a sitter, you have been warned. DON'T underestimate the possibility of psychotic thoughts at third plateau levels. I've had it happen to me, and I assure you it'll be a whole lot safer and possibly less traumatic if you have a sitter. In any case, slowly increasing doses at third plateau levels shouldn't be as objectionable to some like having to do that through the second plateau, for whom impatience might be a problem. Third plateau trips will be quite intense, even at the lower end. They might be totally euphoric, or a bad trip from hell, but shouldn't be boring. If you do make it all the way up to dose near or into the fourth plateau range (if you would even consider it), then only the most foolhardy or reckless would do so without a trip sitter. Somebody has to watch your body while you roam the astral planes in your mind.

rfgdxm/Robert F. Golaszewski
8 November, 2002

Back to the DXM (dextromethorphan) Harm Reduction Project home page

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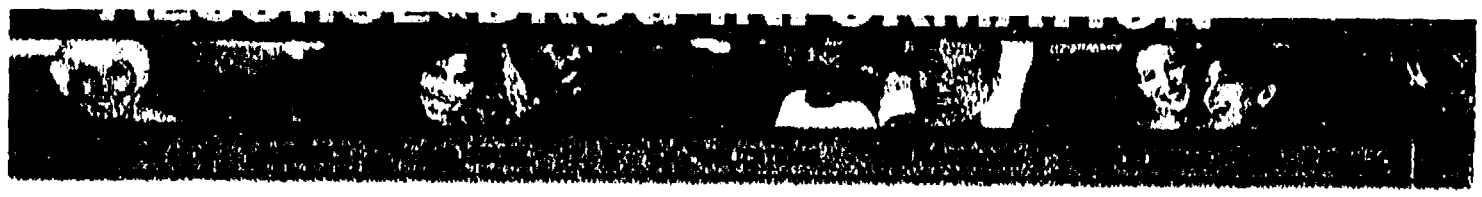

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Cold Medicine Abuse on Rise By Teens

Allyson Schafter
December 13, 2002

The winter months inevitably bring holiday parties and celebrations, as well as the onset of cold weather and all the hassles that can accompany this time of year. And as the cold and flu season swings into full gear, many people turn to over-the-counter remedies. These medicines can be effective when taken as directed, but recently there have been more reports of young people across the country intentionally overdosing on over-the-counter cold medications, suc Robitussin. This phenomenon has come to be called "robotripping."

Last year in the United States, 14 people died from misusing cold medicine, accordin statistics from the New Hampshire Poison Information Center at Dartmouth-Hitchcoc Medical Center.

Experts say the most dangerous cold medicine abused by teenagers goes by the brai name Coricidin Cold and Cough, also called "Triple C's" or "Candy." The drug is dangerous compared to other over-the-counter medications because it contains the highest amount of DXM, dextromethorphan. DXM is a chemical that produces psyche effects when taken in large quantities. More than 80 over-the-counter cold medicines contain DXM, which can be an effective cough suppressant when taken as directed.

The cough and cold mixture in Coricidin also contains chlorpheniramine maleate and

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cause brain damage and death in large doses. The two drugs affect the brain in the s manner as a heroin overdose (when taken at overdose levels), by inhibiting the brain' ability to tell the lungs to breathe. It can also increase the heart rate to a point where cardiac arrest is possible.

In 2001, the New Hampshire Poison Information Center received 292 reports of cold medicine overdoses resulting in hospitalization, 25 of which involved DXM. So far this year 246 overdoses have been reported, with 46 attributed to DXM. No national agen keeps track of Coricidin abuse, but poison control centers across the Nation—includir centers in Maryland, Florida, Arizona, and Ohio—report increasing numbers of teens overdosing on the drug. Although the practice isn't nearly as prevalent as alcohol or marijuana use, the fact that almost twice as many DXM overdoses occurred from one year to the next could be a cause for concern for parents.

Coricidin is sold in pill form, so parents should keep an eye out for empty packaging i their child's bedroom or tablets missing from the medicine cabinet. Also, be on the lookout for symptoms of Coricidin use, which include impaired judgment and mental performance, loss of coordination, dizziness, nausea, hot flashes, accelerated heartb high blood pressure, slurred speech, sedation, tremo.g, seizures, and dilated pupils.

For more information on cold medicine and over-the-counter drug abuse, please call SAMHSA's National Clearinghouse for Alcohol and Drug Information at 1-800-729-6 or click on the following resources:

- Give 'Em the Facts: Prescription and Over-the-Counter Drug Abuse
- "Robotripping" - Kids Overdosing on Cold Medicine to Get High. ABC Ne December 16, 2002.
- Teen Abuse of Cold Drug on the Rise. *The Detroit News*, March 2002.
- "It's Just Cough Medicine" - Think Again. Tennessee Association of Alco and Drug Abuse Services.
- "Triple-C" Becoming Popular Over-the-Counter High Among Teens. First Coast News, February 2002.

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abc NEWS.com

Ian, 17, and Tom, 16, say the over-the-counter cold medicine they used to get high made them feel out of control at times. (ABCNEWS.com)

'Robotripping'

Kids Overdosing on Cold Medicine to Get High

ABCNEWS.com

Dec. 16 — Parents concerned about whether their children are abusing drugs might also want to keep their medicine cabinets under lock and key.

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Across the country, children and teens are intentionally overdosing on cold medicine or "robotripping" in order to get a hallucinogenic high.

Robotripping,is the slang term for intentionally overdosing on over-the-counter cold medication such as the cough medicine Robitussin. Although cough syrup abuse is nothing new — it dates to more than 30 years ago — it seems to be undergoing a revival lately, with cases of teens overdosing on the medicine popping up across the country.

Robitussin, NyQuil, Benadryl and Coricidin are among the favorites. Tom, a 16-year-old boy whose last name is being withheld, told *Good Morning America* that some school friends told him about robotripping and he got high off a bottle of Robitussin. He then began experimenting with other over-the-counter medicines, taking eight to 16 Coricidin tablets at a time, he said.

"I started out with Robitussin, I drank an eight-ounce bottle," Tom said. "The Robitussin was more like a high off of marijuana, and with Coricidin you can't sit still, you keep talking," he said.

Ian, 17, said he used Coricidin, Nyquil and Benadryl to get high.

"It kind of got all concentrated into your head, and you really got kind of hyper and are all over the place and acting real stupid," Ian said.

DXM Is Trouble Ingredient

The culprit ingredient is dextromethorphan, a common additive in cough suppressants that can cause hallucinations when used in large amounts, according to Dr. Drew Pinsky, an addiction expert.

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"There's Web sites out there that tell these kids how to do this, how to get the pills, how to take enough pills," Pinsky said.

Users can suffer psychosis, brain damage, and seizures. Overdoses can be fatal. Fourteen people died last year from intentional overdoses of cold medicines, and several hundred were hospitalized, Pinsky said.

"These are legal drugs, so only the worst cases of overdose make it into the records," Pinsky said.

More than 80 over-the-counter cold medicines contain DXM, or dextromethorphan, a chemical that serves as a powerful cough suppressant when taken properly, but produces psychedelic effects when taken in large doses. DXM abuse is hard to track because it is legal and most abusers are under 18.

Sear

ama

Ian and Tom say they're off Coricidin and Robitussin now, after getting help.

"I never got caught with it, but I got caught in school for being drunk and high, and they sent me to a drug counseling program and that covered everything," Ian said. "I've been clean off of that stuff for about two months now," he said.

Tom, who says he used Coricidin and Robitussin from late last year until October of this year, said he had managed to keep up a normal appearance in front of his teachers and parents, even when he was hallucinating, but away from home or school, he sometimes became uncontrollable. He would sleepwalk, talk in his sleep and have blackouts.

Tom says he's clean today and in an outpatient rehabilitation program while attending narcotic anonymous meetings.

Pee Wee Drug Dealers

There is also concern about the age at which children are abusing drugs, which seems to be getting younger.

In Port St. Lucie, Fla. last week, two 9-year-old children were found with 15 small bags of marijuana, reportedly while riding the school bus to their elementary school. One boy was passing the baggies to the other. The two boys are both in the third grade.

Police are investigating whether the boys intended to sell the drugs. ■

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"It's Just Cough Medicine" – Think Again!

There is an emerging trend happening in homes across Tennessee, right under parents' noses. Recently, there have been news reports of overdoses and theft of this drug across the state as well as nationwide. The Tennessee REDLINE has been receiving calls and inquiries about it for nearly 3 years from various areas of the state. What is it? What is this drug? It is the abuse of over-the-counter cough suppressants. Dextromethorphan or DXM is a semisynthetic narcotic related to opium and found in many over-the-counter cough suppressants in the United States and most countries. DXM is contained in any drug whose name includes "DM" or "Tuss." The drug comes in various forms. Most common are cough suppressants in caplet or liquid form, including Corcidin, Robitussin, Vicks Formula 44, Drixoral, and several generic brands. (A caution: Not all medicines under these brands contain the drug since most brands put out several formulations. Look on the label for "DM," "Tuss," or "Maximum Strength.")

Less publicized and more easily obtained than the more well-known club-drug ecstasy, DXM's legal status and familiarity may lure some kids into taking it, despite the dangers it poses of addiction, injury, and death. "It's not an ugly drug. It's much less intimidating than snorting a powder or injecting a strange substance," said William Bobo, M.D., a psychiatrist who, along with Shannon Miller, M.D., is conducting an exhaustive review of the scientific literature on DXM.

Anyone, including minors, can buy these medicines at a local convenience mart or drugstore. And since the Food and Drug Administration (FDA) approves DXM for sale in over-the-counter medicines, those seeking a high, and especially teens, may assume it's "safe." "It's a very familiar substance, in short," said Bobo, and thus "it is felt to be benign by abusers." This underestimation of the drug's dangers and abuse potential is not limited to abusers, explained Miller. "Many clinicians simply aren't asking these questions—and certainly when they are faced with someone using it, they tend to minimize it."

DXM is related to opiates in its make-up, and it produces mind-altering highs. Misuse of the drug creates both depressant and mild hallucinogenic effects. It also acts as a dissociative anesthetic, similar to PCP and ketamine.

Sought-after effects include:

- Hallucinations
- Heightened perceptual awareness
- Lethargy

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- Perceptual distortion
- Dissociation
- Euphoria
- Mania-like symptoms such as thoughts racing

Adverse effects are many:

- Confusion
- Impaired judgment and mental performance
- Blurred vision
- Slurred speech
- Loss of coordination
- Rigid motor tone and involuntary muscle movement
- Tremor
- Dizziness
- Nausea, abdominal pain, vomiting, vomiting of blood
- Dysphoria (sadness)
- Paranoia
- Headache
- Decreased ability to regulate body temperature
- Excessive sweating
- Reduced sweating and increased body temperatures, or hot flashes
- Irregular heartbeat
- High blood pressure
- Numbness of fingers or toes
- Redness of face

http://www.tnclearinghouse.com/factsheets/DXM.htm

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- Loss of consciousness
- Dry mouth and loss of body fluid
- Dry itchy skin and occasional patches of flaky skin

Emergency rooms increasingly report DXM overdoses and DXM-related crises. In spite of these serious potential adverse effects of DXM, the dangerous behavior it induces, and the ingredients ingested along with DXM-containing cough medicines, abusers keep returning because of the drug's legal status and easy access.

Its use is becoming more prevalent in dance clubs and at dance events called "raves," where it is sometimes used as an alternative for the more well-known drug ecstasy. Adolescent youth easily can obtain the drug because stores sell it over the counter, with no prescription required. Its street names include:

- DXM
- robo
- skittles
- Vitamin D
- dex
- tussin

WHAT CAN WE DO??

The most important thing for everyone is simply to be aware that the problem exists. Parents should look for signs of abuse such as a child bringing home his or her own box, or an unexplained dwindling of the family's stock. Doctors can look for signs of abuse and send patients to treatment providers. Treatment providers need to be aware of the special considerations associated with the drug's availability. And abusers should know that the drug is dangerous and has addictive properties.

For further information or if you or someone you know needs help for a problem with DXM or any other drug, Call the Tennessee REDLINE at 1.800.889.9789 for free confidential referrals to services in your area. For more information about over-the-counter or any alcohol or other drug abuse, please call Tennessee Association of Alcohol and Drug Abuse Services (TAADAS) at 615.780.5901 or visit www.health.org/newsroom/rep/170.htm. The Tennessee REDLINE is a program of TAADAS and is funded by the Tennessee Department of Health. Sources: Tennessee REDLINE & NCADI Reporter.

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THE DEXTROMETHORPHAN FAQ

ANSWERS TO FREQUENTLY ASKED QUESTIONS ABOUT DEXTROMETHORPHAN (DXM)

Used at Erowid with the permission of the author

William E. White

[Contact information currently unavailable, July 2001 - erowid]

HTML Version 4.02

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Revision History:

- 4.03: Sep 22, 2001: erowid change to 4.8.5.1 (again)
- 4.02: July 17, 2001: erowid change to 4.8.5.1
- 4.01: June 7, 2001: erowid minor addition to 5.3.4

New Section: Moron of the Moment

Since first coming up with the FAQ I've received a grand total of four negative responses out of over eight hundred total. Recently I got one with no return address (funny, that); because of this, I can't respond to h/her directly. However, I *can* take the comments and deconstruct them (besides, s/he marked them .olic anyway). So, if you'd like to take a look at my first negative comment in over six months, and the response I'd give to it, go here.

New Section on Quitting DXM

If you find yourself psychologically addicted to DXM you may wish to consult the new section on quitting DXM (Section 6.8). Remember, I'm not a doctor and I'm not going to play one on the net either, so see a physician first and foremost and ask her or him about the suggestions I list from former DXM addicts.

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Introduction to the FAQ v4.0

A lot has happened since I published Version 3 of the DXM FAQ; some of it has been good, some not so good. I'd like to take a moment to address some of these changes and some of my concerns. I still do not regret having published the FAQ, and out of all the feedback I have received (including letters from physicians, scientists, parents, and just plain druggies), less than one percent has been negative. The reasons I gave for its publication still apply, but those of you familiar with v3.0 will notice that this version shows considerably less praise for DXM.

When I published the FAQ on Usenet (and then the World Wide Web), it was my expectation that it would be of interest primarily to psychonauts, experienced psychedelic users, and others who use drugs for self-exploration and spiritual purposes. I knew, of course, that not everyone who did DXM would use it with the intention of expanding the mind, but I reasoned that, given the relative unpleasantness of consuming cough syrup, and the "heaviness" of the DXM experience, most people would find casual, recreational use of DXM unlikely. Things didn't quite turn out how I expected.

Also at that time there was a severe shortage of information from former DXM users about adverse effects of long-term use. I had reasoned that long-term use was probably not a good idea, but probably not terribly dangerous. Of the people I had interviewed who had used DXM regularly, very few had any problem with it, and those who did recovered when they stopped using it.

Since then there has been a great increase in DXM use (or at least more people are talking about it). My concern that the FAQ had started a "DXM epidemic" turned out to be mostly baseless; the majority of new DXM users seem to hear about it the same way that DXM users have always learned about it: from their friends. Some do learn about it from the FAQ, but for the most part you have to know about DXM in the first place before finding or understanding the FAQ.

As I have spoken to more and more users of DXM, I have learned that more people have negative experiences with the drug than I had expected. Most of these are simply people who try it once, decide they don't like it, and never try it again. A few people, on the other hand, seem to be greatly susceptible to DXM addiction and some of these have suffered long-term health consequences. A very few may have suffered permanent brain damage from extremely heavy use of DXM (e.g., an 8oz bottle of Maximum Strength syrup every day). On the other hand, some people consume the same amount for years seemingly without consequence. And while some people can consume DXM regularly without psychological consequences, others suffer from severe depression and psychotic breaks, even leading to a few cases of suicide attempts.

This brings me to the most relevant new information about DXM: Olney's findings of NMDA Antagonist Neurotoxicity (NAN). There is great debate right now whether NAN is relevant at recreational doses or not. In animals, the dosage required to induce NAN is far in excess of the anaesthetic dose, and humans typically take sub-anaesthetic doses of dissociatives. On the other hand, there may be danger with long-term use at considerably lower dosages that the animal models do not show.

The data from human experiences are hard to interpret. Many heavy PCP users suffer obvious cognitive and motor impairment; however, PCP has neurotoxic effects (in particular in the cerebellum) not shared by other

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dissociatives including DXM or ketamine. Ketamine is probably a better approximation of DXM, but very few people have done large amounts of ketamine for long periods of time. A notable exception is John Lilly, who is a bit of a nut, but was probably a bit of a nut before doing ketamine, and (at least the last time I checked) he doesn't seem to suffer from cognitive impairment.

There are a few DXM users who have suffered long-term consequences. Out of approximately five hundred current and former DXM users I have heard from, three have suffered lasting cognitive impairment. Additionally, there is one published paper on cognitive impairment from chronic DXM use, although the author suggests an underlying temporal lobe seizure disorder. DXM has been shown to increase the frequency of complex partial seizures, and it's possible that it is the seizures, and not the DXM itself, which is causing problems. Unfortunately, it has also been suggested temporal lobe epileptics may also be more susceptible to dissociative addiction. Hopefully much of this will be resolved in the next few years.

Until then, my official recommendation is not to use DXM at all. Since I know this isn't likely to happen, my own personal belief is that DXM is probably pretty safe when used occasionally (e.g., once or twice a month) at the lower plateaus, and rarely (e.g., once or twice a year) at the higher plateaus. I have yet to hear from anyone who used DXM with this or less frequency who has suffered any impairment, temporary or permanent. Actually, to be technically correct, nobody using it once a week for less than six months has ever seemed to have problems, but it's always best to keep a wide safety margin.

Another thing to keep in mind is that DXM in the upper plateaus is a considerably different experience than the lower plateaus, and may be better suited to spiritual or ritual use. Even at the lower plateaus, DXM is not really well suited as a frequent recreational drug.

So what do you do then if you find yourself in that particularly human condition of ennui (for which psychedelics are a most effective medicine)? Well, ideally I'd suggest you hop on a plane to Amsterdam (or somewhere else where 2CB and marijuana are legal). Unfortunately this isn't an ideal world, and flying across the Atlantic is outside the means of most of us (including me). A more reasonable suggestion would be to do your part to change the laws in this country so that psychedelics can regain their rightful place as tools for mental, emotional, and spiritual exploration and growth. Remember, the laws aren't going to change unless we work to change them.

In summary, I'm not nearly as convinced that DXM is a benevolent psychedelic as I used to be. It is in many ways considerably more powerful (and certainly more dangerous) than LSD or mushrooms. Like all psychedelics it can profoundly change you; unlike others, these changes are not necessarily under your control, especially if you are not very familiar with yourself. DXM can be a great tool for spiritual rebirth, but it can also turn you into a paranoid, antisocial asshole. I still believe that DXM has a place among psychedelics, but do understand that it is *not* a replacement for LSD, mushrooms, 2CB, or even ketamine. It is a unique and uniquely powerful mind-altering drug, and one which I think most people would do best to avoid.

William White

March 15, 1997

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Introduction to the FAQ v3.0

This document is a FAQ ("fack"), i.e., a series of questions and answers. The term comes from Usenet, and stands for **F**requently **A**sked **Q**uestions. These are the sorts of questions that people new to Usenet tend to ask frequently. When these questions become frequent enough, the question and its answer may be placed into the FAQ for the newsgroup (or for a topic within the newsgroup). A few people use the term AFAQ (**A**nswers to **F**requently **A**sked **Q**uestions), but most use FAQ to refer both to a frequent question and to the document

This FAQ covers *dextromethorphan* (decks-tro-meth-OR-fan), the cough suppressant commonly found in cough medicines available over-the-counter in the USA and other parts of the world. Of course, dextromethorphan (DXM) does more than suppress coughs; otherwise, there wouldn't be so much discussion about it on Usenet. The bizarre truth about DXM is that it is a very potent psychoactive drug when taken in sufficient quantities. So if you've ever heard about people drinking cough syrup for fun, well, now you know why.

The trouble, however, is that most cough medicines have other ingredients which can make you uncomfortable, sick, or dead, depending on the ingredient and how much you take. Furthermore, even when pure, chronic or heavy use of DXM may cause health problems. This document is intended to combat potentially dangerous misinformation about the recreational use of DXM, and to allow you to make an intelligent and informed decision about DXM.

My own interest in DXM came quite by accident; once, while sick with the flu, I misread the instructions on a bottle of cough syrup and drank two shots from the included shotglass instead of two teaspoons. Soon after I noticed that music and motion had become very satisfying experiences. This left me puzzled, and my reaction was to go to the library and research DXM through Medline, medical journals, and books.

Of course at that point I was hooked - not on DXM, but on neuropharmacology. I decided to learn as much as I could about DXM, and found it to be one of the most unique and interesting of all recreational drugs in terms of how it works on the brain.

About this time I noticed a number of incorrect and potentially dangerous posts (articles) about DXM appearing on *alt.drugs*. So, I decided to gather the information I had and write a FAQ. It eventually became much more than a FAQ, giving explanations and information in addition to answers, but by then the name had stuck. The FAQ took me over 150 hours to complete - I figured if I'm going to do it, I'd better do it right.

publishing the DXM FAQ, the reports of DXM use started coming in. People who had been using DXM but were uncomfortable talking about "getting high off cough syrup" shared their stories with me. Some were good, some were bad, some indifferent. I've been trying my best to get all of these personal reports together

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into a coherent whole, but this FAQ is written in my free time and I don't get paid for it (although donations are acceptable :^).

Please note that it is **not** my intention to get a bunch of people hooked on cough syrup (actually addiction is very rare, but you get my point). It **is** my intention for people to know the truth so they don't make bad decisions for lack of knowledge. DXM is **not** safe and harmless; nothing is. Nor is it universally enjoyable; in fact, some find high-dose DXM experiences terrifying. But I believe that people can only make good decisions, or learn from bad decisions, if information is available. So please, use your head!

William White

May 10, 1995

THE DEXTROMETHORPHAN FAQ

ANSWERS TO FREQUENTLY ASKED QUESTIONS

ABOUT DEXTROMETHORPHAN (DXM)

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1 Acknowledgements

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ACKNOWLEDGEMENTS

First and foremost I would like to thank my wife, Nicole, for providing me with a seemingly endless supply of love and support, and for putting up with my idiosyncrasies. I doubt anyone else could have coped with being married to someone whose idea of fun is spending hours in a library researching tripping off of cough syrup.

I would also like to thank Barbara Adeanna and Peter Zachariah Kramer who helped me proofread the FAQ and who took the time to tell me when I was confusing, unclear, or simply full of it. Additionally I would like to thank them for their support and encouragement throughout the writing process.

I would like to acknowledge Schering-Plough, Richardson-Vicks, and other OTC pharmaceutical companies, for giving me something to write about. How about bringing back DXM-only pills, folks?

The evolution of this document also owes a great deal to the participants of Usenet *alt.drugs, alt.psychoactives,* and *rec.drugs.psychedelic*, notably including P. L. and all the people who made hyperreal.org, the Lycaeum, and other drug websites what they are today. And to the hundred or so people who contributed their experiences to the FAQ, thank you; my understanding of DXM came about because of your assistance.

I'd like to give a moment of thanks to the one and only person thus far who has given me truly critical and negative feedback. I showed her feedback (and the resulting exchange of email) to a friend of mine who is a neuroscience researcher and physician, and my friend reassured me that this person's objections, although numerous, were also baseless. Still, it has given me something to think about. As hard as it may be for some people to believe, a big part of why I wrote the FAQ in the first place was out of concern for people's physical, emotional, and spiritual well-being.

Finally, thanks to my friend H., who taught me about DXM in the first place.

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2. Preliminary Information

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2.1 Restrictions and Disclaimer

This text covers the recreational and medical uses of dextromethorphan, a cough suppressant in common use in over-the-counter (non-prescription) cough medicines. This is version 4.0-Y (hypertext).

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PostScript™, etc.). For information regarding specific formats, please contact me.
7. The HTML format hypertext files on my website may not be distributed without my approval; please use my site for them. You may, however, provide links to them.
8. Once a given version number has been released, no prior versions may be distributed without written permission. Please stick to this rule if you can; I try and keep the information in this document as up-to-date as possible.
9. This document may be cited as:
   White, William E. (1995) The Dextromethorphan FAQ: Answers to Frequently Asked Questions about Dextromethorphan, version 4.0.
   Published in HTML at http://www.frognet.net/dxm
10. As I do not wish my motives to be misrepresented, no citation or quotation of this document may be used so as to explicitly or implicitly suggest that I am in favor of the illegal use of any drug (legal or not), or any other illegal activity, subject to USA law.
11. No modified version of this document may be distributed in any form.

2.1.2 General Disclaimer

This text discusses some rather controversial topics. Currently, there are laws in most places of the world that make it illegal to use certain drugs for recreational purposes. It doesn't take a genius to figure out that the *medical* nature of the question has nothing to do with their legal status (otherwise, alcohol would be illegal and we'd all be smoking dope). In particular, a lot of people are making a lot of money from the illegal drug trade. The distributors, manufacturers, and sellers of illegal drugs are among them, of course. So are the law enforcement agencies and politicians, and the manufacturers and distributors of legal drugs like nicotine and alcohol. In the past few years, many scientists, physicians, journalists, and others have suggested legalization as a way to reduce the harm associated with the drug trade.

It is not my desire to address this topic in depth here. What is important is that, in response to these suggestions, the proponents of the War on Drugs (and its equivalents elsewhere) have become increasingly aggressive. One of their goals is to prevent the dissemination of information about recreational drugs (unless it's their own propaganda). As such, anyone even discussing drug use is walking on thin ice, and once you go about telling people how to do it, the ice becomes a lot thinner.

I have no intention of being thrown into prison so that they are forced to release rapists, murderers, and child molesters in order to make room for me. I'm not planning to become a martyr any time soon; I'd much prefer for the Drug Peace to come without violence (legal or physical). However, I feel it is important to provide true information about drugs. J. S. Mill argued very eloquently that if an idea is true, then it can only become stronger when it is confronted with falsehood; to prevent debate in the hope of protecting the "truth" only leads to lies. I agree entirely, and quite frankly I think anyone even thinking of getting into politics should be familiar with (and hopefully agree with) Mill and his arguments. Honest and open discussion of drugs can only lead to better policy and less harm.

In any case, like so many others, I am walking on somewhat thin ice here, and must take certain steps to protect myself. The following rather verbose disclaimer, which may or may not be worth anything in an actual court of law:

It is not my intention to influence anyone to commit an illegal act. I explicitly instruct all readers not to violate

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any international, national, state, regional, city, or other applicable laws governing any of the information presented in any document authored by me or made available by me through electronic or other publishing [illegible]ds, including this document. Specifically, I hereby advise everyone not to ingest, inject, smoke, snort, s[illegible] up your ass, or otherwise administer any legal or illegal drug (except for legal drugs under order of a physician), or to engage in the manufacture, distribution, synthesis, analysis, or other processing of any legal or illegal drug, regardless of anything you may see in the aforementioned documents. I advise everyone not to follow any procedures listed. All information is presented for EDUCATIONAL PURPOSES ONLY!

None of the information in this document is guaranteed to be accurate or valid in any way. Anyone attempting any such action or process takes full responsibility for any outcome resulting from such, and neither I, nor my access provider, nor any other subset of the Usenet/Internet or world community (except for the person or persons attempting the action) may be held responsible.

By proceeding past this Disclaimer, you agree to assume all responsibility for any actions, legal or not, that you may take. If any part of this disclaimer is found to be invalid, then all rights to access and distribute this information are revoked.

2.1.3 How to Reach the Author

Any questions or comments may be addressed to me:

Email:
bwhite@frognet.net
PGP 2.6.2 block available by finger
Encrypted mail preferred.

US Mail:
William White
PO Box 536
Athens, OH 45701 USA

PGP Key:

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-----BEGIN PGP PUBLIC KEY BLOCK-----
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I [illegible] don't call me up, telling me I'm going to Hell or somesuch nonsense. I don't believe in it and I don't have the ti[illegible]or inclination to listen to that sort of drivel. Thus far I've gotten very few negative responses, and I thank everyone who has taken the time to email me, call me, or otherwise contact me.

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Testimonials and personal data are presented anonymously. I do not maintain copies of the sender's name, address, or personal information, either online or offline, and thus I cannot give information as to their identities. Any personal information, testimonials, or reports as to DXM's effects that were or are sent to me will be considered anecdotal and not specifically referring to the sender. I encourage anyone with applicable data to send it to me anonymously. Any data sent PGP encoded will be decoded on my private system (MS-DOS) which is offline. After decoding, all information regarding the sender's identity is overwritten (200 pass random pattern). Thus I cannot link testimonials or information to senders after this operation. Note that my system is NOT TEMPEST SECURE (not that I've noticed any strange vans near my house).

2.2 Why a DXM FAQ?

There is the philosophy among some in the USA (and probably the rest of the world) that the best way to prevent people from making mistakes is to withhold information from them. For example, this is particularly noticeable in the case of sex education, where some assert that teaching children about sex is equivalent to giving them permission to copulate, and that, since no sex is perfectly safe, and since teenagers especially have a tendency to take risks (e.g., no birth control), we ought not to teach sex education in the schools. One might just as easily say that teaching children about cars is equivalent to giving them permission to drive, and that, since no driving is perfectly safe, and since teenagers especially have a tendency to take risks (e.g., racing down Main St.), we ought not to teach driving education in schools.

This misguided philosophy of "ignorance is strength" is just as often applied to information pertaining to drug use. In the case of drug use, however, good information is immediately useful towards preventing drug-related injuries. In the case of DXM, there are several possible mistakes people can make, and the chance for making a mistake is compounded by the fact that people hear "you can get high off cough syrup" as advertisement for DXM use. At best they are unprepared for the trip; at worst, they get hold of an acetaminophen-containing preparation and end up in the hospital or dead.

Make no mistake; this information will probably encourage some to try, and continue to use, DXM. That is not my intention. A few of these people may end up addicted, or at least habituated to the point of trouble. That is certainly not my intention. My intention is to make sure that everyone out there knows what the risks and effects of DXM use are, so that s/he can make intelligent choices for herself or himself. An intelligent choice is not always right, but it is fair, and you always learn from it.

This text sprung out of the Usenet newsgroups *alt.drugs*and *alt.psychoactives,* where about 1 or 2 questions a week about DXM would appear. After responding weekly, or in some cases daily, I decided to put together all the questions (and a few questions I thought would follow) and write a full explanation of DXM. Some of the material is fairly technical, but I thought it better to give too much information than not enough. It is distributed once a month (more or less) on the Usenet newsgroups *rec.drugs.psychedelic*and *alt.drugs* (until the latter disappears); please distribute it beyond Internet and Usenet (subject to the restrictions above).

It is my sincere hope that this type of information may help the Internet fulfill its potential as an information source. Those of us who have the time and ability to provide good information should feel obligated to do so; if we set a

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standard of high signal and low noise, perhaps others will follow.

2.3 Keeping DXM Legal

Right now, DXM is legal for over-the-counter use in most places. This seems to be for two reasons primarily. First, there is no substitute for DXM that does not also have abuse potential. Nor is there likely to ever be one; everywhere the cough reflex can be blocked involves some type of receptor associated with recreational drug effects. Second, pharmaceutical companies don't want to lose a major chunk of their income. DXM works as a cough suppressant, and it works well. Besides, nobody wants to have to go to the doctor to get a prescription every time they get a cold.

However, it is possible that DXM-only preparations might disappear from the market. This would be unfortunate, both for recreational users and for the general public; the most likely additive - guaifenesin - makes some people vomit even at low doses. Another possibility would be the addition of something which would be harmless at regular doses but induce nausea (or other unpleasant effects) at recreational doses.

The best answer is probably prevention, which unfortunately involves two conflicting goals. On the one hand, it is essential that DXM related deaths do not occur - this was my primary motivation in making this FAQ in the first place. Several DXM cough medicines can be dangerous if consumed recreationally, due to the presence of other ingredients. There is also the problem of drug interactions, e.g., DXM + Seldane™, which can be fatal.

On the other hand, the spread of information to keep people from hurting themselves is also likely to inform people who didn't know about DXM, and will want to try it. DXM is still an unknown to many people (although not as big an unknown as most think - pockets of recreational DXM use have existed as long as DXM has). I've come to the conclusion that I'd rather have a bunch of people doing it safely than a few doing it dangerously - but then again, I'm also in favor of sex education.

Thus, I encourage anyone who may want to try DXM or tell her or his friends to try it (which I again explicitly tell you not to do) to make sure and emphasize *all* the risks and dangers involved. *Don't* rush into high dosages. *Don't* trip alone, or without a designated sober person. *Don't* encourage people who are not psychologically mature to experiment with DXM. And *please* use common sense and be safe.

In the event that DXM-only preparations do get pulled, the best answer is probably to have an isolation method that will separate the DXM from other ingredients. In my opinion, the most likely additive is guaifenesin (although people were using Robitussin DM™ long ago, and just toughing out the inevitable extreme nausea). I've been working on a way to separate the DXM from guaifenesin, using commonly available substances, *and producing a pure, safe product.* We *don't* want another "cat" (methcathinone) media-scare on our hands. Currently I offer a method for evaluation only; **this method is not proven**. I'm posting it with the FAQ so that other people can give it their consideration.

In conclusion I'd like to remind everyone that we may be walking on thin ice here. I've tried my absolute hardest to make this FAQ as accurate and scholarly as possible, so that if anyone who matters ever does get a look at it, they'll get

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bored somewhere around the explanation of P450-2D6 polymorphism. Still, please use common sense.

2.4 How to Use This Document

I have tried to make this document useful for a variety of audiences, and as such it can sometimes get fairly technical. If confused, consult the glossary; if still confused, check with a basic neuropharmacology text. I unfortunately do not have the time to answer general questions about neuropharmacology; I'm employed full time at a small ISP, trying to finish my education, and married.

This document is broken up into chapters and sections by subject, with appendices, references, glossary, and index. At present, figures and diagrams are fairly minimal; I'm trying to improve that aspect. Also, sometimes I simplify things a bit. If you take exception to anything, email me with references and I'll consider modifying it.

This document is distributed in three forms: ASCII text on Usenet; HTML on the World Wide web (http://www.frognet.net/dxm), and in printed form. I try to keep the HTML copy the most current, not an easy task considering the length of the document. I still haven't found an HTML editor that beats *vi*.

The following additional formats will be made available as I have time to create them: Microsoft Word™ PostScript™ and PDF. Email me for requests for any other format. Requests for oddball printer formats will be redirected to the bit bucket. Again, apologies; I just don't have much time anymore.

If this is coming to you via Usenet, please note that the Usenet version is subdivided into sections; some news machines choke on very long files. I **do not** post the section on what you can synthesize from DXM, since it's mostly specialized information. Email me if you want it. Otherwise, posting is once a month, with the DXM Quick Reference being posted biweekly. If I'm eating up your bandwidth, I'm sorry; recently a **lot** of DXM use has been going on and I want to make sure everyone has the facts available.

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3 DXM QuickFAQ

from the DXM FAQ
used at Erowid with the permission of author William White

This is a quick question-and-answer section about DXM which avoids most of the technical detail of the full FAQ sections. However, since DXM is a complex drug, you are advised to read the appropriate sections in the full FAQ.

3.1 What is DXM?

DXM, or dextromethorphan, is a cough suppressant drug found in cough syrups and cough medicines. It can be used recreationally, but there are risks.

3.2 You Mean I Can Get High Off Cough Syrup?

Yes, if you choose the right kind; if you pick the wrong kind, you can end up dead. And you may not like the "high" you get; some people love it, others hate it.

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3.3 What Kinds of Cough Medicine are Safe?

Basically, anything containing **ONLY** dextromethorphan hydrobromide (DXM HBr). Popular US brands include Robitussin Maximum Strength Cough (and generic equivalents), Drixoral Cough Liquid Caps (the red kind), and generic equivalents.

3.4 What Happens if I Drink the Wrong Cough Syrup?

If it has gauifenesin (Robitussin DM and generic "DM" syrups have this drug), you'll probably puke your guts up. If it has acetaminophen (paracetamol), you stand a good chance of a painful, prolonged death. Anything else, you're likely to the trip and may end up in the hospital.

3.5 I'm Taking Other Drugs -- Can I Take DXM?

Quick answer: it depends. Don't take DXM if you are taking any of the following other drugs:

- Antidepressants of any kind. MAOIs (monoamine oxidase inhibitors) are the worst; DXM + a MAOI will kill you. DXM with other antidepressants can cause serotonin syndrome, an unpleasant and occasionally fatal condition.
- Diet drugs like phentermine, fenfluramine (Redux), or phen-fen. Again, a risk of serotonin syndrome.
- Non-drowsy antihistamines (allergy medicines) like Allegra, Seldane, or Hisminal.

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3.6 What's the DXM Trip Like?

Well, that depends on how much you take. There are four different kinds of experiences, based on the dosage; these are called *plateaus*. The first plateau is a mild stimulant effect with a little bit of a buzz, and has been compared to MDA. The second plateau is more intoxicating and has been compared to being drunk and stoned at the same time. The third plateau is dissociative, like a lower dose of ketamine. The fourth plateau is fully dissociative like a higher dose of ketamine.

You should **not** attempt higher plateau doses unless you have someone with you who can take care of you in case you get sick or freak out. It happens on DXM. Many things can happen unexpectedly on upper plateaus, such as spontaneous memory recall, complex delusions, hallucinations, out-of-body experiences, near-death experiences, and perceived contact with spiritual or alien entities. You need to be pretty stable and grounded before you can handle these things.

3.7 How Much DXM Do I Take?

See the full FAQ; it's complicated and depends on your body weight; furthermore, some people can't handle DXM due to a genetic mutation in an important enzyme. So you **always** want to do a low dose on your first trip, and then increase gradually with each new trip.

3.8 Is DXM Like Acid?

No. It's more like ketamine or PCP, but not much like them either.

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3.9 Is DXM Fun?

Some people think so; others point out that while the lower two dosage plateaus are more recreational or fun, the upper two seem to be more suited for self-exploration and shamanic work.

3.10 Is DXM Dangerous?

Yes, especially if you take too much. Some of the more important dangers you might want to know about are:

- Nausea, diarrhea, vomiting, and allergic reactions (often from the cough syrup itself)
- Hot flashes, dizziness, and bad trips
- Psychotic breaks (generally from high dose use)
- Psychological addiction and depression (generally from regular use)
- Irreversible brain damage (from chronic use at high doses)

The last -- brain damage -- is fairly rare, occurring in less than 1% of the regular users I've interviewed. They all used DXM very frequently. If you do DXM twice a month or less, you'll probably be OK. But remember there's always the risk of something going wrong.

3.11 If DXM is Dangerous, Why Do It?

That's up to you. Most people in our culture seem to shun the idea of taking real risks, whether it be through drugs or high-risk sports such as mountain climbing and hang gliding. On the other hand, when someone goes and climbs a mountain without adequate equipment and training, and then falls to her death, nobody goes and blames the mountain.

There are many people who believe that the risks of DXM (or other drugs) are worth the rewards. If you are a legal [illegible] and are willing to take responsibility for your actions, in my opinion you should be permitted to experiment with psychedelics to your heart's content.

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4 General Information About DXM

from the DXM FAQ
used at Erowid with the permission of author William White

This section covers general information about dextromethorphan, herein referred to as DXM. IUPAC chemical names are in a sans serif font, in square brackets.

1. PLEASE NOTE that the UK (and European?) name of **acetaminophen** is **paracetamol**. It is also known as **APAP**. They all refer to the same substance.
2. Erowid Correction of Canada's Contac CoughCaps, March 31, 2001

If you get nothing else out of this FAQ, let it be this: Remember that DXM is a powerful psychedelic which can be used safely, but must be used with care and respect for your own body and mind. DXM is not a safe drug, and it has not been well studied at recreational levels; whenever you use it you are taking a risk, possibly a big one. Please read and follow these basic guidelines:

- Not everyone likes DXM, and your experiences with it may be very unpleasant. A very few have had such intense side effects from DXM that their first trip lands them in the hospital. DXM is not a quick and easy buzz, and getting good results with it can be hard, sometimes unpleasant work.
- **Do not use DXM on a constant or frequent basis!** Like alcohol (and unlike marijuana), constant or frequent (more than once or twice a week) use may be dangerous. **Although not everyone seems susceptible, a very few daily high-dose users may have seriously and permanently fried their brains.**
- **Do not use DXM if you have a any of the following medical conditions:** mental illness, epilepsy, seizures, liver or kidney disorders, hypertension, heart problems, or ulcers.
- **Do not use DXM if you are pregnant or nursing.** All dissociatives adversely affect fetal development, and may lead to birth defects and mental retardation.
- Because some people can have severely adverse reactions to DXM, **never** rush into a high dose Instead, take no more than twice your last dose, and wait at least one week between doses. Yes, it may take you a month before you get to interesting territory, but that's better than ending up in the hospital. **Yes it can happen to you!**
- Never exceed 20mg/kg (or 2000mg, whichever is lower) of DXM under any circumstances, and never exceed 15mg/kg (or 1500mg) unless you have a trip-sitter who is experienced and capable in the event of a medical emergency.
- Because of the potential for allergic or other adverse reactions to inert ingredients, always try a low dose first when taking a DXM product (syrup, gelcap, capsule, whatever) you haven't taken before.

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- **Never** experiment with hallucinogens without a sober person around to help you in case you get into trouble. This goes doubly for DXM, which is much more likely to induce abnormal and dangerous behaviour than LSD.
- **NEVER, EVER, EVER** drive under the influence of any intoxicating drug including DXM!
- **Never** use a product containing acetaminophen (also called paracetamol or APAP, and known by the brand name Tylenol™). Large doses of acetaminophen can cause liver damage or death. Many cough syrups contain acetaminophen so always read the label.
- **Never take DXM with yohimbine (Yocon™)!** To do so may be risking permanent brain damage!
- **Never** take DXM if you are taking a monoamine oxidase inhibitor (MAOI). This also applies for one week before and two weeks after taking a MAOI. MAOIs include some (rarely used) prescription drugs for depression and Parkinson's disease, a few recreational ethnobotanicals (harmine and harmaline), and yohimbe bark. Mixing DXM and a MAOI has **regularly** been fatal.
- Do not take DXM with phentermine, fenfluramine, or the combination (phen-fen), all of which are used as prescription diet pills. This combination can cause serotonin syndrome.
- **Never** take DXM if you are taking, will take, or have taken within **six** weeks, the prescription antihistamine terfenadine (Seldane™), *or any other prescription, non-drowsy antihistamine* (e.g., Claritin™ or Hisminal™).
- **Never** take DXM with the SSRI antidepressants Desyrel (trazodone) or Serzone (nefazodone); these combinations have resulted in liver damage.
- Be very careful combining DXM with SSRI and tricyclic antidepressants (i.e., those in common use), and **never** use DXM when taking more than one drug at a time for depression, due to the potential for serotonin syndrome.
- Avoid all products containing DXM and other active ingredients.
- Avoid Benylin™ brand products which seem to cause severe nausea. Avoid any product with castor oil. Avoid Coricidin Cough and Cold™ at upper plateau doses due to the potentially dangerous effects of antihistamine overdose.
- Remember that DXM can sometimes trigger panic attacks in susceptible individuals, especially those inexperienced with DXM. This is a major cause (if not the major cause) of tachycardia (high heart rate) from DXM. All the more reason not to rush in to anything.
- Always remember: recreational use of DXM is still a great unknown. The brain you are risking is your own.

4.1 DXM Quick Reference Page

Dextromethorphan (decks-tro-meth-OR-fan), or DXM, is a cough suppressant found in over-the-counter medications. It has also been used recreationally for at least 30 years, without much harm or publicity. Although chemically related to opiates, its effects are closest to ketamine's. In addition to suppressing coughs, DXM is used medically for diagnostic purposes, and may be useful for a variety of conditions from seizures to heroin addiction. In the brain, DXM blocks the dopamine reuptake site, activates the sigma receptor, and blocks the open NMDA channel. (None of these effects are permanent).

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Occasional recreational use of DXM is probably safe, though side effects and risks have been noted (I hereby tell you not to use any recreational drug including DXM). Many cough medicines contain ingredients other than DXM; some, such as acetaminophen (paracetamol) can be fatal when an overdose is taken. The commercial preparations which can be used recreationally are those **containing DXM only** In the USA this includes mostly "Maximum Strength" cough formulas and Drixoral Cough Liquid Caps™, and generic equivalents. All should list ONLY *dextromethorphan hydrobromide* under active ingredients. Avoid *Benylin DM*™. The above cough syrups have 3mg/ml (15mg per teaspoon), for 360mg per 4oz bottle and 720mg per 8oz bottle; the cough gelcaps have 30mg each. Preparations like *Robitussin DM*™ contain guaifenesin and may cause vomiting.

Never take DXM with, or up to two weeks before or six weeks after, the prescription "non-drowsy" antihistamines (allergy medications) Seldane™, Claritin™, or Hisminal™. **Never** take DXM with, or up to two weeks before or three weeks after, a MAOI (Monoamine Oxidase Inhibitor) - certain drugs for depression; you will probably be told by your doctor if your drug is a MAOI (Prozac™ isn't). **Never drive under the influence of DXM. Don't** take DXM more than once or twice a week. **Don't** take DXM if you have a history of mental illness, panic attacks, seizures, liver, kidney, or heart disease. Some people react very badly to DXM; others don't experience anything at all, partly from inherited lack of an enzyme. Prozac™ blocks this enzyme and may lengthen or change the DXM trip. Recreational DXM use may be illegal. DXM may cause false positives on drug tests.

DXM trips vary depending on dosage, and can be lumped into four very different plateaus, or types of trips, depending on the amount taken. Dosages are given in milligrams per kilogram, so multiply the figure by your mass in kg (or pounds divided by 2.2). The first plateau, 1.5 to 2.5 mg/kg, is like a slightly intoxicating stimulant; music and movement are often pleasurable. The second plateau, 2.5 to 7.5 mg/kg, is intoxicating, with a "stoning" a bit like that of nitrous oxide or marijuana; sounds and sights seem to be on strobe-effect ("flanging"), short-term memory is somewhat disrupted, and there are occasional mild hallucinations. The third plateau, at 7.5 to 15mg/kg, consists of strong intoxication, hallucinations, and overall disturbances in thinking, senses, and memory; third plateau trips can be unpleasant. The fourth plateau, above 15mg/kg, is similar to a sub-anesthetic dose of ketamine, with dissociation of the mind from the body, and may be dangerous physically and psychologically. Most recreational use of DXM happens at the first and second plateau. DXM starts to become toxic around 20 to 30mg/kg.

While occasional recreational use of DXM is probably safe, some people react very badly to dissociatives, especially at high doses, and may panic. Frequent DXM use, like frequent alcohol use, is probably dangerous and should be avoided. Please be safe, sensible, and use your brain; it's the only one you'll ever have.

From *The Dextromethorphan FAQ: Answers to Frequently Asked Questions about DXM, v4.0*, by William White (bwhite@frognet.net). Available on Usenet rec.drugs.psychedelic and on the World Wide Web at http://www.frognet.net/dxm.html. This section may be freely printed or photocopied separately provided it is kept intact, on one page.

4.2 What is Dextromethorphan Hydrobromide (DXM)?

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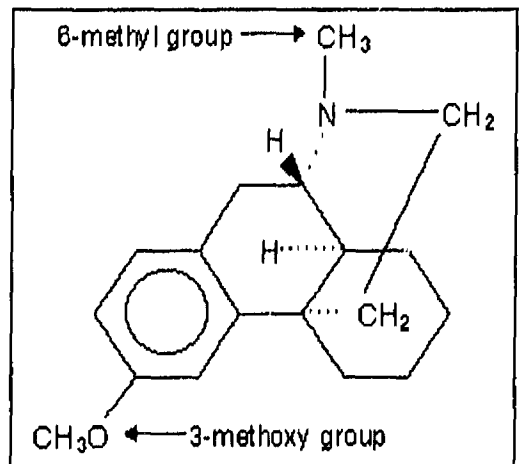

Figure 1: DXM Molecule

Dextromethorphan hydrobromide is the water-soluble salt of dextromethorphan (DXM) and hydrobromic acid (that is, DXM hydrobromide is what you get when you react pure DXM with hydrobromic acid). DXM is a synthetic morphine analog, similar to levorphanol, but does not have any opiate-like effects. DXM has been in use in the USA for approximately 30 years, and has replaced codeine as an OTC cough suppressant (1-3).

DXM has been popular as an "underground" recreational drug for at least 30 years (3). It is probably one of the few OTC medicines with any serious recreational use potential (ephedrine might also qualify). It is both extremely safe and very effective as a cough suppressant.

DXM's IUPAC name is [(+)-cis-1,3,4,9,10,10a-hexahydro-6-methoxy- 11-methyl-2H-10,4a-iminoethanophenanthrene], and is also (and more commonly) known as 3-methoxy-17-methyl-(9alpha,13alpha,14alpha)-morphinan; CAS-125-71-3 (1). Note: the 3-methoxy and 17-methyl groups are pointed out for later notes.

(Oh, just as a side note, I'm proud to say that for once I actually got the IUPAC name right all by myself - the Merck Ir[illegible] lists the same thing).

The recreational use potential of DXM has not, in general, been well known, either by drug users or by physicians. Not too long ago, many physicians denied that dextromethorphan was psychoactive at all; whether this was out of ignorance or a desire to prevent recreational use, I do not know (probably the latter). At present, there is an increasing body of knowledge about DXM's potential for recreational use (and abuse) available in medical journals (3-7,132,136,139-141).

DXM is unique among recreational drugs for several reasons. First, it is pharmacologically unlike most other recreational drugs (PCP and ketamine being its nearest relatives). Second, its effects can vary considerably from individual to individual. Finally, it can cause quite different effects at different dosage levels, ranging from mild euphoria to full dissociation.

4.3 What is Dextromethorphan Polistirex?

I[illegible]methorphan Polistirex is a time-release formulation of DXM; the "polistirex" refers to a sulfonated styrene-divinylbenzene copolymer complex -- basically, an edible plastic (1-2). It is occasionally spelled polystirex or polystyrex. Unlike the HBr salt, which is absorbed fairly quickly, this compound is intended for longer duration cough

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suppression. Most, but not all, people who use DXM recreationally tend to prefer the HBr form (which is also much more readily available). The polistirex preparation will probably increase the ratio of DXM to DXO (see next section).

Dextromethorphan polistirex may be more toxic than the hydrobromide version, possibly due to buildup of DXM in the bloodstream (143).

4.4 What is Dextrorphan (DXO)?

Dextrorphan is a metabolite of DXM (i.e., the body converts DXM to dextrorphan). The conversion from DXM to DXO occurs via removal of the methyl group at position 6, a process called "O-demethylation". DXO is very similar chemically to DXM, and reacts with the same receptors in the body, but with a very different spectrum. Whereas DXM is strongest at the PCP2 and sigma receptors, DXO primarily targets the NMDA receptor (see Section 10).

The practical upshot is that the dissociative and intoxicating or "stoning" effects are stronger with DXO, whereas the stimulation, cognitive alterations, delusions, and psychotomimetic (literally, "psychosis-like") effects are stronger with Γ Most DXM users find some balance between the two to be the most pleasurable. Too much sigma activity is u. .y regarded as dysphoric (strongly unpleasant) and disturbing, and if prolonged, may be dangerous (101,135).

Fortunately, you don't have to worry about converting DXM to DXO; the body does it for you via an enzyme called P450-2D6 or CYP2D6 (also called debrisoquine 4-hydroxylase). However, between 5 to 10% of the Caucasian population lacks this enzyme (12-15), and in the rest of us it can vary. Many drugs can temporarily block P450-2D6 from working (10-11) and thus alter the balance between DXM and DXO. For a list of these drugs, see Section 15.1.

One of DXM's metabolites, 3-methoxymorphinan, can itself block P450-2D6. As a consequence, taking a second dose some time after the first dose of DXM will probably increase the ratio of DXM to DXO in the bloodstream. Taking the dose all at once, on the other hand, will probably increase the relative amount of DXO. Generally, then, the quicker the dosing, the more DXO and less DXM, and the more NMDA blockade (like ketamine) and the less sigma and PCP_2 activity. Subcutaneous injection leads to very little conversion from DXM to DXO.

When discussing effects, this text usually uses "DXM" to refer to both dextromethorphan and its metabolite, DXO. A few people have used DXO specifically; one indicated that it did in fact have fewer cognitive effects than DXM.

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4.5 Is DXM Enjoyable as a Recreational Drug?

It depends on what you consider "enjoyable". Roughly one third of the people who try DXM like it enough to ever repeat the experience; one third hates it, and one third doesn't enjoy it enough to drink cough syrup. Among those who do enjoy it, most report that their more "profound" DXM experiences were in many ways also very unpleasant, challening, and have a strong dysphoric undertone. Experienced psychedelic users seem to enjoy DXM more than the inexperienced. Generally speaking, enjoyable DXM experiences require putting a lot of emotional and psychological energy into the experience.

DXM does not provide a simple high like marijuana, and it is not a substitute for other psychedelics. Many people will not enjoy it; before considering DXM, remember that you may hate the experience. If you are looking for a cheap buzz or a gentle ride, you probably won't like DXM.

4.6 Is DXM an Opiate?

No, it isn't. Sometimes people get confused because DXM's stereoisomer (basically, the mirror image molecule), called levomethorphan, is an opiate. In two dimensions the molecules look identical, but in three dimensions, they are mirror images of each other. DXM no more fits into opiate receptors than a left-hand threaded screw will fit into a right-hand threaded nut.

In fact, DXM doesn't bind at any opiate receptors, doesn't have opiate painkilling effects, and isn't cross-tolerant with opiates. It is only out of sheer chance that when DXM was invented, its origins were among the opiates; DXM's cough suppressant effects are completely different in mechanism from the cough suppressant effects of opiates.

4.7 Does Everyone Like DXM?

No, in fact from speaking with many people who have tried it, only about one third of the people who try it ever take it a[illegible] One third seem to absolutely hate it, and the last third couldn't care less. Among the third who do like it, the m[illegible]ity (around 80% of those who like DXM) take it once a month or less.

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Part of the problem is that not everyone gets the interesting sets of effects (see Section 5). To some, the DXM trip is just a moderate buzzing sensation and a feeling of being slightly drunk. So your mileage may vary.

A few people really enjoy DXM, and use it weekly; a very few (less than 5% of those who like DXM) use it more than twice a week. Keep in mind that I have not assessed the error margin on these figures, and that they reflect a biased sample of the population. I hope to have more accurate figures after completing a survey of DXM users.

4.8 How Does One Obtain and Use DXM?

DXM is available at drugstores throughout the world, chemical suppliers, and (very rarely) as a street drug. Generally, however, I wouldn't trust anyone saying he or she had DXM on the street; it's probably ketamine, PCP, or something totally unrelated.

DXM is most commonly available in cough syrups, though some syrups contain other ingredients which can make you sick (or dead) if you take too much of them. It is also available in gelcaps and in some places in capsules, either alone or in combination with other ingredients.

DXM can also be extracted from cough medicines, and the extract can be taken orally, injected subcutaneously, intraperitoneally, intramuscuarly, or intravenously. It can probably also be snorted or used rectally (though why one would want to I don't know). Smoking the free base is very difficult if not impossible. DXO (not DXM) free base can be smoked at 190 C (pers. comm.).

Some drugstores keep track of people who frequently buy DXM-containing cough preparations, especially if they buy multiple bottles at once or tend not to buy other things at the same time. This is less common in larger supermarket/drug stores. In some cities where DXM use has become popular (and come to public attention), sales have been restricted to adults. In Utah in the 1980's, DXM was placed behind the counter due to recreational use.

Finally, DXM is available from chemical suppliers, very few of which will sell to individuals.

Hopefully I'll soon be finished with the "Find the DXM" page, which allows people to find out which DXM preparations are available in their areas. Don't hold your breath, though; I'm a sysadmin at a small ISP and that doesn't leave me with a lot of time.

4.8.1 Cough Syrups

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DXM is widely available in cough syrups, both brand-name (such as *Robitussin*™ or *Vicks Formula 44*™) and store b[illegible]. Most DXM-containing cough syrups also contain one or more of the following other active ingredients: nasal decongestants, antihistamines, acetaminophen, or guaifenesin (see Section 4.11). As a rule, you want to avoid all of them.

Generally speaking, DXM cough syrups all taste nasty. This is for two reasons: to cover up the (even nastier) taste of DXM itself, and to prevent recreational use. The generics tend to be less thick, and thus more drinkable, than the brand names. Some people prefer to mix the DXM with sodas; others find this only makes an already unpleasant task even more unpleasant. Your Mileage May Vary.

Most people who have used DXM cough syrups recreationally seem to prefer to take it on a mostly empty stomach, possibly with crackers or some other source of carbohydrates. I generally feel that you should avoid slamming your kidneys and pancreas with a lot of glucose at once; thus I think some crackers or chips beforehand would be advisable. Greasy food should be avoided both before and after taking DXM. Most people report that if carbonated drinks are ingested, they should be clear (e.g., 7-Up™).

The German company "Dr Rentschler" makes a cough syrup called "tuss hustenstiller saft".

[redacted]

4.8.2 Gelcaps

There are "gelcaps" (liquid or gel filled capsules) available that contain DXM, but they tend to be brand-name only. The most frequent (if not only) brand in the US is *Drixoral Cough Liquid Caps*™. They come in boxes of 10 or 20 gel capsules, each containing 30mg of DXM. The gel capsule itself is red colored; the liquid inside is actually clear (and tastes very, very bad). The capsules are somewhat large, and difficult if not impossible to take without liquid to wash them down. This brand also comes with a $0.50 or $1.00 manufacturer's coupon inside, which some have taken to calling *Drixoral*™ *Dollars* (after *Camel Bucks*™, a fake currency coupon in Camel™ cigarettes which could be collected and "spent" on various stuff, unfortunately not including iron lungs and chemotherapy). Note that Drixoral also makes several other liquid and capsule products, all of which contain undesirable active ingredients besides DXM.

Recently, Drixoral Cough Liquid Caps have been getting harder and harder to find. The usual story from the drugstores is that they aren't very popular; my suspicion is that they are too popular. Look around, and you will probably be able to find them. There is a rumor going around that the "new" gelcaps have something in the coating that induces nausea, but I have found no evidence for this whatsoever. The ingredient list hasn't changed, and changing ingredients without making it public is strictly

Absorption from the gelcaps takes some time, and can be sped up somewhat by cracking open each gelcap in your mouth before it is swallowed. Note, however, that the liquid inside is apt to spurt out, and it tastes bad. Really, really bad - sour and bitter and cloying all at once with a stickiness that won't go away. However, if you can stand it, you can b[illegible]e used to it after the first few gelcaps. You can also crack open the gelcaps and try to collect the liquid, but it t[illegible]o go everywhere.

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Some people have claimed that gelcap DXM "feels" different from cough syrup DXM. This may be pure placebo effect, or it may be a result of the slower absorption (and thus more DXM vs. DXO) of gelcaps. It is also possible that t[illegible]active" ingredients in cough syrup may affect the experience by altering blood glucose levels. Most seem to pr[illegible] the gelcap "feel".

[redacted]

4.8.3 Tablets and Capsules (including Coricidin)

A variety of DXM-only pill brands are available throughout the world; unfortunately, none are available in the US. Some of the brands include:

- *Romilar* (southeast Asia and others)
- *Dr. Rentschler tuss hustenstiller retard kapseln* (Germany)
- *Everest* (Taipei and others)

[Erowid Note: Contac CoughCaps (Canada) were removed from this list because we received reports from Canadians that these contained 300mg acetaminophen per dose.]

P[illegible] let me know if you learn of any others.

DXM pills typically contain 15 or 30 mg of DXM, but some (such as the Dr. Rentschler brand, tuss Hustenstiller retard Kapseln) contain 60mg of DXM.

In the US, a new tablet brand, *Coricidin Cough & Cold*, is available. Containing 30mg DXM and 4mg chlorpheniramine maleate (an antihistame), these have become popular for lower plateau dosing, but can have extremely unpleasant anticholinergic side effects (drymouth, blurred vision, confusion, etc.) with higher doses. One person had to be hospitalized for vomiting blood and entering respiratory arrest after taking a high dose of Coricidin tablets. Even low doses often have unpleasant side effects and may be very confusing. At the lower plateaus, the chlorpheniramine does seem to alleviate the "Robo Itch" (see Section 6.1.3). The box is marked "suitable for people with high blood pressure" (Coricidin has other tablets available which are unsuitable for recreational use).

Furthermore, many Coricidin seem to report that frequent use leads to increasingly severe nausea triggered by taking, or even looking at, the pills. Some people have been known to puke in the drugstore from seeing the box (one user reported that 30+ people he knows suffer from this). I have no idea why this would happen.

Again, remember that the antihistamine in these tablets will change the character of the DXM trip (not necessarily in a good way), potentially increasing the degree confusion. **Do not use this product except at first and second plateau dosage!** An overdose of antihistamine, while not typically fatal, can be extremely unpleasant and has been reported to be a frequent cause of "bad trips" from Coricidin. Most DXM users have recommended not taking more than eight Coricidin tablets; some say not to use this product at all.

[redacted]

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4.8.4 Lozenges

There are a few brands of cough drops/lozenges which contain DXM without other active ingredients. One such brand is Sucrets™ (not the kind that come in the tin; these come in a bag and are labelled as containing DXM). Each lozenge contains 15mg DXM, as well as a number of inert ingredients (primarily sucrose, flavoring, coloring, magnesium silicate). Some people report the sucrets contain menthol; others don't (I suspect there may be different versions available). Other lozenges available contain from 7.5mg DXM (a South African brand) to 30mg DXM. Revco carries a DXM lozenge containing 5mg DXM each called Hold™, which supposedly taste better than Sucrets but are fairly expensive (and contain less DXM).

Since the inert ingredients present in these lozenges may cause nausea, some people have managed to get rid of most of them by placing the lozenges in a container of water and microwaving until fully dissolved, then filtering through a coffee filter, discarding the precipitate (solid), and drinking the liquid. Longer boiling seems to drive off the flavoring and menthol without affecting the DXM.

Interesting side note: recently, in South Africa, cough lozenges containing an abnormally high amount of DXM were illegally diverted from disposal and resold, causing "moderately severe" toxicity in 24% of primary school pupils using these lozenges (369).

4.8.5 Pharmaceutical and Chemical Suppliers

DXM is not DEA scheduled in the USA (or most other parts of the world), and consequently should be available via pharmaceutical chemical suppliers. For example, Sigma Chemical Company (1-800-325-3010) lists DXM hydrobromide (product D2531) for US $18.20 for 5 grams, US $128.45 for 50 grams. Note that I have no affiliation with Sigma in any way; I just happened to have a copy of their catalog handy when writing this.

In theory, it would be fantastically cheap and easy to order DXM this way; in practice, it's possibly difficult, and probably a Very Bad Idea. First off, most chemical companies are wary about selling to individuals (and if you're not a legal adult, forget it). Secondly, there's a significant chance that your order will be reported to the DEA, and although it's not technically illegal, if enough people do this, that may change very quickly.

Still, though, if you have the (possibly foolish) courage to try, there's no reason why this shouldn't be a reasonable source. Just use your head. And don't mention the FAQ.

Recently, a few chemical resale companies have popped up, relying upon the fact that many potentially useful chemicals can be sold legally to researchers (for which there doesn't seem to be a legal definition). **Please remember th is your responsibility to make sure that ordering and using DXM from a chemical supplier is legal in your area. A to my knowledge no chemical supplier (at least, none you're likely to run across) warrants its product for human consumption. Buyer beware!**

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Currently I know of two companies selling DXM (other than Sigma and the like, which won't sell to individuals): **Chemical Resale of Santa Barbara** and **WANMAN Enterprises**.

4.8.5.1 Chemical Resale of Santa Barbara

September 2001: CRSB is no longer in business according to its founder, Tom Kaspar. He recommends http://www.ltkresearchproducts.com/ as a reliable commercial provider.

CRSB was in limbo while Tom Kasper was in jail for a couple years for acting freaky and scaring people on an airplane. He and CRSB returned to business in the spring of 2001 and is once again selling DXM, among other chemicals. CRSB's products are not for human consumption and are for research only. CRSB can be contacted at wirehead@sb.net.

4.8.5.2 WANMAN Enterprises

Another company which offers USP grade DXM is WANMAN Enterprises. I know next to nothing about them except they gave me their address and prices for inclusion in the FAQ.

Current prices are 10g for $50, 100g for $300, and 1kg for $1000 (US dollars). Orders are shipped via private carrier (UPS, FedEx, etc). They have a special of 50g for $100 to readers of the FAQ (mention you saw them there). Certified check or money order should be made out to WANMAN Enterprises.

Their address:
WANMAN Enterprises
7620 Vance Rd.
Kernersville NC 27284
winfrey@ssasoutheast.com

4.8.5.3 Other

I have also heard of a company in Texas that sells small quantities of DXM (again, for research purposes I suppose), but do not know anything else about them.

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4.8.6 Extracted DXM

DXM can be extracted (see Section 11) and the extracted DXM can be taken orally, either as free base or as salt (the free base should convert to the hydrochloride salt in your stomach). DXM is commercially available as the hydrobromide salt (as well as polistirex), but DXM extraction typically results in DXM citrate (see Section 11.1.3). The free base tends to be somewhat alkaline and should be avoided unless combined with food and/or juice (or other acidic beverage). When taken on a mostly empty stomach, the extract is generally (but not always) absorbed faster than cough syrups, gelcaps, or capsules. Some extraction processes may convert some or all of the DXM into dextrorphan (DXO). Extracted DXM, unlike cough syrups and gelcaps, has no bromide toxicity (see Section 4.11.7).

4.8.7 Injection and Other Routes

DXM hydrobromide is reasonably soluble in saline, and I see no reason why other acid salts shouldn't be - though their long-term stability may be doubtful. However, **injection is a very dangerous way of using recreational drugs, especially if the substance in question is not prepared specifically to be injected**. Some of the potential risks include: sterile abscesses, torn or collapsed veins, bruising, muscle fiber damage, histamine release, infection (hepatitis F V, etc.), embolism (and possible resulting stroke or cardiac arrest), increased chance of addiction, overdose, and p. e mistaking you for a junky. True, most of these are unlikely, and if done correctly injection is generally very safe. However, the key word is *correctly*. If you're still interested, consult a medical text; I'm not going to teach you how to shoot up.

A few notes for those brave or stupid enough to still be interested. Intravenous (IV) and intramuscular (IM) injection both seem to produce similar results in animals, and IM injection is almost always safer. DXM can also be injected intraperitoneally (IP), but that evidently requires some skill. Subcutaneous (SC) injection ("skin popping") leads to slower absorption and a great increase in the amount of DXM relative to DXO. All injected drugs should be completely pure, dissolved in the appropriate physiological saline. In the case of SC (and possibly IM) injection, injecting too large a volume of material can lead to a sterile abscess.

DXM can also theoretically be snorted although I don't generally think this is a very smart route; the nasal lining is very tender. DXM free base is probably too alkaline to try this with. It can also probably be used rectally, but somehow the thought of a cough syrup enema doesn't thrill me.

Smoking DXM free base has been attempted several times by various people without much success. DXM itself seems to vaporize at a fairly high temperature, and is extremely harsh. To make matters worse, in typical DXM extractions, some of the flavoring agents end up surviving the extraction and they lend a definite unpleasant taste to the smoke.

I have received one report of a successful DXM freebasing experiment. The person said that while it was nice to know it was possible, it was just too much trouble to be worth it. Another person reported making the attempt and suffering from a severe burning sensation in his lungs which ended up as an asthma attack.

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4.9 What are Some Typical DXM-Containing Preparations?

OK, I finally gave up on even trying to list commercial DXM preparations because there are too many (not to mention they differ from place to place even within the US). Instead, I list here the typical DXM formulas and preparations you are likely to encounter.

- **Pediatric Syrups (1-1.5mg/ml DXM)**
  There are several brands and generics of "Pediatric" formulation DXM preparations. Intended for children, they contain very little DXM; on the other hand, they usually taste better. In general though it's a waste of money and time to try and use pediatric DXM formulas for recreational purposes.
- **Regular Strength Syrups (2mg/ml DXM)**
  Many "regular strength" cough syrups contain 2mg/ml DXM. In the US, the most notable example is Vicks Formula 44™ (which formerly contained 3mg/ml). These are of course quite usable for recreational purposes, although 3mg/ml syrups are preferred.
- **"DM" Cough Syrups (2mg/ml DXM)**
  Most of the "DM" cough syrups (of which the notable brand is Robitussin DM™) contain 2mg/ml DXM as well as gauifenesin. During the 1980's, many of these syrups contained 3mg/ml DXM but were reduced in strength in response to recreational use. These syrups can also be used recreationally, but note that the guaifenesin can cause nausea or vomiting (see Section 4.11.3).
- **Maximum Strength Cough Syrups (3mg/ml DXM)**
  The strongest syrups regularly available in the US are 3mg/ml and are typically marked "Maximum Strength Cough" (of which Robitussin™ is the most notable example). The generics are almost always called "Tussin Maximum Strength Cough". These are the most commonly used syrups for recreational purposes.
- **Concentrate Syrups (6mg/ml DXM)**
  There are a very few brands of "concentrate" syrups, which are intended for institutions (or large families) who buy the concentrate and dilute it, possibly adding flavoring. The only brand I've ever heard of is Pinex™. Good luck trying to find these.
- **Gelcaps (30mg DXM)**
  Drixoral Cough Liquid Caps™ are available in the US (and possibly other places), and contain 30mg DXM in a gel capsule. These are sporadically available; if you can't find them in your area, try elsewhere.
- **Lozenges (7.5mg - 30mg DXM)**
  A few lozenges are available which contain DXM. In the US, the only brand I'm aware of is Sucrets™, which contain 15mg of DXM (see above notes on Section 4.8.4). Another brand containing 7.5mg DXM is available in South Africa.
- **Capsules and Tablets (15mg - 60mg DXM)**
  Various capsules and tablets are available throughout the world containing only DXM (to my knowledge, none are available in the US). These range from 15mg to 60mg per pill, with 15mg and 30mg being the most common.
- **DXM + Chlorpheniramine Capsules (30mg DXM)**

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Coricidin Cough and Cold™ tablets are available in the US with 30mg DXM and 4mg chlorpheniramine maleate (an antihistamine). These are suitable **only for first and second plateau dosing** (generally, ten pills or less) due to the adverse effects (possibly dangerous) of antihistamines at high doses. Be advised that some people react very poorly to antihistamines. On the other hand, the antihistamine evidently can prevent the dreaded "Robo Itch" (see Section 6.1.3). Coricidin has other formulas which contain undesirable or dangerous ingredients; the correct one is marked "suitable for people with high blood pressure".

- Miscellaneous

I have heard rumors of DXM available on the street in 240mg, 300mg, and 600mg doses, but I cannot verify these rumors. The "DXM" may actually be PCP, ketamine, or anything for that matter (but is probably just extracted or purchaed DXM).
"Agent Lemon" (see Section 11.1.3) has also been made available in some locations. Again, be advised that you are relying upon someone else's chemistry skills.

4.10 How am I Supposed to Drink Cough Syrup?

question. Part of the reason DXM isn't terribly popular is that drinking cough syrup is, well, disgusting. However, here is a suggested method courtesy of "JR":

Materials:

- 2 glasses
- A sink with COLD water
- cough syrup
- toothpaste

Procedure:

1. Fill one glass with water, the other with Robo. **Keep the water running** (it makes the sensation less gross for some reason). **Do not allow Robo to be smelled under any circumstances!**
2. Pinch nose shut with one hand
3. Sip water
4. Take 5-6 deep hyperventilative breaths
5. Slam the entire 8oz bottle of Robo at one time.
6. **While still holding nose**, drink remainder of water
7. Refill glass with water and drink the entire glass of water.
8. Repeat again, for a third glass of water.
9. **Still holding your nose**, spread toothpaste in your mouth, thoroughly coating the inside of your mouth. Release your nose, and exhale through both nose and mouth.

Minty fresh!

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4.11 What Should I Know About Other Drug Ingredients?

There are five main classes of active ingredients that are present in OTC DXM-containing products: decongestants, antihistamines, guaifenesin, analgesics, and alcohol. Each will be discussed in turn, followed by "inactive" ingredients. With the possible exception of alcohol, all should be avoided, although for differing reasons. Some of these other active ingredients will make your experience unpleasant; others can kill you. Additionally, some of the dyes and other "inactive" ingredients may cause some people trouble.

4.11.1 Decongestants

There are three nasal decongestants that are used in OTC cough formulas in the USA: PPA, pseudoephedrine, and phenyleprine (the latter is almost always found with antihistamines). PPA is also known as phenylpropanolamine (from which the acronym PPA is derived), norephedrine, and the IUPAC name [alpha-(1-aminoethyl)benzyl alcohol]. Pseudoephedrine, known as the brand name Sudafed™, has the IUPAC name [(+)alpha-(1-methylamino)benzyl alcohol]. Phenyleprine is [(-)-3-hydroxy-alpha-(methylaminomethyl)benzyl alcohol] (1-2).

These decongestants belong to a class of chemicals known as the phenethylamines; this class also includes methamphetamine, MDMA (ecstasy), MDA, etc., and tend to be DEA scheduled. Decongestants are not scheduled by the DEA (this is USA laws) because they do not have significant psychostimulant activity. Ephedrine, which is similar to pseudoephedrine, and is (or was, depending on your state) available throughout truck stops and mail-order pharmaceutical companies in the USA, does have mild stimulant properties; thus its popularity as a form of "legal speed". All of these drugs stimulate the sympathetic nervous system (the "fight or flight" system) and are thus called sympathomimetics.

What nasal decongestants do share with the more potent amphetamines is the peripheral activity common to sympathomimetics, such as vasoconstriction (constriction of blood vessels) and decreased nasal secretions (the good side), and - with larger doses - insomnia, hypertension, heart rhythm abnormalities, hemorrhaging, stroke, or death (the bad side) (8). Note that these are extreme reactions, and that individual tolerance to sympathomimetics tends to vary considerably. Tolerance can build quickly, and a fatal dose for one person may have only a mild effect on another person.

Because of the potential danger of hypertension, exceeding the recommended dose of DXM and decongestant containing preparations may be asking for trouble. Most people can probably handle it in smaller recreational doses, but the peripheral "speediness" can be distinctly unpleasant. Anyone with high blood pressure or the like has no

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business taking large quantities of decongestants.

F[illegible], more recent research suggests that many of DXM's potentially disturbing side effects (see Section 6) might be po[illegible]tiated by any stimulant. Panic attacks, hyperthermia, hypertensive crisis, and the like are notable examples. In extreme cases, stroke or brain hemorrhage may be possible.

Conclusion: *Possibly suitable for first plateau use only; otherwise avoid these drugs!*

[redacted]

4.11.2 Antihistamines

The antihistamines operate by blocking histamine receptors (see Section 10.1 for an explanation of receptors). Peripherally, this has the effect of reducing the symptoms of histamine activity (stuffy and runny nose, itchy eyes, hives, rashes, etc.) associated with infections and allergies. In the brain, histamine is partially responsible for wakefulness, and antihistamines that cross the blood-brain barrier will cause sleepiness. In fact, most OTC "sleeping pills" in the USA are really just antihistamines (although melatonin is making inroads as an alternative). There are antihistamines that do not cross the blood-brain barrier (e.g., Seldane™) but these are prescription in the USA.

I[illegible]loses of antihistamines can result in dizziness, impairment of concentration, extreme sedation (or, paradoxically, in[illegible]nia), headache, heart palpitations, dry mouth, gastric discomfort, delusions, and abnormally high blood pressure. Doses of 30-60mg/kg have been fatal in very young children; most adults, however, are very unlikely to overdose on antihistamines. Death, when it does occur, is from cardiovascular collapse or respiratory arrest (8). High doses of prescription antihistamines are much more dangerous; **do not** mix DXM with prescription antihistamines!

The danger of an antihistamine overdose is very low when using a DXM-containing product recreationally. However, you will most likely experience some unpleasant symptoms, such as sleepiness, dry mouth, heart palpitations, etc. These side effects increase as the dosage increases. A very small amount of antihistamines might be useful in preventing DXM-induced histamine release.

Conclusion: *Traditional antihistamines may be suitable for first and second plateau dosage levels, but should not be used at the upper plateaus. NEVER use DXM with prescription, non-drowsy antihistamines!*

[redacted]

4.11.3 Guaifenesin

([illegible])enesin (gwye-FEN-a-sin) [3-(2-methoxyphenoxy)-1,2-propanediol] is an expectorant; it increases the production of respiratory tract fluids, thus making phlegm less viscous and easier to cough up. Guaifenesin has been shown effective as an expectorant, but is of no use as a cough suppressant. It is often combined with dextromethorphan.

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Guaifenesin should not be used for chronic coughs or coughs accompanied by excessive phlegm (1-2).

doses of guaifenesin tend to induce emesis (i.e., you puke). Other effects from high guaifenesin doses are not well known, but probably not serious. Some suggest that guaifenesin may act as a muscle relaxant at high doses (an effect for which it is used in veterinary medicine).

Conclusion: *as most people do not enjoy vomiting, I would recommend avoiding guaifenesin-containing products.*

[redacted]

4.11.4 Analgesics, Acetaminophen/Paracetamol

Acetaminophen, also known as paracetamol and APAP, is the most common analgesic (painkiller) present in cough suppressant formulas. It is closely related to the NSAIDs (non-steroidal anti-inflammatory drugs) of which aspirin and ibuprofen are the two most common examples. Unlike the OTC NSAIDs, however, acetaminophen/paracetamol does not tend to irritate the stomach, and thus its inclusion in cough syrups.

An acetaminophen overdose is very dangerous. Normally, acetaminophen is metabolized (broken down) in the body by two separate pathways, both of which lead to harmless metabolites. However, these two pathways can only handle so much before saturating. At that point, the remaining acetaminophen is metabolized by a cytochrome P450 liver enzyme. The metabolite via the P450 pathway is toxic to the liver (2,8).

Furthermore, this doesn't happen right away; it can take 16 hours before any signs of liver damage show up. This delayed toxic effect has been responsible for the rather painful deaths of some people who (accidentally or not) overdose on acetaminophen, and then think they are fine when no immediate problems occur. There is an antidote (acetylcystine), but it must be administered within the first 12 to 16 hours.

The toxic dose of acetaminophen can be as low as 50mg/kg; for a 60kg person this is only six acetaminophen tablets. This is unlikely but possible. **DO NOT UNDER ANY CIRCUMSTANCES USE RECREATIONALLY ANY DXM PRODUCT WHICH ALSO CONTAINS ACETAMINOPHEN / PARACETAMOL!**

As for aspirin and ibuprofen, the other two most common OTC painkillers, both tend to irritate the stomach at high doses. I recommend against them, especially if you have an irritable stomach. *Never take large doses of aspirin or ibuprofen if you have an ulcer.*

Conclusion: *avoid any product containing an analgeisc.*

[redacted]

4.11.5 Alcohol

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Most cough syrups contain some alcohol, to help dissolve the DXM (and other drugs) and to numb the throat. With a few exceptions (such as Nyquil™), the amount of alcohol is not usually very great. While alcohol does not, in general, mix well with DXM as a recreational drug, the amount in cough syrups should not cause trouble unless you are specifically sensitive to, or attempting to avoid, alcohol. There are alcohol-free preparations available; gelcaps and tablets are alcohol-free.

4.11.6 Food Coloring and Dyes

Some of the dyes used in cough formulas may give some people allergic reactions. Most notable among these is tartrazine (FD&C Yellow #5). Generally, these dyes are not a problem unless you take a lot of them (which recreational DXM use may involve). If you think you may be allergic to a dye, switch to a different brand (or more accurately, a different color). It is also a good idea to keep an antihistamine (not a prescription or non-drowsy one!) nearby in case an allergic reaction does occur.

4.11.7 Bromide Ions

DXM is usually ingested as a hydrobromide salt. Large amounts of bromide ions can cause sedation and eventually lead to bromism (bromide poisoning), which affects (among other things) the skin and nervous system (see Section 6.3.15. I don't think this is terribly relevant for users of DXM (recreational or not); however it is one more reason to avoid prolonged high-dose use. You can avoid bromide ions by converting the DXM to free base and/or hydrochloride salt (see Section 11.1). Some physicians do believe that prolonged heavy use of DXM may lead to bromism (144).

4.11.8 Other "Inactive" Ingredients

Cough syrups tend to contain several thickening and sweetening agents. Glucose, sucrose, invert sugar, and fructose are commonly used as sweetening agents. Obviously, a person with blood sugar problems (diabetes or hypoglycemia) should not take large amounts of these syrups. "Diabetic" syrups are available.

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Thickening agents don't generally cause problems other than nausea. Occasionally people will look on cough syrup labels and see propylene glycol or polyethylene glycol, and (thinking about ethylene glycol, i.e., antifreeze) worry about toxicity. Propylene glycol is not toxic, even though ethylene glycol is. The same goes for polyethylene glycol (PEG) - it's also nontoxic. About the worst you will get from any of these is an upset stomach.

One general note - keep in mind that your body does eventually have to use or excrete whatever you eat and drink. Drinking huge amounts of sugars and thickening agents can put a fair amount of load on the pancreas and kidneys and should definitely be avoided if you have kidney problems already. There is anecdotal evidence that regular high-dose use of DXM cough syrups (without eating much) has led to kidney damage due to the glucose load (though I suspect rhabdoymolysis may be the cause -- see Section 6.2.7. I cannot confirm this but I can't disprove it either. I've also heard of people having blood sugar problems after repeated use of DXM cough syrups, but again I can't verify this.

4.12 Why are So Many DXM Preparations in Liquid Form?

Cough preparations are in liquid form for two reasons. First and foremost, most people have the (mistaken) belief that in order for a cough suppressant formula to work, it must coat the throat. While this may be true for local anaesthetics, in the case of DXM (or codeine for that matter), it's complete bunk. If consumers were a bit smarter, maybe we wouldn't have to gag down cough syrup. There are, in fact, gel-capsule cough suppressants on the market, and I expect that tablet or capsule dextromethorphan will eventually be more common.

Second, tablet-form DXM preparations have been kept from the market in an attempt to prevent their recreational use. Romilar™ tablets used to be available in the US, but were removed from the market due to concerns about their abuse. Other DXM formulas have been reduced in strength, or combined with other ingredients, in an attempt to prevent or reduce recreational use potential.

4.13 Is Recreational Use of DXM Illegal?

Possibly. There may be laws making it a crime to use OTC medicines in any way other than directed on the label. Not that this stops people from using ephedrine (a bronchodilator) as a stimulant. Nor are you likely to get caught and/or prosecuted; the authorities are much too busy infringing upon our civil rights looking for the illegal drugs. But, remember - I SPECIFICALLY instruct you NOT to use any medicine in a manner inconsistent with its labeling.

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Furthermore, suggesting to someone that they use DXM as a recreational drug could also be violating a law - against prescribing drugs as a layperson. Again, it's not likely to happen, but it is possible.

D[illegible] is a prescription drug in Sweden (9). It is prescription and scheduled in Australia unless combined with other active ingredients. It may become prescription in other countries. In drug stores in some areas it is kept behind the counter, must be requested, and is only sold to adults.

4.14 If DXM is Legal Why Isn't Everyone Doing It?

A lot of reasons, actually. Beyond the obvious one that not everyone knows about it are a number of reasons which may be more relevant. First and foremost, DXM doesn't appeal to everyone; in fact, it seems to follow a "rule of thirds". One third of people who try DXM like it, one third hate it, and one third could care less.

Secondly, doing DXM is either disgusting or a time-consuming process for most people. Cough syrup tastes bad, and is unpleasant to drink; even the gelcaps become unpleasant to take after a few times due to their rather large size. DXM c[illegible] course be extracted, but it is a time-consuming process that requires enough effort to discourage those only c[illegible]ly interested.

Third, DXM is to a certain extent "anti-addictive", at least when used occasionally. Because DXM blocks NMDA receptors (see Section 9 and Section 10.3), it prevents associating any pleasant effects of the drug with the taking of the drug. Instead, the memories of taking the drug are associated with sensations *before* the DXM kicks in, e.g., nausea.

Fourth, DXM trips can be extremely confusing, especially if the user doesn't have experience with psychedelics. The DXM trip is so unlike an LSD or mushroom trip that people who take it expecting the latter are often discouraged and do not repeat the experience.

Finally, DXM has a reputation as a "loser drug", something people take when nothing else is available. While it's true that DXM is legal, and thus *can* in fact be taken when nothing else is available, this doesn't make it any less powerful (or any safer) than illegal drugs.

4.15 New Medical Uses for DXM

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In the past five years, research, especially research centered on NMDA receptors, has uncovered more and more medical uses for DXM. Some of these include:

[redacted]

4.15.1 Diagnostic Uses

Cytochrome P450-2D6, also known as CYP2D6 or debrisoquine hydroxylase, is a liver enyme which is extensively involved in metabolizing drugs. Many drugs are metabolized by P450-2D6, and many drugs also inhibit it. Some people are genetically lacking in the normal P450-2D6 variant, and physicians will use DXM to determine which variant of P450-2D6 a patient has (10-11). About 5-10% of Caucasians and 0.5% of Asians seem to lack P450-2D6 entirely, or have a very inactive mutation (12-15). In remaining individuals, its activity can vary significantly due to genetic factors (15-18). Between 0.5% and 2% of the population has multiple copies of the P450-2D6 gene and will metabolize 2D6-dependent drugs much more quickly than most people (155).

Since many drugs become toxic at high doses, it is important to give the proper amount to those people who will metabolize it differently than the normal population. DXM is used to test metabolism by CYP2D6. The patient is given a specific amount of DXM, and then the relative concentrations of DXM and its metabolites are determined.

S recent research suggests that susceptibility to lung cancer may be related to P450 variant, and DXM may be an e. ve diagnostic tool for predicting lung cancer susceptibility (376).

[redacted]

4.15.2 Neuroprotectant Uses

One area in which DXM (as well as other NMDA blockers; see Section 10.3) shows great promise is in the prevention of brain damage resulting from excitotoxicity (over-stimulation of nerve cells to the point of cell death) and other types of nerve cell damage (19). DXM may reduce or eliminate the brain damage resulting from conditions such as fever, hypoxia (lack of oxygen) (20), ischemia (cutoff of blood to brain cells) (21-22), physical injury (23), infection (such as poliomyelitis, encephalitis, and meningitis), stroke, seizure, drug toxicity (24-25), electrical shock (231), hypoglycaemia (243), and withdrawal from long-term dependence upon certain drugs (notably alcohol, barbiturates, and benzodiazepines such as Valium™) (26-29).

In the case of infection (and in particular poliomyelitis), it has been demonstrated that the damage to the CNS often occurs not from the infection, but from the body's own defenses, and notably from a chemical called quinolinic acid (a m olite of tryptophan) (30,31). Quinolinic acid is a very potent agonist (activator) at excitatory amino acid r ors, of which NMDA is one type; DXM prevents quinolinic acid from activating NMDA receptors. (Incidentally, the function of quinolinic acid - if it has any - is not currently known; it may be involved in the immune response).

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As for physical trauma, hypoxia, seizure, stroke, etc., there are several experiments which indicate that the majority of the damage again comes from excitotoxicity at excitatory amino acid receptors. While DXM has shown somewhat less s s there (possibly due to other factors being involved), it still has potential.

DXM is currently being evaluated as an anticonvulsant (32,33). The animal data are somewhat conflicting, but the most accurate model of epileptic seizures (called *kindling*) responds well to DXM. Preliminary studies in humans indicates that even very low levels of DXM may help prevent seizures. This effect is not, as was originally thought, due to NMDA receptors; instead, it is probably due to sigma receptors or voltage-gated ion channels (32).

Interestingly, DXM produces different side-effects in kindled (seizure-susceptible) animals than in non-kindled animals (this may be due to uncoupling of NMDA receptors). It is possible that humans susceptible to seizure may experience different effects from recreational DXM use.

[redacted]

4.15.3 DXM for Chronic Pain

DXM seems to enhance the painkilling ability of opiates without adding to the side effects, and in practice the patient can lower the dose of opiates while maintaining analgesic effect (37). As an added bonus, DXM seems to prevent o tolerance (see next section). DXM by itself has only marginal analgesic effect if any (373,375).

[redacted]

4.15.4 DXM for Drug Addiction

DXM, as well as other dissociatives, seems to prevent and even reverse tolerance to (and thus physical addiction to) many drugs. In the case of opiates, DXM has been used to treat withdrawal symptoms (169). DXM plus diazepam (Valium™) was tested and found to be more effective at combating the symptoms of heroin withdrawal (goose flesh, tremors, pupil dilation, joint pains, etc.) than chlorpromazine (Thorazine™) plus diazepam (34). A further study verified this and found that adding tizanidine (an alpha-2 adrenergic agonist) to the DXM+diazepam cocktail was even more effective (133).

Dissociatives have also been found to reverse or prevent tolerance to cocaine (247), nicotine (249), and alcohol (232), and some researchers have suggested that DXM (and other NMDA antagonists) may be universally useful in most if not all drug addictions.

[redacted]

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4.15.5 DXM for Disease and Miscellaneous Conditions

DXM is being investigated as a treatment for various diseases due mostly to its NMDA antagonist effects. The most promising results have been in treating shingles, a disease which primarily affects the elderly wherein a dormant viral infection flares up and attacks peripheral nerves. DXM can block the (often excruciating) pain from this flareup, and may prevent peripheral nerve damage (370). It may also be effective at treating herpes pain (368).

Some chronic neurodegenerative diseases may be treatable with DXM. Notable among these include ALS (Lou Gehrig's Disease) (168), although more recent research seems to show that DXM may not be a useful treatment for ALS (363). Even "Mad Cow" disease (and other prion diseases) may respond to treatment with DXM (362).

DXM has also been used to treat mental retardation (35), and Parkinson's disease (36). DXM may even have be useful in treating lung and other cancers (38) and preventing tissue rejection in transplants (263) due to the (poorly understood) effects of sigma ligands on tumor cells and the immune system (see Section 10.2).

Some papers have suggested that dissociatives have antidepressant effects (208,212,223,245,250), while others dispute this (225,229). Finally, the dissociative qualities of DXM may be of use; ketamine has been used to calm children in order to perform genital exam in cases of suspected sexual abuse (184-186).

4.16 Drug Interactions

Please read through this section if you are taking (or have or will be taking) other drugs in addition to DXM.

4.16.1 Fatal or Dangerous Interactions

DXM should not be used (either recreationally or at normal dosage levels) by people who are taking a monoamine oxidase inhibitor (MAOI, rhymes with "wowee") - either a prescription MAOI or a recreational one such as harmaline. N[illegible]hat there is considerable confusion among drug users about what is and isn't a MAOI. MAOIs include a few d[illegible]prescribed for depression and Parkinson's disease, and a few rare recreational drugs derived from exotic plant sources (harmine and harmaline, from Syrian Rue and Yagé, for example). Prozac™, MDMA, cheese, beer, Seldane™,

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etc., are **not** MAOIs - they are things to avoid when taking a MAOI. If you are taking a prescription MAOI you will almost certainly know, as your physician will have (hopefully!) told you to avoid eating aged cheeses. **Combining D and a MAOI has been fatal (3)!**

Fluoxetine (Prozac™) is a cytochrome P450-2D6 inhibitor (39) and will change the characteristics of a DXM trip somewhat, increasing the ratio of DXM to DXO. Other P450-2D6 inhibiting drugs, which include many antidepressants, will probably do the same; see Section 15.1. The duration of the trip may be greatly extended by P450-2D6 inhibitors; some users have reported effects lasting 12 to 24 hours past the normal duration. The potency of DXM may also be enhanced via other mechanisms by fluoxetine (40).

Combining DXM with the antidepressants Desyrel (trazodone) or Serzone (nefazodone) has been reported to cause liver damage!

One user reported that combining DXM with bupropion (Wellbutrin[tm]) resulted in a prolonged (3+ day) hangover and an increase in adverse side effects.

Fluoxetine and other SSRI antidepressants, as well as tricyclics and lithium (and of course MAOIs) may interact with DXM to cause **serotonin syndrome** (see Section 6.2.9). This condition, although rarely fatal, is not terribly pleasant. Vascular disease may increase the chance for serotonin syndrome with DXM + antidepressants (364), and other disease conditions may do so as well. Some DXM users who have taken DXM while on antidepressants have reported unpleasant reactions that sound a lot like serotonin syndrome, so you might want to watch out. Some of the symptoms of serotonin syndrome include muscle rigidity, confusion, diarrhea, incoordination, low-grade fever, sweating, muscle tremor, mania, agitation, exaggerated reflexes, and nausea.

D t take DXM with the diet drugs phentermine, fenfluramine, or phen-fen; this combination can also cause s nin syndrome.

DXM should not be taken (recreationally or at normal dosage levels) with the prescription antihistamine terfenadine (Seldane™). **This combination has been fatal (41).** Terfenadine has been implicated in other drug interactions, incidentally. The reason for this interaction seems to be that terfenadine, which is normally metabolized by a P450 enzyme, induces heart irregularities when it builds up. DXM may saturate the P450 enzymes that normally metabolize terfenadine. Incidentally, this probably applies to other non-drowsy antihistamines, such as Claritin™ and Hisminal™ as well; avoid combining them with DXM.

Some people find that nicotine (cigarettes) causes severe nausea when combined with DXM. Others have noticed a general increase in physical discomfort and "bad trips" from combining the two. Some research has suggested that cigarette smoke inhibits monoamine oxidase (378,379) in which case cigarettes could greatly increase the chance of unpleasant side effects.

[redacted]

4.16.2 Beneficial Drug Interactions

Both opiates and dissociatives have strong side effects which can limit their usefulness in pain treatment. When the two

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are combined, however, a synergistic effect occurs, and patients can lower the dose of both drugs to the point where side effects are minimalized (236,267,278). Dissociatives prevent tolerance to opiates (248) and can alleviate opiate w[illegible]awal (254). On the other hand, combining the two may increase the chance for respiratory depression and fatal ov[illegible]ose.

[redacted]

4.16.3 Recreational Drug Interactions

Marijauna and DXM is a frequently used combination, albeit one which has seen little research. Competitive NMDA blockade enhances marijuana catalepsy (210), and conceivably noncompetitive blockade would as well. Dizocilpine, a dissociative used in research, decreases the analgesic effects of marijuana (214), and causes downregulation of anandamide receptors (THC receptors) (218).

Dissociatives may block the depletion of 5HT (serotonin) caused by MDMA (ecstasy) (241). However, there is also the potential for hypertensive problems, so I wouldn't advise this combination. Methamphetamine produces vacuolation of neuron terminals due to a collapsed vesicular proton gradient (181) (translated into English, this means that speed damages brain cells by breaking open the little bubbles of neurotransmitters inside the cells). However, dizocilpine (and presumably other dissociatives) may prevent this (219). It also seems to block methamphetamine induced 5HT d[illegible]ion (241).

Antidepressants and dissociatives seem to interact as well, not necessarily in a good way. Both desipramine and dissociatives increase prefrontal lobe dopamine activity; the combination is highly synergistic (277). Even worse, dissociatives may actually reverse the antidepressant effect (229). Dizocilpine reduces $5HT_2$ receptor density (212), and increases 5HT binding in the hippocampus and striatum (252). On the other hand, one paper found that dizocilpine helped antidepressants in some tests (245,250).

Finally, dissociatives block tolerance to many drugs, including alcohol (232), cocaine (247), nicotine (249), and morphine (248).

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5 The DXM Experience

from William White's DXM FAQ
used at Erowid with the permission of author William White
Last edit: Aug 2002, Erowid.org. Added English Measurement Note to dosage table.

This section discusses some of the effects you might expect to feel if you were to use DXM recreationally (which I recommend against, of course). The effects listed are generally positive, and reflect the results of people who have positive experiences with DXM.

Some people have negative experiences with DXM! For these people, the DXM "trip" may just be several hours of dizziness, nausea, hot flashes, and confusion, with several days of hangover. This is the main reason why most DXM users suggest starting with a first plateau dose.

5.1 What is the General Character of the DXM Experience?

This is a difficult question to answer, because DXM's effects tend to vary widely depending on the person, their set and setting, other drugs, their physiology, and so on. DXM, probably more than most drugs, tends to exert its (recreational) effects in separate stages or "plateaus", rather than being linearly dose-dependent. Within a given plateau, a given set of effects will occur (at a roughly dose-dependent strength). On the other hand, once the next plateau is reached, the feeling may change entirely. A reasonable analogy is water - it exists in three states (solid, liquid, and gas) which all can exist at varying temperatures (e.g., hot water and cold water), but which have different characteristics.

DXM and its metabolite, dextrorphan (DXO), produce different sets of effects. Normally, DXM is converted mostly or entirely into DXO, but with recreational doses, the conversion enzyme (P450-2D6) may saturate, leaving a mixture of DXM and DXO. Furthermore, another of DXM's metabolites - 3-methoxymorphinan - can also block this enzyme, so that taking divided doses leads to more DXM and less DXO than taking a combined dose of the same amount.

DXM's effects are in some ways much more subtle than DXO's. Whereas DXO produces a heavy "stoning" or intoxicating effect, DXM by itself is only lightly intoxicating. DXM, however, can alter the thought processes, leading to highly abnormal, psychosis-like mental states. It is possible that DXM, via sigma activation, may induce a mental state similar to that of schizophrenia. Whether or not this is fun to you is, of course, up to you.

DXM seems to exhibit at least four definable plateaus based solely on dosage, and an additional plateau is notable from a specific dosing regimen (see below, Section 5.9). I previously listed three plateaus; then four; now I'm listing five (though "Plateau Sigma" doesn't occur at dosages higher than the fourth plateau). Evidently, dosages above the fourth plateau lead to full anaesthesia, psychosis, coma, and/or death.

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Not everyone notes distinction between the first and second plateaus, or between the third and fourth plateaus. Others suggest that each effect of DXM has a dosage level at which it starts, and (in some cases) a dosage level at which its e[illegible] are no longer noticeable (being overpowered by other effects). Some people will disagree with this classification m[illegible]od, but I think this is the best way to represent DXM's effects. Both the third and fourth plateaus have significant dissociative characteristics, much like ketamine.

The most important thing to keep in mind is that the effects in different plateaus are often very different. For example, on the first plateau, DXM tends to have a stimulant effect. Upon reaching the second plateau, however, the stimulant effect may no longer be present.

The beginning of the comedown off of a DXM trip can come abruptly. Often, the user will know when it's starting to end by noticing the return of normal sensory processing. Coming down from there may take a significant amount of time. A second DXM trip too soon after coming down is not a good idea due to the potential for side effects and psychotic episodes (227). Wait at least three days and preferrably two weeks between each DXM trip.

The following table can be used as a general guideline for the plateaus. For convenience I give example dosages in gelcaps and 3mg/ml syrup for 75kg and 150lb adults; adjust up or down by the amounts indicated per 10kg or 25lb. Calculating with the mg/kg is more accurate, but it's easy to make mistakes when using non-metric measures. **These dosages are as DXM hydrobromide.**

Dosage will vary considerably from person to person, by as much as 5 times! Also, these mg/kg figures should evidently be adjusted down for higher mass (e.g., maybe 6mg/kg to 13mg/kg third plateau for a 150kg adult). Note that kg = pounds * 0.45.

I [illegible] included a new category in this table: "Usenet Suggestions". This is a combination of suggested dosage g[illegible]mes from Usenet, and may more accurately represent the plateau dosage of DXM in regular users (the original plateau levels were based mostly on occasional users).

Table 1: DXM Plateaus and Dosages

Plateau	First	Second	Third	Fourth
Dosage Range (mg/kg)	1.5-2.5 mg/kg	2.5-7.5 mg/kg	7.5-15 mg/kg	>15mg/kg
Usenet Suggestions (mg/kg)	2.7 mg/kg	6.4 mg/kg	9.4 mg/kg	18mg/kg
Gelcaps (30mg) for 75kg adult	4 to 6 gelcaps	6 to 18 gelcaps	18 to 37 gelcaps	>37 gelcaps
Adjust per 10kg	1/2 to 1 gelcap	1 to 2.5 gelcaps	2.5 to 5 gelcaps	5 gelcaps
Gelcaps (30mg) for 150lb adult	3 to 5 gelcaps	5 to 17 gelcaps	17 to 34 gelcaps	>34 gelcaps
Adjust per 25lb	1/2 to 1 gelcaps	1 to 2.5 gelcaps	2.5 to 5.5 gelcaps	5.5 gelcaps
Syrup (3mg/ml) for 75kg adult	37 to 62 ml	62 to 187 ml	187 to 375 ml	>375 ml
Adjust per 10kg	5 to 8 ml	8 to 25 ml	25 to 50 ml	50 ml
Syrup (3mg/ml) for 150lb adult	2 tbsp to 2 oz (1/4 cup)	2 oz to 5.5 oz (2/3 cup)	5.5 oz to 11 oz (1 1/3 cup)	>11oz
Adjust per 25lb	1 tsp to 2 tsp	2 tsp to 1 oz (1/8 cup)	2 tbsp to 2oz (1/4 cup)	2 oz
English Measurement				

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Conversion	1 cup = 8 oz = 16 tablepoon (tbsp) = 48 teaspoon (tsp)

The specific effects at each plateau will be listed according to the following categories: *Sensory, Cognitive/Emotional, Motor,* and *Memory.* Additionally, the lower two plateaus are considered together, as are the upper two plateaus.

5.2 Overview of the Lower Plateaus

The four dosage plateaus can be divided into two groups based on a certain degree of similarity: the lower plateaus and the upper plateaus. The lower two plateaus share many features and some of these will be considered here. A generalization would be that the lower two plateaus are more "recreational" than the upper plateaus. Specifically, they have considerably less hangover, do not generally involve serious disruption or breakdown of sensory processing, and are more similar to other intoxicants.

DXM in the lower two plateaus has been compared to a cross between MDA and alcohol. It tends to intensify emotional responses and feelings of meaning from external events. At the lower plateaus there is usually enough motor control to be able to engage in physical activites (although, like MDMA and MDA there are reasons why you may not want to, including dehydration and overheating).

Most find sensory input is still understandable, although there are peculiar changes which will be discussed below (notably flanging). At the lower plateaus it is still possible to interact extensively with the outside world, and one can watch and follow reasonably complex plots in movies, and have complex conversations.

Although DXM is in many ways not a good "casual" drug most people have used it without adverse effect at the lower plateaus. Interestingly, many people who have use DXM at the upper plateaus eventually find that the lower plateaus no longer offer much enjoyment. There are a lot of potential reasons for this (see Section 7.6); I think most of it is simply that DXM at the upper plateaus changes one's expectations about its effects and gives one familiarity with its memory inhibition.

5.3 The First Plateau

The first plateau generally occurs around 1.5 to 2.5 mg/kg (some net users suggest 2.7mg/kg as ideal for regular users), but this may vary enormously depending on metabolism and other factors. The first plateau is probably the hardest to

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hit; many people "overshoot" it. Please keep in mind that these effects listed are general effects, and that individual results may vary considerably.

A general narrative of the first plateau can be constructed. At about 30 minutes to 1 hour after dosing, an "alert" sensation is noticeable; this is simply a feeling that is unique for individual and signals the begin of altered consciousness. The experience has only a vaguely "drug-like" character for about 10 minutes, after which restlessness and slight stimulant effect are noticeable. After another 10 minutes or so, movement and position sense are altered; those with motion sickness begin to notice nausea. Gravity starts to feel weird, and one may bounce around a lot. Emotions may start to become intensified. There is a slight feeling of dissociation from reality, but overall the experience is slightly intoxicating, with intensified emotions and sense of importance from everyday events. This effect peaks and then slowly subsides until it is unnoticeable.

A first plateau trip usually takes between 20 and 40 minutes to start (on an empty stomach), peaks about 1.5 to 2 hours later, and lasts between 4 and 6 hours. Gel capsules take up to 1 hour additional to dissolve. Hangovers are very rare from this plateau, but if they do occur, they tend to consist mainly of lethargy.

The primary effects of the first plateau are general euphoria, euphoria specifically linked to music and motion, slight disturbances in balance, moderate stimulation, and very slight intoxication. The intoxication and balance disturbances are similar to that induced by alcohol, but much weaker and without the mental confusion; there is little if any mental sluggishness or confusion with a first plateau trip.

Some people have difficulty hitting the first plateau. It can take several trials; as a general guideline, if you notice double vision, you've gone way too far. A lot of the more pleasurable first plateau effects, in particular the music euphoria, are set and setting dependent. Being in good physical condition, avoiding excessive caffeine, and being in a good mood are all important factors in achieving a good first plateau dose.

Positive first plateau experiences are one of the first to go with regular use. Part of this seems to be tolerance (which builds quickly and lasts for considerable time). Another part seems to be a familiarity with the first plateau experience; after awhile it no longer seems quite so profound or interesting. Some have suggested changing set and setting as a way of regaining the more interesting aspects of the first plateau.

5.3.1 Sensory Effects

Most of the effects of the first plateau relate to the senses. The best known, and probably the most responsible for first plateau use of DXM, is the effect upon hearing (specifically upon music). Sounds may seem "richer" or "deeper", and music in particular is affected (the difference between listening to music on DXM versus sober has been compared to the difference between music in a concert hall versus on a cheap radio). In addition to the change in the nature of hearing itself, music can bring a sense of euphoria, often quite intense. In comparison to the positive effects on music reported by some users of cannabis, the DXM music effect is usually characterized as much "speedier".

The type of music with which this effect most strongly occurs will tend to vary from person to person. Rave music is one of the most commonly affected, possibly due to the regular beat (at higher plateaus especially, much of DXM's sensory effects seem beat or rhythm related). Classical and Celtic/folk also seems to be popular. Really, though, the

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strongest indicator of personal response to a given piece of music seems to be 1) that the user enjoys it, and 2) that it has an "intense" or thematic quality.

Not everyone notices this effect. Some notice the opposite -- DXM makes music seem less impacting, and bass tends to be attenuated, leaving everything sounding "tinny" and distant. There does not seem to be any factor predicting whether DXM will improve or degrade the musical experience.

Visual effects are not particularly strong at this plateau. If present, they usually consist of motion trails (as if afterimages of each "frame" of vision were not clearing quickly enough). There may be some deterioration of stereoscopic vision (and thus depth perception). Colors may seem slightly more vivid. Some have remarked that peripheral vision seems to be degraded.

Taste and touch do not seem to be appreciably affected, although some users have reported that taste is enhanced and mildly euphoria-linked. Others have reported the same effect for touch. The sense of smell, on the other hand, is improved for some; in fact, some find scents so overpowering that they cannot remain around scented items.

Balance and body position sense can be significantly affected, ranging from a mild disturbance (some call it "sea legs") to a near total loss of position and balance sense (generally this only happens on upper plateaus). The changes seem to relate to an anesthesia of the body senses in particular. The effect (like the other sensory DXM effects) can be euphoric; some users like to roll around, do cartwheels, dance, march, whatever. People who are very susceptible to motion sickness seem to report nausea, but most do not. Overall some have described these effects as like free-fall.

5.3.2 Cognitive/Emotional Effects

Even though DXM has a slight "stoning" or intoxicating effect on the first plateau, there are surprisingly few deficits of cognitive function. Language is the most strongly affected, although these effects are usually limited to occasional word and syllable repetition (especially in already-repeated syllables, e.g., "banana" to "bananananana"), spoonerism (e.g., "share boulders" instead of "bare shoulders"), and difficulty coming up with specific words (the "Tip of the Tongue" phenomenon).

Some users report that they feel more creative and capable of non-linear thought on DXM, and this seems to be maximized on the first and second plateaus. Whether this is, in fact, true, or just seems true because of the drug, I have no idea; to my knowledge there are no studies on this. Another cognitive characteristic that occasionally occurs at the first plateau (but more commonly at the second) is that things can seem much more interesting, or at least much less dull and boring, than they usually are. There may be an overall increase in approach-related behavior.

Many DXM users report a moderate to strong stimulant effect at the first plateau, which disappears at higher dosages. This seems to be enhanced by caffeine. One user reported being able to stay up for 48 hours by maintaining a first plateau level. (Note that I don't recommend this).

Another characteristic of first (and second) plateau trips is a lowering of inhibitions related to conversation (and to a lesser degree to behaviour). Many people find they can discuss painful or embarrassing topics without difficulty. This is usually described as a very positive effect, and those who have experienced it often state that they feel more

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comfortable with themselves after the trip. Some have reported a strengthening of friendships due to this effect. It's interesting that as the third plateau is approached, recall and discussion of such topics seems to become more and more "[illegible]atory".

A few people seem to have problems identifying abnormal behaviour, and some have gotten themselves into awkward social situations by saying (or, rarely, doing) exactly what they mean. Dissociatives do seem to inhibit the ability to unconsciously recognize and act based upon social constructs. My personal feeling based on some observation is that if you are consciously aware of your behaviour you are not likely to have problems; it is those who act primarily out of instinctual adherence to social rules that tend to behave somewhat bizarrely.

Mood enhancement is the most regular emotional effect of the first plateau; many people find themselves fairly bouncy and happy, occasionally euphoric. Unlike many drugs, there is not usually much "let-down" when the trip ends. Fear is rare at the first plateau. There may be a sense of energy or drive.

The effects upon libido evidently tend to vary from person to person. Some people report an increase in sex drive; others find that playing, physical contact, music, etc., seem much more interesting and enjoyable than sex. The effects on sexual performance itself are not very strong at the first plateau, though males may have some difficulty in achieving orgasm. When orgasm does occur, it is often accompanied by extreme muscle tension and profuse sweating. **Note that there may be problems with hypertension from sex on DXM.**

5.3.3 Motor Effects

Another identifying characteristic of a first plateau DXM trip is its effect upon motion and motor skills. Users tend to walk and move in specific ways (varying somewhat from person to person) characterized by large, fluid movements. In fact, it may be difficult to perform small or abrupt motion. Motor tasks initiated may continue beyond their targets (this can range from fun to distracting). To an outside observer, this can seem quite strange, especially the changes in gait. It is possible, however, to move normally.

These changes may be related to euphoria- linking of body kinetic sense (see Sensory Effects, above) which would make large and sweeping motions more enjoyable. It is also possible that something more directly involved in the planning and carrying out of complex motor tasks may be at work, and that the euphoria is simply a general phenomenon which is not directly connected to the alterations in motor skills. Some have suggested that impaired processing of vestibular signals (i.e., those from the middle ear which relay position and motion information) may be involved. Activity of DXM in the cerebellum may also contribute.

5.3.4 Memory Effects

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The memory effects of a first plateau trip are slight but usually noticeable. Most of the effects probably come from a general deterioration of short-term memory. Working memory (the "train of thought") can become stuck in repetitive thoughts; other times it can be very easy to become distracted. Recall of events prior to the trip does not seem to be degraded. Encoding (i.e., making new memories) may be worsened, so that after the trip there is some difficulty in recalling events during the trip. Also probably because of the deterioration of short-term memory, it may be easy to lose track of time.

[erowid note: The sections on memory discuss only memory effects during the acute effects of DXM ingestion and are not describing any lasting aftereffects.]

5.4 The Second Plateau

With the second plateau (around 2.5-7.5mg/kg, 6.4mg/kg suggested from regular users) several new effects become evident. The most profound is that DXM begins to take on a heavier "stoning" characteristic, and senses and cognitive function are affected accordingly. Closed-eye hallucinations start for some people on the second plateau. Some of the first plateau effects, e.g., the music and motion linked euphoria, may diminish or stop entirely.

Second plateau trips usually take between 30 and 60 minutes to start (on an empty stomach), peak about 2 to 3 hours later, and last about 6 hours. Again, gel capsules take up to 1 hour additional to dissolve. Hangovers are not common with lower second plateau trips, but some people experience them.

A general narrative of the second plateau: The trip beings identically to the first plateau trip, although the alert and early effects may be noticed earlier. After passing to the music and motion euphoria stage, the first plateau sensations begin to be overshadowed by disruptions in sensory processing, as sensory input begins to get "choppy". Both sight and sound take on a dreamlike characteristic and one begins to feel increasingly detatched from the outside world. There may be bursts of sensory deprivation where the outside world seems to go away, but overall one maintains contact (somewhat incoherent) with the outside world. After a few hours of an overall "stoned" feeling, the sensations begin to subside. A slight hangover consisting of lethargy may be noted the next day.

5.4.1 Sensory Effects

The most general sensory effect of the second plateau is "flanging". Flanging, also called phlanging, phasing, stop-action, framing, strobing, etc., is the sensation that continuous sensory input has been chopped up into frames (as if you were watching a badly animated cartoon), often with some echo effect of each frame. There does not seem to be any loss of sensory content; instead, it is as if the ability to keep sensory input time-continuous were disturbed. The best analogy from other drugs may be the effects of nitrous oxide upon sound. The best analogy from non-drug experiences

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is listening to a voice through an echo/delay effects box (which is where the term "flanging" comes from).

An interesting and probably associated sensory phenomenon is that it seems as if one is aware of several temporal stages of sensory processing all at once. In other words, a sentence may be heard not sound for sound or word for word, but all at once (this is difficult to describe). Similarly, visual images may be jumbled together with previous images. This may be due to an excessive persistence of sensory buffering.

Vision in particular is changed on this plateau. Depth perception is often lost, and the ability to keep both eyes focused on the same thing is diminished (leading to slight double vision). This is most noticeable in people without a dominant eye.

Sound, as already mentioned, tends to be flanged. With the sense of touch, there is not necessarily flanging so much as a noticeable delay between the stimulus and recognition of it. Pain especially tends to be somewhat dissociated. Taste is usually simply dulled. Many people report a vastly improved sense of smell though some report that it is dulled as well.

The sense of balance is severely disrupted, as is body position and kinetic sense. Keep in mind that dissociation of pain and the disruption of body sense together make physical exertion somewhat risky, as it is possible to over-exert and not notice.

Closed-eye hallucinations tend to begin at the second plateau (and in fact are the reason I distinguish this from the first plateau). Usually these are not "true" hallucinations, but instead are considerable enhancement of imagination, up to fully eidetic imagery (i.e., you experience lucidly what you imagine). This is especially powerful with memories; some users are able to re-experience past events, or "simulate" future events, as if actually there, interacting with the environment (I call this the "Holodeck Effect"). Many users report this to be quite useful for introspection.

Any hallucinations, if they do exist, tend to be abstract and cartoon-like. There seems to be an emphasis on linear structures - long, thin lines, or long queues of simple objects. There may also be Lilliputian hallucinations (everything seems either way too big or way too small, or both). Some people find considerable similarity with fever hallucinations; this can be unpleasant.

Your experiences throughout the day will influence the hallucinations you see and the imagery you can create. For example, if you have spent the day playing DOOM™, your hallucinations are likely to involve scenes and elements from the game. Eidetic imagery works a little different - you can conjure up images, but they are likely to have a "DOOM™-esque" feel to them (bitmapped textures, ugly walls, etc.). This is an interesting effect, and my hunch is that DXM hallucinations and imagery may be very dependent upon what's already stored in intermediate term memory. So it might be worth planning the events of the day with your trip objectives in mind. This may also be possible to some extent during the trip itself; e.g., if you want to imagine yourself in space, go to a planetarium.

5.4.2 Cognitive/Emotional Effects

Logical reasoning is still not appreciably affected at the second plateau; in fact one of the more interesting aspects of DXM at the first and second plateau may be its ability to disturb one function of the mind while leaving another almost untouched. On the other hand the content of one's thoughts may become increasingly abstract as the outside world is

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ignored.

An interesting cognitive effect that is pronounced at the upper second through the third plateau is a change in self-referential thinking. Self-referential thoughts or ideas (e.g., "this statement is false") may seem both more understandable and more profound, both in the abstract and on a "gut level". Thoughts can, in fact, get quite abstract, sometimes to the point of seeming meaningless to other observers. Quite a few people have reported some sort of self-referential or abstracting aspect to thoughts, such as a "self-creating and self-invoking meme" that consists of the concept of itself. Another example is abstracting the concept of abstraction (and abstracting that, and so on and so on). There may be an overall blurring together of cause and effect, and causality may become an alien concept (I've spoken to more than one quantum physics student who enjoyed DXM).

Language becomes difficult, partly due to cognitive changes (as in the first plateau), and partly due to difficulty in coordinating the mouth and tongue motions. There may also be a direct effect on the language-producing centers of the brain. Interpreting spoken language is difficult due to sensory flanging. However, thinking in language is still fairly easy.

The curious detachment from painful or embarrassing topics of conversation that occurs at the first plateau continues and is much stronger at this plateau. Again, this is generally viewed as a positive event, although if you're not prepared to encounter and possibly discuss your deepest, darkest secrets, you might want to avoid higher doses until you're comfortable with DXM.

Another major defining characteristic of the second plateau (as well as closed-eye hallucinations and flanging) may be the motivational aspect. Repetitive, mundane, boring tasks suddenly become doable, and (if one can avoid distraction) may be easily accomplished, even if they take hours. There may be a considerable behavioural stimulant effect remaining at the second plateau without other feelings characteristic of stimulants. The euphoria from the first plateau continues but diminishes as dosage across the second plateau increases.

5.4.3 Motor Effects

The first-plateau effects on motor skills continue to exist, and may be considerably stronger. Some users find themselves contorting their limbs into rigid positions (and in some cases with general muscle rigidity), others may extend and stretch themselves. These effects are not always immediately apparent; when they are, the user usually reports that it just "feels right" to be in that position. It is still possible to override this.

Another accentuation of first-plateau motion effects that sometimes occurs is that the large, sweeping motions, once initiated, may continue for considerable time (looking somewhat like a cross between modern dance and Huntington's disease). Again, it just "feels right" to do.

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5.4.4 Memory Effects

Intermediate-term memory and working memory may be severely disturbed, although experience with DXM seems to help people compensate. Possibly because of the changes in memory, it may be very difficult to get bored, even with repetitive tasks. At this plateau, a lot of time may get lost, and the more mundane aspects of the trip are easily forgotten after it is over.

5.5 The Transitional Phase

Between the second and third plateaus lies a transitional phase. Not everyone experiences it; it seems that about 70% of DXM users have reported at least one aspect of it. In some senses it seems to be "programmed", in that the content of the experience, although varying from individual to individual, does not change much from one trip to another.

O[illegible]ll these experiences are probably the crossing of a threshold in dissociation. The hypothesis is this (although it is b[illegible] means proven). Generally speaking, sensory input competes with "feedback" input from the brain (you've probably noticed this from being deep in thought and not noticing what is going on around you). As sensory input becomes sufficiently inhibited, networks where sensory and feedback information are combined and reconciled begin to gain a larger and larger proportion of their input from internal feedback sources. Eventually, there is enough attenuation of sensory input (and probably intermediate-term memory as well) that the feedback loop becomes "free-running", leading to internal states (or models, if you prefer) that are increasingly detatched from the outside world.

During this time, people generally report that they can experience the process or they can discuss, relate, write about it; it does not seem possible to experience it while attempting to maintain contact with the body in any way. Unfortunately, memory of the experience is often impaired, so one gets the feeling of having taken an incredible ride without remembering it. Fortunately, the threshold experience may repeat itself throughout upper plateau trips (see Section 8.2.1).

If you want a very rough model for the threshold experience, get a video camera and a television, and feed the output of the camera into the TV. Point the video camera at the TV, turn on the date display on the camera (to provide some sort of "sensory input"), and turn the brightness down on the TV. Adjust the zoom on the camera to roughly include the entire TV screen. You will notice one or two copies of the date/time digits appearing, but overall the picture still looks like a video of a TV screen inside a screen (or two).

As you increase the brightness on the TV, however, something interesting begins to happen. Eventually, the feedback becomes self-sustaining, and you can get extremely complex, self-reinforcing patterns which take hold and maintain themselves. The entire picture begins to turn into abstract blobs and colors. As you adjust the zoom, you will find a s[illegible] point where you can wave your hand in front of the screen and the effects of this "sensory input" will ripple t[illegible]h the system, mutating constantly but never really leaving. This also makes a fascinating trip toy, by the way.

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Overall there are some common features to most people's threshold experiences. The first is a sensation that has been described as the opening of nasal passages, being full of helium, losing one's body, or having one's heart stop beating. The actual effect is most likely a sudden cutoff of sensory input from within the body - everything from all the little aches and pains to the awareness of one's own heartbeat go away. This can be very disturbing if a naive user interprets it as heart failure!

The second transitional effect is a temporary loss of all sensory input (this does not always occur), as if one were in a sensory deprivation tank. This is often accompanied by severe Lilliputian hallucinations, probably because there is no internal size reference (since the rest of the universe has just gone away). One person reported feeling as if he shrunk down to the size of a proton, and the rest of the world were light-years away.

This transitional phase often repeats itself between the third and the fourth plateaus.

5.6 The Upper Plateaus

The upper plateaus are considerably less "recreational" than the lower plateaus, and are more introspective, spiritual, and shamanic. Most people who use DXM for psychonautical exploration or spiritual work do so at the upper plateaus. The upper plateaus generally take more out of the user, with more frequent hangovers and moments of dysphoria.

Unlike the lower plateaus, most upper plateau experiences do not lend themselves to moving around much. Most people find it better to find someplace comfortable and stay there. Trying to move too much can induce nausea in some people.

5.7 The Third Plateau

The effects at the third plateau itself tend to be very intense, and often very different from earlier plateaus. Keep in mind that a third plateau trip can be terrifying to people who are not psychologically comfortable and prepared. Because the third plateau is so individually variant, I don't feel comfortable in trying to come up with a narrative.

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5.7.1 Sensory Effects

The flanging of visual effects, coupled with the loss of stereoscopic vision, becomes so strong that the brain seems to completely give up trying to process vision, leading to a sort of "chaotic blindness". Simple images (e.g., a candle flame) are still recognizable, although given the loss of stereoscopic vision one tends to see two of everything. More complex images, especially images that are not sharply defined, are difficult if not impossible to recognize. Vision, when possible, has a very dream-like quality to it.

Simple sounds are still understandable, and one can usually comprehend language, although it may be necessary for the speaker to phrase it in a complex rhythm (see Section 5.7.2). Music euphoria is rare. Touch and taste are subject to considerable anesthesia, and pain especially may be completely dissociated (it's still there, it just doesn't seem to apply). Body position, kinetic, and balance senses are similarly disrupted.

Some people continue to report an enhanced sense of smell on the third plateau; in a few people almost all smells are overpowering, and subtle elements of scents may be recognizable. This can affect taste, and ordinary foods or drinks can take on peculiar tastes as previously unknown odors are noticed. Even the type of container can affect the smell, with faint scents from paper cups, plastic, and even metal noticeable.

Hallucinations may continue, although they tend to be more abstract and "pre-sensory" rather than being predominantly visual. Oftentimes there is an overall sensation of being surrounded by "grey-ness", which brightens to white light as the dosage increases. There do seem to be more frequent moments of "virtual world" experiences, where one can c uct an imaginary sensorium with the eyes closed.

At the third plateau, the flanging of sensory input occurs both on a raw level (sounds, images) and on higher levels (words, phrases, faces, etc.) This is, to my knowledge, unique to DXM. Flanging may slow down and speed up, leading to periods of lucidity alternating with periods of semi-consciousness.

5.7.2 Cognitive/Emotional Effects

Cognitive function becomes severely disrupted at the third plateau. Complex tasks, such as arithmetic, may be very difficult (though some report little or no difficulty with simple skills). Reaction time is significantly delayed. Decision-making is somewhat degraded, although conceptual thought is less affected than concrete thought. Generally speaking, mental tasks which do not require changing context are far less impaired than tasks which require one to change one's decision-making approach.

Those who study this sort of thing will be interested to know that I have done some preliminary tests which show impaired results on the "Brain Warp" toy in "combo" mode (which is a basically a simplified Wisconsin Card Sort for k This probably indicates impaired prefrontal lobe function, a hypothesis supported by some research (226,326).

Language changes can be quite significant. Sentences may stretch on and on, or alternately be very terse (I call this the

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"Hemingway Effect"). Words, syllables, and phrases are commonly repeated. This may be related to problems with working and short-term memory. Speech may occur in a very rigid (but not necessarily simple) rhythm, and the user may not respond to speech unless it is in a similar rhythm.

The normal "chatter" that goes on inside everyone's brain tends to slow down or stop at this plateau, leaving a feeling of mental peace and quiet. One person reported this as "it felt like the top of my skull was opened into a clear blue sky".

Mood can range from absolute mania to panic. Many people have independently reported feeling as if they were dying, with some sense of fear, although some people do not seem to associate fear with this. Some people report a great increase in approach behavior, as if every event and object were a new experience; others find irrational fears occurring (possibly due to body load).

Panic attacks have occurred at the third plateau. This can be a scary experience, especially if one finds one's heart rate skyrocketing due to the panic attack and doesn't know why. The best way to cope with this is to try and calm down, much the same as one would with a bad trip on any other hallucinogen.

DXM on the third plateau has a very "shamanic" feel to it. Part of this is due to the sense of rebirth, part from the recall of suppressed and/or partially forgotten memories (some similar effects which I formerly placed on the third plateau (e.g., feelings of contact with other beings) I now place on the fourth plateau as they tend to occur at substantially different dosage levels). Complete annihilation of self can occasionally occur (rarely up to the point of forgetting one's identity, but more commonly just psychedelic ego-annihilation).

Note that, to sober observers, the effects of a third plateau trip can seem very unusual and unpleasant (often much more than to the person tripping).

5.7.3 Motor Effects

At the third plateau it may be impossible to perform coordinated movements. The large, sweeping motions of the first and second plateau are no longer present. Instead, many users lack both the desire and ability to move at this plateau.

Well-learned motor tasks (e.g., speaking and typing) are still possible at this plateau, provided the user doesn't attempt to think about them. In particular, some users have reported that they were able to express their thoughts via typing, without even thinking about it or realizing they were doing so; however, when they looked at the screen or keyboard, they were no longer able to type. This is evidently a phenomenon unique to dissociative anesthetics.

5.7.4 Memory Effects

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Short-term memory is seriously impaired; working memory is less impaired. Thoughts may get stuck in a loop. M[illegible]ry encoding of the more mundane experiences of the trip tends to be very bad; expect to forget a lot of the trip it[illegible]. (a few people report that they begin to recall events from the trip a few days after it has ended; I know of no mechanism for this). The sense of time can be quite distorted, both in terms of chronological placement of events and in the sense of the passage of time.

The day after a third plateau DXM trip, some users feel as if there were a break in the continuity of their memory, almost like the close of one chapter and the beginning of another. Some find this a very positive feeling, like a rebirth or rite of passage. It can be disconcerting if experienced without adequate foreknowledge and preparation.

One of the most significant memory effects that can occur at the third plateau is the spontaneous recall of memories, often memories which were hidden (consciously or not). This can be a positive experience if one is prepared to review the darkest secrets of one's past; otherwise it range from somewhat embarrassing to very unpleasant and disturbing. The user may also feel compelled to tell her or his companions about these memories (not always a good idea).

5.8 The Fourth Plateau

Information pertaining to the fourth plateau (roughly, above 15mg/kg) is limited, and what I have gathered will be presented as a general overview. Fourth plateau doses are similar to fully dissociative (but pre-anaesthetic) doses of ketamine.

Please note that dosages in these ranges are approaching the danger zone, and *under no circumstances should anyone take this much DXM without a sober assistant who can take you to the hospital if the need arises!* Many people neglect "trip sitters" with psychedelics. While you can probably get away with this with LSD (provided you remain in control enough not to do something stupid), with DXM there may be moments of such total confusion that you can wander into trouble without knowing what's going on. Additionally, the danger of adverse physiological effects, although not great, is worth paying attention to. Finally, psychotic breaks are most frequent at fourth plateau doses (and of course increase as the dosage increases).

Generally, people entering the fourth plateau report that they lose all contact with their bodies, often suddenly. This can be somewhat frightening. In particular, the sense of breathing is one of those missing, and people have occasionally interpreted this as evidence that they were dead. The surrounding environment may be evenly colored (usually grey or white), or it may appear vividly realistic, or cartoon-like, or anywhere in between these.

Many users have reported experiences very similar to "out of body" and "near death" experiences. In such cases, many report that they have contacted other beings, whose reaction to the user is usually somewhere between curiosity and amusement. Contact with "superior being(s)" has also been reported, sometimes as a raw force, sometimes personified ir[illegible]e way. In the reports given to me, the "superior being" image is more often female than male.

Delusions can become fairly involved at this plateau; the crucial factor seems to be whether or not the individual realizes that the belief or thought is drug-induced. Some people, especially those more experienced at this level, have

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reported that although they were aware that their thoughts were delusional, they didn't really care at the time. In general these delusions are fairly harmless (e.g., "I am a flower in the middle of a field").

Typically an individual in this plateau won't be moving at all, which can be frightening to observers. In many ways this state resembles dreaming. If someone in this plateau does attempt to move, his or her attendants should be very sure that he or she is conscious of these actions, and not responding to a delusional environment.

Somewhat surprisingly, many cognitive abilities are still intact. Basic computational skills and long-term memory recall do not seem to be particularly affected. It is also possible for the "body" (actually body and some parts of the mind) to undergo fairly complex tasks while the conscious mind is dissociated.

One individual wrote the following of the fourth plateau trip, and I think it is a good explanation both of the trip and of its possible origins:

> I've come to the conclusion that DXM is almost unique in it's ability to create a truly "alien" experience - one in which major aspects of one's humanity can become entirely irrelevant. Most obviously, one's body can be left behind; even forgotten. The experience of becoming or encountering bizarre life-forms seems at least somewhat common, as are weird, horizonless landscapes or space-scapes. I think alot of this "alieness" comes from having so many of one's ties to the familiar severed. When your body is gone, your mind loses its sense of how "big" or how "small" you are in relation to your surroundings. Hence hallucinations of huge things like galaxies, or of being as large as a mountain, as small as an atom, etc. I think the brain also misses subtle clues like the sensation of breathing, blood flowing through the veins, etc. - things which help remind you that you're human. And at some point, even your memories of the familiar may be suppressed.

5.9 Plateau Sigma

A few people have independently contacted me about an additional plateau -- one reached not by increasing the dosage but by prolonging the experience. I searched for some time for a name before settling on "Plateau Sigma", both because it seems to be related to sigma activity (see Section 10.2) and because it occurs as one sums up small doses (sigma being the mathematical symbol for summation). This summation may lead to a strong potentiation of the psychotomimetic effects of DXM (227). **Over half the people who had a Plateau Sigma experience have said it was extremely unpleasant and that they would never repeat it.**

The most commonly reported dosage regimen for Plateau Sigma is given below. However, before giving it, I warn you strongly against making this sort of attempt. DXM at high dosages is probably hard both on the brain and the body, and extending the experience is likely to increase the chance for dangerous side effects. Furthermore, one must be experienced enough with DXM, with the psychedelic experience in general, and with one's own mind, to be able to understand the experience. Everyone who has reported a successful experience with this dosage regimen has been at least 23 years of age. While I do not doubt that some younger people may be capable of having a good experience at this plateau, most seem to be unable to understand it and unable to control it, and there may be a real danger of psychotic breaks. Finally, the experience is in some ways acutely uncomfortable, as one's contact with inner and outer

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reality seems to break down entirely.

C ning suggestions from others I have come up with the following dosage regimen. Start relatively early in the day (the experience degrades if one is too fatigued), at about 6 to 10 hours after awakening. It helps tremendously if one is in good physical shape and not under emotional stress. Take a low second plateau dose. In three hours (or about 1 hour after the peak), take a second low plateau dose. At three more hours (or, again, 1 hour after second peak) take a high second plateau or low third plateau dose. After coming down from the third plateau, instead of going back to the second plateau and down to baseline, you may be left in Plateau Sigma. Drugs which inhibit cytochrome P450-2D6 seem to enhance the duration and intensity of the experience. Nicotine is reported to inhibit it, and may even prevent it entirely.

At Plateau Sigma interesting things happen to reality. Some have reported vivid, entirely realistic contacts with alien entities, spirits, gods and goddesses. Unlike the fourth plateau, these contacts often take place with eyes open, immersed in everyday reality. Although none of the people who reported these experiences to me had bad trips, most related that the experiences were so real that they felt they easily could have.

Vision suffers a curious change, seeming to consist of well-processed but highly strobed images; so strong is the effect that it seems as if one is looking at the world under a fast strobe light. The eyes don't seem to track in synch with the inner 3D model of the world, so that when one looks to one side or another, the world lurches back and forth for a moment. Interestingly, it almost seems as if one is looking at the world from an inner vision with the eyes closed (see Section 5.11).

Finally, thoughts can be totally deranged. Connections between entirely unrelated ideas form, causality goes out to lunch, and one's personality seems pretty much dissolved into the universe. Expect to hear a lot of voices; some people find themselves totally obedient to them. There seems to be a "tireless" quality to the experience, as if one does not feel ei fatigue or emotion directly, but only receives information from the inner voices ("sit down now, you're tired"). T are interesting comparisons both to accounts of acute schizophrenia and to Jaynes' postulated bicameral mind (350).

Again, let me warn you of the dangers here. You are probably stepping head first into psychosis, and unless you've got a very good trip sitter, you might end up coming back to reality in a padded room. Or, if you're really unlucky, you might freak out, have a hypertensive crisis, and end up in the hospital. Chronic high-dose use of PCP has been implicated both in deterioration of some brain areas and in cerebral hemorrhages. While PCP stands somewhat alone among dissociatives due to its additional and peculiar pharmacology, one should always be cautious when blazing trails in uncharted territory.

One last time: Be Careful!

5.10 Is There Anything Beyond the Fourth Plateau?

T may be yet another plateau beyond the fourth. One individual took 3000mg (I don't know his weight) and survived, although he regained consciousness in a strange location and remembered nothing of the trip. Beyond the

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fourth plateau probably lies full anaesthesia, then respiratory collapse, coma, hypoxic brain damage, and death. Given the toxicity of DXM at doses much higher than the fourth plateau, I don't think anyone should try and go there. You r not be able to come back.

More recently, one user accidentally went beyond the fourth plateau and had a rather unpleasant (to say the least) experience:

Now, and interesting experience to relate. several months ago, I accidentally took 3060mg of dxm, which at my weight then of 150lbs, translated to about a 46.6mg/Kg 9I believe) dose.

Now, I won't go into the details of how I managed to take this much, but in a nutshell, I took 1100mg and three hours later felt nothing, so I took another 900mg. Then, once it hit me, I somehow cleaned out the rest of my stash, for what reason, I don't know.

Anyway- for the first 6 hours following my first dose, I felt normal. Then, I experienced a normal high 2nd trip until the point when I took the remaining 1060mg. After that point, i recall the following things:

1. *falling face down on the floor in my room.*
2. *wondering why my rug tasted like burned nylon, when it was cotton.*
3. *feeling myself **float** past the 3rd and even 4th plateaus, they were clearly defined for me, with differing emotions and feelings for each one. The last thing I remember before passing out was looking up and seeing a 5th plateau, which was very dark and most definitely not happy looking. :) Then darknss.*
4. *dropping in and out of consciousness for a period of 15 hours, while hearing the voice of what I thought to be some higher being telling me repeatedly "do not do this to me again"*

ximately 25 hours after the first ingestion, I woke up, for the first time realizing where I was and what I'd done. I crawled to the bathroom, and found I'd lost about 4lbs due to sweating, and was severely pale and shaky. I crawled back to my room, and found the floor absolutely soaked with sweat, which smelled like coricidin. I then passed out again, and woke up 6 hours later completely refreshed, but with a slight stomachache. I grabbed come chocolate milk and that gave me some energy back. Enough to reflect, at least. It was then that I counted the empty foil wrappers and learned what I'd done. I laid back and thought about this, and couldn't remember much, but did come to believe that the 'divine voice' I'd heard was nothing more than my brain screaming at me.

Since then, the trip has faded from my mind, but every time I look at coridicin, be it in a friend's hand, or in the store, I hear that voice again, and almost always puke instantly. As such, this dose is NOT recommended,and will probably prove fatal to someone not as lucky as I.

5.11 What is the "DXM Third Eye Camera"?

T Third Eye Camera" (or "DXM Wacky-Cam" as one person called it) is a strange sense of vision that occurs sometimes after vision re-integrates in upper plateau trips. It is most prominent in Plateau Sigma experiences. There is a very pronounced strobing of vision without afterimages. As one moves one's eyes, the world seems to zoom back and

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forth (it seems that the inner model of the world isn't staying in synch with the outside; it may be that the brain has lost track of where the eyes are pointing). Vision is heavily dream-like and almost seems to persist with the eyes closed.

Somewhat more specific is one person's explanation that the "strobe light" seems to consist of regular pulses at roughly 8Hz, with small duty cycle (i.e., the "pulse" phase of the strobe is considerably shorter than the "non-pulse" phase). The frequency suggests theta rhythm, and there is research to back this up and potentially explain it (see Section 9.2.7). One person suggested that the strobe pulses seemed to be a negative image of the world, or perhaps an alternative view of it. It may be a strobing between an inner model of the visual space and sensory input. It might also be a flashing between the left eye's view and the right eye's view (another person suggested this). In any case, it seems to persist only until one goes to sleep, regardless of how much DXM is still hanging around in your body when you wake up.

5.12 Tussin Space, Tussin Consciousness

One of the more interesting phenomena that occur after one has gained experience with DXM is the development of a state-dependent memory. As the DXM experience starts, one finds onesself in comfortable, familiar territory, a space and consciousness unique to the DXM experience. Memories of former DXM trips can become easier to recall and r ivid. To many, this phenomenon is associated with a physical construct, a "Tussin Space," as more than one person has called it.

The exact nature of this space varies from person to person. Many find it to be a vast, open space, full of exotic and alien constructs, buildings and shapes. Some see crystalline towers and cloud-like lifeforms; others see the Tussin Space as a forest, desert, or other natural setting. Your Mileage May Vary. Many if not most don't really see it as a physical space at all.

Along with this space comes the unique but consistent changes in consciousness that lead to the state-dependent memory of the DXM experience. Called Tussin Consciousness by some, it becomes more and more familiar as one learns familiarity with DXM and becomes able to compensate for the memory inhibition.

5.13 What is the "Tussin Euphoria" and What Makes it Unique?

F do psychoactive drugs because in some sense they are pleasurable or beneficial. In some cases, such as cocaine and opiates, this takes the form of a "body high" or general euphoria resulting from stimulation of the brain's reward centers (the pathways of the ventral tegmental area, to be more specific). In other cases, like marijauna and LSD, the

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benefits are more emotional and intellectual. Many lab animals do not self-administer marijuana, and to my knowledge none self-administer LSD or related psychedelics.

DXM seems to lie somewhere in between; exactly where seems to depend on the individual. There is a definite DXM euphoria (called the "Tussin Euphoria" by the same people who refer to Tussin Space and Tussin Consciousness), but not everyone experiences it. Some in fact find DXM so profoundly disturbing that they never repeat the experience. A very few seem to find such incredible meaning and profundity to the DXM experience that it becomes psychologically addictive.

The Tussin Euphoria is totally unlike the euphoria from "body drugs" such as cocaine or heroin, and equally unlike the euphoria from MDMA (ecstasy). Instead, it is a sensation of being totally at peace with onesself, the universe, and other people. Ordinary cares and concerns seem to vanish as one enters a world where anything is possible, and the body becomes increasingly irrelevant. "Meat pleasures" such as food and sex are no longer relevant.

For those susceptible to it, the lure of the Tussin Euphoria can be significant. One person compared it to "The Nexus" from *Star Trek: Generations*; when in the Tussin Space, time has no meaning, and anything is possible. Basically it comes down to whether or not you enjoy being a discarnate entity, roaming around in a mental/spiritual world without physical interaction. Conversations are, of course, still a part of one's interactions, and many find great comfort and pleasure in group tripping. However, don't expect physical contact to be particularly profound; DXM is not a substitute for MDMA.

If you find yourself particularly susceptible to Tussin Euphoria, keep in mind that with frequent use of DXM it goes away and leaves one only with a sense of discomfort and dysphoria. In a very few individuals, this can continue into full-blown depression. Like all other drugs, you never get something for nothing.

5.14 What Can Happen with Long-term or Regular Use?

Long-term or regular use, especially in amounts above 6mg/kg daily, tends to produce several undesirable effects, some of which may be dangerous. Although these are discussed in detail in Section 6.3, I will go over them briefly here.

The most significant risk of regular use of DXM is mental impairment (deterioration of language, motor skills, memory; loss of emotion; antisocial behaviour; violent ideation; etc.). Obviously there is mental impairment while intoxicated. However, some regular users have reported a temporary but long-term impairment (up to three months) after discontinuing regular use of DXM. The mechanism for this is unknown, but it has been reported with other dissociatives (355).

Permanent impairment is a more significant problem. There are two separate mechanisms for this: Olney's lesions (see Section 6.3.1) and hypertension-induced CVAs (stroke and cerebral hemorrhage). Olney's lesions are a particular type of dissociative-induced brain damage that occur in experimental animals at between 5 and 10 times anaesthetic doses, but may also occur with long-term use (though this is unproven). Hypertensive CVAs have been demonstrated with PCP (355) but not with DXM.

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At least one study has shown permanent cognitive impairment from DXM (136), and I have received three additional reports of it (out of about 500). Generally speaking it doesn't seem to occur except with regular use of high dosages, a[illegible]ere may be underlying disorders (temporal lobe epilepsy, susceptibility to CVAs, etc) involved.

To make matters even worse, long-term sigma activity may cause permanent changes in neurons (101), although evidently this is predominantly a problem with other sigma ligands like haloperidol (it took 3 days for DXM to produce the changes haloperidol produced in a few hours).

A second risk concerns addiction (see Section 6.6). There doesn't seem to be much risk of physical addiction; while some have suggested that NMDA receptors upregulate with blockade (114), other studies dispute this. On the other hand, psychological addiction from dissociatives is well documented (194,202,203). Not everyone seems to be susceptible to this; genetic factors may be involved. For further information see Section 5.13 and Section 6.3.11).

One person related a story of DXM addiction which may give some perspective on the problem. The individual was roughly 60kg, and took a dose of 480mg, three or four times a day. The total dosage was thus 1440mg to 1920mg, i.e., 24 to 32mg/kg. This individual took the dosage regularly to maintain a constant state of profound intoxication with a great deal of opiate-like effects; neglecting the dose led to withdrawal symptoms consistent with opiate withdrawal, and possibly also withdrawal from a depressant. The individual had no history of psychological problems. The individual developed severe depression, leading to a suicide attempt and several months in drug rehabilitation.

Exactly why some individuals seem to have drug dependence problems with DXM is unknown; it may be a function of chronic high-level use, or it may be a function of individual physiology. PLEASE NOTE that this user built up to this dose over a considerable time; a similar dose in a drug-naive individual could well be fatal.

D[illegible]ciative-induced depression is another concern with DXM, and has been documented (4,6,139-141,355). There n[illegible]e biological factors involved. According to the data I have gathered, the incidence rate may be as low as 5% or as high as 40%, depending on how you look at things (I haven't done any formal studies yet, and in particular I have not used any established depression inventories, so my guesstimates must be taken with due skepticism). Paradoxically, some researchers suggest that dissociatives are actually antidepressants, but that, unlike those used in clinical practice, tolerance can build rapidly, leaving one with a rebound effect.

Other things to worry about are hypertensive crises, serotonin syndrome, damage to the kidneys, liver, and pancreas, heart arrhythmias, antisocial behaviour, psychotic breaks, muscle degeneration, etc. For the full story, see Section 6.3).

For better or for worse, most of the pleasurable effects of DXM tend to go away with regular use. Tolerance can build rapidly, leaving one only with a general sensation of being high and stupid.

A very few users report beneficial effects of chronic high-level use. The effects usually include some antidepressant activity (entirely reasonable given the possible significance of PCP_2 receptors), stimulant activity, long-term motivational effect, and cognitive and creative enhancement (this has not been quantified and may be entirely subjective). It is arguable that chronic DXM use may actually be self-medication for depression in some people.

Overall, however, most people report that DXM loses its interesting characteristics when used regularly, leaving the more mundane and unpleasant aspects. One former user summed it up well by stating that "being addicted to DXM was like being addicted to heroin. Except not as fun." So **please** be careful and avoid regular use.

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5.15 Why does DXM Affect Different People So Differently?

Several reasons. First off, there is a liver enzyme known as cytochrome P450-2D6 (also CYP2D6, or debrisoquine 4-hydroxylase), which metabolizes DXM. Some people lack this enzyme, and of those who have it, subtle genetic variations can result in different activity (10-18). Thus, while one person may metabolize DXM quickly, another may not (there are other pathways which are much slower). Certain drugs - such as fluoxetine (Prozac™) can inhibit this enzyme (39). A partial list of P450-2D6 inhibiting drugs is given in Section 15.1.

Second, some of the effects of DXM are due to the DXM itself, and some are due to its metabolite dextrorphan (DXO), which is more similar to PCP and ketamine in its neuroreceptor activity (43). Some individuals may metabolize high doses of dextromethorphan to dextrorphan more quickly than others. Incidentally, my opinion - based on anecdotal evidence of recreational DXM use while on fluoxetine - is that **both** DXM and dextorphan are responsible for the psychoactive effects (yes, I changed my mind). There is evidence to show that DXM is definitely involved, and may be responsible for most of the lower plateau effects (32).

Third, NMDA receptors are intimately involved in many areas of the brain where a great deal of processing takes place, such as the hippocampus and the cerebellum. In contrast to the biogenic amine neurotransmitters (serotonin, dopamine, noradrenaline, histamine, and acetylcholine) which seem to play a modulatory role, excitatory amino acids and NMDA receptors are involved in the "nitty gritty" of brain processes. It is possible that, due to this extensive involvement, many different cortical and limbic circuits may be affected.

I , DXM affects at least four different binding sites (see Section 9.2), and each of these is subject to subtle variance from person to person (44).

A few people have suggested that temporal lobe epilepsy may greatly change the DXM experience (pers. comm.). If nothing else, it has been implicated in cognitive impairment from DXM use (136). Additionally, some of the more profound dissociative experiences (see Section 8.2.1) may be altered, and possibly amplified, by having an underlying susceptibility to seizures.

There are probably a gazillion other reasons why DXM has such a wide range of effects. Subtle differences in brain chemistry, notably in terms of sigma receptors, may also be involved. Psychological set, as well as setting, are undoubtedly also part of the problem.

5.16 How Does DXM Compare With Other Dissociatives?

and especially fourth plateau DXM experiences seem to resemble ketamine experiences, and based on reports of people who have done both, the similarity is considerable. This is not surprising, since both DXM and ketamine block NMDA receptors. Since v3.0 of the FAQ I have heard from PCP users who have tried DXM; all of them say that the

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two share little in common except at very high doses of DXM, and that even then the experiences are significantly different. PCP stands somewhat alone among dissociatives due to its unique neuropharmacology.

The lower DXM plateaus seem to show a number of differences from other dissociatives. This is most likely due to DXM's unique potency at the dopamine reuptake site (the PCP_2 receptor) and the sigma receptor. DXM's ability to block dopamine reuptake is probably the biggest factor in its popularity at lower plateaus; neither ketamine nor PCP have substantial ability to do this.

When DXM is taken in divided doses, or when it is taken with an inhibitor of the P450-2D6 enzyme (e.g., fluoxetine), its sigma agonist activity becomes much stronger in comparison to its effect at the NMDA receptor. As expected, DXM taken under these conditions differs from other dissociatives, and is sometimes reported to induce schizophrenic-like thought processes and other unpleasant effects.

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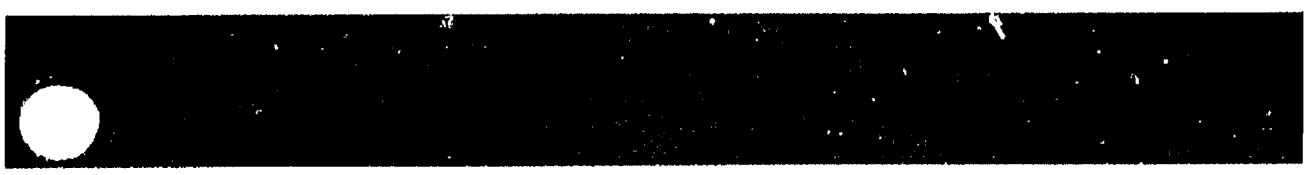

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6 DXM Side Effects and Other Things to Avoid

from the DXM FAQ
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minor update: July 11, 2002 - modified itching section.

Like all drugs, DXM has side effects and risks. While mild in most people, they cannot be ignored. DXM is not a "safe drug" or a "harmless drug" (two oxymorons if there ever were). This section details side effects that you may encounter, and is the largest section in the FAQ (other than trip experiences).

I have reported every adverse effect (side effect) that has been related to me as a part of a DXM experience, some that have never shown up but have occurred with other dissociatives, and a few that are just speculation. Many of these have been isolated events; some have occurred only when DXM was combined with other drugs. Keep in mind when reading this section that most, if not all, of these, are infrequent side effects. If you've ever read the little information sheet that comes with any prescription medicine, you'll know that pretty much any drug you take has a plethora of side e , most of which you'll never encounter.

I have tried to organize the side effects roughly by the frequency of occurrence, but I have not performed any real statistical analysis yet, so this is very rough. Instead of trying to give percentages I break the frequency down into the following categories, with additional categories for risks that occur with other dissociatives or may occur in theory:

Frequent	Experienced by more than 20% of DXM users
Occasional	Experienced by 5% to 20% of DXM users
Rare	Experienced by 1% to 5% of DXM users
Very Rare	Experienced by less than 1% of DXM users
Non-DXM	A known adverse effect of other dissociatives
Theoretical	A theoretical adverse effect of dissociatives

Keep in mind that I may have missed some critical research, so don't think that just because I list a risk as "theoretical", that it can't happen to you.

6.1 What are Some Minor Risks of Occasional Use?

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Although generally very safe, you should be aware of some of the possible adverse effects that can occur with o nal use of DXM. These are ordered **roughly** by frequency of reporting, but I don't have any hard figures. These ar fairly minor risks or adverse effects, and though they may contribute to a bad trip, are probably not cause for concern. However, (and I will repeat this often), if in doubt, **see a doctor!**

6.1.1 Nausea and Other Gastric Disturbances

Category: Frequent

Probably the most commonly reported side effect is nausea, most likely a simple result of gagging down a bottle or two of cough syrup or a bunch of big gelcaps. People who use the gelcap or capsule preparations do not, in general, experience as much nausea, although DXM itself, like peyote, can occasionally cause nausea (this is less common than nausea from syrups). DXM free base and "Agent Lemon" (see Section 11) seem to cause the least amount of nausea.

Many cough syrup preparations can cause considerable amounts of bloating and gas. Expect to pass gas for the next day. Stomach cramps and other gastric disturbances, probably from the amount of sugars and thickeners, are also c on. Preparations with guaifenesin tend to induce vomiting at recreational DXM levels. Mixing DXM with large a its of alcohol can have the same effect; one poor individual who mixed DXM with a large quantity of alcohol vomited for over two hours.

Serotonin syndrome (see Section 6.2.9) is another possible cause of nausea and diarrhea, but doesn't seem to occur except when DXM is combined with other serotonergic drugs (mainly antidepressants).

6.1.2 Dizziness

Category: Frequent

Closely related to nausea, DXM can cause dizziness in many users. If you get motion sickness this is probably a bad thing; otherwise, enjoy the free-fall sensation. Dizziness is almost certainly a result of impaired processing of vestibular sensory input (i.e., signals from the middle ear, where position and motion are sensed).

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6.1.3 Mild Allergic Reactions and Histamine Release

Category: Frequent
See Also: The Itch

Ah, the "Robo Itch". Some people get it and some don't. There's evidence that at least some of the cases of Robo Itch are a psychological reaction to mild anesthesia, but many are probably a result of histamine release - not necessarily an allergic reaction per se, but a possible consequence of DXM's pharmacology. The itching tends to go away, and although scratching is pleasurable (and a loofah is wonderful), take care not to overdo it.

Actual allergic reactions have occurred, and often these are a result of the "inert" ingredients, usually one of the dyes (e.g., tartrazine). A topical antihistamine spray might be a good idea. You should *always* keep an oral antihistamine on-hand, at least during your first few DXM experiences (or when trying out new preparations). **Just remember not to use any prescription, non-drowsy antihistamine with DXM**. Diphenhydramine (Benadryl™) is a good OTC antihistamine that is probably safe to combine with DXM (at least it hasn't caused anyone problems yet).

People who have used Coricidin™ tablets have reported that the Robo Itch seems to be completely absent. Be warned, however, that one should not use DXM+antihistamine tablets above the second plateau due to the potential for adverse anticholinergic effects (which if nothing else tend to cause bad trips).

Note that some people find the itching to be unpleasant enough to keep them from trying DXM again, and a few people have scratched themselves raw. Do take care.

6.1.4 Sexual Dysfunction

Category: Frequent

DXM commonly inhibits orgasm in males and occasionally in females. When orgasm does occur it is often accompanied by profuse sweating and muscle rigidity. Sex probably isn't a good idea due to the potential for aggravating hypertension (see Section 6.1.12). Besides, the inhibiton of tactile sense tends to make sex a less than thrilling experience.

6.1.5 Diaphoresis (sweating)

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Category: Frequent

Many DXM users note sweating both while on DXM and for several hours after coming down. Some have noted a peculiar odor to the sweat, which may be metabolites of DXM or may simply be a consequence of enhanced sense of smell. In any case, just drink lots of water and you should be fine.

6.1.6 Impaired Judgement and Mental Performance

Category: Frequent (especially upper plateaus)

This one's a no-brainer. DXM inhibits normal mental functioning. That's why people take it. Whether this is fun to you is, of course, entirely up to you. Some people simply find DXM makes them feel too stupid. There is also some evidence for impairment of judgement, so a trip sitter is a good idea. Oh, and don't think for a moment that you can drive on DXM; even if you can't tell, it greatly reduces reaction time.

6.1.7 Hangovers

Category: Frequent (especially upper plateaus)

Yes, hangovers can happen. See Section 6.9.

6.1.8 Tachycardia (Increased Heart Rate)

Category: Occasional

Tachycardia seems to be fairly common but not particularly serious; generally, a heart rate in the range of 90 to 120 can occur. This is probably a side effect of the stimulant qualities of DXM. Substantially higher heart rate may indicate a panic attack (see Section 6.2.1).

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Deanna Hollraith 10/3/03
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Two users have reported that benzodiazepines (esp. clonazepam) prevent this side effect.

6.1.9 Pupil Dilation or Constriction

Category: Occasional

Although it doesn't happen to everyone, some report substantial pupil dilation on DXM, similar to the pupil dilating effect of LSD. This is probably a dead giveaway that you're "on something", so you might want to know if it happens to you before trying to get away with being on DXM in public. And may your eyes dilate to the size of saucers and attract cops for miles around if you ever drive on DXM!

There are also a limited number of reports of pupil constriction. These seem to occur with much less frequency. In both cases, pupils remain normally responsive to light. Two people have reported to me that their pupils were significantly different in size; usually this is an indication of something Very Wrong going on in the brain (hemorrhage, stroke, or other CVA), so if this happens to you, seek medical assistance! It is possible that this may occur as a result of asymmetrical effects of dissociatives on the cerebral cortex, and isn't indicative of any damage at all.

6.1.10 Hot and Cold Flashes

Category: Occasional

Hot and cold flashes during the trip occasionally occur, and are not generally serious. One user reported frequent extreme hot flashes, which eventually got bad enough that he sought medical assistance. A few people have reported hot flashes several days after the DXM trip is over. This may simply be a phenomenon of sensory dissociation, or it may be indicative of an actual fluctuation in core temperature (see Section 6.1.13).

A few have reported that eating a small amount of food from time to time can prevent hot and cold flashes, so they may be related to rise and fall in blood glucose levels.

Two users have reported that benzodiazepines (esp. clonazepam) prevent this side effect.

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6.1.11 Facial Edema

Category: Occasional

DXM occasionally induces mild facial edema (swelling and buildup of fluid). This may be due to a histaminergic effect. It does not seem serious.

6.1.12 Mild Hypertension (High Blood Pressure)

Category: Occasional

DXM, like other dissociatives, can cause mild hypertension (high blood pressure). This is not generally considered serious, as the elevated blood pressure is still within the normal range. If you have high blood pressure to begin with, stay away from DXM (or stimulants for that matter). There are cases of serious hypertension from dissociatives; see Section 6.2.6.

Two users have reported that benzodiazepines (esp. clonazepam) prevent this side effect.

6.1.13 Mild Hyperthermia (Increased Temperature)

Category: Occasional

A rise in body temperature of about 1 degree Farenheit (0.5 C) has been noted by many users of DXM, and low-grade fever is one of the hallmarks of dissociative intoxication. It doesn't seem to be a serious condition. Serious rises in body temperature have been noted with dissociatives, however; see Section 6.2.5.

Two users have reported that benzodiazepines (esp. clonazepam) prevent this side effect.

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6.1.14 Overexertion

Category: Rare (more common with other dissociatives)

As DXM is a dissociative anesthetic, it will make you less aware of the normal body senses, including muscle fatigue and pain. As a result you can easily over-exert or over-stretch yourself, especially if you are out dancing or engaging in other physical activity. Pay close attention to your body if you plan on moving a lot.

On a somewhat related note, many people report that heavy exercise under the influence of DXM can cause nausea. This seems to occur mainly at the second plateau and above; in contrast, one user reported swimming on a first plateau dose to be a very pleasant experience.

6.1.15 Urticaria (skin rash/wheal)

Category: Very Rare

Urticaria, a skin rash or wheal typically consisting of white or red bumps, is rarely reported from DXM, and typically appears on the arms or less commonly the chest or face. It is probably related to histamine release. It goes away soon after the trip is over.

6.1.16 Increased Bile Secretion

Category: Very Rare

Two people have reported greatly increased bile secretion from DXM. It's possible that DXM may be released into the bile and may be subject to re- absorption, but this has never been demonstrated. In any case, although this may be a source of discomfort, it doesn't seem particularly serious.

6.1.17 Inappropriate Behaviour

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Category: Very Rare (more common with other dissociatives)

Some people have reported slightly to moderately inappropriate behaviour while on DXM. The most common example of this is blurting out whatever comes to mind, i.e., avoiding those little white lies we normally hold on to for the sake of politeness. Other cases included public nudity, impaired grooming, and abnormal gestures.

There are numerous examples in the literature of inappropriate (and often dangerous) behaviour in PCP users, but to my knowledge nobody has yet done anything terribly outrageous or dangerous while on DXM.

6.1.18 Miscellaneous

One user with a blind spot in one eye due to a stroke reported hallucinations in the blind spot persisting for several days. This eventually went away but was not particularly enjoyable. LSD, cannabis, and alcohol all failed to induce this effect. Ketamine did, however. DXM may also interfere with the biological clock and prevent light entrainment (221,230).

6.2 What are Some Major Risks of Occasional Use?

There are also more serious adverse effects that can occur from DXM use. All of these should be taken seriously, and if at all in doubt about your health, see a physician immediately. As far as I know nobody has ever died or suffered serious injury from any of these adverse effects, but they generally aren't pleasant either.

6.2.1 Panic Attacks

Category: Occasional

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Several users have reported panic attacks, and I am beginning to think some people may be susceptible to this from DXM. This seems to be worse when DXM is combined with other drugs, including marijuana (cannabis). The trouble with panic attack is, once you realize you're having one, it can make you feel out of control of the drug experience, which makes the panic attack even worse. This is a difficult vicious circle for some people to break. Fortunately this mostly seems to happen with high doses (around 10mg/kg and up).

If you find yourself having a panic attack, there isn't really much that you can do for yourself except relax, take deep and even breaths, and try to calm down. If you find yourself hyperventilating, breathe into a paper bag (which really does work, by raising blood CO_2 levels).

Benzodiazepines (Valium™ and related drugs) are an effective treatment for panic attacks. However, they have several drawbacks. They must be prescribed by a physician (at least in the US), and they will usually stop the DXM experience very suddenly. They are both psychologically and physically addictive, and withdrawal from regular use can cause brain damage.

Benzodiazepines, esp. clonazepam, may prevent panic attacks from DXM, but must be used with care and under the guidance of a physician.

6.2.2 Psychotic Breaks

Category: Rare

Psychological side effects to psychedelics can be quite varied. Bad trips are certainly possible, as with any drug. As with other psychoactive drugs, especially hallucinogens, there is always the chance that a mental illness may be triggered by the experience. Keep in mind that DXM is related to PCP, and some people really don't get along well with dissociative anesthetics. The chance of experiencing a psychotic episode probably increases with dosage.

Many of the cases of DXM "abuse" in literature have concerned psychotic episodes (the same is true for LSD). This probably skews the perception of how frequent these events are, since most of the published accounts come from hospital visits. The vast majority of DXM users do not experience psychotic breaks. From personal communications I have noted nine cases of DXM-induced psychotic breaks that required hospitalization; of these, six involved regular users.

6.2.3 Impaired Judgement in Critical Situations

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Category: Rare to Very Rare

I already mentioned how DXM impairs driving ability. It also seems to impair judgement, both about one's abilities and one's susceptibility to harm. This is bad news when it comes to driving and other critical situations. So before you consider doing anything where your life may be on the line, know good and well that DXM **will** impair your performance.

Disturbingly, DXM also impairs judgement in sexual behaviour. While it does tend to make orgasm difficult for males, it has also been known to impair good judgement about sex. While I don't think DXM has the same ugly potential as Rohypnol or other benzodiazepines, it can make you stupid and fearless enough to not use protection, and that can be a deadly mistake.

I have actually heard from one person about DXM being used to lower inhibitions for the sake of getting someone's consent. This is an entirely detestable practice, although not limited to DXM (alcohol is used regularly for this purpose daily, but that doesn't make it right).

Let me put it simply. If you and your partner want to use DXM with the intention of having sex on it, that's your business. But if you use DXM to lower someone's inhibitions, that's an entirely different situation. Basically, it means you can't get laid without impairing someone's judgement. There's a word for that: **loser**. It'll also get you thrown in prison, where you can find out how much fun nonconsensual sex really is.

Besides, it's much more fun where the other person has all their mental and physical abilities.

6.2.4 Depression

Category: Very Rare (more frequent with regular use)

One person reported a long-lasting depression and paranoia after a single episode of DXM use. This individual was age 15 at the time; I suspect that young teens may be more susceptible to depression and other mental illnesses from DXM use than adults.

6.2.5 Serious Hyperthermia (High Temperature)

Category: Very Rare (more frequent with other dissociatives)

One user reported a case of hyperthermia (increased body temperature) which could have been dangerous, with a rise in

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body temperature to 103 F (38 C). The individual in question also had a cold at the time, so part of this might have been a result of existing illness.

In the case of serious hyperthermia there is an immediate need to lower body temperature. Sponge baths with cool water and drinking cold liquids are the safest way, although a few physicians have recommended ice-water baths for severe cases. ALWAYS have someone sober to make sure the person doesn't go into shock and drown. Whenever body temperature nears 105 F (40 C) you should get medical attention. Temperatures at or above 107 F (41 C) will probably cause permanent brain damage.

There is a condition that occurs sometimes with volatile anaesthetics called *Malignant Hyperthermia*, which is often fatal and seems to involve genetic susceptibility. Malignant Hyperthermia can raise temperature to 112 F (44 C) and is obviously a different sort of threat than the one or two degree temperature rise from dissociatives. I have never heard of it occurring with any dissociative (anaesthetic use or not).

6.2.6 Serious Hypertension (High Blood Pressure)

Category: Very Rare (DXM plus stimulants)

I have heard of only one serious case of hypertension, when DXM was used in combination with pseudoephedrine. DXM itself typically raises blood pressure slightly (although a few people experience a drop in blood pressure). This is probably due to sympathetic activation from DXM's dopamine reuptake inhibiton and from downstream effects of NMDA blockade.

Take care combining DXM with stimulants or physical exertion. There is always a chance of hypertensive crisis and hemorrhage, and it's not always easy to predict. If in doubt consult a physician, since drugs which lower blood pressure aren't commonly available, and must be used with considerable care. Avoid DXM if you have an existing high blood pressure condition.

6.2.7 Rhabdomyolysis

Category: Non-DXM

PCP use has been cited as a cause of rhabdomyolysis, a condition where muscle cells break down, and myoglobin and creatinine bits and pieces of muscle cells leak out into the bloodstream. To put it simply, they don't belong there, and the body doesn't know what do with them. They end up essentially clogging the kidneys, which shut down. This can also occur with a variety of stimulant drugs, including amphetamine and MDMA (ecstasy). Nobody's really quite sure why

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this happens, although some believe it to be a combination of repeated or excessive muscle cell activation, dehydration, and high body temperature (not surprisingly, most MDMA-induced rhabdomyolysis takes place at raves).

This is of course a serious condition, but hasn't to my knowledge ever occurred from DXM. It's not always fatal, but if enough muscle tissue is destroyed, it can be. Needless to say, medical intervention is required.

I have received anecdotal evidence from one person who complained of prolonged illness (3-4 days) following DXM use, during which she did not produce urine, followed by about three hours of bloody urine. Needless to say she didn't repeat the experience. I haven't a clue if this could have been rhabdomyolysis (and she didn't consult a physician at the time), but obviously something was amiss with the kidneys. Incidentally, this occurred after years of DXM use.

6.2.8 Respiratory Depression

Category: Non-DXM

One of the risks of high doses of dissociatives, and in fact the proposed mechanism for overdose fatalities, is respiratory depression (201). The two medically recorded deaths due to DXM overdose (one of which was a suicide) were attributed to this. I have never heard of any other cases of DXM-induced respiratory depression, although I suspect it is a serious threat at doses above 15mg/kg.

The real danger of respiratory depression (other than death of course) is hypoxia (insufficient oxygen) and subsequent brain damage. DXM does, of course, protect the brain from hypoxic damage, so hypoxia with DXM is probably safer than an equivalent degree of hypoxia with opiates, but there's still no need to put your brain at risk. In the grand scheme of things hypoxia is just one risk among many for brain damage with regular use of high-dose DXM, but the actual data from DXM users shows that brain damage is extremely rare.

A lot of people worry about respiratory depression because of a feeling of shortness of breath that often accompanies DXM intoxication. This may be a consequence of the brain "taking over" breathing from conscious control, as well as impaired perception of the breathing process. If you're really worried, stop taking DXM. I suppose you could rig up an oxygen mask, but if you're enough of a hardcore psychonaut to consider that you probably don't need my help.

6.2.9 Serotonin Syndrome

Category: Theoretical (especially DXM + antidepressants)

Serotonin syndrome is a recently-identified condition that typically occurs when combining serotonergic drugs (i.e.,

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drugs that stimulate, or mimic, serotonin activity in the brain). Most of these drugs are antidepressants (MAOIs, SSRIs such as Prozac™ or Zoloft™, tricyclics, lithium, and atypical antidepressants); others include buspirone (BuSpar™), MDMA (ecstasy) and other phenethylamines, tryptophan, harmine and harmaline (both recreational MAOIs), and possibly serotonergic hallucinogens such as LSD, psilocybin, and DMT. **Phentermine, fenfulramine, and phen-fen can also cause serotonin syndrome when combined with DXM.**

DXM induces a release of serotonin, and while it has never been demonstrated to cause serotonin syndrome by itself, it has been shown to do so in combination with other serotonergics (365). In particular, combining SSRIs and DXM may be risky; one paper found serotonin syndrome from an SSRI combined with DXM with a concurrent vascular disease (364).

Serotonin syndrome is indicated by a combination of three sets of symptoms: changes in mental status, autonomic dysfunction, and neuromuscular abnormalities. Specific symptoms include:

- Changes in Mental Status
  - hypomania
  - confusion
  - agitation
- Autonomic Dysfunction
  - diarrhea
  - low-grade fever
  - diaphoresis (sweating)
  - shivering
- Neuromuscular Abnormalities
  - myoclonus (sudden, brief muscle spasms)
  - hyperreflexia (exagerrated reflexes)
  - ataxia (incoordination and clumsiness)

Yes, there is some overlap (e.g., shivering can considered as an autonomic dysfunction or a neuromuscular abnormality).

More serious symptoms can include rhabdomyolysis (basically, your muscle cells break open and leak muscle-cell-parts into your bloodstream, poisoning you), coma, and death. Serotonin syndrome deaths are rare, however.

Treatment of serotonin syndrome requires medical intervention, and consists of supporting measures to treat the symptoms, and possibly antiserotonergic drugs. Benzodiazepines (such as Valium™) have also been used with considerable success (366).

The astute among you will notice that many of these "symptoms" are characteristics of DXM intoxication. In fact, many serotonergic drugs can cause these symptoms. The question is whether or not the symptoms become severe and numerous. At least one symptom from each of the three categories is generally required for a diagnosis of serotonin syndrome.

Once again, if in doubt, see a doctor. And avoid using DXM in combination with any antidepressant. **Remember, combining DXM with a MAOI has been repeatedly fatal!**

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6.2.10 Major Allergic Reactions and Histamine Release

Category: Theoretical

It is possible to have a major allergic reaction to DXM or to one of the inert ingredients (typically tartrazine). An antihistamine is the obvious solution. If you are allergic to aspirin you may be allergic to tartrazine, and in any case it is a good idea to try DXM at a very low dosage first to rule out allergic reactions to any of the ingredients found in cough syrups. You should also repeat the low-dose test every time you try a new syrup, gelcap, or other DXM formulation.

I have never heard of a serious case of DXM-induced histamine release but it is a possibility. Again, an antihistamine should help, but if things continue to get worse, get medical help.

6.2.11 Miscellaneous

F hough DXM has been successfully used to prevent seizures, it may actually induce them at high dosage levels (4., especially in epileptics (142). You want to avoid this.

Some users who have taken very high dosages of DXM (above 15mg/kg) in products containing guaifenesin have lost motor function to the point of choking on their tongues (or at least feeling like it; I've been told that this is technically impossible but I've also been told it isn't). Obviously, nobody should be experimenting at this level without a (sober) assistant. If this happens, seek medical assistance. While I cannot vouch for the efficacy or safety of this procedure, I have been told that one can maintain the airway by grabbing the person's tongue and holding it out of his or her mouth until motor function is regained (or the ambulance comes). Don't try to insert anything into the person's mouth; it could slip and make the problem worse.

6.3 What Are the Risks of Regular Use and Binges?

Prolonged, regular use of DXM has some definite risks. Generally speaking the most common is mania, which has b eported in people using large amounts of DXM (especially to self-medicate depression) (1-3,132,136,139-141). T s probably a combined effect of dopamine reuptake inhibiton, downstream effects of NMDA blockade, and possibly sigma receptors (see Section 10). One user who had formerly used the antidepressant bupropion

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(Wellbutrin™) reported a similar but somewhat stronger antidepressant effect from DXM, though with greater adverse side effects.

This section may also apply in the case of drug "binges" (using DXM continuously of more than one day). This is to my knowledge much more common with other drugs than DXM, since it does tend to induce a fairly significant hangover after awhile (if for no other reason than the cough syrup is hard on your stomach).

The most serious adverse effects are all related to brain damage. **This is a well documented risk of PCP in humans and has been shown with all dissociatives in animal models!** The good news is this doesn't happen at human recreational dosage; the bad news is the animal models may not predict the effects of regular use at lower dosages. The other bad news is that PCP may induce brain damage by other mechanisms; the other good news is PCP is unlike DXM or ketamine, and neither DXM or ketamine users have shown much impairment.

This time I have tried to organize by categories representing the degree of seriousness of the adverse effects: permanent brain damage, physical toxicity, temporary mental impairment, psychological disorders, and miscellaneous.

6.3.1 NMDA Antagonist Neurotoxicity (Olney's Lesions)

Category: Permanent brain damage

Onley's Lesions (named after a researcher named Olney, appropriately enough) are a particular type of damage observed from NMDA antagonists (dissociatives). Damage occurs primarily to the posterior cingulate and retrosplenial cortex (289), and to a lesser extent the entorhinal cortex, dentate gyrus, and olfactory regions (213). The posterior cingulate may be involved in evaluating one's own behaviour (316), verbal and auditory memory (294), spatial memory and cognition (316), and language, notably metaphor comprehension (303). The retrosplenial cortex may be involved in novelty encoding (321) and learning, memory, and emotional behaviour (324). The hippocampus and adjacent areas are well known to be deeply involved in intermediate-term memory and forming relationships between sensory data, and damage to the hippocampal formation causes amnesia both in humans and animals. Full detail on Olney's lesions is given below; see Section 6.5

If this strikes you as areas that DXM interferes with, congratulations, you've been paying attention. On the other hand, these are functions that, according to all human research, recovers after occasional use of dissociatives. There is considerable documentation of PCP users suffering deficits in language (especially finding words), memory, cognitive skills, and motor skills (which may be a result of PCP's peculiar toxic effects on the cerebellum not shared by other dissociatives). Perhaps most disturbingly, this damage also includes the ability to form emotional ties and recognize emotions in others, and an increase in flattened affect (outward emotionality). PCP's reputation for creating psychopaths is probably 99% media hype, but in this case (unlike most drugs the media demonizes) it probably has a kernel of truth.

PCP has been well studied, and an on-line review is available (355). Some of the papers cited in this source are, in my opinion, a bit dated, but it provides a good starting point for understanding what can occur with long-term high-dosage use of dissociatives. Some speculate the damage is caused by hypertensive strokes or hemorrhages, although it is worth noting that this speculation was made prior to the knowledge of Olney's lesions.

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Studies with PCP show that this sort of damage sometimes does resolve (though sometimes after months or years). And users of ketamine seem to show considerably less damage than users of equivalent amounts of PCP (pers. comm.). F[illegible]nore skepticism is warranted since one popular method for making PCP involves a precursor chemical which, w[illegible] heated, releases cyanide gas (196). Samples of street-grade PCP show that many contain a fair amount of this precursor (the sloppiness of drug chemists is probably the biggest reason to avoid synthetic drugs).

Still, I have received a few anecdotal reports of DXM-induced degradation of mental performance that are consistent with this type of damage. To be precise, I have received eight first-hand reports of this over the past five years, and have read about one other. Three of the eight seemed to show permanent damage; in the other five, it resolved after several months and may have been due to depression. There have been numerous second-hand stories ("I heard from this ex-girlfriend about this guy who drank a bottle of cough syrup and his brain melted and ran out his nose"), but I don't necessarily consider them accurate.

The published account (136) involved a 39-year-old insurance salesman who consumed 1500mg DXM, 5000mg guaifenesin, and 3mg alcohol, about once per week. A SPECT scan showed widespread dysfunction of the cerebral hemispheres, and EEG mapping showed excessive right central alpha activity. The researchers suggested a concurrent diagnosis of temporal lobe epilepsy on the basis of extreme religiosity andexcessive note-writing (although I've known more than one who experienced this from DXM). His condition continued to deteriorate after ceasing DXM use.

One former user told me of his experiences following use of 720mg DXM twice to three times a week for 3 months, and then four to five times a week for another three months. After quitting DXM, he experienced uncontrolled shaking of muscles and severe muscle fatigue for three years, and permanent difficulties in forming complex thoughts into words. He described the latter as "trying to make a complicated sentence out of alphabet soup".

O[illegible] first-hand accounts, three involved concurrent use of other drugs, in all cases stimulants (pseudoephedrine in o[illegible]nphetamines in the other two), and in one case (DXM and amphetamine) also PCP, ketamine, and MDMA. Of the four cases not involving other drugs, all four used in excess of 1000mg per week, three using over 2000mg per week, and all four for a period of at least six months.

To make matters even more complicated, I've also spoken to at least twelve other people who have used in excess of 1000mg per week for a period of one year or more, without obvious evidence of lasting impairment. One was formally tested and showed no significant impairment. A few of them remarked that there was a recovery period of several months to two years during which they felt "burned out".

So how do you avoid this sort of damage? Well, the obvious way is, don't do DXM. However, people regularly use drugs which can and often do cause brain damage (including alcohol, cocaine, amphetamines, and depressants), so I have a sneaking suspicion not everyone is going to drop that bottle of Tussin and walk away from the medicine cabinet.

The best advice I can give you, other than Just Say No, is Just Stay Low. Keep doses as low as necessary to meet your objectives, using meditation, sensory deprivation, theta stimulation, etc., to boost the effects (see Section 7.4). And since I mentioned it, don't use DXM without a set objective and goal. It is *not* a casual psychedelic which should be taken just to relieve boredom; that's why the Goddess gave is marijuana and mushrooms (wait, I can't say that ... strike that.) Okay, *fly to somewhere where it's legal* and *then* smoke marijuana. Don't break the law. But more importantly, don't use DXM so often that it becomes damaging. Besides, like any other psychedelic it loses its magick when used too often.

If you have already spent the last five years drinking gallons of cough syrup, maybe now is the time to stop, wait a year o[illegible]and then decide whether you want to continue. More practical advice for psychonauts and the hardcore is given b[illegible], in Section 6.5.

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6.3.2 Cerebral Hemorrhage and Stroke

Category: Permanent brain damage

PCP has been repeatedly blamed for causing cerebro-vascular accidents (CVAs) such as hemorrhages and strokes, with numerous papers referring to this (a good review is provided in (355)). In conversation (pers. comm.) and "off the record" one researcher into dissociative neurotoxicity told me that this mechanism may be less established than it seemed, for the following reasons:

- Most of the research suggesting CVA damage from PCP came out during the initial PCP epidemic, when it was obvious that people were being hurt but there wasn't much time to figure out why, and the research was somewhat rushed.
- Nobody at the time knew any mechanism for NMDA antagonist neurotoxicity and it wasn't considered as a possible culprit.
- Many people who used PCP were polydrug abusers and mixed it with amphetamines, cocaine, or other stimulants, a practice which is much more likely to result in hypertensive CVAs
- Much of this research was funded during the early years of the War on Drugs, and other research from this time is known to be biased.

Still, the concensus among everyone (this researcher included) is that PCP, especially street-grade, is bad stuff, and while one hit isn't likely to fry your brain, continued use might. Whether this is due to Olney's lesions or CVAs is to some degree a moot point.

The symptoms of a CVA can include sudden (often intense) headaches, slurred speech, ataxia, confusion, numbness or loss of muscle control to parts of the body, and abnormal pupil responses. That some of these are also symptoms of DXM intoxication complicates matters for physicians, so make sure if you do see a doctor you tell her or him about your DXM use (and what it does).

There is, I think, enough data to show that PCP is possible of inducing CVAs, at least in those with underlying hypertension and who go on "binges". It's never been demonstrated with DXM, but there hasn't been nearly as much use of DXM as PCP either. Perhaps with increasing recreational use of ketamine the issue will be resolved. If you use any drug regularly you should seriously consider donating your body to science when you die, since it really will help us in our understanding of the actual dangers of drugs. Not that a solid knowledge of the dangers of alcohol and tobacco stop anyone from using them, mind you.

I know of one person who developed a severe headache during an extended DXM trip, which lasted for several days. This person experienced no loss of mental ability, but hasn't had an MRI (a type of brain scan) either (and isn't likely to since they don't come cheap). So who knows, it could have happened. If it makes you any happier, a DXM-induced CVA is probably healthier than one induced by stimulants, since the secondary quinolinic acid induced damage (see Section 4.15.2) is blocked by DXM. Still, that's small comfort when you risk irreversible brain damage.

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6.3.3 Other Neurotoxicity Mechanisms

Category: Permanent Brain Damage

Some have suggested that chronic NMDA blockade may be a mechanism for Alzheimer's disease (100), though this could be due to advanced stages of Olney's lesions. There is also a remote possibility of toxicity to 5HT (serotonin) neurons due to induced overactivity, similar to that resulting from MDMA (52). This has, however, never been observed with any dissociative.

Excitotoxic rebound is a process by which brain cells, accustomed to a lower level of activity, essentially "burn themselves out" when a depressant drug is removed. Alcohol, benzodiazepines (tranquilizers, e.g., Valium™), and barbiturates (sedative-hypnotics or "downers") are well known for causing severe excitotoxic rebound. It is possible that regular use of DXM could lead to an upregulation (i.e., increase in number) of NMDA receptors as the body tries to compensate for the blocking effect of DXM. Recent research suggests that NMDA receptors do not upregulate with blockade, so excitotoxic rebound probably isn't a major factor to worry about.

6.3.4 Mania

Category: Psychological disorder

As stated above, mania has been documented from regular use of DXM (1-3,132,136,139-141). There may be biological susceptibility to it. One of the problems with mania is that, unlike depression, manic patients are often unaware that they are suffering from a psychological disorder. In all recorded cases, mania went away when DXM use was discontinued.

6.3.5 Depression

C ory: Psychological disorder

In addition to mania, DXM can also induce depression, although depression is more often associated with DXM withdrawal. In a few cases, depression can occur even during DXM intoxication. This can range from mild dysphoria

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to suicide attempts, and there have been a few anecdotal reports (unverified, at least by me) of actual suicides among heavy DXM users. These stories were one of the reasons that one group of DXM users discontinued using DXM. There is a published case of a successful suicide attempt by DXM, although it is not known if DXM-induced depression had anything to do with it.

There is some research right now indicating that dissociatives may actually have antidepressant effects (208,212,223,245,250), but other research casts doubt on this (225,229). It seems that in animal models, dissociatives can act like antidepressants on some tests, but not necessarily others. What may be happening is that, by inhibiting memory and overall cognitive function, the dissociative is producing identical results in the test models but for a completely different reason. Others suggest that dissociative depression occurs primarily when tolerance is reached and as a result of withdrawal, or because of a perception of significant mental impairment and the fear that it might be permanent. Withdrawal does improve cognitive abilities (355).

Whatever the reason, it does seem to be a real risk of long-term use. If you start finding yourself hostile or depressed, or your friends start mentioning it, lay off the DXM for a few months and see a mental health professional.

6.3.6 Violent Ideations, Antisocial Behaviour, and Paranoia

Category: Psychological disorder

A few regular users of DXM have reported to me that, after a year or so of constant use, they developed regular, violent ideations, and would tend to respond in anger to any perceived threat. A few others have noticed a paranoia while using DXM regularly. Two may have exhibited antisocial behaviour but to my knowledge no formal tests have been done (and in one of these cases I suspect the individual wasn't terribly social to begin with).

My hunch is DXM may actually be more pleasant to antisocial personalities because it seems to impair perception of social cues, reduce stress related to social situations, and generally reduce inhibitions. It may be that antisocial personalities just happen to like DXM more than others, who don't enjoy being cut off from interpersonal interactions and social behaviour (or who find such interaction to be more unpleasant than most).

It is possible that violent ideations coupled with psychotic breaks could result in violent behaviour; this is a well known side effect of PCP, and can have such extreme consequences as parents trying to kill their children (199). However, these cases are not nearly so common as they are made out to be (192). Also, one paper on PCP found that violence was correlated with personality and background, and not everyone was susceptible (193).

The only person who reported this with whom I've communicated after he stopped using DXM told me that these symptoms went away after about three months.

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6.3.7 Memory Impairment

Category: Temporary Mental Impairment

DXM inhibits memory. If you use it regularly, your memory will be impaired. No big secret here; if you smoke weed all the time you probably won't have much of an attention span either. Still, don't forget that it can take awhile (up to a month or so) for memory to come back to normal after discontinuing DXM. And since DXM inhibits encoding of memories, keep in mind that you may not have coherent memories from times when you used DXM, even for days after the experience. This is nothing new to alcoholics, of course, but it isn't exactly fun in either case, and years from now you may find yourself regretting not having remembered the times when you regularly used DXM.

6.3.8 Language Impairment

Category: Temporary Mental Impairment

On high doses of DXM most people remark on impaired language skills, especially being unable to find the correct word. With regular use of DXM, many people have noticed that their "inner narratives" become more and more abstract and pre-linguistic, and that they find it more and more difficult to convert concepts into language. Some of this may be due to the fact that the mental states induced by DXM don't really have terms, but I have little doubt that there is some transient (and possibly permanent) inhibition of language skills. Although in all cases I've known of (except for those listed above under Section 6.3.1) this has been a temporary phenomenon, it's possible that language skills have to be re-acquired after loss of brain cells. Unproven, but possible.

One person remarked that it felt as if the skills had been somewhat forgotten due to lack of use, since DXM tended to make him think in terms of pure concepts rather than language, and that as soon as he started using language in his inner narratives, the skills came back. Perhaps like muscles, mental skills must be used regularly to stay in shape.

6.3.9 Weight Loss

Category: Physical Toxicity

If you get any stupid ideas, the weight comes back after you stop using DXM and typically you end up worse off than before (similar to speed in this respect). I wouldn't mention it, but I've spoken with someone who used heroin for the weight loss (somehow I think this person's going to get the Darwin Award). Now that I've hopefully dissuaded

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everyone, here's the skinny (so to speak). Regular use of DXM can induce weight loss, typically about 10 to 20 pounds (4.5 to 9 kg), and although I don't know how much is fat and how much muscle, I suspect it's not all fat, since one r[illegible] user noted a significant decrease in strength.

Part of this weight loss is probably due to a drop in appetite, since it inhibits appetite for food (as well as most other physical appetites) and since one is often nauseous from drinking cough syrup. Part of it may be due to a stimulant effect, or an increase in metabolic rate. Regardless of the reason, it is temporary.

6.3.10 Loss of Muscle Control

Category: Miscellaneous

At high enough doses, DXM, like any other dissociative, can cause loss of muscle control, but that's not what I'm referring to. With regular use of DXM, some people have noticed extreme weakness and muscle tremor, like that found during exhaustion with weightlifting. Exactly is going on is beyond my knowledge; it may be related to blood glucose (everyone who mentioned this was a regular user of cough syrup), it may be neuromuscular in nature, or it may be a result of exhaustion from muscle rigidity.

It [illegible]orth noting that DXM (more so than DXO) blocks calcium channels, and that regular use of DXM may lead to a buildup of DXM in the bloodstream which could eventually affect calcium channels. This is idle speculation, however. Regardless of the cause, this sort of problem is probably your body's way of telling you to lay off the drugs.

6.3.11 Habituation and Psychological Addiction

Category: Miscellaneous

Anything can become psychologically addictive: drugs, television, shopping, gambling, sex, masturbation, thumb-sucking, whatever. Generally speaking though one can distinguish a point at which one's habits become self-destructive, and at this point it's generally safe to say psychological addiction has occurred.

There is much talk when discussing any drug about the difference between psychological and physical addictions. At the extremes, this isn't so difficult to understand. Rats won't self-administer LSD, and people who take LSD co[illegible]ulsively are psychologically addicted. People who use alcohol regularly eventually require alcohol for their brains t[illegible]tion normally, and are considered to be physically addicted.

In the middle is a grey area. Is caffeine physically addictive? With regular use, the brain does adjust to it, and there is a

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well-defined set of withdrawal symptoms, but people don't generally think of caffeine as being physically addictive. The same holds true for nicotine, which some rate as the most addictive drug known to man.

More recently, psychological addiction has come to be understood as the desire or need to take a drug (especially when there are serious consequences to doing so), whether out of enjoyment of the drug (primary psychological addiction) or out of a desire to avoid the negative effects of withdrawal (secondary psychological addiction).

There are documented accounts of DXM users who continued to use DXM in spite of adverse consequences (136), and I have received about two dozen reports of people whose use of DXM caused them significant trouble. Everyone I was able to follow up on had discontinued use, although some experienced relapses into use. This follows the patterns of PCP users (195,202-203).

Based on this I would say that DXM is habit-forming or psychologically addictive. How much? Well, it's hard to tell; any rating of addictiveness is definitely subject to bias. Personally, I'd say it's more addictive than marijuana, and probably about as addictive as (or slightly less than) alcohol, in those susceptible to dissociative addiction. There does seem to be some sort of factor (or factors) which are involved, since many people can use large amounts of DXM without ever developing a habit. Whether these factors are a part of personality or biology is beyond my knowledge.

Psychological addiction is not itself a threat, although there can be economic and social consequences to it. After all, not everyone likes being around someone who is high all the time, and it does impair your ability to hold down a job, go to school, and interact with your loved ones when used to excess. More importantly, however, regular DXM use may bring about long-lasting or even permanent mental impairment.

6.3.12 Tolerance and Physical Addiction

Category: Miscellaneous

Tolerance and physical addiction are two different things, although some would argue that the first is a necessary condition for the second. Tolerance occurs where increasing doses of a drug are required to maintain a given level of a drug's effect. One can become tolerant to many drugs, whether they affect the mind or not; some examples are caffeine, alcohol, stimulants, depressants, opiates, nicotine, nasal decongestant sprays, and aspirin and related NSAIDs.

Physical addiction is generally viewed as a condition where the drug is needed for normal function of the body or brain. Tolerance to the effects of drugs can occur without physical addiction, e.g., when tolerance occurs as the body becomes more effecient at metabolizing the drug. However, in the case of psychoactive drugs, tolerance and physical addiction usually go hand in hand.

The big exception to this is the psychedelics. Any LSD user will tell you that tolerance to LSD builds quickly; however, there doesn't seem to be any "LSD withdrawal" when one stops using it that requires one to take LSD to maintain normal function. Though I had formerly worried about rebound excitotoxicity at NMDA receptors, it seems that NMDA receptors do not upregulate with use of DXM; it also doesn't appear that dissociatives are physically addictive (194). They do induce tolerance, some would argue extremely rapid tolerance (called tachyphylaxis), since a second dose of a dissociative a few hours after coming down off the first doesn't seem to induce the same level of

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effects. This may be related to alcohol tachyphylaxis, since many of the behavioural effects of alcohol may be a result of (direct or indirect) NMDA blockade.

To sum it up, DXM does seem to induce tolerance (and I would guess it is cross-tolerant with PCP and ketamine, but nobody's ever tested that), but there does not seem to be an appreciable withdrawal symptom beyond drug craving (194). Some might disagree, pointing out a definite set of withdrawal symptoms from dissociatives including restlessness, dysphoria, depression, and flattened affect, but these may just be an effect of long-term use itself that persists for some time after discontinuing the drug.

6.3.13 Psychosis

Category: Psychological Disorder

DXM, like other psychedelics (and for that matter any intense experience) can induce psychotic breaks which can be long-lasting. Personal susceptibility seems to be involved here, and some people may have latent mental problems which are triggered by DXM. I definitely would advise against DXM use if you have a history or family history of mental illness, especially schizophrenia, depressive disorders, or antisocial personality traits.

The threat for this sort of thing goes up as use becomes more regular, and some have noted that DXM made them a little bit crazy when they were using it regularly. One person with whom I spoke didn't think this was such a bad thing, but none of the others enjoyed it much. This isn't a particularly common problem, but shouldn't be ignored either. You never know if you're susceptible to a psychotic break until you have one, and coming to your senses in a padded room probably isn't the best trip in the world. Treatment includes antipsychotic drugs and in rare cases electroshock (200).

Some research has linked sigma receptors to schizophrenia (46-49), and chronic use of NMDA antagonists has been shown to upregulate (increase the number or activity of) dopamine receptors (50). This could theoretically mean that DXM could trigger schizophrenia or mania in susceptible individuals. Some researchers have suggested that chronic NMDA blockade and/or sigma activity may be responsible for schizophrenia (100).

6.3.14 Liver, Kidney, and Pancreas Damage

Category: Physical Toxicity

I found no evidence of damage to the liver, kidney, or pancreas from DXM in medical research, however, there are potential mechanisms for it. DXM itself is metabolized fairly easily; it's the inactive ingredients and some of the more unlikely side effects one has to worry about.

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Drinking cough syrup dumps glucose into your bloodstream, and doing this repeatedly on an empty stomach probably puts a load on your pancreas (and stomach, adrenal glands, and probably other parts of your body as well). True, that's the job, but one can overwork any organ. A few long-term users of DXM have reported that after years of use they became intolerant to any amount of sugar on an empty stomach.

There's also the possibility of damage to the liver, especially if the enzymes inhibited by DXM (cytochromes P450-2D6, 3A4, and 3A5) are also involved in metabolizing something else, and that something else ends up being metabolized by another enzyme into something dangerous. This is the sort of thing one has to worry about when inhibiting liver enzymes, and it does occasionally cause problems; as an example, DXM will compete for the enzyme which degrades the prescription antihistamine terfenadine (Seldane™). It may happen that the new metabolite of something is a cell toxin and will wreck your liver; this is a proposed mechanism for acetaminophen toxicity. If you are worried, there are blood tests which can assess liver function.

Finally, I received anecdotal evidence from one person about potential kidney damage. This person had used DXM numerous times without problem until once (after a year of regular use) when, while using during a flu, experienced kidney dysfunction and bloody urine. Years later when trying DXM again, the effect repeated itself, with kidney pain, lack of urine production, and (a few days later when her kidneys started to produce urine again), blood in the urine. Needless to say if this happens to you, it's a good sign you should stop.

6.3.15 Bromide Poisoning

Category: Physical Toxicity

Although some authors have suggested the possibility of DXM-induced bromism (144), actual blood tests have revealed little danger to occasional users, even with large doses of DXM (136). Daily use might lead to a dangerous buildup. Notable symptoms of bromide poisoning include headache, irritation, slurred speech, psychosis, weight loss, hallucinations, and an acne-like rash. Bromism can cause irreversible brain damage. In addition to directly testing bromide ion content of the blood, bromism can be detected by increased anion gap.

6.3.16 Miscellaneous

DXM may decrease immune function due to sigma activity (51). Chronic use of NMDA antagonists seems to modify alcohol tolerance; this is based mostly on anecdotal evidence and theory, but it appears to be a very real phenomenon. If true, then it is important to note that the GABA receptor effects of alcohol may NOT be changed; in practical terms, you might be a lot drunker than you feel, and this could possibly lead to alcohol poisoning. Be careful, and limit

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yourself to as little alcohol as possible when using DXM. A recent paper supports the ability of DXM to affect alcohol tolerance (53) although this paper was concerned with a different effect, i.e., prevention of learned tolerance by NMDA a nists.

At least one user has reported that very long-term regular use of DXM (recreationally) can lead to a constant hacking dry cough. I have not been able either to confirm or to disprove this.

6.3.17 Summary: Regular Use Considered

There are obvious societal consequences to regularly using a drug which can significantly alter or impair function, and though I shouldn't need to bring this up, I'd better do so anyway. One user of DXM who sent me email reported that he had lost his job, his wife, and his friends because his regular use of DXM made him unable to function in society. He seemed happy, and perhaps he found his own curious form of nirvana, but if he had been given the choice before using DXM with foreknowledge of the consequences he might have chosen differently.

I realize that most people go through irresponsible phases where they don't really care about the consequences of their actions. Now, I truly believe that, as long as those consequences don't involve the *physical* harm to others, that's your b ss. Someone who cares about you has every right to try to talk you out of it, but ultimately, it's your life, and all t en people see any behaviour they don't understand (or like) as self-destructive. I've known racists who believed that associating with members of other races was self-destructive, and that certainly doesn't make it true.

However, before doing anything that may change your outlook on life significantly, ask yourself if you are ready for the changes that may occur, for the loss of those things you now consider significant. Ideally one would consider this before making any big decision in life, regardless of whether it is marraige, divorce, taking a new job, becoming a Tibetan monk, joining the French Foreign Legion, or doing too many drugs.

Remember though, that regular use of DXM may cause long-lasting, even permanent changes in consciousness, mental ability, and personality. Don't jump into the deep end without knowing how to swim and knowing what's waiting for you down there.

6.4 DXM and Pregnancy

C ord: **don't**. Dissociatives seriously affect fetal brain development (198), and reduce the number of axons pruned during brain development (up to and including early childhood) (237). This results in disrupted network formation

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(242), which leads to impaired spatial learning (246) and may increase the chance of seizures. To sum this up in non-scientific terms, kids whose parents used dissociatives during pregnancy run a high chance of brain damage and p[illegible]y epilepsy.

6.5 What is NMDA Antagonist Neurotoxicity and How do I Prevent It?

When NMDA antagonists were first studied they seemed like a dream come true: here were drugs which could block from part to all of the damage from strokes, head injury, hypoxia, polio, and a variety of other conditions. However, it seems that nature never gives something for nothing, and here too there was another side to the coin.

The dream ended when Olney et al. demonstrated that animals given huge doses of dizocilpine (MK-801), a new dissociative used in research, showed curious vacuoles (essentially, tiny holes) in tissue samples in the posterior cingulate cortex and retrosplenial cortex of lab animals (174,177,180-182,217,307-308,323,329). Further research showed that other indicators of damage were present, such as proliferation of microglia and induction of a protein called HSP70 (Heat-Shock Protein 70) (173,325).

S[illegible]hen, Onley's lesions, also known as NMDA Antagonist Neurotoxicity or NAN, have been discovered with ketamine (325), PCP (302), and dextrorphan (177), all noncompetitive NMDA antagonists. Competitive NMDA antagonists have also been shown to cause Olney's lesions (213,312). PCP causes additional damage to the cerebellum and other areas, possibly due to its unique pharmacology (302). Drugs which bind to the polyamine site on the NMDA receptor evidently do not cause Olney's lesions (318), although nobody is quite sure why. Curiously, NAN may be worse in females than in males (290).

6.5.1 Overview and Mechanism of Olney's Lesions

The mechanism for Olney's damage is still being sorted out, and is somewhat perplexing, since NMDA antagonists generally protect neural tissue from damage rather than causing it. Trying to tie everything together is a little like trying to solve a crime with only circumstantial evidence; there are clues, but nobody's been able to watch the criminal in action. Here is what current research seems to indicate, pieced together into a coherent whole. A simplified explanation is given below.

- Dissociative anaesthetics activate neurons in the posterior cingulate cortex (PC) and retrosplenial cortex (RC) in lab animals (and presumably humans) (289,310,322). There is also secondary, "downstream" activation of neurons in the entorhinal cortex, dentate gyrus of the hippocampus, and olfactory regions (213).
  There are two theories for why this happens; either one, both, or neither could be true. One theory is that NMDA

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receptors are found on inhibitory GABA interneurons, and that when these receptors are bocked, these interneurons secrete less GABA, and thus excitatory pyramidal neurons that normally receive a lot of GABA inhibition are overexcited.
The other theory is that the PC and RC are less affected by NMDA blockade than the hippocampus (and related areas), and that these formations serve as feedback to the hippocampus and surrounding networks. As these limbic networks are inhibited, the PC and RC increase their output to compensate, resulting in overactivity (300).

2. The overactive cells begin to heat up, use up their energy supply generate toxic waste products, and/or let in too many calcium ions (182,217,300,308).
3. Regardless of the mechanism, or whether the mechanism is none of the above, the overactivity seems to cause intracellular organelles (notably mitochondria and endoplasmic reticulum) to malfunction (174,182,217).
4. The mitochondria probably lose their proton gradient and allow their innards to spill into the surrounding cell material, where they cause all sorts of trouble, possibly including forming free radicals which cause further damage to the cell. Another possibility is that the free radicals come first, and they cause damage to the mitochondria and other organelles. Mitochondrial damage can occur within 15 minutes of the drug dose, the endoplasmic reticulum is damaged 30 minutes, and in both cases gets worse as time progresses (308).
5. The cell responds to this damage with a protein called HSP70. This "heat shock" protein is made and activated when something (such as overheating, thus the name "heat shock protein" or HSP) is causing a cell to malfunction so badly as to be in danger of self-destructing, and its job is to turn the cell off until repairs can be made (325). Hopefully, the cell will get a lot of rest (about 24 hours (322)) until it goes back to normal. **At this point the problem is still reversible and the brain cells have not been permanently damaged** (177).
6. If the cell continues to be overexcited, it eventually burns out completely as the increased temperature, disrupted ion gradient, hypoxia, calcium ions, free radicals, and/or buildup of waste products kill it. At this point, surrounding support cells called microglia are activated and come in and eat the cell (probably under the theory that if an infectious organism caused the cell death, it'd better be destroyed before the infection can spread) (173,325).
Then, scientists come along, freeze the brain, and slice it up into thin slivers. During the fixing process (307), the disrupted intracellular organelles expand to form vacuoles, the HSP70 shows up with tests designed to look for it, and the dead cells and proliferating microglia show up on microscope slides.
8. The scientists take pictures, publish papers, thank their lucky stars that they aren't the rats who just took ten times the human anaesthetic dose of dizocilpine, and go home and fix martinis, smoke cigarettes, eat fast food, and engage in other sanctioned risk-taking behaviour (that's a joke ... yes I know there's a difference between a behaviour that kills you in twenty years and one which causes immediate brain damage).

A layman's explanation of the above: when you take too high a dose of dissociatives, a few parts of your brain become wildly overexcited, the brain cells get damaged, try to shut down, and (if damaged beyond repair) die. Support cells come in to clean up the mess, and you're left with permanent brain damage.

6.5.2 Dosages at Which NAN Occurs

According to most current research the dosages at which Olney's lesions become relevant is far in excess of human recreational doses. Here are some of the reported dosages applicable for different dissociatives.

Drug	Dosage	Type of Damage	Ref

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Ketamine	40mg/kg	HSP70 (no cell death?)	(325)
K[illegible]mine	80mg/kg	Microglial activation (cell death)	(325)
K[illegible]	50mg/kg	HSP70	(302)
PCP	8.6mg/kg	increased glucose metabolism (no cell death?)	(322)
PCP	0.86mg/kg	normal glucose metabolism (no cell death?)	(322)
Dizocilpine	5mg/kg	Vacuolation w/ cell death	(307)
Dizocilpine	1mg/kg	Vacuolation w/o cell death	(308,323)

6.5.3 Balancing the Risks: Is Olney's Research Relevant to DXM Use?

Obviously there are still a lot of questions to be answered. The most important for human users of dissociatives is whether this type of damage can occur at recreational levels, and if so, what can be done about it.

Let's review the evidence both for and against Olney's lesions in human users of dissociatives. First, the evidence for. The posterior cingulate and retrosplenial cortex (PC and RC) are involved in skills which seem to be impaired in r[illegible] users of dissociatives. Olney's lesions occur at doses several times the recreational dose, but that's at one dose of the drug; repeated doses of lower amounts may cause the same damage. Olney's lesions are also only generally visible when large numbers of cells are destroyed, and they're significant enough to be visible under the microscope. Finally, conditions which increase the likelihood of Olney's lesions, such as less than ideal blood circulation to the brain, large amounts of glucose (**like that found in cough syrup**), concurrent use of stimulants, physical stress, hypertension, and the like, are all commonly found in drug users, who don't tend to be the healthiest lot (this is a generalization, of course).

On the other hand, Onley's lesions have never been found at human recreational levels, and DXM has received little attention. Ketamine users, some of whom have used ketamine for many years, don't typically show mental impairment. Even the few DXM users who do show impairment typically return to normal after staying off DXM for several months, and at least one paper suggests the mental impairment from dissociatives may be caused by depression, not brain damage (355). DXM is typically found in hydrobromide form, and bromide is a CNS depressant and may prevent damage to the PC/RC (incidentally, that's not the reason DXM HBr is used; DXM HBr just happens to be more water-soluble than any other form). DXM syrups usually contain alcohol, which also depresses the CNS. And, the lower plateaus of DXM are equivalent to doses of ketamine and PCP lower than commonly used recreationally.

Weighing the two sides I personally believe that moderate use of dissociatives is probably no harder on your brain cells than moderate use of alcohol or amphetamines (I said *moderate* use, not some five day fry-yer-brain speedfreak binge), and that if you use DXM sparingly (e.g., once or twice a month at lower plateaus, maybe once or twice a year at upper plateaus), you'll be just fine. In fact, I've never known anyone to suffer lasting impairment even after going through a few months of weekly DXM use at upper plateaus. But **I could be wrong!** Mild brain damage has a nasty way of sh[illegible]ing up years later when you've forgotten about the stupid things you did when you were young.

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6.5.4 A Look at the Areas Involved

Nobody's totally sure exactly what most parts of the brain do, but there is some evidence which may indicate possible functions for the posterior cingulate and retrosplenial cortex. Although our understanding is far from complete, and mine is considerably worse than that, I'll try to put together the published results into a coherent whole.

The posterior cingulate cortex is the posterior (rear) part of the cingulate cortex, a section of the cerebral cortex interconnected with the limbic areas. The front part of the cingulate cortex is called, appropriately enough, the anterior cingulate cortex. Like most areas of the brain, the boundaries of the cingulate cortex are somewhat indistinct. There are differences between the posterior and anterior cingulate cortex (beyond the obvious one of location); notably, the anterior cingulate cortex has fewer pyramidal neurons than the posterior cingulate, and in the anterior cingulate these neurons have more complex connections (310). This entire area may relay information between the hippocampus (and other limbic systems) and other areas of the brain (298).

There is a lot of disconnected research that points towards possible purposes for the posterior cingulate cortex. It may be one of the components of verbal and auditory memory (294), multisensory perception (315), visuospatial cognition and/or evaluation of emotional behaviour (316). The right hemisphere posterior cingulate is activated in comprehension of metaphors (303), and the left in associative learning (304). Story comprehension seems to use the posterior cingulate (292). In late Alzheimer's disease the posterior cingulate may be subject to atrophy (314,317). It is activated during a' y (313) and in OCD (Obsessive-Compulsive Disorder) (305) but deactivated during phobic fear (299).

It has been suggested that the cingulate cortex in general may be involved in evaluating (posterior) and acting on (anterior) one's own behaviour and spatial orientation (316). This is, in my opinion, the most comprehensive view of the existing research. To put it simply, the job of the posterior cingulate cortex might be to evaluate and consider where you are and what you're doing. Since dissociatives tend to interfere with the ability to evaluate one's own behaviour, it may be that the posterior cingulate is a part of a self-evaluation system.

Another paper (311) analyzed the network properties of the posterior cingulate, and suggested that neural output from the hippocampus that was in sync with the theta rhythm would pass through the posterior cingulate cortex in preference to other routes. What makes this so interesting is that the flanging or strobing effects of DXM seem to occur at theta rhythm, which may be a consequence of DXM's effects on the posterior cingulate.

There was considerably less information published on the retrosplenial cortex. One paper found that it was activated during the encoding of novel situations (321). Another (324) suggests that the circuitry between the retrosplenial cortex and hippocampus is an important path by which the hippocampus affects learning, memory, and emotional behaviour. Numerous papers suggest it has a role in visual processing.

Hopefully I'll be able to fill this area in with more information as my knowledge of (and the amount of published information on) these two areas of the brain increase. Until then, make what you will of the rather sparse information I have provided.

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6.5.5 Preventing and Limiting NMDA Antagonist Neurotoxicity

So what can you do about this? Well the best thing I can tell you is, stay away from drugs that might give you brain damage, whether it's DXM, alcohol, stimulants, benzodiazepines, PCP, or glue. If marijuana were legal I'd say smoke as much as you want (keep in mind that the *smoke* isn't terribly good for your lungs though), since there have been numerous studies which have shown no neurotoxic effect from marijuana. But since marijuana ain't legal, ... well, there's always caffeine I guess (until that's made illegal too).

Realistically, I know many of you are going to keep using DXM, especially since it obviously doesn't impair everyone who uses it (even in large amounts). People regularly make choices to engage in risk-taking behaviour, whether it's rock climbing, driving too fast (or without a seat belt), eating red meat, not exercising, or taking drugs. Ultimately that's your choice. Society has made many drugs illegal, and many argue that if drugs were legalized that would give them an aura of legitimacy and safety, but it's legal to sit around and watch TV all day, eat nothing but cheeseburgers, bathe only once a month, and hit yourself on the head with a hammer, and even as a child I never believed that legality made any of these a good idea.

So here are some practical suggestions based on research into Olney's lesions, which may work, may do nothing at all, or may make it worse. It's up to you to decide, but keep in mind that tomorrow it may turn out that any one of these is helping to fry your brain.

- Avoid stimulants of any kind with DXM, especially yohimbine. Alpha$_2$ agonists seem to prevent Olney's lesions (175); yohimbine, an alpha$_2$ antagonist, could instead make the problem much, much worse.
- Make sure you are in good physical condition, with low blood pressure and low cholesterol. The ability of brain cells to recover from metabolic insults is vastly improved if cerebral blood circulation is in good shape.
- Consider Coenzyme Q10 supplementation. One paper suggested that Q10 might be useful in some types of neural lesions (216). It has been suggested that, as a mitochondrial energy substrate, it may prevent brain cells from "running out of fuel".
- Consider a **very mild** CNS depressant, like a glass of wine or a beer. I wouldn't go much beyond this, since combining DXM with too much alcohol can lead to severe nausea. A benzodiazepine is probably overkill.
- Use gelcaps or capsules instead of syrups, which contain glucose; the presence of high glucose levels seems to make things worse.
- Limit use of DXM extract, which doesn't contain bromide ions, or use it in conjunction with a little alcohol.
- Limit frequency and dosage of DXM
- Give your brain a rest of at least 48 hours after using DXM
- Eat healthily before, during, and after DXM use
- Consider an alpha2 agonist (175). Or maybe not; the research isn't conclusive on this yet.
- Regularly monitor your mental skills and have others monitor them as well.
- Make each DXM trip count so you don't feel the urge to reattempt an unfulfilling trip experience.

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6.6 Is DXM Addictive?

From one viewpoint, of course, anything can be addictive -- television, chocolate, masturbation, self-mutilation, etc. So in that sense, yes, DXM can be addictive. Somewhat more relevant are the degree to which DXM is addictive, and how such addiction manifests itself. The quick answer is, DXM can be addictive if you use too much, too often.

The traditional distinction made with respect to addiction is between physical addiction and psychological addiction. As examples, alcohol is physically addictive, whereas marijuana is psychologically addictive. Unfortunately this distinction has its problems - not the least of which is that since the brain is a physical construct, any addiction is in some sense "physical."

As physical addiction is a somewhat nebulous concept at best, I prefer to use the concrete ideas of tolerance and serious withdrawal symptoms. Tolerance is a process by which the body and brain adjust to a drug so that the dosage must be increased to achieve the same effect (some drugs, such as nitrous oxide, exhibit *reverse tolerance*, becoming more potent the more often they are used). "Serious" withdrawal symptoms is somewhat less clear, unfortunately. Note that it is possible to become tolerant to a drug without being psychologically addicted; in fact, some people lose the desire to use a drug when tolerance takes away its more interesting effects.

There is considerable evidence based on personal reports that tolerance to DXM's more interesting dissociative effects builds quickly. This is a result of upregulation or sensitization of NMDA receptors, as well as possible changes in other receptors and systems indirectly affected by DXM. Cross-tolerance exists between DXM, PCP and ketamine, naturally. Some people seem to be immune to tolerance to dissociatives including DXM (lucky them).

[illegible]y it takes several doses before tolerance is noticeable, although a few people have noted tolerance after just one dose. Larger doses will lead to quicker tolerance. Once tolerance has built, it takes at least three weeks before receptors will reregulate to normal levels. To avoid this problem, it is probably best to dose only once a week at most. Also, some people believe that receptors which are upregulated (or downregulated) for long periods of time may tend to stay that way. The practical upshot is you should take a month off every now and then (a good idea with any drug, incidentally).

Interestingly, the first plateau music euphoria effect also seems to disappear with repeated use of DXM. It's also one of the last effects to come back. This may be due to downregulation of dopamine receptors rather than upregulation of NMDA receptors. The practical upshot is, don't do DXM all the time. Again, some people are luckily immune to this tolerance effect.

For information on withdrawal and withdrawal symptoms, refer to the next section.

Psychological addiction to DXM has been noted a few times, and can theoretically lead to physical addiction. Generally, though, dissociatives aren't considered particularly habit-forming, since they tend to have such "heavy" effects. Low-dose DXM might be an exception due to its moderate to strong stimulant effect; in practicality, it's probably too hard to consistently hit the first plateau.

There are exceptions, some of them notable. One case report (132) involved a 23-year old male who maintained an incredible daily dose of 30mg/kg to 40mg/kg DXM (plus a six-pack of beer)! Needless to say, after maintaining this dose long enough, he had become addicted, although the authors consider it a "psychological" addiction, with w[illegible]rawal symptoms such as dysphoria, depression, and anxiety.

Most people who use DXM have noticed little or no addiction, and only mild tolerance (don't let that scare you; remember that coffee produces both tolerance and withdrawal symptoms). A few unfortunate people have developed

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problems with DXM. Prolonged, heavy use of DXM seems to induce dysphoria, anxiety, and/or depression in some people; as the dosage is increased, the problem gets worse. Unfortunately, at this point, there may be withdrawal p[illegible]ms (see the next section). If this happens to you, seek medical assistance.

6.7 Is DXM Withdrawal Dangerous?

Withdrawal from *occasional* DXM use is almost certainly not dangerous, and in fact any "symptoms" felt are probably just "jonesing" - the same sort of withdrawal "symptoms" felt with marijuana, television, sex, etc. At this point it's a matter of willpower more than anything else.

Once tolerance has built, withdrawal has the potential to cause more serious problems. Mild tolerance to DXM is probably no more dangerous than mild tolerance to alcohol (tolerance at the level of "being able to hold your liquor"). Withdrawal may produce boredom and mild anxiety, but rarely anything more troubling than that.

One person reported a curious withdrawal effect which has also been noted upon cessation of SSRI antidepressant th[illegible]y. Whenever moving his eyes, or upon any sudden change in sensory input, he experienced a sudden, momentary d[illegible]ss and altered consciousness. Ginko biloba, exercise, and sleep were reported to all help with this.

Beyond the mild tolerance level, things could get rapidly worse. There is evidence that significant NMDA upregulation can lead to (100) and many of the symptoms of opiate withdrawal may occur via a similar mechanism (109,133). The good news is, studies generally haven't found any significant evidence of brain damage from heroin withdrawal, so withdrawal from DXM probably wouldn't be much trouble. The bad news is, heroin withdrawal isn't particularly enjoyable.

Interestingly, one person who developed addiction and tolerance to DXM also compared the withdrawal symptoms to those of heroin (although DXM never produced any of the positive effects of opiates in this individual). These symptoms included watery eyes, stuffy nose, gooseflesh, muscle spasms, increased pain sensitivity, nausea, anxiety, and depression. Furthermore, the individual eventually began to develop some of these symptoms even while using DXM. This is definitely something to avoid.

If you happen to develop a significant degree of tolerance to DXM, it might be a good idea not to quit "cold turkey" (all at once). Build down slowly over a few weeks, and avoid all other drugs in the mean time. One person who had been using DXM twice daily reported no withdrawal symptoms after decreasing the dosage 10% per day, and stopping at 180mg. This should prevent any excitotoxic rebound.

On the other hand, given the research from Olney et al (see Section 6.3.1, it may be better to go ahead and quit cold turkey after all. Some research casts doubt upon upregulation of NMDA receptors with blockade, and if so, then there may be no danger to quitting DXM completely without tapering down. To be honest, there is evidence on both sides, a[illegible]e best advice I can give you is not to get into this situation in the first place. If you do manage to develop a DXM a[illegible]ion, I wish you the best of luck, and I think your best course of action would be to see a physician. Since most medical authorities are ignorant of DXM's psychoactive potential, it would probably be advisable to treat it as an addiction to any other dissociative (ketamine or PCP).

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6.8 Kicking the DXM Habit: What to Do If You are Addicted

The first thing to understand about DXM addiction is that most people who find themselves addicted use DXM on a very regular basis -- weekly, or (more frequently) daily. **This is very dangerous!**. It is vital that you quit using DXM as quickly as possible if you are using it on a daily basis.

If you have access to mental health services I strongly suggest you seek them out. Many areas provide financial assistance for uninsured or low-income patients. DXM addiction can be treated like addiction to any other dissociative, i.e., PCP or ketamine. Unfortunately, many physicians and psychiatrists are not generally up-to-date on dissociative addiction, so you may need to look around.

The biggest problem with DXM addiction is rebound depression. Many casual DXM users have noticed a slight depression during the hangover phase. With regular use, however, the brain becomes tolerant to certain aspects of the DXM experience (probably a reregulation of serotonin receptors due to the DXM-induced serotonin release). To compensate for the depression (which can be severe) many people turn back to DXM. Unfortunately, dissociatives make poor antidepressants, since they have numerous side effects.

Incidentally, keep in mind that dissociative-induced depression is often severe enough to result in impaired mental functioning. Many cases of dissociative "brain damage" turn out not to be permanent after all, but only the consequences of major depression.

If you choose to kick the habit on your own, or if you have no other choice, you have two options: *build-down* and *cold turkey*. Build-down means that you slowly taper off DXM use in the hope that your brain will readjust as you do so, and thus avoid the potentially severe depression of sudden withdrawal. Cold turkey withdrawal (the term comes from the gooseflesh of heroin withdrawal) means stopping suddenly.

6.8.1 Preparing to Quit

The first and most important step in either case is wanting to quit. Not merely knowing you should, but actually wanting to. Take a good, hard look at your life. Talk to your friends about your problem -- I know it can be hard to do, but they probably already know it anyway. Examine your performance at work or school. And look at your own use p[illegible]ns -- are you using DXM as a group activity, or are you using it alone? Take stock of your finances. All of these f[illegible] can help to contribute towards the desire to quit DXM.

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Keep in mind that you may have to quit DXM permanently, and never use it again. By the time most people has become addicted to DXM, however, they tend to derive little or no pleasure from the experience anyway. So you must be prepared for the thought of never using DXM again, or at least waiting a year or two and before trying it again. Remember, though, there are other psychedelics out there, and many of the more interesting effects of DXM can be achieved through transcendental meditation, yoga, and other spiritual work.

In preparation for quitting any drug, get rid of anything and everything that acts as a "trigger" for DXM use. Let your friends who use DXM know you are trying to quit. You don't have to shun them completely, but you might be well-advised to avoid them while they are using or discussing DXM. Discard any supplies of DXM you have (if you are quitting cold- turkey). Don't go to the drugstore without someone else to watch over you. Don't go to places where you traditionally used DXM (this is hard if you used it at home). If you will be moving soon, you can use the move as an opportunity to leave behind all the sensory triggers that made you think about DXM.

6.8.2 Quitting "Cold Turkey"

The safest way to quit from a neurological standpoint is to quit cold turkey -- completely and suddenly. This is also the most difficult. The depression stage can last for several weeks, even months. Fortunately, it is treatable with drugs; SSRIs such as fluoxetine (Prozac) have been used with great success in treating PCP addiction, although there is some evidence that serotonin/dopamine reuptake inhibitors, or combining a SSRI with a dopamine reuptake inhibitor such as bupropion (Wellbutrin), may be preferrable. In drug-resistant cases, electroconvulsive therapy (ECT), or the newer (and safer) variant, left-prefrontal transcranial magnetic stimulation, have been used as well. In any event, it is important to see a psychiatrist who can assist you, give you a neurological evaluation, and prescribe any necessary drugs. **DO NOT** use DXM after you are placed on antidepressants of any kind.

If you do not have access to psychiatric medicine, you still have other options. Try to vary your daily routine to expose yourself to new and interesting stimuli. As corny as it seems, taking long walks in the woods and, especially, getting a lot of sunlight, has helped many people (and there may be some evidence that DXM-induced depression may be in part due to a disruption of the circadian rhythm, similar to Seasonal Affective Disorder). Keep a regular, rigid schedule of getting up and going to bed at the same time. Some people have had success using melatonin to help them stay on schedule but there is some evidence that melatonin may worsen depression in susceptible individuals. And the most important thing you can do is to get regular physical exercise! Not only does it help with depression, it also helps to get your body and brain back in top working order.

6.8.3 Build-Down

Build-down is a controversial method for dealing with addiction. Many people with whom I've spoken have used build-

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down successfully, but many others tried it and failed. At the very least you can try it first and then, if that doesn't work, try cold-turkey withdrawal (which may be easier after you have cut down DXM use).

There are two conflicting issues here. On the one hand, maintaining a regular, even dose of any drug can prevent the "rush" that so many people find contributes to the addictiveness of the drug. On the other hand, regular use of DXM can become dangerous to the brain. Weighing these issues, and on the basis of those who have used build-down successfully, I believe that a regular **low** dose of DXM may be appropriate for build-down. Fortunately, even a lower dose of DXM seems to help fight off dissociative depression.

I do not claim to be a physician and I can only relay to you what others have told me. Before attempting build-down you **must** consult a medical authority, and at the very least have your serum bromide level checked (or check anion gap, which amounts to the same thing) to see if you are already in danger or bromide poisoning. Assuming you check out OK, and your physician is willing to let you try build-down, here is what I have been told from successful build-down attempts. **THIS IS NOT INTENDED AS MEDICAL ADVICE, ONLY ANECDOTAL EVIDENCE FROM FORMER DXM USERS.**

First off, get someone else to help you -- a friend, spouse, whatever. You want to make sure they will keep you on the rigorous schedule and not let you go back to using large amounts of DXM.

The key to this method, according to those who have used it successfully, is to place yourself on a regular, low dose of DXM -- just enough to keep the depression from becoming severe. First off, wait at least three days from your last DXM dose before starting the build-down; this should allow your body to clear out any DXM and metabolites. Also, make sure you are not on any drug which can alter DXM metabolism -- including antidepressants.

The build-down dose is taken three times per day at rigid six hour intervals, and an individual dose should **not** be enough to get you high. One person successfully used 30mg 3/day; most however have used 60mg 3/day. It would probably be better to start at 30mg 3/day and then move up, if that isn't working, after two or thee days.

After establishing the maintenance dose, build-down users continued this dose for one to two weeks, before halving the dose. Again, after another one to two weeks, the dose was halved again; finally, when the total daily dose was less than 45mg, they went to twice a day for one week, then once a day for one week, and then quit completely.

All of the people who built down experienced mild depression, although most found it manageable, and some told me that the ideas suggested above in Section 6.8.2 (exercise, walks in the woods, sunlight, regular sleep habits, etc.) helped to make them feel better.

Again, remember, I'm only conveying anecdotal information here; you **absolutely must** work with a physician or counselor who can give you the professional help you need. For all I know, these people who told me their successes could be unique in some way (or for that matter they could be lying to me).

6.8.4 After Quitting: When Can I Use DXM Again?

Possibly never. Like any other severe addiction, there is always the risk of a relapse. If you choose to throw caution to

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the wind, that's your choice and you do it with the understanding of the risks involved. The only suggestion I can give you is to limit DXM use to one particular environment, and make sure it's an environment you do not encounter when n ng DXM. Basically, by making it into an isolated ritual, you lessen the chances of normal sensory cues leading yo ck into addiction. One former DXM addict managed to use DXM again without becoming addicted after two years of being drug-free; he did so by only using it with a select group of people, in one particular place, and then one of his friends was responsible for giving him his dose in a particular cup (thus avoiding the sensory cue of the cough syrup bottle).

Still, it's better to find other ways of feeling good. Yoga and meditation are probably the two best means of achieving altered states of consciousness that are similar to DXM (unfortunately, unlike DXM, they require hard work and patience). If you live somewhere where serotonergic psychedelics (mushrooms, LSD, 2CB, etc) are legal, you may find that these can give you the psychedelic consciousness without the addictiveness (or danger of neurological damage) that come with DXM.

Best of luck, and remember, above all, seek professional help. I am not a physician, only a researcher, and I cannot and will not claim to give advice for your particular case. There are too many other factors which I do not know, and cannot understand, as I have limited medical knowledge in areas other than neuroscience.

6.9 DXM Hangovers -- Avoiding and Alleviating

Hangovers from DXM trips are not common at lower dosage ranges (first and second plateau). Instead, many people report feeling energetic and refreshed the next day, although it seems that getting enough sleep is important here.

At higher dosage levels (third and fourth plateau), hangovers are more frequent. Hangover effects reported consist of lethargy, sleepiness, amotivation, mild sensory dissociation, muscle rigidity, muscle tics (especially in the jaw and hands), dizziness, loss of balance, headache, photophobia, and sharply diminished sense of taste. Some people say that everything tastes like slightly salty tepid water, or like MSG (monosodium glutamate, the flavor enhancer). Note that you're very unlikely to get all, or even most, of these symptoms.

Some of the hangover effect from high dosage trips is probably due to residual DXM or dextrorphan, especially in individuals who lack P450-2D6, or in whom it is inhibited (e.g., by fluoxetine). To my knowledge there doesn't seem to be any way to speed up the metabolism; the best I can suggest is to exercise, drink plenty of water, take a multivitamin every day (don't overdo it, one is plenty) and possibly a **small** iron supplement (which just might increase cytochrome turnover), get enough sleep, and eat right. **Don't** take too much iron; iron is very toxic.

Other hangover effects may be due to neurotransmitter depletion (due to induction of 5HT and dopamine release), temporary inactivation of NMDA receptors (I doubt it, but there's been speculation), or just plain lack of sleep. Again, treating your body well is probably the best you can do.

F , there is evidence that, for 24 to 48 hours following use of a dissociative, certain parts of the brain are underactive (probably due to neurotransmitter depletion) (322). There's not much you can do except tough it out. Obviously, you shouldn't use DXM unless you have a day to recover.

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Preventing hangovers may be possible to some degree. Certainly, make sure you are in good physical condition to start with, and don't try to stay up too late during your trip. Drink plenty of fluids (it is possible to get dehydrated; this can s[illegible]own the kidneys), and **don't** mix DXM with anything that could further deplete neurotransmitters (e.g., a[illegible]etamines, MDMA, etc.). Try to avoid going to sleep while still tripping hard - it seems to reduce the quality of sleep. Eat something before you go to sleep; usually DXM kills the appetite, so you may not know your body needs food.

Another possibility is the use of nootropics ("Smart Drugs") to help prevent and alleviate hangovers. A good place to start for information is alt.psychoactives (although, like any source on the Internet, take any information with a grain of salt and ask for medical journal references); another good place is Dean and Morganthaler's text on the subject. A healthy dose of skepticism is probably a good idea here; some of it might be placebo effect. There's evidence for and against; check Medline if you're interested. Note that unless otherwise specified, everything I mention should be available at health-food or mail-order vitamin suppliers (this is USA; I don't know about other countries).

Several people have reported beneficial effects from cholinergics, specifically choline (the precursor to acetylcholine), and DMAE (also a precursor, and a choline oxidase inhibitor). In both cases the bitartrate salt seems to be the usual (there is a liquid DMAE para-aminobenzoic acid formulation that tastes nasty and evidently doesn't work). Note that some people with depression, primarily endogenous, react very poorly to cholinergics. Also note that they can make you really, really irritable if you're susceptible. Regular use of DMAE seems to be the most effective, although that's something that you have to build up for a couple of weeks (Dean and Morganthaler suggest around 800mg per day in divided doses).

One-time use of DMAE or choline immediately before, during, or after the trip has also been reported to work, (in that order of preference), although not as well. Recommendations given to me have been 800mg DMAE, or 1500mg ch[illegible]e; in either case with 350mg vitamin B-5 (pantothenic acid) which acts as the relevant cofactor here. Don't go r[illegible]above that.

There is some preliminary evidence that supplementary tyrosine (the precursor to dopamine and noradrenaline) may actually be useful in the case of dopamine depletion. Normally, the rate-limiting enzyme in the process is nearly saturated, so boosting tyrosine doesn't work. It's hypothesized that more enzyme may be produced in response to dopamine depletion. Furthermore, sigma activity may enhance synthesis of dopamine (114), so taking supplemental tyrosine is even more likely to be a good idea.

A side note ... for whatever reason, nootropics fans seem to be abnormally fond of using phenylalanine instead of tyrosine. Phenylalanine does convert to tyrosine, but it's a very slow, limited conversion, and there's no good reason for choosing phenylalanine over tyrosine.

Vasopressin might also be useful; it seems to have a fair amount of success in combating intoxicants, possibly by affecting long-term potentiation (how I don't know). It's prescription in the USA, and it does have side effects.

One final note - **do not take tryptophan!** Although this isn't established, it's possible that NMDA receptors may be upregulated after a DXM trip (especially in chronic users). Tryptophan, in addition to leading to 5HT, also leads (along a much more efficient pathway) to a substance called quinolinic acid, which is very toxic to neurons, and acts via NMDA receptors.

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6.10 How Toxic is DXM, and What is the Lethal Dose?

The LD_{50} (dose at which 50% of animals die) of DXM doesn't seem to be well known. For a variety of reasons, animal assays of the lethal dose of psychoactives aren't always accurate. Nor have I ever found a published LD_{50} for DXM. So instead, I've decided to go on the basis of the few deaths that have occurred from DXM use, keeping in mind the amount of DXM people regularly consume for recreational purposes.

In searching medical literature, I found only two cases of death associated with DXM use, both in Sweden. In one case, a girl was found dead in a public bathroom with two bottles of 30mg DXM tablets (the number of tablets is believed to be 50/bottle, but may be 15 or 25). She had previously tried to commit suicide using a bottle of 50 tablets (this leads me to believe that she had, in fact, taken 100 tablets, for a total dose of 3000mg).

The other case involved a 27 year old man, and few details were specified. In both cases, death was apparently due to inhibition of respiration. Plasma levels of DXM were 9.2 and 3.3 micrograms per gram (cases 1 and 2); plasma levels of dextrorphan were 2.9 and 1.5 micrograms per gram. Liver levels of DXM were about an order of magnitude higher. In both cases, the ratio of DXM to dextrorphan was about 3 (9).

On the other hand, a dosage of 42mg/kg/day has been used (*with respiratory support*) in children (33), which would be 2500 to 3000mg for a 60-70kg adult. There is also a very low incidence of death associated with DXM use. Since a 42mg/kg dose in an adult may be stronger than the equivalent dose in a child (I have no reason to believe this, but it is p[illegible]le), caution is advisable in taking this as an indication of safety.

The highest daily dose of DXM I've come across is from a case study of a 23-year old male (132). His daily dose was 3 to 4 12oz bottles of Robitussin DM™, for a total of 2160mg (31mg/kg) to 2880mg (41mg/kg). He was, of course, considerably addicted to DXM, and had built up this dose over a long period of time.

It is reasonable to expect, given the data, and the available data on the effects of high DXM doses, that DXM starts becoming toxic around 25 to 30 mg/kg (about 1700-2000mg for adult of 150lb). This corresponds to between 5 and 6 4oz bottles of 3mg/ml cough syrup, i.e., a fairly large amount, but still within the realm of hardcore experimenters. Keep this in mind before you consider large doses. IV naloxone is considered the antidote for DXM overdose (54), even though DXM isn't an opiate.

Note that since publishing the FAQ, I have heard anecdotally (but have not verified) of a few recent (non-fatal) overdoses in Australia, and one fatality in the United States. The latter involved long-term regular use and may have involved a buildup of DXM in the bloodstream. Nine additional fatalities involving combined use of DXM and zipeprol in Korea have been documented (367).

6.11 Do You Recommend DXM for Recreational Use?

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No. Definitely not. Use of medicine, OTC or not, contrary to instructions may be a violation of local, state, and/or f[illegible] law. I hereby specifically tell you not to use any DXM-containing product (or any other product) in a manner in[illegible]sistent with its labeling.

Even if DXM were legal for recreational use, I still wouldn't recommend it for frequent use, nor for high-dosage use. Frequent use may bring about undesirable changes as mentioned above. High-dosage use carries with it all the risks of any hallucinogen, and can be distinctly unpleasant. Very little is known about sigma, PCP, or NMDA receptors. You dork with them at your own risk, and that risk may be considerable.

To be honest, part of my answer is covering my ass, and part is genuine caution. DXM probably isn't quite as friendly as I used to think it was, and there's no need to place onesself in harm's way for the sake of a buzz. If you're just looking to get generically "high", there are better highs out there (unless you really happen to be drawn to dissociatives, and if so, believe me, you have my sympathies). So make sure you really want to do DXM before you do it. It's not a substitute for LSD or marijauana and shouldn't be used as one.

Once more, I officially instruct you not to do DXM, or any other drug, unless under the guidance of a physician. Right now, in the USA, there are many people with nothing better to do than support legal paternalism and legal moralism. For whatever reason, some people feel that they have the right to tell a legal adult what she or he can and cannot do that involves only her/his body. And as long as this goes on, I'm going to make sure I'm not thrown into prison so they can free murderers and rapists to make room for me. So, I'm telling you - don't break the law.

6.12 Help! What do I do if ...

This section covers suggestions for undesirable, unexpected, and unplanned situations. Always remember, though, if you feel there is a real emergency, get to a hospital. While DXM-related deaths are very, very rare (two published, three anecdotal), they have occurred. Nobody wants to see any more happen. **None of this is intended to be medical advice or replace the judgment of a physician, nor should it be taken as such. These are general guidelines only, compiled from reports of DXM users. Neither I nor anyone else take responsibility for any injury, death, or other misfortune, resulting from this advice.** There, have I covered my ass well enough? Probably not. Just remember, please use common sense and be careful!

6.12.1 Itching (the "Robo Itch")

See Also: Allergic Reactions & Histamine Release

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Some people get the itch, some don't. Among those who do, some seem to get it from the DXM itself, some from the dyes in cough syrups (in particular tartrazine), and some just as a consequence of losing tactile sensation.

In any case, from all reports the best thing seems to be to wait for it to go away, and try to think about something else. Scratching is OK, so long as you don't injure yourself in the process (remember, you many not be feeling pain as you normally would). A loofah can be quite enjoyable, actually, should you feel the urge to take a bath (which evidently can itself be enjoyable on DXM. Just be careful!) You can try a topical antihistamine spray, but I doubt it will do any good. An oral antihistamine (remember, never take non-drowsy antihistamines like Seldane™ with DXM!) is also reported to work without adverse effects.

If the itch is accompanied by a rash, swelling, or other symptoms of an allergic reaction, you can consider taking a small dose of an oral antihistamine such as Chlorpheniramine Maleate (CPM) (not a prescription one), and make sure there is someone with you. Redness with itching often results from unconscious scratching or rubbing the skin, but some DXM users report redness appears with the onset of the itching reaction.

If the allergic reaction continues, or you feel you may be going into shock, get to a hospital. To my knowledge this type of allergic reaction has never occurred on DXM.

6.12.2 Fast Heartbeat

Many times this is more a problem of perception than anything else. Still, it does happen. As far as I have been able to determine, DXM itself can raise the heart rate somewhat, about as much as a mild to moderate stimulant (e.g. a few cups of coffee to a "coffee virgin"). Reports have indicated a range of 90 to 120 beats per minute as the relevant range.

Try to have someone sober take your pulse, since you may be getting sensory echoes. If your heart rate is truly high (as a general but probably inadequate guideline, above 120 beats per minute), do your best to relax, stay calm, and see if it goes down with relaxation (and see Section 6.12.3 below if relevant). If you continue to have an abnormally fast heartbeat, by all means see a doctor. You probably aren't in much danger, but there's no need to take the risk.

Prolonged very fast heartbeat, or fast heartbeat accompanied by chest pain or tightness, should be taken seriously and may be cause for medical attention (note that a panic attack can also cause a feeling of chest tightness). If in doubt, go to the hospital. People with existing heart problems should avoid recreational DXM use. Incidentally, neither of the recorded deaths due to DXM overdose were attributed to heart failure (respiratory failure was considered the cause).

6.12.3 Panic Attacks

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Panic attacks can occur on DXM, especially in naive users or users rushing in to higher doses. A panic attack can increase the heart rate significantly, sometimes as high as 200 beats per minute! Unfortunately, panic attacks can be h control; the best thing to do seems to be to try to relax, go somewhere you feel comfortable, and focus on your en nment. A panic attack is a positive feedback situation; once you start having one, the symptoms themselves can feed the fear. Breaking this vicious cycle can be difficult. If you are predisposed to panic attacks you should probably avoid DXM in the first place.

6.12.4 Irregular or Skipped Heartbeats

An irregular heartbeat, like a fast heartbeat, may be a problem of perception more than anything else. Remember that, especially at higher doses, there can be a "sensory echo" effect which may influence your measurements.

An occasional feeling that your heart "skipped a beat" is usually not cause for worry. Sometimes it is due to spasms of the esophagus, stomach, or bronchial tubes and has nothing to do with the heart; it's hard to distinguish sensations among internal organs. More frequent heart irregularity, or irregularity with chest pain, may require medical attention. Go to the hospital if in doubt.

6.12.5 Nausea, Vomiting, Gas, and Diarrhea

Ah, the joys of ingesting large amounts of thickening agents. Nausea is to be expected, especially with cough syrups. It usually goes away. A few people have reported that meclizine (available in several brands of over-the-counter anti-nausea medicine) can help without adversely affecting the DXM experience. In general, though, most anti-nausea drugs are anticholinergics and/or CNS depressants, neither one of which you want to mix with DXM. The best response seems to be to tough it out, or switch to gel-caps. Incidentally, avoid taking DXM with greasy or heavy foods.

Vomiting occasionally occurs, usually for the same reason as nausea. Again, not much to worry about. If you do vomit, just make sure to drink lots of water to replace what you just lost. Both guaifenesin and large amounts of alcohol tend to contribute to the tendency to vomit.

Gas and diarrhea, especially after the trip, are also fairly common with syrups. Not much to do, unfortunately; just tough it out and drink water. Loperamide (Immodium™) can help with intestinal cramps and diarrhea, and from all reports doesn't affect the brain at all.

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6.12.6 Unconsciousness

This is mostly advice for the designated sober person; obviously it won't do you much good if you're unconscious. Unconsciousness with DXM is to my knowledge extremely rare (I've heard of it happening once). Please keep in mind that it is possible to achieve a fully anaesthetic dose of DXM, but if you do so you risk serious injury, and probably won't remember much of the experience. There are probably a few psychonauts out there with the experience (and the assistance of physicians) to handle voluntary anaesthesia, but let's leave that to the professionals and the truly insane.

Generally if someone passes out, the first thing to do is make sure they don't fall and hit their head. Yes, DXM may protect brain cells somewhat from the effects of head trauma, but let's not try out that theory ourselves. Make sure the unconscious person is lying down with their feet elevated, and that someone (sober) is with them. If you feel there is any danger of vomiting, roll the person onto his or her side.

There are several reasons why a person on DXM might be, or appear, unconscious. Most commonly, he or she may be in an imaginary dream world, unresponsive to the physical world. He or she may have fainted due to postural hypotension (which I've heard of happening with DXM). Or they may just be ignoring you.

Whatever the reason, try and get a response from the unconscious person. If you can't get any response after a minute or so, it's time to call an ambulance. See Section 6.12.7.

6.12.7 Overdose

The first thing to do in the case of a suspected overdose is to call an ambulance. Don't argue, don't hesitate, and don't worry about the legal implications; you can work that out later. Remain calm; freaking out won't help anyone. If they are unfamiliar with DXM overdoses, tell them to bring a syringe of naloxone. If you receive instructions from the medical authorities, follow them.

Check the individual's breathing and pulse. You may need to apply CPR if the heart has stopped (again, follow any instructions the emergency personnel give you). Try to find out exactly how much DXM he or she took, and at what time. Also find out if he or she was taking any other drugs (legal or not), notably including antidepressants, prescription antihistamines, sedatives, or alcohol.

Really, at this point, you need competent medical advice, and I'm not a physician. Unfortunately, as more than one physician has told me, the medical community is generally ignorant about DXM. Given this, I'm going to try to outline below as much as I can that might be relevant about DXM in an emergency, with the understanding that someone with medical knowledge will evaluate the situation.

W dealing with a DXM overdose it is important to remember that there are really two drugs at work: DXM and its metabolite, dextorphan. At overdose levels, the conversion enzyme (CYP-2D6) will probably be saturated, so even after gastric lavage and activated charcoal, DXM will continue to be converted to dextrorphan (DXO), probably raising

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serum DXO levels. Also, since DXM is usually found as the hydrobromide, you may have to worry about acute bromide toxicity.

DXO is in the same class as ketamine and PCP, and from all accounts can be treated as such. DXM has additional pharmacological activity; it is a calcium (and possibly sodium) channel blocker and a mild noncompetative dopamine reuptake inhibitor. Like PCP, DXM may cause hypertension and CVAs (though if it's any consolation the NMDA blockade should minimize the damage). There is also the possibility for serotonin syndrome if DXM has been combined with a serotonergic. Rhabdomyolysis has never been observed with DXM but is possible.

I have no data on whether acidifying the urine will hasten DXM clearance. Nor do I know whether DXM (or DXO) may reappear in bile, though I have heard several anecdotal reports of increased bile secretion during DXM use.

Finally, remember that, like PCP, DXM can cause emergence phenomena. Once the individual regains consciousness he or she will probably be confused, and possibly paranoid and hostile. Also like PCP, DXM can impair perception of pain. Although I've never heard of it happening, it's possible that someone coming out of a DXM overdose could become violent.

Remember, if there is any indication or suspicion of an overdose, get medical assistance immediately!

6.12.8 High Temperature / Fever

First, make sure you actually have a fever. DXM can mess with your sense of temperature. On the other hand, I have received one report of DXM-induced hyperthermia that could have been dangerous. A temperature at or above 102 F (39 C) is entering the danger zone. If this happens to you (or someone you are with), the best way to cool down is by taking a cool bath or shower (make sure it feels cool to a normal person!), and drinking cold water. Incidentally, speaking from personal experience (with the flu, not DXM), the "cool" water will feel damn cold.

In the case of a fever at or above 105 F (40.5 C) you've got a real emergency on your hands. Immediately contact a doctor or hospital, and try to reduce the body temperature as quickly as possible. Ice-water baths are acceptable providing there is someone (sober) there to make sure the person doesn't go into shock and drown. Expect to hear a lot of screaming; this is a significantly unpleasant experience even without a fever.

6.12.9 Shortness of Breath / Breathing Problems

Again this is usually a perception problem, and sometimes is related to panic attacks. There is also evidence that dissociative anesthetics in general cause a transient feeling of shortness of breath, possibly because the body is

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beginning to "take over" breathing from conscious control. Take deep, even, and slow breaths; hyperventilating won't help, and can make you feel even worse. It should clear up by itself. In the case of hyperventilation, the "breathing into a bag" trick really does work, by increasing blood CO2 levels.

6.12.10 Choking On Your Tongue

If you start feeling like you are choking on your tongue, make sure someone can assist you, or call a doctor if you believe you really are choking. There is actually very little danger of choking on your tongue; it's pretty much physically impossible. Nonetheless it can seem frightening.

If you are in the position of trying to assist someone in this situation, open the person's mouth, tilt their head back slightly, and grasp and hold their tongue out of the way of their airway until they feel better. Avoid putting anything in their mouth; this could easily fall in and make things much worse.

6.12.11 Nosebleeds

DXM can occasionally dry out your sinuses (an anticholinergic effect), so check first to see if your nosebleed is a result of nasal irritation. If so, treat it like you'd treat any other nosebleed.

If in doubt, or if you notice a prolonged nosebleed, burst capillaries in the eyes or face, headache, or a sudden impairment of mental or motor skills (hard to determine on DXM, I know), get medical help. I'm not familiar with any cases of DXM-induced hypertensive CVAs, although it might be possible, especially when mixed with stimulants or MAOIs.

A suggestion was made to me from a physician that I'm going to pass along. If you're going to be doing any sort of recreational drugs which carry a risk of hypertension, you may wish to purchase a sphygmomanometer (that blood pressure measuring gadget). They aren't terribly expensive, and they can warn you when you're starting to get into dangerous territory.

6.12.12 Feeling "dead" / losing one's body

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Remember, DXM at high levels can be very dissociative. You're not dead, you just can't feel your body right now. This s[illegible]n have a lot in common with certain lucid dream states. A feeling of "being dead" is common with third and fo[illegible] plateau DXM doses. The best thing seems to be to try to make contact with some part of your body (this can take a lot of effort), to reassure you that you're still there. Then, relax and enjoy your trip.

This is another reason why you should have a sober person with you. If you are in any real danger, he or she should take care of you.

6.12.13 Hangovers (lethargy and feeling "not all there")

Hangovers can occur from higher doses. Usually you can expect to feel very relaxed if not lethargic for the next day after a heavy trip. You may also might experience dizziness, muscle rigidity, loss of balance, slight double-vision, and a general feeling of being "not all there". Again, it goes away. Sleep seems to improve things a great deal. Make sure to drink a lot of liquids, get plenty of rest, take a multivitamin, and exercise. As DXM is metabolized differently in different people, some may experience hangovers (and trips) a lot longer than others; some have had three-day trips and week-long hangovers. For more details, see Section 6.1.7.

6.12.14 Prolonged Dissociation From the Real World

Very rarely, someone will come out of a DXM trip and seem to be very dissociated from the real world, behaving a little like a robot. Whenever this has been reported to me, the person in question had always taken a high (third to fourth plateau) dose, and in most cases had tried to achieve an out-of-body state (draw your own conclusions). Make sure the person is relaxed, and try to engage him or her in a familiar activity. Familiar environmental cues should go a long way towards bringing him or her back to the "real world". Also keep in mind that the person may be slow to metabolize DXM and thus still be tripping.

If, after a couple of days, the person still hasn't returned to normal, it's time to get worried. Contact your nearest psychologist, priest, shaman, or other equivalent. Note that I don't think there's any biological reason for this to happen.

Some papers on PCP have suggested that PCP can cause transient psychotic breaks in susceptible individuals which can last up to ten days. Hospitalization is recommended for the safety both of the patient and of others. I've never heard of anything like this with DXM but it could happen. This problem seems to resolve itself with or without psychiatric i[illegible]ntion. After returning to normal, the person may not remember the trip or a few days after it (355).

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6.12.15 Serotonin Syndrome

It's not generally a good idea to diagnose yourself, and I'm hesitant to list in this section a diagnosis rather than symptoms. On the other hand, serotonin syndrome is, at least at the time I'm writing this, relatively unknown and probably underreported. And with increasing numbers of people taking SSRIs like Prozac™, the potential for serotonin syndrome among users of DXM is rising.

The symptoms of serotonin syndrome are specified above (see Section 6.2.9). Keep in mind that generally speaking anyone on DXM will experience some of those symptoms, so don't freak out. The point is, if you start noticing said symptoms when you aren't on DXM, or if they are considerably stronger than usual, you might have a problem.

Don't panic. Serotonin syndrome is rarely fatal; usually it's just an indication that you need to stop taking so many serotonergic drugs. There are specific treatments for it (antiserotonergic drugs, appropriately enough), and most of the symptoms respond adequately to benzodiazepines.

6.12.16 Bad Trips

First off, let me distinguish between a bad trip and a true psychotic break. Here's an example. If you feel like your ego is dissolving into a puddle of jelly and you're suddenly confronted with frightening memories and images, that's a bad trip. If you believe the aliens have implanted a homing beacon in your brain and you have to drill a hole in your skull to let it out, that's a psychotic break. Generally speaking if you're having a bad trip, you still know you're on drugs. If you have a psychotic break, you probably don't.

The most important thing, and it seems trivial, is to remember that it's all in your mind. Your own mind is generating your experiences, and nothing in there can truly harm you. Make sure you are in a quiet, calm place, with limited sensory stimuli. If you find yourself having severe Lilliputian hallucinations (i.e., everything seems the wrong size, either too big or too small, or both), keep your eyes open and focus on a familiar object that will give you a size reference.

If things seem to be getting worse, consider a *light* sedative, such as as beer or two. Clinically, benzodiazepines have shown great utility in terminating dissociative trips, but I **do not** recommend using them except under the guidance of a physician. If you do use them, prepare to slam into a "psychic wall" since the experience of suddenly stopping the trip can be unpleasant, to say the least. Incidentally, by "psychic" I mean the effects of psychedelics on the psyche (mind and consciousness), not anything paranormal or spiritual.

Finally, try to keep a sense of humor about the whole thing. You aren't generally in any danger from DXM (unless you've taken way too much, in which case you should get yourself to the hospital), and it will end.

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6.12.17 Psychotic Breaks

This section is probably of no use to you if you're the one experiencing the psychotic break, and is primarily intended for trip-sitters. First verify that the tripper is actually out of his gourd and not just playing games (incidentally, this is a good reason to use a "safeword" when tripping; when the safeword is spoken, take everything seriously until further notice). Delusions on DXM, especially upper plateaus, are common and not usually something to worry about since people aren't usually motivated to act upon them.

If you've got a real problem on your hands, call the hospital and explain the situation. Again, since DXM isn't a commonly known drug, you can tell them it's similar to ketamine and PCP (an oversimplification, I know). Be very careful in trying to restrain the tripper, since she or he may perceive this as a threat, and will probably be mostly immune to pain. Unless you can *safely* restrain someone (and unless you've had training in this sort of thing, you probably can't), the tripper, like a cornered animal, could beat the living shit out of you without thinking twice.

Instead of restraint, try talking him or her down. Be calm, soothing, and repeatedly remind the tripper that they have taken a drug which has critically impaired their perceptions. Remind them of who they are and how they got here, and that the experience will end.

6.13 How to Know When You've Done Too Much DXM

I always try to keep a sense of humor in life ... after all, it's only a temporary stop between incarnations anyhow. In view of that, I offer some suggestions from readers on how to know when to stop.

- You can identify a dozen different brands of cough syrup ... by the smell alone
- The local pharmacist starts asking about your tuberculosis problem
- The checkout clerk calls you "that Robitussin junkie"
- When you take out your recycling it's all brown glass bottles
- You ran out of excuses at the supermarket and now just tell people you *like* that cherry taste
- If Drixoral Dollars were real you'd own a Ferrari
- You haven't slept in two weeks, haven't eaten solid food in days, and you've just told your parents that you're marrying an alien from the desert planet Zolgar
- You've gotten so used to your eyes moving independently that you think you're actually a cleverly disguised lizard
- You just made your fifth Christmas ornament out of those little plastic shotglasses
- People ask you why you're walking around in shorts and a T-shirt sweating like a horse ... in the dead of winter.

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- Your native language now consists of grunts and bizarre gestures
- Sophia Loren, Sean Connery, etc., come knocking at your door offering a night of passion and you tell them you aren't into "meat pleasures"
  You think you're on the Internet ... physically.
- You're sure you're actually a Jedi Master, but for some reason your Jedi Mind Powers don't seem to work on the cop that just arrested you for walking naked down Main Street.

On a more serious note, if you do start finding reality breaking down, your friends avoiding you, or your grades or work performance dropping, it's time to stop. DXM may be a lot of fun, but it just isn't worth losing something truly important over.

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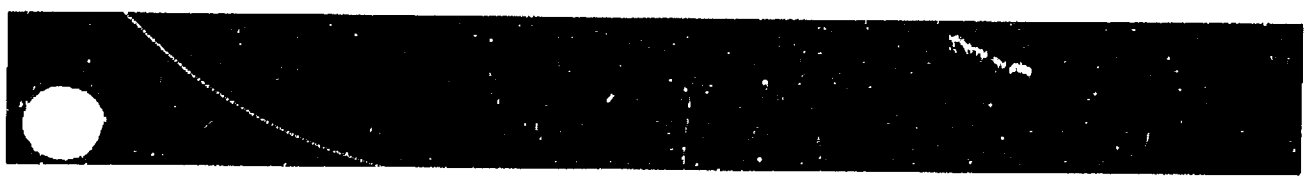

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7 Getting the Most Out of DXM

This section covers various activities, methods, etc., that, according to current and former DXM users, enhance the DXM experience. Some readers may wonder about the appopriateness of this section, given that I do try to discourage DXM abuse. Let me respond to any potential objections by saying that I believe that safe, responsible use of DXM is possible and should be encouraged. I believe that some people will do psychedelics whether one wants them to or not, so it's better to give everyone the opportunity to have a safe and rewarding experience.

Let me go even further out onto the thin ice here and state that I believe that all psychedelics have a place in exploration of spirituality and consciousness, when used by mature and responsible individuals. Most Western cultures shun the psychedelic experience, and I believe this is unfortunate. While I don't think psychedelics will give you special abilities, they do allow you to tap into abilities that you didn't know you had. The key is to remember that they are only tools and should be used as a means to an end, not an end in and of themselves.

Okay, I've babbled long enough. Here are some suggestions from DXM users on rewarding activities to combine with DXM.

7.1 General Tips on Enjoying the DXM Experience

The best advice I can pass along to you about enjoying DXM is not to overdo it. Overusing any psychedelic will transform the magickal into the mundane. Don't try to repeat a given trip, or to hold on to something that happened before; trip experiences, like lovers, are always lacking when revisited.

Additionally, you must be emotionally and mentally prepared for DXM. No drug can give you what you don't already have inside yourself, and if you are lacking in worldly experience, your psychedelic experiences may seem hollow and stereotypical. I know we live in a culture of instant gratification, but the old saying does hold true with psychedelics: good things come to those who wait.

Try to give some thought to why you are taking DXM. Perhaps it is for self-exploration, as a group experience, to immerse yourself in a natural (or unnatural) environment, or simply to gain a new perspective

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on something. Whatever the reason, make sure you have one; if you just want a "buzz", go to Amsterdam and smoke marijuana. Psychedelics should be used with respect and reverence for what they show us.

I know not everyone is going to follow this advice, and, well, that's your choice. Perhaps for you, psychedelics can be used casually or even daily. Not everyone is wired the same. Just be careful, please. Insanity isn't nearly as fun as it is portrayed.

7.2 What are Some Fun or Interesting Things to Do on DXM?

This section lists some things that various people have done on DXM that they have enjoyed. Note that not everyone will agree, and some of these activities may be unpleasant to some. Activities that are pleasant at one dosage may not be so at another.

7.2.1 Listen to Music

Probably the most common fun thing to do on DXM, especially at lower doses, is listen to music. Even at higher doses, music can be quite enjoyable, and will often induce fantastic closed-eye visions and hallucinations. Many people have in fact reported they were unable to hallucinate without music. Some use music to help create an imaginary setting for their hallucinatory experiences. Why music enhances the DXM experience so much, I don't know; other dissociatives don't seem to go nearly as well with music.

As for what music is best, that's a matter of personal opinion. Some prefer classical music, saying it brings a transcendent feeling and visions of flight. Rave and techno music are also popular, possibly because of the strong, regular beat. Ambient seems popular, especially towards the end of DXM trips, where it has a soothing effect. Really, though, a lot has to do with what you like.

7.3 Watch a Movie

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Many people enjoy watching movies on DXM, typically at first to upper second plateau levels (beyond that it becomes difficult to process visual information). It seems that some types of movies lend themselves particularly well to DXM, and when viewed, the DXM user finds himself or herself totally immersed in the movie environment, up to the point of perceiving the smells and tastes of that environment, and empathizing with the characters. DXM can transform a movie from something you watch to something you experience directly.

Movies which go well with DXM typically have simple plots but can have very complex environments. Sometimes the best DXM movies have no plot at all (e.g., *Koyaanisqatsi*, which is a series of montages and images which form a coherent, simple, and in some ways disturbingly beautiful theme). Movies that are highly archetypical in nature (such as *Excalibur*, as well as many Westerns) also go well with DXM. One person reported that old B-movie Sci-Fi thrillers, horror flicks, and the like also go well with DXM and become much more fun.

One final word of advice. Since DXM impairs the ability to form long-term memories, expect to be horribly confused unless you've seen the movie before. So if you want to watch a movie on DXM, it might be a good idea to watch it sober a day or two before, and give your mind time to become familiar with the plot.

7.3.1 Make Music

Recently someone pointed out to me that, like other psychedelics, DXM lends itself well to making music. Now, keep in mind that the music may not sound like much to anyone else; I suspect that psychedelic music-making is a type of feedback loop by which unconscious thoughts and impulses can be brought into the conscious mind. Whatever the reason, it does seem to be enjoyable to many.

7.3.2 Dance

Many people enjoy dancing on DXM, usually at the first plateau and somewhat less commonly on the second. Third and fourth plateau doses of DXM are almost certainly not compatible with dancing (or most other motor skills). Raves are the most common DXM dancing event, although I see no reason why any other type of dance couldn't be enjoyable as well.

Please note that, as with any dissociative anesthetic, DXM can make you less aware of overexertion, leaving you with a generally sore body the next day. Also, as with any stimulant, take care not to overheat or become dehydrated.

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7.3.3 Swimming (First Plateau Only!)

A few users have reported that swimming on a first plateau DXM trip is an ecstatic experience. Evidently, the regular, rhythmic motions of lap swimming go well with DXM's rhythmic nature, and the feeling of the water supporting the body provides a deep sense of calm. There should be little danger with swimming on a first plateau DXM dose, although higher doses could become quite dangerous. Overexertion is always a possibility, but fortunately swimming's low-impact nature may minimize some potential injuries. In any case, if you do decide to try swimming on DXM, never swim alone.

7.3.4 Group Tripping

One of the characteristics of the NMDA/sigma class of psychedelics is the ability of people tripping together to synchronize their experiences as they discuss them. This is not unique to DXM; ketamine users have noted the same effect, and although I have no reports I'm certain PCP would act similarly.

Group use of DXM was fairly common among some members of the hardcore warehouse subculture in the 1980's in the USA. People would decide on a "destination" or goal for their trips (which some called "vacations"), and choose music, decorations, and other stimuli to match the destination. Destinations ranged from the specific to the mythological (e.g., Hell). Talking during the trip helped maintain synchronization. Most of the time, the environment (sights, sounds, smells, etc.) was carefully crafted to fit the destination.

If you are planning a group DXM trip, it might be a good idea to make sure that everyone is experienced with DXM beforehand, so that they know what to expect. Try to adjust dosage for everyone to place everyone at roughly the same place in the same plateau (group tripping seems most effective at the upper second plateau). If desired, pick a destination beforehand, and adjust your setting to match. Be wary of intense or potentially unpleasant destinations (the "vacation to Hell" mentioned above was undertaken by very experienced DXM users). Try to make sure everyone stays together; many people have reported that having someone leave can ruin the experience. And above all, make sure someone sober is available to watch over you and make sure nothing goes wrong.

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7.3.5 Paranormal/Spiritual Exploration

Dissociatives seem to lend themselves to paranormal experiences, and there are some very mundane, physiological explanations for this. Whether you accept the validity of these experiences or not, they tend to be interesting, to say the least. An entire chapter of the FAQ is devoted to the connection between DXM and paranormal experiences; see Section 8.

7.3.6 Observe People

Many DXM users have told me that DXM allows them to detatch themselves from the unconscious influences in conversation and social interaction, and to perceive these consciously. One person remarked that, while on DXM, sober people's actions and words ranged from obviously deceptive to downright silly, and were enormously interesting to observe. I suspect that, by altering the "automatic" or unconscious perception of social cues, DXM may allow these cues to enter conscious awareness.

7.4 What Tools Can Enhance the DXM Experience?

Since DXM becomes increasingly hard on the body and brain as the dosage increases, it is generally a good idea to make as much as you can out of a given dose. Here I offer the suggestions of various DXM users on tools to enhance the depth or intensity of the trip. These are especially useful at obtaining upper plateau effects from lower plateau dosages.

7.4.1 Sensory Deprivation

Many of the interesting effects from DXM occur due to an inhibition of sensory input, and a subsequent feedback loop that separates the conscious mind from the senses and body. Although one can obtain this

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from a high enough dose of DXM, it is also possible to boost the effects of a low dose using sensory deprivation, which generally increases the frequency of paranormal and altered state experiences (332,338).

For the ultimate in sensory deprivation, nothing beats a floatation tank. Popularized by John Lilly, floatation or sensory deprivation tanks are essentially nothing more than big boxes filled with water which has been saturated with about a half a ton (450kg) of epsom salts. You lie down in the water (in which you float, thanks to the epsom salts), close the cover, and relax, and find yourself cut off from all sensory input.

Unfortunately, float tanks don't come cheap. The low-end models typically start at $2000; the high-end models (which come with temperature control, built in stereo sound and video screens, etc.) are considerably more expensive ($4000 and up). If you have that kind of money, call *Tools for Exploration*, a company dedicated to exploration of consciousness; their phone number is 1-800-456-9887 (I have no affiliation with them).

For those without that kind of money but with good carpentry skills, you can of course build your own. Keep in mind that you can't just throw together a box and expect it to hold the stress imposed by the water (not to mention you). I'm not particularly good with carpentry, so I'm not going to even make suggestions here. But I do know it can be done, as I have spoken with someone who built his own float tank for $300 (not including the cost of the epsom salts). One warning, though: if you plan on putting in a water heating system, make good and goddamned sure it runs off a low-voltage supply and is protected by a ground-fault interrupt device. If this is meaningless to you, leave it to a qualified electrician.

Okay, so you're neither rich nor a carpenter, but still want to play with sensory deprivation. Here are a few suggestions.

Take a warm (not hot) bath in a dark room. You can experiment with various essential oils to provide an olfactory sensorium, or just use water. This is actually fairly effective from all accounts, but make sure there isn't so much water that you could pass out and drown. Keeping someone with you might be a good idea.

- Get yourself a pair of good quality earplugs. The foam kind you can buy at the drugstore are OK, but there are better ones available which will block out more sound. This will help with sensory deprivation.
- Find someplace nice and comfortable and lie down. After awhile, your brain will become used to the unchanging tactile input and you'll be able to ignore it.
- Instead of sensory deprivation, try a *ganzfeld* (see the next section).

7.4.2 Ganzfeld

There is one major problem to sensory deprivation, which is that even in conditions of total darkness and silence, one will typically continue to perceive sight (phosphenes) and sound (tinnitus, or ringing in the ears). There are numerous causes for this, but it all boils down to the fact that as you boost the gain on any sensory detection system (natural or artificial), you end up with more and more noise.

When scientists were studying psychic phenomena, they ran into this problem, and rather than using drugs

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to enhance sensory cutoff, they chose to take a different approach: the *ganzfeld*. A ganzfeld, (literally, "total field") is a set of constant, predictable sensory inputs. In a typical ganzfeld experiment, the subject is placed in a comfortable chair in an isolated room, with translucent filters placed over his or her eyes, and a dim, constant light source (usually red). Sound may be absent, or white noise may be used.

This sounds a lot more expensive than it usually is. In many experiments (remember, this is often on the fringes of science, so budgets aren't terribly high), the "translucent filters" are ping-pong (table tennis) balls cut in two, and the white noise is provided by an AM radio.

This is surprisingly easy to recreate in the comfort of your own home. Buy a pack of (white) ping-pong balls, and cut one in half. Let it sit open for a few days to let the ubiquitous "ping-pong ball smell" dissipate. Tape over the sharp edges of the half ping-pong balls with transparent tape over the edges so there are no sharp edgesPlace a comfy chair in the center of a room, and place a few dim, red bulbs in the lights. Get yourself an AM radio and tune it to a nonexistent station to provide a white noise, and turn the volume down to where it is comfortable. Sit down in the comfy chair, adjust it to where you can totally relax, and place the two ping pong balls over your closed eyes.

This does seem to work, although not as well as a sensory deprivation tank. The going theory among most researchers with whom I've spoken is that the sensory networks typically create internal models of the external world and only report when things change. In other words, you perceive not the external world, but the difference between your internal world and the sensory input. As long as sensory input stays exactly the same, the sensory networks don't really generate much output, and the conscious mind is once again left alone to do its own thing.

7.4.3 Light and Sound (Brainwave) Machines

Light and Sound Machines are devices which use flashing light and sounds to induce changes in brainwave activity. The simplest of these, costing as little as $20, consists of a bunch of LEDs hooked up to a timer chip with a potentiometer for you to adjust the flashing frequency. The most complex of these (I've seen them list for as much as $500) are full- fledged portable computers which can independently control multicolored lights for each eye, as well as stereo headphones. Some of them allow you to plug in your own music, and will layer the brainwave beat frequency on top of it.

These are available from a number of sources, including the aforementioned *Tools for Exploration* (call for their catalog), "new age" stores, science stores, and of course on the Internet. To some degree you get what you pay for, but keep in mind that not everyone responds to these gadgets, and you may be better off not forking over the big bucks until you're sure it will be worth it. There's also a shareware program for PC's called "flasher" (see Section 7.4.5) which does the same sort of thing.

The theory on these devices is this. What we call "brainwaves" are the overall resonant properties of neural networks which, to a certain extent, behave like oscillators. Like most oscillators, these can be driven externally, and in this case, the best way to do so is via the eyes and ears. Flashing lights are known to affect brainwave activity, as are pulsing sounds (especially when a beat frequency is applied between the

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two ears). Epileptics are particularly susceptible to this, and most people are susceptible to the so-called "photic driving" effect, which can induce nausea and confusion using only flashing light and sound.

In other words, flashing lights and pulsing sounds can potentiate oscillations in the brain's neural networks in much the same way that one pushes a child on a swing. At precisely the right moment, a little push adds to the energy of the oscillator and keeps it going. Light and Sound machines apply just the right push at the right time to enhance brainwave activity in particular frequencies.

Using these devices, one can potentiate activity at various brainwave frequencies. Thus far the most commonly discussed brainwave frequencies (or more accurately frequency ranges) are alpha, theta, beta, delta, and sigma. The presence or absence of a given brainwave frequency is an indication of mental state, and by inducing brainwave activity, one can enhance those mental states.

A quick over-simplified summary of brainwave bands:

- **Alpha waves** range from 8 to 12 Hz (cycles per second). Alpha waves appear to be associated with meditative and hypnotic states and sleep. One study on brainwaves and golf (356) found that alpha activity seems to be a good predictor for accurate putting; others have suggested that alpha waves tend to occur while one is absorbed in physical or mental tasks.
- **Beta waves** range from 20 to 28 Hz and appear to be associated with active concentration and thought.
- **Theta waves** range from 3 to 8 Hz, and seem to arise from a hippocampal circuit, possibly with the help of a circuit in the brainstem (358). Theta waves tend to decrease immediately before volitional movements, and are probably an indicator of a closed feedback loop in the limbic system. The theta rhythm may help to encode spatial and/or temporal information (359). Interestingly, the prohormone DHEA increases theta activity (357).
- **Delta waves**, 0.3 to 3 Hz, typically occur only during non-REM sleep. NMDA antagonists (presumably including DXM) greatly increase delta waves during subsequent non-REM sleep (360).
- **Sigma waves**, 10 to 15 Hz, seem to occur primarily during sleep.
- **Gamma waves**, 30Hz and above, may reflect certain aspects of the cognitive process.

The two important brainwave bands for DXM users are theta and alpha. Light and/or sound stimulation at these frequencies has been reported to induce a variety of interesting altered states of consciousness which are, for the most part, indescribable.

Theta stimulation in particular has been reported to generate fantastic results. Here is a description of one person's DXM plus theta stimulation experience:

> I used the program "FLASHER" set at 6Hz, turned off the lights, and stared at the screen. At first it just looked like a big flashing computer screen, but gradually I noticed that I was perceiving the light and dark phases separately. The flashes seemed to get brighter and brighter, and last longer and longer. Everything kept building up in intensity, and it was starting to get somewhat scary, when all of a sudden the flashing just ... stopped. It was all white light, and I felt my soul being tugged out of my body. From then on it got really weird ...

WARNING: Brainwave stimulation, especially in the alpha band, can induce seizures in epileptics. If you are, or suspect you might be, epileptic, don't use light and sound machines! DXM may actually decrease the seizure threshold, so be very, very careful.

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7.4.4 Hemisphere Synch Audio Tapes

So-called "hemisphere synch" tapes are audiocassettes which contain stereo sound tracks designed to induce particular brainwave patterns. They are similar in principle to light and sound machines, but obviously less flexible. One brand, "HemiSync", has been demonstrated to be effective (340) (I have no affiliation with this product). You can order hemisphere synch tapes from Tools for Exploration (1-800-456-9887).

7.4.5 Trip Programs

There are a variety of "trip programs", which typically display psychedelic graphics, morphing patterns, weird visual effects, and that sort of thing. These are popular additions to any psychedelic experience. A short list c m, with links to download, can be found at the following website: http://www.frognet.net/~dxm/trip-p ams.html.

One of the more notable of these is *flasher*, a short DOS program which does a fairly goo>

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ashing the screen at you. It comes highly recommended by several DXM enthusiasts.

7.4.6 Trip Toys

DXM, unlike LSD, doesn't tend to lend itself as much to trip toys. By the time you've reached a sufficient dose to get strong psychedelic effects, you probably won't want to move around much. However, some people seem to enjoy trip toys with DXM, ranging from art supplies to slinkies. I can't really offer suggestions h except to find what you like and have fun with it. One person reports a device called the "LSD Flight S ator", an inexpensive gadget, works well to induce closed-eye hallucinations.

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7.5 What are Some Things to Avoid on DXM?

This is a small list of some of the things which people have reported were particularly unpleasant, boring, or otherwise unenjoyable.

7.5.1 Heavy Exercise

Most individuals who have exercised under the influence of DXM have reported negative effects such as nausea, vomiting, cramping, and a general loss of the more enjoyable aspects of the trip. This seems to become more and more significant with higher doses of DXM. The one exception seems to be swimming, which if done on a first plateau DXM dose can be enjoyable.

7.5.2 Driving

DXM is an intoxicating drug, and no intoxicating drug should be used when you are driving. Ever. If you're pulled over, the cops will know you are on something, as DXM strongly interferes with normal eye movements at recreational levels. They may not know what you're on, but they can still bust you, and even if you never get formally charged, this is definitely not a fun tripping experience.

Not to mention, by driving (or operating heavy machinery) on DXM you are placing yourself and potentially a lot of other people at risk. The highways are full of enough carnage as it is, and there's no excuse for adding to it. Quite frankly I think that anyone who drives while intoxicated (on anything) is committing an act of attempted manslaughter (if not murder) and repeat offenders should be charged and tried as such. That's probably an extreme position, but I think far too many people are willing to blame their alcohol (or drug) for their driver's arrogance and stupidity.

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7.5.3 Going to Class, School, or Work on DXM

Many people have had the experience of going to classes drunk, stoned, or otherwise intoxicated. Going to class on a low dose of DXM should be fairly similar. Once probably won't hurt you, although it certainly isn't going to help you either. Doing this regularly is definitely bad news, as DXM will interfere with memory when used regularly, and may cause cognitive impairment with long-term use. High doses of DXM are even worse, since the dissociative effects can lead to highly inappropriate behavior. To top it off, as it becomes more difficult to judge the appropriateness of behavior, the fear at doing something that will get you laughed at (or worse) can make a trip turn unpleasant.

A special note for people still in high school (or younger): don't do DXM, or any other drug, in school. Yes, school can really suck. The classes are boring, repetitive, unchallenging, and full of potentially useless information. The teachers are often (but not always!) more interested in hearing you regurgitate facts than have an original thought. The administrators generally aren't interested in you as a person, they're interested in making sure the school runs smoothly and that they get paid. And your peers usually don't give a rat's ass about your feelings; they're too busy coping with newly found hormones and playing Cooler Than Thou. And so, I might add, are you, in all likelihood.

D[illegible]g this time, many students with half a brain in their heads end up going through the usual sort of t[illegible]ge existential angst (you'll know it when you get there). This is, I think, one of the rites of passage of today's youth, which has the potential to liberate one from being completely under the control of what one's peers think of as cool. It also has the potential to get you into a lot of trouble, especially with drugs, and DXM is no exception.

Don't get me wrong; I don't think drug use is inherently any more or less wrong for teenagers than for adults. In practicality, however, one needs a certain level of emotional and intellectual (and possibly physical) maturity before responsible drug use becomes likely. And responsible people know there are times and places not to use intoxicating or otherwise mind-altering substances.

So in the mean time, avoid using drugs in school. Many of your teachers and administrators will know (they may seem dumb as a post. Don't believe it). Your grades will probably suffer, and for all their seeming irrelevancy, good grades are really one of the better tickets out of a life of boredom. You may also develop a stubborn habit, as the use of a drug becomes associated with the everyday activity of going to school. Finally, the bad trip potential shouldn't be ignored.

As for what to do instead, well, there's no easy answers there. Some people find fulfillment in reading Sartre and Thoreau, others in reading X-Men and romance novels. Regular exercise really does help, as with so many other problems in life, and it helps one to cope with boredom and mundanity. Don't neglect your mind either, even if your teachers do; you can be your own teacher (and a damned good one at that). Question everyone and everything; it's the only way to learn. And above all else, try to keep a sense of humor; things that seem vastly important now will seem a lot less serious in a few years.

Obviously, the same advice goes for using DXM at work. Unless your job is considerably different than most I've ever encountered, DXM won't help your performance and will probably seriously impair it. So unless you

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want to end up unemployed, save the psychedelics for weekends and vacations.

7.5.4 Dose "Boosting" and Re-dosing

This issue is considerably more complex than I'd originally realized. Generally speaking, taking a booster dose is not a good idea and probably won't do what you want. It *is* possible to jump from the first plateau to the second, and from the second to the third, with a booster dose. However, it doesn't always work, and generally speaking you can't sustain a given plateau (except the first plateau, although that's difficult).

With a great degree of practice, you can probably become adept at gauging how much DXM to take for a booster dose. However, it seems to take a lot of practice. You'd probably be better off picking the dosage at the beginning and sticking with it.

Besides, as the duration of the trip is extended with dose boosting or redosing, the dysphoric aspects of the experience increase, until eventually most people report feeling like the walking dead. Not to mention by extending the duration of the trip you are increasing the chance for adverse effects and brain damage.

The exception to all this seems to be a first plateau dose, which (with practice) can be maintained for some time, leading to a prolonged stimulant effect. This is probably due to the dopamine reuptake inhibiting effect of DXM (absent with DXO), similar to that of bupropion (Wellbutrin™) or cocaine. Prolonging this will, however, intensify the "crash" and is probably not a good idea.

7.5.5 Stressful Environments

Many DXM users report that stressful environments can induce bad trips, dysphoria, and panic attacks. This is nothing new to psychedelics, of course, but DXM seems to be more capable of it than LSD.

7.6 What is the "50 Trip Limit" and How Can I Avoid It?

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Recently someone pointed out to me that most of the psychedelic and interesting effects of DXM seemed to g ay with repeated use, and hadn't returned. He suggested a limit of about 50 trips; i.e., you get roughly 50 DXM trips before the magic is gone. Other people have said similar things, although the exact number seems to vary from person to person. A few seem to be able to use DXM repeatedly without ever losing the more interesting psychedelic qualities.

There are a number of possible explanations for the "50 trip limit". Here are a few I came up with, as well as potential solutions.

1. Long-lasting tolerance. Some people have noticed a tolerance of up to a *year* to the more pleasant effects of DXM. Why this is, I don't know; nor do I know any way to reverse it.
2. Disruption of enzyme systems. It is possible that the P450 enzyme system is disrupted for long periods of time by DXM, although I don't see why this would happen. This could last for quite some time, potentially permanently. It's also possible that a conversion enzyme is *induced* so that the DXM is converted to a metabolite too rapidly. Nothing to be done about this that I know of.
3. State-dependent memory. When you first do DXM, you are in a completely new and wonderful state, and you don't really "integrate" the memories of the non-drug states (including the unpleasantness of drinking cough syrup). As you begin to trip more and more often, environmental cues help you to integrate the drug-state and the non-drug-state. Eventually you will learn to associate the drug not only with the pleasant effects but also with the unpleasantness of taking it, something which doesn't happen early on due to DXM's ability to inhibit memory.

   Try taking DXM in a *completely* new environment and see if that changes anything. Make sure to do a *low* dose first, though; if there is a state-dependent tolerance, you could go way too high accidentally if in a new environment.

4. Hallucinogen antidependency. This is a common phenomenon with most psychedelics. After using any psychedelic several dozen times, the magic is gone. It just becomes familiar territory, and with the "wow" factor from the novelty gone, the more mundane aspects (confusion, nausea) of the trip intrude. The solution to this, if there is one, is to put your own "magic" into the experience by interacting with people, trying new experiences, etc. (but don't drivel)
5. Problems with an ingredient in cough syrups. It's possible that the gut, liver, or kidneys start to have trouble metabolizing all the gunk in cough syrups. Try using DXM extract.
6. Age. DXM becomes increasingly less pleasurable as one gets older. No solution that I know of, except possibly to make sure you are physically fit before tripping.
7. Brain damage. I've seen no evidence for this except with very frequent high-dose use (e.g., third or fourth plateau several times a week for several months); furthermore, people who do report DXM becoming less pleasant with time haven't said it's that much faster with high dose trips (whereas any brain damage problem would be). Technically speaking, the damage that Olney et al found with dissociatives is way *beyond* the fourth plateau dosage level, and I'm not convinced that normal users would ever experience it.
8. Cigarettes or other drugs. If you've changed your drug-taking habits, this may affect DXM's effects.

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7.7 Why Can't I Hallucinate on DXM?

Some people have trouble achieving hallucinations on DXM. Here are some suggestions that may be helpful, based on reports I have received (note: none of this should be taken as advice in any way; I'm just passing this along):

- Place yourself in partial or complete darkness. Most NMDA/sigma agents seem to give the best hallucinations when there is little or no visual input.
- Close your eyes. It is almost always easier to get closed-eye visuals (CEVs) than open-eye visuals (OEVs), and DXM is no exception.
- Listen to music. Music often brings about intense visuals, sometimes even open-eye visuals.
- Mentally focus on your phosphenes - those little blips and squiggly patterns that appear in your field of vision in darkness (yes, everyone has them; not everyone notices). For whatever reason, this seems to help start hallucinations.
- Imagine things. This seems to help start the process in some people.
- Dose with other people and synchronize your trips.
- Increase the dosage the next time you trip.
- Decrease the absorption time the next time you trip. If you are taking gelcaps, break them open. If you are drinking syrup, drink it on an empty stomach.
- *Increase* the absorption time the next time you trip. Some people have reported this to be useful. For example, if taking gelcaps, take one every 5 minutes until all are taken.
- Combine with cannabis (marijuana). *(Note: this is, of course, illegal, and I advise you not to do this).*
- Inhale a balloon of nitrous oxide (*again, this is probably illegal, and I'm advising you against it).* **Warning**: one person (a regular user of nitrous oxide) reported that this combination resulted in long-lasting peripheral numbness.

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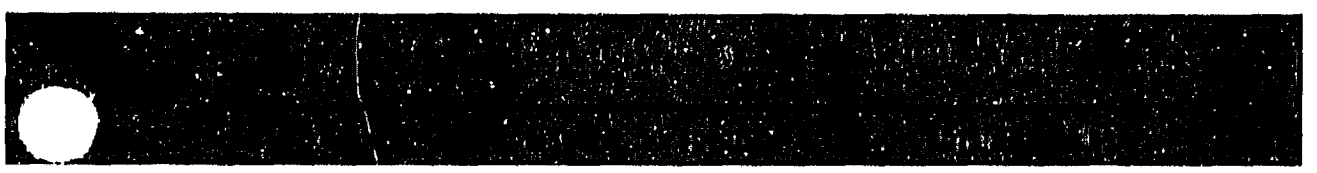

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8 Altered States and Paranormal Experiences

from the DXM FAQ
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Shortly after publishing version 3.0 of the FAQ I started getting letters from people who were having what they believed to be psychic, paranormal, or spiritual experiences on DXM. As time went on, the number of these letters increased, and I received additional information from psychonauts who have used ketamine in paranormal investigations.

I gave a lot of thought to whether or not I should include this information in the FAQ. People *have* asked me about DXM and paranormal experiences, and in general my response has been, "you're on drugs, it's all in your mind". Unfortunately that doesn't really answer any questions, since people are obviously having these experiences, whether t' e delusional or not, and nobody seems to have much idea why.

So I am going to attempt in this chapter to take an open-minded but somewhat skeptical look at the possible relationship between DXM (and other dissociatives) and paranormal experiences. It may surprise you to know that there are very good reasons to suspect that paranormal experiences may involve some of the same brain mechanisms affected by DXM. Whether or not these paranormal experiences have any validity outside of the human brain is entirely a question of faith, and I won't try and make that decision for you.

I'm also using this chapter to discuss in more detail some of the altered states of consciousness and experience that occur on DXM. These are not in any sense paranormal, but they are interesting, and discussion of them doesn't really fit anywhere else.

8.1 Preliminary Information and Discussion

V e in an Age of Reason, where science and technology are viewed as limitless in their ability to explain the world th. e perceive. And, living in this age, we like to believe that we are entirely rational creatures, and that what we perceive can be explained in simple, concrete terms.

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Unfortunately, it just ain't so. Humans are fundamentally irrational critters, and our conscious, rational minds are just a thin veneer layered on top of complex, unconscious neural networks which occasionally behave in bizarre ways. Many c[illegible]ssume that our conscious minds are in total control, logically formulating ideas and thoughts, when in fact our in[illegible].ations, ideas, and impulses seem to come from nowhere. In spite of adherence to conscious thought, much research suggests that the brain works best when one doesn't try to think too much; as an example, one study found that hunches were considerably more accurate than the conscious mind in choosing among stacked decks of cards.

The most blatant example of our unrepressed irrational side may be the widespread phenomenon of UFO abductions. Thousands (perhaps tens of thousands) of ordinarily rational people, most of whom have no good reason to lie, report alien encounters ranging from viewing UFOs to having been abducted, taken into spacecraft, and subjected to experiments. While there is occasionally physical evidence that *something* happened, many times there is solid evidence that nothing physical was going on at all.

Interestingly enough, these experiences are nothing new. In the 1800's, people didn't see UFO's; instead, they saw floating ships which travelled across the country. And before that, of course, were faeries, elves, and other mythical creatures. Whatever they are, and whether they exist outside of our minds or not, they seem to take on a form appropriate to the society of the time. Many of the features of the abductions stay the same, regardless of the symbols. A detailed examination of these similarities is given in *Passport to Magonia* (361).

There are numerous explanations for these phenomena, but one thing seems certain: for whatever reason, people *are* perceiving them. Recent research by Persinger et al. suggests that electromagnetic and geomagnetic fields, earth lights, and the like, may capable of inducing eddy currents in the temporal lobe limbic networks, resulting in all sorts of bizarre experiences (332,333). If you've been paying attention, you'll recall that DXM (like other dissociatives) exerts some of its effects on these very same networks.

T[illegible] are still many questions to be answered, of course. Researchers have constructed devices which induce these eddy currents and can produce generic "vestibular" sensations, but these simple sensations are nowhere near the complexity of the typical alien encou[illegible]ter. A few have suggested that these "aliens" may be real in some sense, not necessarily little green men in flying [illegible]ucers, but perhaps noncorporeal, electromagnetic entities. Other people tend to look on those few as kooks.

So in any case, whether or not you believe in the *objective* validity of the paranormal experience, it is hard to argue with the *subjective* validity of it. DXM is capable of inducing a variety of paranormal experiences, and even though it's probably "all in your head", there's good reason to believe that non-drug-induced paranormal events are also all in your head as well. Again, let me point out that whether or not you believe these are real in some objective sense is entirely a matter of faith and cannot, in general, be proven or disproven scientifically.

8.2 What Paranormal and Altered State Experiences Occur on DXM?

I[illegible]s a detailed list of various paranormal, spiritual, or otherwise altered states and experiences that can occur during the use of DXM. Most of these tend to occur at the upper plateaus and at Plateau Sigma, and many of them are very rarely reported.

http://www.erowid.org/chemicals/dxm/faq/dxm_paranormal.shtml 2/7/2003

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8.2.1 The Dissociative Spiral

The *Dissociative Spiral* is a term which I borrowed (and modified) from Shulgin's *PiHKAL*. It describes a particular set of characteristic sensations or internal states that seem to occur as a result of some sort of abnormal temporal lobe functioning. In *PiHKAL*, Ann Shulgin recounts how she would experience the "Spiral" when she was younger, almost always right before going to sleep. Many people have reported the very same set of effects on DXM (and ketamine), and I suspect that people who experience it naturally may have something interesting going on in the temporal lobes that mimics the effects of dissociatives. Perhaps this is due to release of endopsychosin, or perhaps it's just the way these people's brains are wired. One person suggested it may be complex partial seizures, but I don't think there's any evidence for that.

The Dissociative Spiral seems to have four phases, each phase lasting a fixed amount of time. Not everyone experiences all phases. I have given each phase a name which I think is descriptive based primarily on the experiences of DXM users; I also suggest you consult *PiHKAL* for Ann Shulgin's version.

1. **Supernova**. Ann Shulgin refers to this as "macrocosm-microcosm". There is a sensation that one's "core" is rapidly shrinking, growing ever smaller and smaller, down to the size of a subatomic particle. Accompanying this shrinking sensation is a feeling of one's "outer shell" expanding equally rapidly, until it fills the entire universe. This is generally considered as a pleasant sensation, with a slight characteristic of free-fall.
2. **Lilliputian Hallucinations**. After shrinking down to a proton, the Lilliputian Hallucinations begin. Everything that one imagines or recalls seems grossly distorted in size. Human figures alternate between tall and thin and stretched out like taffy, and shrunken and rounded. Many people see long, thin ribbons of multicolored energy. There is a disturbing sense of Infinity with these hallucinations. Most find this phase extremely grating on the soul, mentally painful, perhaps because one is perceiving objects to have totally opposite characteristics at once. Some people are familar with Lilliputian hallucinations from fevers.
3. **Veils of Light and Darkness**. The third phase consists of alternating visual fields of total, thick black and ghostly white or greyish-white. Each visual field gives way to the opposite as if veils were being torn and dissolved. The "black veil" is often described as being much darker than ordinary darkness, since even the phosphenes (the patterns one sees with eyes closed in the dark) are absent. Most people also find this phase extremely unpleasant.
4. **Contact**. The fourth phase, and the rarest, is also the most spectacular. After passing through the last Veil, there is a sudden sense of being in the presence of a profoundly powerful, loving, intelligent entity (or occasionally, multiple entities). These typically greet the individual with empathic communication, sending messages of familiarity, joy, love, concern, and occasionally a vague sense of humorous curiosity at finding a human being in this place. This phase is the most profound, and the most pleasant.
   To my knowledge nobody has ever done an EEG during the Dissociative Spiral, but I have a hunch that the temporal lobes would probably be doing something interesting. Perhaps this is a common occurance, but one that most people are incapable of perceiving. In any case, it is frequently observed with DXM, typically phases 1 and 2, occasionally phase 3, and rarely phase 4.

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8.2.2 Deja Vu and Other Memory Mishaps

Deja Vu, the feeling that one has had the exact same experiences before, is common both during and after the DXM trip. Somewhat less common is *Jamais Vu*, the sensation of being in a totally unfamiliar environment when one is not. Other memory mishaps, such as recognizing unfamiliar objects or people as familiar, or familiar ones as strange and unknown, also occur. All of these are probably due to misfiring in the neural networks responsible for recognizing and recalling sensory input.

8.2.3 Out-of-Body Experiences (OOBEs)

OOBEs (Out-of-Body Experiences) are common at fourth plateau doses. Typically these start with a sensation that one is being tugged horizontally out of one's body, followed by a floating sensation. Typically one enters what seems to be an entirely different plane of existence, although rarely people report staying in the physical world as a noncorporeal entity, viewing one's body from above. The various alternate planes each have consistent physical rules, life forms, and appearances.

Explaining OOBEs is difficult and is in my opinion currently beyond neuroscience. The rational explanation is that these are delusions, but if so, then they are delusions that we seem to be in some sense programmed to experience in a consistent fashion. The one explanation I have heard that seems to make sense is that one is experiencing one's world (or more accurately, the internal model of one's world) from a "third person" perspective, i.e., the "fly on the wall" viewpoint that many people have when dreaming or recalling memories. There may be some sort of built-in spatial transformation that allows one to perceive (consciously or not) the world from an outsider's perspective and observe one's own actions. It's possibl that the posterior cingulate cortex may be involved.

8.2.4 Near-Death and Rebirth Experiences

Near-death experiences (NDEs) are less common than OOBEs, and also usually occur only on fourth plateau trips. Again this seems to be something that we're wired to experience when the brain is sufficiently disrupted, either by drugs or by lack of oxygen. Following an NDE, and sometimes after a heavy upper plateau trip, one may experience a profound sense of rebirth, a discontinuity in memories as if one has begun life anew. This may be some sort of state-dependent memory phenomenon.

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8.2.5 Contact with Alien and Spiritual Beings

Many people report contact with alien and spiritual beings, deities, and free-floating consciousnesses during upper plateau trips, notably during out-of-body experiences and the dissociative spiral. It has been suggested by Jaynes (350), Persinger (330-349), and others that these entities may be fragments of one's own subconscious mind that one is suddenly perceiving consciously. Curiously enough, deities seem to be more commonly female than male. I have no clue why this is the case.

There is also a more complex dissociative effect involving a unique, consistent set of beliefs about, for lack of a better term, an alien conspiracy; see Section 8.3 below.

8.2.6 Clairvoyance, ESP, and Other Psi Phenomena

A few people have reported "Psi" phenomena such as ESP (extra-sensory perception), clairvoyance (psychically seeing distant places), and the like. Telekinesis doesn't seem to be reported, although a few report that, while under the influence of DXM, they felt like they could slightly influence the laws of probability. All of these can be safely explained as simply drug-induced delusions, although there has been to my knowledge no formal research on the subject.

It is possible that ESP and related phenomena (with DXM use or without) exist but occur entirely randomly, or only when not being observed critically. Since repeatability, and invariance under observation, are the foundations of science, it may be that questions about psychic phenomena will never yield entirely to science. At this point it becomes a matter of faith.

One interesting factor which does differentiate ESP from other paranormal phenomena is that while most paranormal experiences occur more often during heavier geomagnetic activity, ESP occurs more often during decreased geomagnetic activity (346). The true believers would probably argue that the geomagnetic field is interfering with ESP; the skeptics would most likely suggest that "ESP" is just a consequence of similar thought patterns leading to similar conclusions, and that the geomagnetic field may be capable of inducing noise into the system.

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8.2.7 Memory Loops and Prescient Sensations

DXM can severely alter the sense of causality, and with upper plateau and Plateau Sigma trips, one can lose one's sense of causality completely. One person reported a sudden feeling that he was contacting his own mind in the past, passing to himself the ideas and insights he had experienced as a child. Another person felt such a strong sense of deja vu, coupled with memory impairment, that he believed he'd had a prescient dream of the current events. Such occurrances are probably a consequence of the profound alterations of memory and recognition networks. It's hard to describe how utterly convincing these sensations can seem while under the influence of dissociatives.

8.2.8 Dissociative Thought Patterns

In the realm of altered states of consciousness, there are several interesting patterns of thought that occur on DXM. Typically these include a sense of deep understanding of highly abstract and often multi-level abstract concepts. Examples include self-referential statements ("this statement is false"), multi-level logic, self-creating ideas (e.g., the concept of a self-creating, self-invoking concept), and so one. One mathematics student was suddenly able to intuitively understand Godel's Incompleteness Theorem (this intuitive understanding persisted even after the DXM wore off).

Most of these concepts are in some sense self-referential, and seem to blend levels of abstraction that don't ordinarily go together. My hunch is that DXM allows the mind to create and maintain associations between increasingly far-fetched and unrelated concepts. As a result, these little "nuggets" of self-referential thought, which would ordinarily be discarded or never make it to consciousness, bubble up into the conscious mind seemingly out of nowhere.

8.3 Cosmic Coincidence Central and the Alien Conspiracy

Everyone take a deep breath, we're about to jump off into the deep end. Many people who have frequently used DXM or other dissociatives begin to develop consistent contact with "aliens" (with all due skepticism, these are probably elements of one's subconscious mind that have taken on characteristics of independent consciousness). Regardless of the cause, one particular subset of these aliens seem to have surprisingly consistent behaviour and intentions. Here, basically, is the message that can be pieced together from dissociative users.

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There are numerous groups of entities or aliens, but two in particular are relevant. One group, the "helpful aliens", are attempting to guide humankind towards societal and spiritual progress with the ultimate intention that we become so far advanced that we can leave behind the earth (and possibly the physical world), and join a vast, intergalactic federation of other races. In order to keep us from blowing ourselves up or slipping into societal chaos, these helpful aliens do what they can to keep us on the right track.

However, there are limits, either by some sort of convention or law, or by the nature of noncorporeal existence, to what these aliens can do. For example, they probably can't show up in big mothership and announce peace on earth; they can't suddenly make all guns and bombs disappear. They seem to be able to influence human progress only by means that appear as coincidence, such as fortuitous events, sudden insights and inspirations, luck, and that sort of thing. Some people have suggested that these "helpful aliens" are bending some sort of "law" by helping us out, and they can only do it as long as it can't be absolutely proven that they interfered with out progress.

Then there are the "not-so-helpful aliens". Not necessarily evil, but totally unconcerned with our race, and unconvinced that we are worth the trouble of helping. Some would say that they view us as we view ants, and would have no qualms about exterminating us if they felt it wise to do so. They too are restricted to operating primarily through coincidence.

Anyone who has studied the belief systems and religions of the world will of course notice that these sets of aliens are nothing new. They are also angels and devils, good and evil spirits, and that sort of thing. There is a great deal of correspondence with the Seelie and Unseelie court of the faeries.

So we are left once again with a part of human consciousness that we don't understand, that is profoundly irrational, and that keeps stubbornly making itself known regardless of how much science and reason we try to cling to. A lot of people have these experiences, on drugs or not (or maybe the ones who aren't on drugs are connected to an "inner pharmacist" of sorts, the secretion of chemicals like endopsychosin which mimic the dissociatives).

Some people have developed surprisingly complex theories about these aliens and their goals and methods. Sometimes the aliens give their names. One person was contacted by an alien named Calsutmoran who said he was from "very far away" (pers. comm.), and explained the Cosmic Coincidence Theory. What is surprising is that someone else, who had never heard this story, also reported contact with an alien of the exact same name.

In conclusion, while I don't necessarily think we're pawns in some weird game of the aliens or spirits, I do think there's a part of the human mind that we don't understand, that may be receiving, and transmitting, information in ways we do not recognize. This doesn't necessarily require any ESP or other psychic powers; it could be as simple as gestures, tone of voice, and other factors that we use in communication that we are not directly aware of. I expect the next decade or two will see some truly rigorous investigation of these topics, and I eagerly await the results.

8.4 Are These Experiences Dangerous?

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Unless you suffer from temporal lobe epilepsy (see Section 8.9), probably not. At least not physically. There is, however, always a psychological danger, and there have been cases of ketamine users committing suicide after forming deep mystical belief systems and desiring to leave the physical world. Some would also argue that any time one is forced into a spiritual contact without all of one's faculties, a spiritual danger exists as well.

8.5 How Can These Be Explained

Okay, so why do people keep having these experiences? Where do these spiritual entities and weird altered states come from? Could a simple molecule be responsible for such a complex set of experiences, or is the DXM molecule just a key that unlocks a hidden part of the brain? Here I will summarize a few theories that I have run across attempting to explain these phenomena.

8.5.1 Temporal Anomalies

The title is something of a pun, since many of these paranormal experiences seem to involve curious twists of time and causality. But the intended meaning is anomalies in the behaviour of temporal lobe limbic networks: the hippocampus and surrounding areas. It is here that memories are stored beyond the immediate (or short-term), and here where these intermediate-term memories (ITM) are integrated back into the neocortex to become long-term memory. We are still a long way from understanding how these areas work.

DXM does seem to exert profound effects on temporal lobe limbic networks. These networks may integrate sensory data from the neocortex and the current contents of intermediate term memory, keeping the results in a resonating feedback loop until it can be discarded, acted upon (by passing it to the motor cortex), or integrated permanently into long-term memory. Dissociatives seem to lower the strength of sensory input, possibly by increasing the firing of neurons which inhibit sensory networks. Similarly, the NMDA receptors which are responsible for forming intermediate-term memories are inhibited. So one is left with a resonant circuit whose other inputs have been attenuated or cut off.

These patterns (internal states) pass repeatedly through the limbic networks (and this seems to be strongly related to the production of theta waves). Eventually, the "goal" (if one wants to think of it that way) is probably to reach some sort of a decision, and then pass the information to the motor cortex where action can be taken; supporting this idea is the fact that theta wave activity drops immediately before motor cortex activation. However, with motor output reduced, one is left with a constant echoing of signals through the limbic areas (possibly bouncing back and forth among the neocortex, prefrontal lobes, and other areas). As these signals bounce back and forth

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without being "tied down" to sensory input or memory, they become increasingly distant in form from any normal signals you're likely to encounter.

It has been suggested that all human temporal limbic networks share a common "language", i.e., a particular pattern of neural activity in one person's limbic system and an equivalent pattern in another person's limbic system are paired with equivalent mental states (331). This is a bold assertion, and if true means that internal states (such as happiness, anger, boredom, familiarity, comfort, recognition, novelty, perhaps even as complex as "I'm being abducted by aliens") may be encoded in different individuals by the same neural patterns. Thus, the particular patterns induced by dissociatives may simply correspond to particular sensations, states, emotions, and/or beliefs, that people interpret in similar ways.

Going one step further, it may be that the reason that people encounter UFOs and aliens nowadays, whereas they encountered airships, ghosts, faeries, spirits, etc., before, was that while the internal states are the same, the memories or ideas associated with them have changed. The neural network pattern that in a modern human means "UFO" may have meant "demon" a few centuries ago. These patterns are outside the range of normal brain functioning, but may be induced by drugs, electromagnetic waves, temporal lobe seizures, and so on.

8.5.2 Complex Partial Seizures

Partial seizures involve only a subset of the brain and, if they occur in areas without direct connection to the motor cortex, may go unnoticed. Complex partial seizures are those which involve a loss of normal consciousness. Some have argued that there is a continuum between normal and epileptic, and that most people have some sort of simple or partial seizure activity at some point in their lives (343). Some signs of complex partial epilepsy do seem to be more common among females who profess beliefs in the paranormal (341).

On the other hand, a significant lack of humor is one of the hallmarks of people who suffer from temporal lobe complex partial seizures and of the experiences induced by the seizures themselves. Furthermore, those with complex partial epilepsy may show increased fantasizing but often show reduced self-esteem (334). Obviously, many people with a perfectly normal or even well-developed sense of humor are having paranormal experiences (both on and off drugs).

Whether one calls it seizures or abnormal network activity, it does seem to be responsible for some interesting things. Most common are sensed presences (339,348,349) and vestibular sensations (332). The former may be an intrusion of the right hemisphere's self-concept into the left hemisphere's consciousness (335,342). Persinger found that such sensed presences also occurred during times of verbal creativity, and may explain the embodiment of creativity in the form of the Muse (348). In fact, a more general view of the right hemispheric consciousness as an "alien" or "godlike" presence has been suggested by Jaynes (350).

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8.5.3 Influence of the Unseen Environment

Another idea is that while these internal neural network states are the reason for such curious experiences, it's not the DXM (or other dissociative) alone that's responsible for the content of the experience. Instead, the DXM is just priming the temporal lobe limbic areas to receive information from "extrasensory" sources.

Before you shrug this off, however, let me explain what I mean by extrasensory. Perhaps I should have used another term, as I am not calling for one to accept psychic powers; I'm merely claiming that the brain may be susceptible to the environment in ways which we don't usually acknowledge.

The most likely of these is ultra-low frequency electromagnetic and magnetic waves, which seem to be received quite well by the hippocampus and surrounding areas (330,336-337,346-347). In fact, many species have a well-defined "inner compass" which reads the magnetic field to help determine position, and in humans, magnetite particles have been detected in the hippocampus (354). These may be an evolutionary leftover, like the appendix, or they may still function, providing part of the overall feeling or *zeitgeist* of a particular place. Humans are susceptible to low-frequency magnetic stimulation of the temporal lobes, and do respond to geomagnetic events (330,332-333). Alien sightings increase significantly before earthquakes, and some have even suggested using these as a predictor of future geological events. In addition to direct effects on the limbic areas, geomagnetic activity also lowers the activity of melatonin; melatonin has been shown to reduce the frequency of seizures (347).

Another possibility is that information is being perceived by the senses but forgotten, or never noticed, by the conscious mind. This information could form a complex tapestry of ideas and concepts that we are not directly aware of, and could manifest itself in breakthroughs, insights, and so on.

There is a (somewhat suspect) theory called the "100th monkey phenomenon", which posits that when enough members of a society learn something, eventually everyone will become aware of it without directly coming into contact with it. Unfortunately for its adherents, the original research on monkeys acquiring skills turned out to be flawed. However, it is worth noting that slang expressions, ideas, and so on seem to arise in a culture from numerous sources at once. What is probably going on is that the conditions that lead to these expressions and ideas saturate society, and enough people are wired similarly to come up with the same ideas.

This is what I mean by the "unseen environment" -- unconscious factors, whether of sensory or unconscious origin, that can affect us and seemingly come from nowhere. Perhaps many of the experiences people have on dissociatives are a result of this unconscious data coming to conscious mind. One possibility is that with the temporal circuitry in a closed feedback loop, slowly varying geomagnetic waves can induce common sequences of internal states in people. Another possibility is that there are unrecognized influences of popular literature (e.g., science fiction novels and movies) which color the dissociative experience.

8.5.4 Spiritual Explanations

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If you want to go really far out on a limb, one can even come up with a possible theory that involves real aliens or spirits. Suppose that these creatures do exist, and that they exist in a primarily noncorporeal form (or, perhaps, they are corporeal, but influence us through noncorporeal mechanisms). Let's say for example, that there are electromagnetic entities, made up of flux lines, charged particles, and undoubtedly things we don't know about, that are alive and sentient. These entities generally hang out in deep space, or in the ionosphere, and can exert only a limited influence on the human mind because sensory data normally drowns them out.

With the senses cut off by dissociatives, however, they can apply enough energy to induce particular states in our minds. They do their best to communicate with us, but can only do so through the roughest of concepts, emotions, and ideas. Perhaps during geophysical events, when a great deal of magnetic energy is available near the ground, they can come down, feed off this energy, and contact people directly. Maybe they can even "construct" objects out of ionized particles and gases. Like ball lightning, these objects may very well tend to be radially symmetric, appearing as spheres, eggs, donuts, saucers, and the like.

Regardless of the situation enabling their contact, once they establish contact with us, they try to communicate with us. However, because of the limitations, we can only interpret their ideas in terms we are familiar with: abductions, experiments, placing microchips in our brains, or taking samples from our bodies. From their point of of view they may intend to convey something totally different, but cannot bridge the language gap.

Finally, they leave, often leaving behind such physical remnants as magentized materials, curious radially symmetric patterns on the ground (indicative of a strong magnetic field and radial ion wind, perhaps?), memory gaps (which tend to happen when the brain is exposed to strong electromagnetic fields), and the like.

Of course, this is all so far off the deep end in speculation that there's nothing whatsoever scientific about it. One could just as easily say that these effects are the result of natural magnetic and electric phenomena. Until someone manages to demonstrate that alien encounters *require* magnetic stimuli of a more complex nature than can be explained by simple natural events, this is no more scientific than any religious faith.

One last point I'd like to bring up. In conversation with these entities throughout history, the entities (from faeries to aliens) typically report a strong aversion to iron. Now, iron has two interesting properties. One, it is at the "bottom of the well" so to speak in nuclear energy -- you can't gain energy by either fission or fusion of the iron nucleus. Two, and perhaps more intruigingly, iron is ferromagnetic, and traps magnetic flux lines. If I were an electromagnetic entity, whose very form was made out of such flux lines, I wouldn't appreciate someone dorking with them. Of course, a more reasonable explanation is that this aversion to iron is a remnant from the end of the Bronze Age, when iron was a magical metal. But the flux line theory makes a much better story, don't you think?

8.6 How do I Maximize Altered States and Paranormal Experiences?

Okay, so whether or not you believe any of this, maybe you want to try for yourself. Many people never experience anything nearly so profound on DXM, but I have heard from many who do. Here are some of their suggestions for enhancing the frequency of paranormal and altered states.

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8.6.1 Theta Stimulation

Many of these effects seem to be maximized when theta waves are produced, possibly because theta waves are indicative of activity in the limbic system. Photic (light) and sound stimulation, using "light and sound" machines (see Section 7.4.3), are effective; another possibility is the "Flasher" program described in Section 7.4.5.

8.6.2 Hemisphere Synch Tapes

Similar in concept to light and sound machines, there are "hemisphere synch" tapes which use recorded sounds to induce particular brainwave activity. See Section 7.4.4.

8.6.3 Magnetic Stimulation

If you really want to go for the gusto, you can use direct magnetic stimulation of the temporal lobes. Check out papers by Persinger (there are numerous others in the field) for a start on the nature of these devices. A lot of research is being done currently in transcranial magnetic stimulation, so in addition to dorking with your temporal lobes you can also try mapping your motor and sensory cortex and checking out the potential antidepressant effect of left prefrontal cortex magnetic stimulation. Actually, if you really are interested in any of this, clear it with a physician first.

8.6.4 Sensory Deprivation and Ganzfeld

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Refer to Section 7.4.1 and Section 7.4.2.

8.6.5 Predosing

A few people report that taking a low "attack" dose at lower second plateau levels four hours or so before the main dose will greatly increase the chance for interesting altered states and paranormal experiences. It probably also greatly increases the chance for side effects and brain damage, so proceed with caution if at all.

8.6.6 Meditation

Meditation is of course a wonderful tool for achieving altered states, with or without the use of drugs. Various meditation techniques exist, and I'm in no position to describe them, but based on published reports I would say that Transcendental Mediation is well documented as capable of inducing these altered states (349). Persinger suggested hypothetically that Transcendental Meditation may induce temporal lobe seizures via a mechanism he called "cognitive kindling" (344), but another paper disputed this, and I haven't noticed meditators convulsing with any appreciable frequency.

8.7 Factors Affecting Susceptibility to Paranormal Experiences

Some have suggested factors which affect the susceptibility to paranormal experiences. Some of the suggested factors (most of which remain to be proven) include: gender (females are more susceptibility), right-handedness, prior paranormal experiences, prior electrical shock (especially from lightning), geomagnetic events, sleep deprivation, underlying seizure disorder, and regular meditation.

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8.8 A Warning About "Spiritual Shortcuts"

Drugs are tools and like all tools they have their limits. Whenever one uses a drug for its mental, psychological, or even spiritual effects, one must remember that the tool itself can never replace hard work and committment. Some would argue that using drugs for spiritual or magickal purposes is completely misguided, but others report great benefit from the use of various psychoactive drugs in meditation, spiritual exploration, and development of a personal philosophy.

Most people who are experienced with the use of drugs in this context must never take the place of sober work. Drugs may be ideal for showing one the possibilities of the mind, but once awakened to these possibilities, it is perhaps best to let memory and familiarity take the place of drug use. It is probably best to limit the use of DXM to the minimum necessary to accomplish a given goal, and with time it should become totally unnecessary. Remember, DXM can be a step along the path, but it should never become the path itself.

8.9 A Warning About Temporal Lobe Epilepsy

Many of the methods discussed above are capable of aggravating an existing temporal lobe epilepsy condition (and probably other forms). Furthermore, people who suffer from complex partial seizures may be more likely to experience paranormal events (334,341), so if you're already talking fluently with the aliens, you may want to be wary about giving yourself extra help. This type of epilepsy can remain confined to the temporal lobes forever, or can generalize to involve the cortex, and in extreme cases lead to seizures severe enough to produce brain damage or even death.

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9 Physiological Effects of DXM

from the DXM FAQ
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This section explains some of what is currently known about DXM and its physiological effects. As the recreational use of DXM is not well studied, most of that information is speculation, some of it entirely mine. To be more precise, a great deal of it is "scientific wild-assed guessing" (SWAGging) and should only be taken as interesting and unproven hypotheses.

A lot of this chapter is very technical. In the next chapter (Section 10), you will find an introduction to neuropharmacology, and the glossary (Section 16) contains definitions and explanations for the technical terms.

9.1 How Does DXM Inhibit the Cough Reflex?

This is a complex problem. The cough reflex generally involves a series of signals originating from the throat, lungs, and nasal passages, and ending up in the muscles. At any point in this pathway, signals can be blocked. Sigma receptors are evidently involved in this pathway (42,49,55,56). This may be a direct involvement - sigma activation may directly inhibit the cough reflex signals - or it may be an indirect one. The cough suppressant effect of opiates (such as codeine) is not related to the same effect of non-opiate morphinans like DXM (49); instead, it seems to be governed by traditional opiate receptors (mu, kappa, or delta).

There is some evidence that $5HT_{1A}$ receptors (a serotonin receptor type) are involved somewhere in this pathway, and that cough suppressants may increase $5HT_{1A}$ activity (57), possibly via NMDA antagonism (90). This could explain some of DXM's mood-altering activity. $5HT_{1A}$ receptors are involved in anxiety states and in resilience to aversive events. Buspirone, a $5HT_{1A}$ receptor partial agonist, is an anti-anxiety drug less potent (but considerably safer) than the benzodiazepines such as diazepam (Valium™).

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9.2 How Does DXM Cause its Psychoactive Effects?

If you thought the cough reflex was complicated, just wait!

9.2.1 General Information

DXM binds to at least four sites in the brain (58), which can be arbitrarily labeled DM_1, DM_2, DM_3, and DM_4; there is probably also a fifth binding site (DM_5). Some of these sites are sensitive to pentazocine, a known sigma ligand; some are sensitive to haloperidol, another sigma ligand. On the following table, information from several sources has been g ed and combined. The binding affinity of DXM, DTG, and 3-PPP are listed (58), along with (+)-pentazocine se tivity (60), and haloperidol displacement ability (58) (binding values in nM unless otherwise specified). "Low" means micromolar binding affinity.

Table 2: DXM Binding Sites

DXM Site:	DM_1	DM_2	DM_3	DM_4
Probable Binding Site:	$Sigma_1$	PCP_2	$Sigma_2$	NMDA
DXM	50-83	8-19	low	low
(+)-3-PPP	24-36	low	210-320	low
DTG	22-24	???	13-16	???
Pentazocine Sensitive?	Yes	No	???	???
Haloperidol Displaced?	Yes	???	Yes	???

What this table demonstrates is that DXM binds to four separate places, two with high affinity. The first receptor is accepted to be the $sigma_1$ receptor based on the binding to pentazocine and haloperidol, and the potency of (+)-3-PPP. The second receptor is almost certainly the PCP_2 receptor, given the insensitivity to pentazocine, and the very high affinity for DXM. The third site is *probably* $sigma_2$ (based on the potency of DTG) but it is possible that "DM_1" in this table represents both $sigma_1$ and $sigma_2$ and that the third site is something else. The fourth site is probably the NMDA r or's open channel site, although it might be the ion channel binding site (59).

I don't have information on the binding of DXO (dextrorphan), unfortunately. It would probably show strongest

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binding at DM4 (NMDA open channel site), followed by DM_1 ($sigma_1$), and then by DM_3 ($sigma_2$) and/or DM_2 (P[illegible]), or both. I'm looking for this information currently.

9.2.2 Contribution of the PCP_2 Binding Site

The PCP_2 binding site is probably the dopamine reuptake complex, so blocking it would prevent the uptake of dopamine in much the same way that the antidepressant bupropion (Wellbutrin™) or cocaine does (73). Of course, DXM is considerably weaker than cocaine (and stronger than bupropion, incidentally) at this site. This probably accounts for the euphoric effects of a low recreational dose, and almost certainly explains the stimulant effects of a low dose. Interestingly, the stimulant effect seems qualitatively different from amphetamines to most people (I have no comparison information on cocaine). One user compared DXM and bupropion favorably in stimulant effect. Incidentally, it seems that DXM may bind noncompetitively at the dopamine reuptake site whereas bupropion binds competitively.

The music euphoria and motion euphoria are probably partly due to PCP_2 activity, and partly due to other activity. As N[illegible]A blockade and sigma activity can both lead to dopaminergic activity (see below), reuptake inhibition would p[illegible]iate these effects.

Interestingly, DXM seems to be much more potent at this site than other sigma/NMDA ligands (such as PCP or ketamine) in comparison to activity at other sites. Also interestingly, at least one tricyclic antidepressant has been found to be active at related receptors (sigma, PCP) (71,74,75); it is possible that the PCP_2 site may be a target of some antidepressants.

9.2.3 Contribution of the Sigma Binding Sites

As the $sigma_2$ site is a fairly recent discovery, it is not known what sigma-related effects and behaviors are attributable to which receptor ($sigma_1$ or $sigma_2$). There is very little data on the subjective effects of sigma ligands, in part because only recently have selective ligands become available, and in part because most researchers aren't very willing to dose themselves to find out. DXM binds to the $sigma_1$ receptor and is generally considered to be an agonist at this receptor. DXM is probably also an agonist (as opposed to an antagonist) at $sigma_2$, though it is much weaker there.

The disruption of sensory processing may be due in part to sigma activation (and partly due to NMDA blockade) (63-65). Sigma receptors may be specifically involved in the auditory effects of DXM (65), and these effects may relate to a

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disruption of sensory input persistence.

Psychotomimetic (literally "psychosis-like") effects of DXM may be a result of sigma activity since sigma receptors seem to have some involvement in schizophrenia (46-49). People who have used both DXM and ketamine have remarked that DXM is much more likely to induce delusional and hyper-abstract thought patterns. Sigma receptors may temporarily modulate cholinergic receptors (97), so sigma activity may produce temporary effects somewhat like the delusional anticholinergics.

The effects on motor skills may be a result specifically of $sigma_2$ receptors (69). Expect to see more data on this subject as $sigma_2$ receptors are investigated more fully. There may also be a contribution from NMDA receptors, of course.

9.2.4 Contribution of the NMDA Receptor

Dextrorphan (DXO) is much more potent than DXM at the NMDA receptor, which accounts for the slow onset of most of DXM's effects even when it is injected. The NMDA receptor is the central site of dissociative action, and is probably the main contributor to most of DXM's effects. Dissociatives, including DXM, act on the NMDA receptor by binding to the channel once it opens up, essentially plugging it up.

Most of the "stoning" or intoxicating effects of DXM are due to NMDA receptor blockade. Alcohol's intoxicating effect seems to be mediated in part by NMDA receptor blockade (alcohol's depressant effect is due to GABA activity; DXM has no activity at GABA receptors) (28,61,62). The dissociative anesthesia of high DXM doses is also likely due to NMDA receptor blockade (63).

As stated before, sensory processing disruption, especially at higher doses, is probably due in part to NMDA receptors and partly to sigma (63-65). NMDA blockade is probably responsible for most if not all of the flanging effects of DXM, especially visual flanging. This is likely an indirect effect, i.e., the blockade of NMDA receptors induces changes in the way the brain processes information, leading to flanging.

The effects on memory are almost certainly due to NMDA blockade. NMDA receptors are intimately involved in long-term potentiation (64,66-68), the primary mechanism behind intermediate-term memory (ITM) and long-term memory (LTM). By blocking NMDA receptors, long-term potentiation, and thus intermediate- and long-term memory encoding, are disrupted.

NMDA blockade indirectly (244) increases dopamine activity in the striatum, nucleus accumbens, olfactory tubercule, and prefrontal cortex (204,226,326). Increased activity at dopamine D_1 receptors is responsible for the increased locomotor activity seen in rats on dissociatives (178), and may be responsible for many of the effects DXM has on motion. Chronic use of DXM may result in upregulation of dopamine D_2 receptors (205).

DXM's ability to suppress respiration at toxic levels is most likely due to NMDA receptor blockade or (in my opinion) ion channel blockade. Some of the effects from very high dosage levels may be due to overall disruption of neural networks. There is some preliminary evidence that both the "spontaneous memory" effect and the sensations similar to near-death experiences may occur as limbic areas (the hippocampus and hippocampal formation and surrounding areas)

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are disrupted by NMDA blockade. Most drugs target specific, small clusters of neurons (or their receptors, which can be scattered about). Both excitatory amino acid secreting neurons and NMDA receptors tend to be more evenly distributed, although they too are concentrated in certain areas of the brain to a lesser extent.

9.2.5 Temporal Lobe Involvement

Probably the greatest degree of DXM's effects come from consequences of the aforementioned receptor binding on the temporal lobe limbic areas. The blockade of NMDA receptors by DXM has specific consequences in these areas. The normal functioning of the hippocampus and amygdala are disrupted since NMDA blockade prevents long-term potentiation. The posterior cingulate and retrosplenial cortex paradoxically become more active. There may be spontaneous "noise" effects in the entire limbic system amplified by feedback. One paper suggested that dissociatives may induce "microseizures" or limited areas of high activity in the limbic system (176).

There is also the suggestion of a "top-down" inhibition of the senses, i.e., inhibitory signals from the limbic areas and surrounding cortical areas are sent "down" to sensory networks, lowering the strength of sensory data. This "top-down" inhibition of the senses may be the mechanism behind dissociative anaesthesia; sensory information is still processed by the brain, but never makes it to the conscious mind and is never encoded in intermediate-term declarative memory (i.e. hippocampus).

Finally, dissociatives seem to alter the flow of signals through the limbic areas, possibly increasing the degree of internal feedback within these areas (or between these areas and the neocortex) and diminshing the amount of sensory data that comes in. Gating of signals coupled to the theta rhythm through the posterior cingulate (311) may be altered.

Putting this all together into some sort of cohesive theory may be too soon but I'm going to do it anyway. My belief (which will probably change as new research becomes available) is that the diminished sensory data (from top-down inhibition), and the decreased encoding of intermediate-term memory, combined with the enhancement of activity in the posterior cingulate and retrosplenial cortex, all lead to an increasingly closed feedback loop. Within this loop, random noise, individual differences in temporal lobe "wiring", the contents of intermediate memory, and the influence of electromagnetic fields (332) all combine to give rise to profoundly abnormal neural patterns.

An interesting aside to this is that the sense of smell is sometimes reported to be enhanced on DXM. This hasn't been formally studied, and may be all in one's mind, but since olfactory data is treated somewhat differently by the brain than the other senses, it may be spared from the descending inhibitory signals that attenuate other sensory data. If so, then the feedback loop could actually serve to increase the strength of olfactory data, by repeatedly adding the same, small signals together.

9.2.6 Contributions of Indirect Activity

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Many of DXM's effects are undoubtedly due to indirect activity at other neurotransmitter systems. For example, it may indirectly increase 5HT activity, especially at the $5HT_{1A}$ receptor. This could explain some of its mood-altering properties. Another example is dopaminergic activity; DXM has a fairly strong ability to increase dopamine activity (both from activating sigma receptors, and from preventing dopamine reuptake at PCP_2 sites) (72,76). NMDA receptor blockade also has been shown to increase dopaminergic activity, as well as activity of other neurotransmitter systems (100).

9.2.7 Flanging

One of DXM's most prominent effects if the flanging of sensory input. This happens to some extent with many drugs, and I have a hypothesis on this. Note in particular the relation of flanging to "stoning" and "buzzing" - in some ways, flanging is a more profound degree of stoning. Some people have noticed a flanging or strobing effect after smoking a great deal of cannabis, and nitrous oxide users are also familiar with flanging of sounds. Even alcohol can produce it.

What it seems many of these drugs have in common is the ability to inhibit hippocampal long-term potentiation. Some have suggested that there are more than one set of signals that pass through the same limbic areas, with those in phase with the theta frequency and those out of phase being gated differently. Perhaps one set of signals is more strongly involved with memory, and the other set more strongly involved with sensory data. Or, perhaps all drugs which inhibit hippocampal LTP all activate the posterior cingulate cortex. In either case, signals at one phase of the theta rhythm could be disrupted, leading to a pulsing of perception in step with theta rhythm.

A different theory is that networks in the brain will re-process the same data repeatedly until a stable configuration is formed, and that DXM (and other drugs) slow down this process. With some networks slowed down and others operating at normal speeds, the characteristic frequencies of the two sets of signals would differ, leading to a "beat frequency" in much the same way that two very similar sounds can lead to a beat frequency (for a quick demonstration of this, listen to someone tuning a guitar by ear).

9.2.8 Hyper-Abstraction

Another interesting effect of DXM is its ability to induce peculiar cognitive disturbances, which I lump together under the term of "hyper-abstraction". Two examples:

A *meme* is a "particle" or "virus" of thought - an idea which is in some ways self-contained, and which spreads like a virus. For example, the idea of civil liberties is a meme, which at some point sprang into existence, spread

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rapidly, and has now become an integral part of our consciousness. One user during a DXM trip suddenly became aware of (or thought up) "The self-invoking, self-creating meme", which was the concept of a meme whose identification creates and invokes it. It seemed that this meme was timeless in the sense that it must have always existed, or it could not have come to mind, since it is not easily deducible from anything other than itself (of course, the brain doesn't work on the rules of logic, but ... you get the point)

- Another user wrote of thinking about convergent infinite sums (e.g., 1/2 + 1/4 + 1/8 + etc., which sums up to 1). Although one can add these terms up forever, it's easier to abstract the process and get the answer that way. This user imagined an infinite series of abstractions, and then imagined abstracting that infinite series to get a new level or plane of abstraction.

Many DXM thought patterns involve what some have called "Strange Loops" in logic (137). Like the self-contradicting statement "this statement is false", some of them cannot be embodied in logical form; others can be, but cannot be derived without presenting them as hypothesis. Thinking at this degree of abstraction is very difficult (unless you are fortunate enough to be Kurt Gödel).

Several people who have written first-person accounts of psychosis and schizophrenia have mentioned increasingly abstract thought patterns (*Zen and the Art of Motorcycle Maintenance* springs to mind). This may of course be complete bunk, and it may be that the increasingly "abstract" thoughts are just increasingly loony (and thus difficult to relate to concrete ideas). On the other hand, it may be that something about schizophrenia and psychotic states is related to a blurring between levels of abstraction. Once blurred sufficiently, a thought which cannot be represented at a concrete degree of abstraction could be representable in the mind.

Thus, DXM may induce a sort of temporary blurring of these levels of abstraction. Whether this is due to NMDA or sigma activity, I don't know, although I suspect the latter, since other NMDA antagonists don't tend to induce such changes in thought patterns.

9.2.9 Delusions and Memory Problems

As stated above, sigma activity may modulate cholinergic receptors in the brain (97), leading to a temporary decrease in cholinergic function similar to (but considerably safer than) that caused by anticholinergics like atropine, scopolamine, cyclizine (Marezine), etc. It is known that cholinergic activity is important in memory, and many nootropics ("Smart Drugs") enhance cholinergic function. Sigma activity may very well cause temporarily lowered effectiveness in some cholinergic receptors, thus distorting memory and thought processes. Some people have in fact said that DXM makes them feel temporarily stupid ("Dumb Drugs", anyone?) although this by no means happens to everyone.

Many of the biogenic amine systems seem to have a modulatory role, and some researchers think these modulating systems operate much like "control knobs". For example, one theory on LSD is that it upsets the "gain control" on sensory recognition networks (possibly by descending inhibition, although through different pathways than those postulated for dissociatives). As a consequence, the random noise input (necessary for any pattern matching network) becomes much stronger than the sensory input. Sensory recognition becomes increasingly less and less precise - ergo, hallucinations.

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LSD's effects are almost certainly more complex than this, but there may be some truth to the "control knob" idea of the biogenic amine systems. If so, then the cholinergic systems may be the "control knobs" for cognitive networks in much the same way that $5HT_{2A}/5HT_{2C}$ systems are for sensory recognition networks. Delusions may simply be the cognitive equivalent of hallucinations. Or to put it another way, the difference between thinking you look like a flower and thinking you *are* a flower may be a question of which network is disrupted.

Memory problems derive to some extent from NMDA blockade, although some users of ketamine have remarked that DXM can have a stronger effect on memory than ketamine. It is possible that, in addition to inducing delusional thoughts, a decrease in cholinergic function could be responsible for some of the memory problems. This is certainly consistent with the effects of the delusional anticholinergics.

Incidentally, the anticholinergics also affect acetylcholine receptors that govern the functioning of the heart and respiration (these receptors do not seem to be modulated by sigma activity). Recreational use of anticholinergics can be extremely dangerous, leading to collapse of respiration or heart failure.

9.3 Why Does DXM Exhibit Plateaus?

9.3.1 Plateaus 1-3: Multiple Receptors

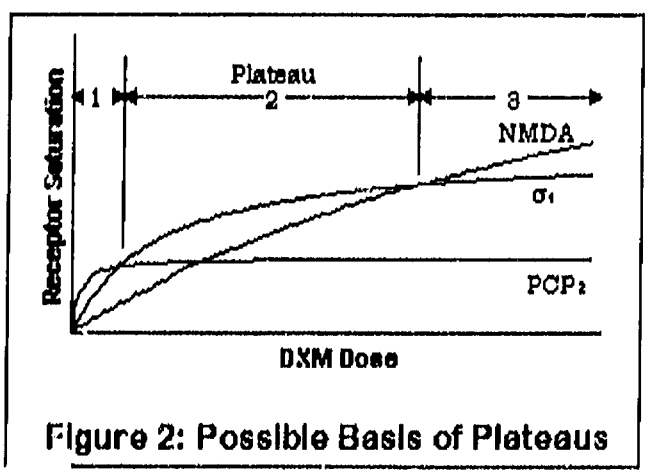

Figure 2: Possible Basis of Plateaus

This graph illustrates a potential effect of multiple receptors. Note that it is a qualitative drawing, not a quantitative one; the actual degree of saturation on different receptors for a given strength of DXM is still mostly unknown. The lines represent saturation levels at the PCP_2, $sigma_1$, and NMDA open channel sites, with full saturation at a given receptor indicated by the "flattening out" of the curve. The X axis is the concentration of DXM; the Y axis is the percent saturation of receptors.

Incidentally, if you are familiar with this sort of thing, you may be more comfortable with a Lineweaver-Burk plot, but for those unfamiliar with them they can be confusing.

L[illegible] its increasing affinity for PCP_2, $sigma_1$, and NMDA receptors respectively ($sigma_2$ is not represented), a low dose will tend to have proportionally more effect on PCP_2 receptors, whereas as the dosage increases, these receptors

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will saturate. Taking more DXM won't change PCP_2 levels much, but will still have a fair effect on other receptors.

Furthermore, the more subtle effects on the PCP_2 receptors may be all but obliterated by the effects on $sigma_1$ and NMDA receptors (the differing vertical maxima of the three curves represent this effect). This is entirely reasonable, since $sigma_1$ and NMDA activity seem to both produce fairly profound behavioral effects, the latter more so than the former.

Thus, the first plateau may correspond to predominantly PCP_2 activity with some sigma activity and a little NMDA blocking effect; the second plateau to sigma and some NMDA effects; and the third to profound NMDA blockade.

This is, of course, a simplification, and it certainly doesn't take into account individual variations in receptors. Some people probably have genetic variants of receptors for which DXM has a stronger (or weaker) affinity. A person with PCP_2 receptors strongly bound by DXM may enjoy its stimulant effects a great deal more than someone whose PCP_2 receptors are only weakly affected.

Additionally, both ion channels and $sigma_2$ receptors are omitted from this graph. They undoubtedly contribute, and some people have asserted that there are plateaus in between the first three. Some of these may be so subtle as to be unnoticeable by most users.

9.3.2 The Fourth Plateau: Sensory Shutdown

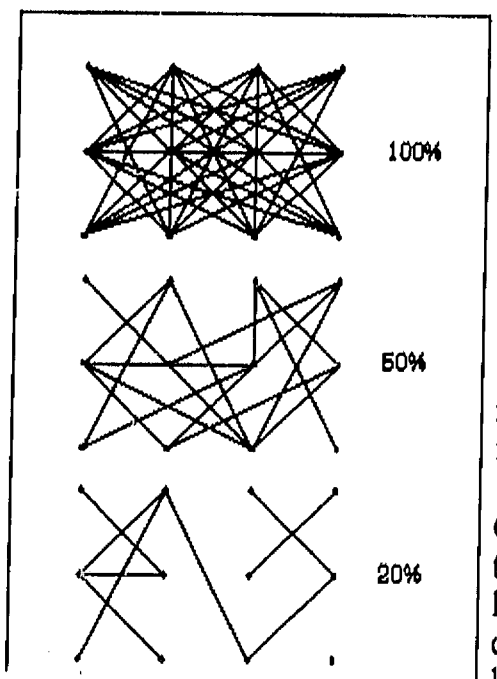

Figure 3: Fourth Plateau Pruning Hypothesis

What about the fourth plateau? Well, once again, here's another little drawing that will hopefully clear up everything (yeah, right). This drawing represents a neural network; the dots are the neurons and the lines are their connections. Like most of the brain, this network is highly interconnected. The percentage numbers show the number of functional links remaining.

As enough NMDA receptors are blocked, one neuron may lose enough input from another that the connection is effectively severed. Initially this isn't such a problem, since both neurons and connections are dense enough so that others can take over the job (although the end result will probably be a slower and less accurate network). At some point, enough connectivity is lost that the network no longer functions.

Compare this to the dissociation of the fourth plateau. At some level, some part of the brain (possibly the hippocampus) loses enough functionality that it can no longer operate as a cohesive unit. Sensory processing halts, and raw sensory input cannot be converted to an appropriately parsed output. The consciousness is then left without any real sensory input; instead, the chaotic, unstable patterns are provided. Ergo, dissociative anesthesia.

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On the other hand, it may be that the threshold of the Fourth Plateau is reached when sensory information becomes inhibited enough for the neural signals in the limbic areas to feed back without substantially being "grounded" in sensory input. This feedback loop continues to perturb the neural signal patterns until they are totally disconnected from any state one is likely to encounter from either sensory input or memory.

9.4 Why is This So Complicated?

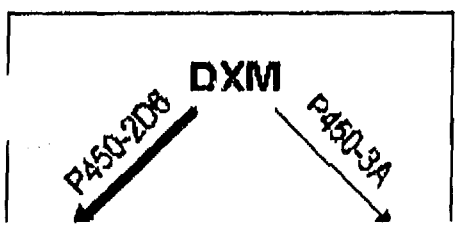
DXM itself is a very complex drug; most drugs only bind to one or two receptors (or at least one class of receptors). Its recreational abuse potential, although known for years, has not been well studied, and it can affect different people very differently. The receptors and binding sites it affects - sigma, NMDA, and PCP_2 - are all new discoveries. All this adds up to a complicated and poorly understood drug.

Furthermore, the brain itself is a complicated system, and we're still mostly ignorant of its function. The basics of neurotransmission seem to be understood, but many questions remain. Nobody knows why there are so many different neurotransmitters, nor why there are so many receptor subtypes. The second messenger systems of most receptors are not well understood either. A lot of what happens inside neurons occurs via changes in genetic expression, and that's yet another topic about which little is known.

To repeat a commonly quoted (and true) sentiment, if our brains were simple enough for us to easily understand, we would be so simple that we couldn't understand them. I do believe that eventually we will have a good idea of how the brain works, but it may not be in my lifetime. Until then we're all just making guesses in the dark.

9.5 Pharmacokinetics: How DXM is Metabolized

DXM, as the hydrobromide salt, is absorbed quickly from the GI tract; within 30 minutes, all of it may have entered the bloodstream (2,3). The polistirex compound is intended for continuous absorption, and may take 6 to 8 hours to fully enter the bloodstream.



DXM is metabolized via two pathways, both of which lead to the same thing, 3-hydroxymorphinan (3HM). The first pathway goes from DXM to DXO (dextrorphan) and then to 3HM; the second goes from DXO to 3-methoxymorphinan (3MM) and then to 3HM. By far most of the DXM (up to 90%) gets metabolized via DXO in normal individuals.

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DXM is converted to DXO by a liver enzyme called cytochrome P450-2D6 (debrisoquine 4-hydroxylase). About 7% of Caucasians and 0.5% of Asians have a highly inefficient (70 times slower) version of this enzyme, and cannot metabolize DXM to DXO effectively (10). About 0.5 to 2% of the population have multiple copies of the P450 gene, leading to extremely fast metabolism of DXM into DXO (155). After being converted to DXO, the enzymes P450-3A4 and P450-3A5 convert DXO to 3-hydroxymorphinan (77).

The other pathway goes to 3-methoxymorphinan first (via P450-3A4 and P450-3A5), and then to 3-hydroxymorphinan. Most people do not metabolize much DXM this way, although people who lack the normal P450-2D6 will convert a substantial amount to 3MM. As 3MM is probably not psychoactive, this means that the 5-10% who lack the normal 2D6 enzyme will experience less effect from DXM (or more specifically, won't experience the effects of DXO).

P450-2D6 functions by removing the methoxy group and replacing it with a hydroxyl (OH) (or more accurately, pruning the methyl off the oxygen); this step is known as O-demethylation. P450-3A4 and 3A5 replace the methyl group with a hydrogen (H); this is the N-demethylation step. Refer to the diagram of the DXM molecule in Section 4.2 for the location of the methyl and methoxy groups.

9.5.1 Factors Affecting Metabolism of DXM

As noted above, some people lack the normal P450-2D6 enzyme. In the rest of the population, this enzyme can be inhibited by several factors. Many drugs inhibit P450-2D6, notably including fluoxetine (Prozac™). A partial list of P450-2D6 inhibiting drugs is given in Section 15.1.

DXM itself naturally will compete with other drugs for P450-2D6, and importantly, so will 3-methoxymorphinan (3MM) (17). In fact, 3MM may have more affinity for the P450-2D6 enzyme than DXM itself does. This may account for the fact that a second "booster" dose of DXM generally produces different effects than the first dose; the competition for P450-2D6 will reduce the amount of DXM converted to DXO in the second dose.

The following graphs come from computer simulations of DXM metabolism:

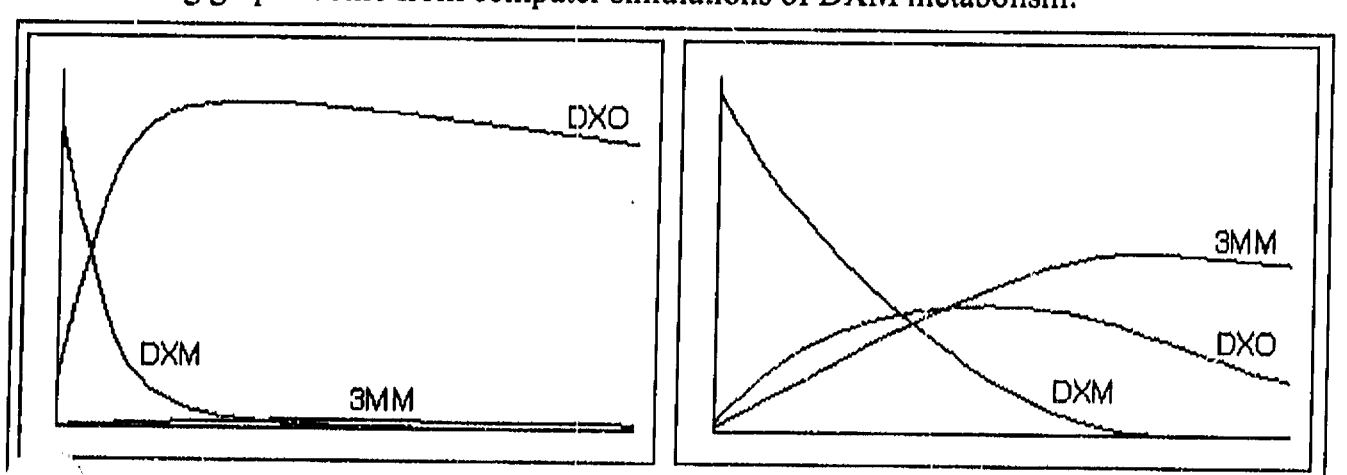

Figure 5: DXM Metabolism, normal and abnormal P450-2D6

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The first pair represent the metabolism of DXM in a normal individual (on the left) and an individual without the normal P450-2D6 enzyme (on the right). Note the rapid and almost complete conversion of DXM to DXO in the normal individual, as opposed to the less efficient and slower conversion in the P450-2D6 lacking individual.

The next pair demonstrate the probable results of taking additional doses (dose boosting). Both graphs correspond to individuals with the normal P450-2D6 variant. Note how the second dose of DXM is not converted to DXO as quickly (thus the shallower slope). The right hand graph shows numerous doses, and the "flattening out" of the metabolism curve for DXM is increasingly evident with each dose.

Incidentally, that these are *qualitative* simulations, not quantitative ones. I have tried to adhere to known KM and VMAX values for the applicable reactions, but the simulation was just a discrete process (to be honest, my differential equation skills are rusty enough that if you stepped on them you'd need a tetanus shot). I did compare my results with what little data I could find, and the comparison seemed reasonable, but then again I could be completely off base. The purpose of these graphs is to demonstrate the relative effects of changes in enzyme activity (via genetic variance and competitive inhibition by 3MM), and hopefully this is good enough for that purpose.

I have no information on what happens to 3-hydroxymorphinan itself. It may be excreted directly by the kidneys, or it may undergo further metabolism.

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10 Neuropharmacology of DXM

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10.1 What is a Receptor, Anyway? (Basic Neuropharmacology)

10.1.1 The Structure of a Nerve Cell

All cells have a *voltage gradient* between the outside and the inside of the cell; if you were to measure the voltage between the inside and outside of the cell you would find that the inside of the cell is somewhat less than -100mV compared to the outside of the cell. In most cells this charge is a consequence of the pumping of ions into and out of the cell, and is not used for anything in particular. Muscle and nerve cells, however, make use of this charge.

Muscle cells and nerve cells (*neurons*) have "excitable" membranes -- that is, the charge across the cell membrane can change, and this change is used for specific purposes. In neurons, a drop in this charge is used to convey a signal.

There are more than 10 billion nerve cells in the human brain, and they all do the same job: conveying signals from their inputs (dendrites) to outputs (axons). A nerve cell looks a little bit like a tree, except that instead of roots and branches, a nerve cell has *dendrites* and *axons*. Generally speaking, the dendrites receive signals and the axons transmit them (remember, a signal is indicated by a change in cell membrane voltage).

At the end of each branch of the axon is a *synaptic bouton*, a small button-like structure which is used to send a signal to the next nerve cell (more on that later). Conversely, the dendrites are used to receive signals, and contain numerous

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little bumps, knobs, and such that each receive a signal from another neuron. One neuron may receive signals from thousands of other neurons.

Some of the signals may excite the cell membrane; others may inhibit it. If the sum of excitatory minus inhibitory signals received by the dendrites is large enough, the signal will reach the nerve cell body (*soma*). Once a strong enough signal is received by the soma, it is sent out along the axons and transmitted.

This is the basis for how neurons function individually. However, it doesn't explain how one neuron sends signals to another (or conversely, how they receive signals). A very few neurons are physically joined to each other, and signals simply cross from one cell to another just as the signals from one transistor cross to another inside a microchip. However, the majority of neurons don't touch each other; instead, they communicate with chemicals called *neurotransmitters* and receive them with structures called *neuroreceptors*

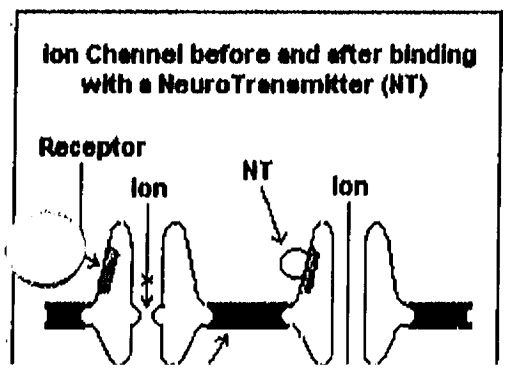
10.1.2 Neurotransmission

A *receptor* is a structure on the surface of, or inside, a cell. If on a nerve cell (neuron), it is often called a *neuroreceptor*. Receptors exist to receive signals from particular chemicals, and when they receive these signals they generally exert some sort of change on the function of the cell. Some receptors are present inside the cell and are called *intracellular receptors*; many receptors for steroids (testosterone, estrogen, etc.) are intracellular.

Since this chapter is about neuropharmacology, the focus will be on neuroreceptors, usually referred to herein simply as receptors. Neuroreceptors exist on the surface of (or, more rarely, inside) nerve cells and respond to chemicals called *neurotransmitters*. Some neurotransmitters also act on cells other than nerve cells; for example, acetylcholine activates receptors on muscle cells, telling them to contract.

Neurotransmitters fit into receptors like keys into a lock, and do not, in general, fit into any other receptor. Thus we have acetylcholine, a neurotransmitter, and acetylcholine receptors. Some receptors (called *ion channel receptors*) when activated will stimulate or depress the membrane potential (and thus the nerve cell's activity); others (*metabotropic* receptors) will induce changes in in the characteristics of the cell. Some ion channel receptors (calcium channels) can do both.

Generally speaking, a receptor on a nerve cell is positioned so that it can receive signals from another nerve cell. Dendrites of course have receptors, but receptors can also exist on the cell body, on axons, or on synaptic boutons. The "interface" between the two nerve cells is called a *synapse*.



The ion channel neuroreceptors typically operate very quickly, and act (and look) somewhat like an iris shutter in a camera. The neurotransmitter (for example, acetylcholine) binds to a specific area on the channel, which (due to electrostatic forces) causes the channel to snap open. Specific ions then leak into and out of the nerve cell, changing its electrical potential. Different channels allow different ions to pass; some ions (like sodium) excite the nerve cell, others (like potassium and chloride) inhibit it. Once the neurotransmitter leaves the receptor, the channel snaps shut, having done its work. These are the receptors involved in fast signal

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transmission, and in conveying skeletal muscle impulses.

Metabotropic receptors have a modulatory role. Some of them increase or decrease the number of other types of receptors. Some cause changes in genetic expression in the cell. Some (called autoreceptors) inhibit the release of their own matching neurotransmitter, a process called negative feedback. A thermostat is an example of a negative feedback system -- the hotter it gets, the less the furnace is on. Generally, these slower domain receptors operate by second messengers (which function as messengers within the cell) such as G-proteins.

Any given neurotransmitter will probably be associated with several different receptors. For example, serotonin (5HT) activates at least twelve receptor subtypes ($5HT_{1A}$, $5HT_{1B}$, $5HT_{1D}$, $5HT_{1E}$, $5HT_{1F}$, $5HT_{2A}$, $5HT_{2C}$, $5HT_3$, $5HT_4$, $5HT_5$, $5HT_6$, and $5HT_7$)! There are several subtypes (instead of just one) because each receptor subtype is involved in a different process on a different type of neuron.

Drugs act on the brain by affecting neurotransmission in some way or another. Some drugs stimulate receptors, some block them; some will change the way that neurotransmitters are secreted, degraded, or recycled. To a great degree, drugs work only because they affect existing neurotransmitter systems; in spite of the popular belief that getting high equates to frying brain cells, drugs that make you high do so simply by mimicking, blocking, or otherwise affecting neurotransmission.

Drugs which mimic, block, or otherwise affect activity of a given neurotransmitter will not affect all receptor subtypes equally. For example, LSD operates at $5HT_{2A}$ and $5HT_{2C}$ receptors; buspirone operates at $5HT_{1A}$ receptors. Consequently, they have very different effects; LSD is psychedelic, whereas buspirone is an anti-anxiety drug.

Different substances may bind to the same receptor but affect it differently. An *agonist* is a substance which binds to the receptor and activates it. A *partial agonist* is an agonist which does not activate the receptor fully. An *antagonist* binds to the receptor and prevents it from operating.

One interesting property of partial agonists is that they tend to "normalize" receptor activity levels. In the presence of a low amount of neurotransmitter, the partial agonist will increase receptor function. In the presence of a high amount of neurotransmitter, however, the partial agonist will limit receptor activity; in fact, many antagonists may really be partial agonists. It is still being debated as to whether LSD is a $5HT_{2C}$ antagonist or a partial agonist.

Antagonists may bind to the same place where the neurotransmitter binds, thus "competing" with the neurotransmitter - these are called *competitive antagonists*. Or they may bind to a separate place on the receptor complex, so that even if the neurotransmitter reaches its binding site, the receptor won't activate. These are called *noncompetitive antagonists*. Note that in either case, the binding of the drug is only temporary; if it were permanent (thus effectively destroying the receptor) it would be *irreversible antagonism*.

The important difference between a competitive and a noncompetitive antagonist is this. If you block receptors with a competitive antagonist, these receptors can still be activated by neurotransmitters if enough neurotransmitter is secreted. If you block a receptor with a noncompetitive antagonist, however, no amount of neurotransmitter will activate that receptor (until the noncompetitive antagonist goes away).

A rather whimsical analogy can be made between neurotransmitter functioning and toilets. In this case, the toilet is the receptor, you are the neurotransmitter, activating it by pushing the flush handle. If your little brother comes up and flushes the toilet for you, he's is an agonist. If he temporarily sticks the handle halfway down, he's a partial agonist. If he holds the handle up so it won't flush, he's a competitive antagonist. If he plugs up the toilet with toilet paper, he's a noncompetitive antagonist. If he breaks the toilet handle off completely, he's an irreversible antagonist.

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The *biogenic amine* neurotransmitters (so called because they are in a chemical class called amines) include *acetylcholine, noradrenaline, dopamine, serotonin* (5HT), and *histamine*. They are derived from amino acids (choline, t[illegible]e, tyrosine, tryptophan, and histidine respectively), generally have a modulatory role, and are the common ta[illegible]s of recreational drugs. For example: LSD, DMT, and psilocybin target 5HT receptors; amphetamine causes a release of dopamine and noradrenaline; cocaine blocks the reuptake of dopamine (thus keeping it active longer); MDMA causes a release of 5HT and dopamine; etc. A mostly complete list of recreational drugs and their neuroreceptor activity is given in Section 15.2.

The *neuropeptide* neurotransmitters include a whole slew of peptides (chains of amino acids), such as neuropeptide Y, angiotensin, endorphins, substance P, and so on. The only recreational drugs targeting neuropeptide receptors are the opiates, which target the mu, kappa, and delta opioid receptors. Opioid receptors are (obviously) involved in pain and behavioural reinforcement. Vasopressin, a nootropic ("Smart Drug") is also a peptide neurotransmitter.

The *amino acid* neurotransmitters include *GABA* (gamma-aminobutyric acid), *glutamate*, and *aspartate*. Receptors for these neurotransmitters include the GABA receptors (which come in two main flavors) for GABA, and the NMDA, AMPA (formerly quisqualate), kainate, and metabotropic receptors (all of which respond to glutamate and aspartate). The GABA receptor is the target of benzodiazepines like diazepam (Valium™), barbiturates, and alcohol; the NMDA receptor is targeted by PCP, ketamine, alcohol, and DXM.

And then there are those receptors that don't really fit in anywhere else. The anandamine receptor is the recently-identified target for the THC in marijuana. The adenosine receptor, which tends to inhibit nerve activity, is blocked by caffeine (by which it exerts its stimulant effect). The sigma receptor was originally classified as an opioid receptor, but is now thought to be separate. Gamma-hydroxybutyrate, GHB, seems to target a specific receptor as well.

F[illegible]eceptor can have more than one binding site (a place where a drug can bind to, generally affecting the activity of ti[illegible]eptor). For example, the NMDA channel/receptor complex has seven (glutamate, glycine, magnesium ion, zinc ion, PCP open channel site, polyamine site, and phosphorylation site). Most have fewer than this; the NMDA channel is an extremely complicated receptor.

Voltage Dependent Ion Channels are similar to the fast-domain, shutter-like receptors, except that they are opened by voltage potentials across the cell membrane. They usually transmit signals along nerve fibers, or cause the end of an axon to release its neurotransmitter. Sodium, potassium, calcium, and chloride (Na^+, K^+, Ca^{2+}, and Cl^-) are the usual ions in question. Tetrodotoxin, the active ingredient in "zombie powder", is a sodium channel blocker. The NMDA receptor has some features of a voltage dependent ion channel (see below).

10.2 What are Sigma Receptors?

Discovered in 1976, sigma receptors (sigma is often written in Greek -- σ -- and if your web browser accepted that, [illegible] luckier than I am) are currently one of the most confusing entities in neuropharmacology. Our knowledge of si[illegible] receptors pales in comparison to our ignorance; in fact, what we absolutely know (or at least think we absolutely know) can be summed up very briefly in the following paragraph:

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Scattered throughout the brain and body there are places (sigma binding sites) where a bunch of chemicals (sigma ligands) happen to stick. We don't know if they're on the outside or inside of cells. We don't know if sticking a c[illegible]al to them does anything or not, except in the vas deferens. We don't really know what they do, if they do an[illegible]ng. We don't know what they're for, why they're there, or whether the body uses them. They may be neuroreceptors, steroid receptors, intracellular messenger receptors, growth regulators, enzymes, or something else entirely.

In other words, prepare to be confused. Don't worry, everyone else is as well.

Sigma receptors were originally thought of as opioid receptors, since many morphine derivatives bind there (283). However, this classification is probably false, and the endogenous opioid peptides show little sigma activity. The usual characteristics of opiates are mediated by the mu (μ), kappa (κ), and delta (δ) receptors. There are at least two sigma receptors, and a third one ($sigma_3$, appropriately enough) has been discovered recently (114).

Some researchers have speculated that sigma receptors aren't really receptors at all, but just enzyme binding sites (84). On the other hand, sigma ligands affect the guinea pig vas deferens muscles, which probably wouldn't happen unless sigma receptors really were receptors (97). Sigma receptors may be intended for hormones or intracellular messengers rather than neurotransmitters, as they are present on microsomes rather than on the cell surface (129).

10.2.1 Sigma 1 Receptors and General Sigma Information

Much of what is known about sigma receptors seems to apply more to $sigma_1$ than $sigma_2$ (though this is by no means universal). I grouped the following information with $sigma_1$ receptors, but don't take this as gospel. I expect that a lot will turn out to be wrong. Fortunately, we may not have to wait long; research in sigma receptors is proceeding rapidly.

10.2.1.1 Endogenous Ligands

The neurotransmitter for $sigma_1$ receptors has not been found, although there are speculations and evidence (82-86,98-99). The usual term for the (unidentified) $sigma_1$ neurotransmitter is "endopsychosin" (99), formerly known as "angeldustin". Progesterone targets $sigma_1$ receptors in the placenta, and it and other steroid hormones may be natural ligands for $sigma_1$ receptors (97,102,103). If this is true, it is possible that some of the effects of sex hormones on the brain may be mediated by the $sigma_1$ receptor (97). Substance P (a peptide neurotransmitter) was considered but rejected as an endogenous $sigma_1$ ligand (111). DHEA may be a $sigma_1$ agonist, and progesterone an antagonist (258).

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10.2.1.2 Location and Function in the Brain

Sigma receptors are densest in the cerebellar cortex (281), nucleus accumbens, and cortex, and also present at lower density in the limbic areas and extrapyramidal motor system (260). This is interesting because some of the bizarre effects of DXM on motion may be related to sigma activity in the cerebellar cortex and extrapyramidal motor system.

$Sigma_1$ receptors (and possibly $sigma_2$) appear to be functionally coupled to some other receptors, notably nicotinic acetylcholine receptors (97,116) and NMDA receptors (106-109,275). They may actually be located on or near NMDA receptors (222).

The nicotinic receptor coupling may be direct, with sigma activation causing a change in the function of nicotinic receptors. Whether modulation of nicotinic receptors would alter the effects of nicotine on the brain, I don't know; some people have indicated that tobacco induces strong responses during DXM use.

Sigma agonists (and/or possibly antagonists) seem to affect memory function, reversing the impairment in memory caused by drugs such as p-chloroamphetamine and MK-801 (a drug similar to ketamine) (130,131). DTG, (+)-pentazocine, and SKF-10047 all improved memory impairment caused by MK-801. On the other hand, NE-100, which is considered a sigma antagonist, seems to help with NMDA antagonist induced memory impairment as well (106-107). DTG, a sigma agonist, reversed the memory impairment caused by carbon monoxide (117).

Many drugs now considered sigma antagonists or agonists may in fact be partial agonists. Another possibility is that the optimal level of sigma activity may be a healthy medium; one study found a bell-curve dose response on sigma a ts (117). This is similar to the effect of many nootropics (smart drugs), specifically the cholinergics - taking too much can be worse than taking none at all. This similarity may be further evidence for the link between sigma receptors and acetylcholine receptors.

Both $sigma_1$ agonists and antagonists may protect NMDA receptors from glutamate toxicity (108). One study found that sigma antagonists protected hippocampal cells from hypoxia and hypoglycemia (104), and this may be related to NMDA receptors as well. Morphine has indirect effect on NMDA receptors that seems to be mediated via sigma receptors, probably $sigma_1$ (109). It is possible that all these effects are mediated via the nicotinic receptor, i.e., $sigma_1$ may not directly control NMDA functioning.

10.2.1.3 Behavioural Effects

The behavioral effects of $sigma_1$ receptors have not been fully established. However, $sigma_1$ (and $sigma_2$) receptors seem to have effects on motor function, producing an increase in locomotion (112,113,120). Part of this effect may occur at the cerebellum (112); the release of dopamine may also be involved (113,128). This is probably the origin of DXM's curious effects on motions and gait, including "sea legs" and the "Robo Shuffle".

S $_1$ activation may counteract some of the analgesic effects of opioids (118). Pentazocine (Talwin), a synthetic o , is a potent $sigma_1$ agonist which tends to be self-limiting; when too much is taken, the sigma activity reverses the opiate activity (267). It is possible that the gradual loss of euphoric effects experienced by morphine and heroin

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users may be related to changes caused by sigma activity.

S receptors seem to be involved in psychotomimetic (literally "psychosis-like") effects from schizophrenia and drugs (46-49). Amphetamine psychosis, a temporary condition resulting from heavy use of psychostimulants, may be due in part to sigma$_1$ activity (80,125). Sigma, and in particular sigma$_1$, receptors may be altered by schizophrenia. An alternative possibility which is being studied is that some sort of chemical - produced by the body itself, or by a virus or other foreign agent - causes prolonged activation of sigma receptors, and this is one of the causes for schizophrenia (47,49). Many neuroleptics, including some of the atypical ones, are sigma antagonists (47,260). Some antidepressants are also sigma antagonists, and all eventually reduce sigma binding (260). Methamphetamine increases sigma binding (211).

Sigma receptors may be involved in the function of the pineal gland, an endocrine gland which secretes melatonin (which maintains the "biological clock"). Sigma activity modulates the noradrenaline-stimulated synthesis of melatonin in the pineal gland (256), and there are in fact sigma receptors within the pineal gland (266).

In addition to DXM, other recreational drugs such as PCP, cocaine, and opiates all show activity at sigma receptors (72). Chronic amphetamine use increases the number of sigma receptors (80), while chronic antidepressant and antipsychotic treatments decrease the number of sigma receptors (47,74). Sigma receptors are involved in the limbic areas of the brain (81) and thus may be involved in emotion. They are also involved in the cough reflex, and probably involved in seizures (or at least their prevention).

10.2.1.4 Location and Function in the Body

Sigma$_1$ receptors are also present throughout the body. Most tumor cells express both sigma$_1$ and sigma$_2$ receptors (38,105), and sigma agonists can inhibit tumor growth (269). Liver and kidney cells also contain sigma receptors (123), as do heart cells (124), and splenocytes (274). As stated above, the placenta contains sigma$_1$ receptors.

Sigma receptors are also present in the immune system and endocrine glands, and may be responsible for modulating these systems. Sigma agonists can prevent rejection of grafted tissue by regulating T cells (263). There is some evidence that sigma agonists may inhibit the immune system. The widespread presence of sigma receptors may indicate some involvement in development, cellular regulation, or other basic biological process.

10.2.2 Sigma 2 Receptors

Much of what was stated about sigma$_1$ receptors may apply to sigma$_2$ receptors as well. There hasn't been much time to differentiate between the two receptor types. The neurotransmitter for sigma$_2$ receptors may be zinc ions (78), and sigma$_2$ receptors seem related to potassium ion channels (79). The sigma$_2$ receptor is less affected by DXM than the

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sigma$_1$ receptor (58). Some of the sigma-induced potentiation of NMDA function may be due to sigma$_2$ receptors (1[illegible]). Ibogaine, currently being tested as a cure for heroin addiction, is a sigma$_2$ agonist (273,283). Other ligands for the sigma$_2$ receptor have been found (261,265,268).

One study found that chronic exposure to sigma ligands, both agonists and antagonists, caused brain cells to degenerate and die (101). The deterioration occurred as a gradual loss of cellular shape; cells eventually became spherical (and died soon after). Interestingly, some drugs, including DXM, seemed to be very weak in this effect. While haloperidol induced significant changes and cell death in a few hours, it took DXM 3 days to produce any changes at all, which reversed when the DXM was removed. The potency of different sigma ligands seems to point towards sigma$_2$ receptors as the culprit in this effect.

By the way, I wouldn't worry too much about this. The concentration of DXM required to induce any change at all was extremely high, and it took 3 days of constant exposure. All changes were reversible, even after the cells had assumed a spherical shape. Haloperidol and other sigma ligands, which seem to be up to 100 times as potent as DXM at producing brain cell degeneration, are used medically used without substantial evidence of brain damage. Finally, steroid hormones may very well cause the same sort of effects if present at sufficient levels (another reason not to use anabolic steroids, I guess).

10.2.3 Sigma 3 Receptors

Sigma$_3$ receptors are a new discovery (114). They seem to be linked to the conversion of tyrosine to dopamine, and sigma$_3$ agonists may increase the rate of dopamine synthesis. DXM's potency at the sigma$_3$ receptor is unknown, but if it binds strongly there, then increased dopamine synthesis may be partially responsible for DXM's stimulant effects. A few sigma$_3$ ligands have been found (262).

10.3 What Are NMDA Receptors?

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10.3.1 NMDA and Other Glutamate Receptors

Most of the better known neurotransmitter systems - dopamine, noradrenaline, serotonin (5HT), and acetylcholine in particular - have modulatory roles. They are produced by a few neurons located in specific clusters, and drugs affecting them often have specific effects (recreational or medical, or both). Receptors for these neurotransmitters tend to operate fairly slowly, taking milliseconds or longer to communicate. Rather than directly changing the potential of the neuron, they often trigger second-messenger responses.

On the other hand, most of the brain's regular function operates quickly, and involves the excitatory and inhibitory amino acids (EAAs and IAAs, respectively). The receptors for amino acids are generally ion channels; when the receptor is activated, ions enter or exit the cell which change its potential. EAA and IAA synapses generally correspond to the positive and negative synaptic connections in electronic and computer neural networks.

The excitatory amino acid neurotransmitters include glutamate and aspartate. GABA is the only established inhibitory amino acid neurotransmitter in the brain; the spinal column also uses glycine. Generally, glutamate is more prominent (or at least better understood) than aspartate, although they have similar effects at EAA receptors. Thus, the receptors for EAAs are called *glutamate receptors*.

There are currently four identified type of glutamate receptors. Two of them, the AMPA (formerly quisqualate) and kainate receptors, are ion channel receptors which increase neuron activity in response to EAAs. A third, the metabotropic glutamate receptor, is a newer discovery, and seems to involve second messenger systems and produce metabolic effects. The fourth is the NMDA receptor.

10.3.2 NMDA Receptor Structure and Function

This drawing represents the structure of the NMDA receptor, according to current knowledge.

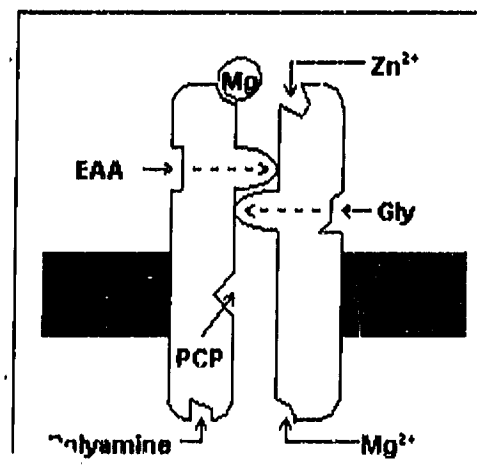

Figure 6: NMDA Channel

The NMDA receptor has seven distinct binding sites. Three of these are located on the exterior surface of the cell, two are located on the cell interior, one on the inside of the channel, and one (the magnesium ion site) is present both on the inside and outside surfaces.

There are two agonist sites on the exterior are the cell, denoted EAA and Gly; they correspond to the excitatory amino acids (glutamate and aspartate) and glycine. Both sites must be occupied before the channel can open enough for any ions to pass through. A third site is the target of zinc ions (Zn^{2+}), which block the channel when present.

The exterior of the channel contains a magnesium ion site. This site is also present on the inside of the cell (alternatively, it may be located within the channel itself). A magnesium ion normally occupies the exterior site; the interior

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site is probably empty under biological conditions.

T[illegible]erior of the cell contains two binding sites. One binds to polyamines (spermine and spermidine), and its function is u[illegible]nown. The other, not shown in this diagram, is a phosphorylation site. Enzymes can bind to this site and enhance or reduce the activity of the receptor.

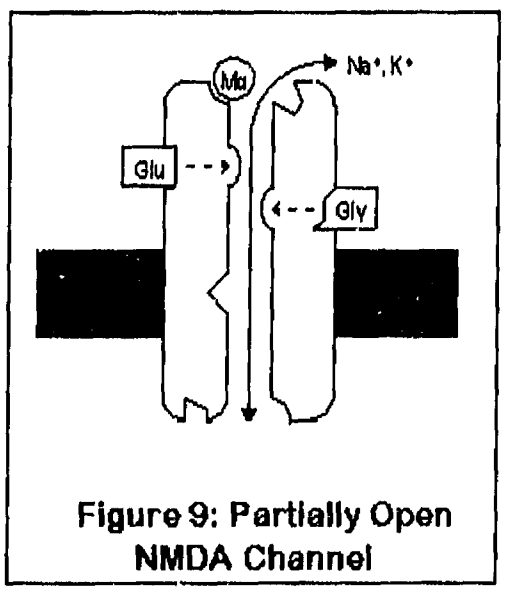

Figure 9: Partially Open NMDA Channel

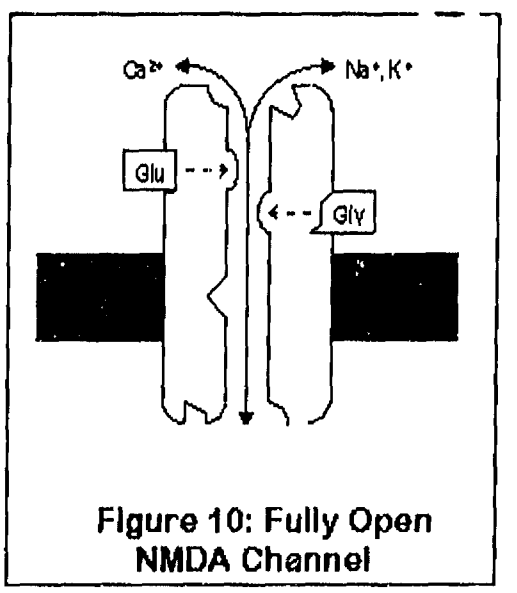

Figure 10: Fully Open NMDA Channel

Finally, inside the channel itself is the PCP_1 site, where PCP, ketamine, MK-801 (dizocilpine), DXM, and dextrorphan all bind. The channel must be fully open for these drugs to enter; once in place they "clog up" the channel.

N[illegible]A receptors are unique for several reasons. Unlike most receptors, they require two agonists (glutamate or a[illegible]te, plus glycine) before the channel opens. These two agonists (Glu and Gly in the diagram) bind to two different locations on the NMDA receptor. After both agonists have bound to the channel, it opens enough for potassium to enter, and the receptor operates much like AMPA and kainate receptors. This is shown in Figure 9.

The most important and unique characteristic of NMDA receptors, though, is what happens next (Figure 10). Normally, a magnesium ion is bound to a specific location at the opening of the channel; this ion allows potassium to pass through but prevents calcium, possibly due to its size. This binding is due to electrostatic forces.

Once the cell becomes activated enough, however, the cell potential rises enough that the magnesium ion is no longer stuck to the cell. Calcium can enter (and exit, although this doesn't happen) the cell through the fully open NMDA channel. Once inside, calcium sets into motion a series of responses which enhance the strength of the synapse.

So what's the point? Well, if the neuron is only slightly active, the NMDA channel may open partially, but the magnesium ion won't get a chance to leave its binding site. However, if the neuron should be rapidly or substantially activated, the magnesium ion will be released, and calcium can enter the cell, enhancing synaptic strength. This process of enhancing synpatic strength, called *Long-Term Potentiation* (LTP), is one of the mechanisms by which neurons can change their functioning and "learn". LTP in the hippocampus is probably responsible for short-term memory. Learning capacity may in fact be directly related to the number of NMDA receptors in the hippocampus (where intermediate-term memory is thought to be stored) (88). LTP is reversible, and long-term memory seems to be stored via more permanent changes in genetic expression and synaptic shape.

Another interesting aspect to the dual action of the NMDA receptor is that it functions as a sort of "coincidence d[illegible]or". Calcium only enters the cell when the membrane potential is low enough **and** when the synapse is activated; th[illegible] detects when synaptic and intracellular signals coincide. In associative networks (which the hippocampus seems to be), the NMDA receptor is ideally constructed to help a neuron "learn" an association between two input signals.

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There are at least three types of NMDA receptors (in the rat, at least; this probably extends to humans as well). One type is found in the cerebellum, one in the thalamus, and one in the cortex. These types differ subtly, but it is possible t[illegible]XM may show a different spectrum of effect on these types than other NMDA antagonists (such as ketamine or P[illegible], (87). There is also some speculation that the NMDA receptor's ion channel may (for reasons unknown) become "uncoupled" from the receptor itself (63).

Noncompetitive antagonism of NMDA receptors by the open channel blockers is known to induce changes throughout the brain. NMDA blockade causes an increase in dopamine release in the midbrain and prefrontal cortex (63). NMDA blockade also causes activation of 5HT systems specifically targeting the 5HT1A receptor (90).

10.3.3 NMDA Receptors and Excitotoxicity

NMDA receptors are involved in excitotoxicity (nerve cell death via over-stimulation). The chemicals which agonize (activate) NMDA receptors can also kill the very same nerve cells they are activating (19). Many substances, such as quinolinic acid (a metabolite of tryptophan) are so potent that very small amounts can devastate great numbers nerve cells. Others, like glutamic and aspartic acid, are less potent but still capable of doing damage if present in sufficient amounts. This excitotoxicity is directly responsible for much of the damage attributed to various types of trauma and ir[illegible] to the CNS. Polio is a good example; by blocking the activity of quinolinic acid, all the damage resulting from p[illegible]ayelitis can be prevented (30-31). DXM is not a particularly effective NMDA open channel blocker, but DXO, PCP, ketamine, and MK-801 (dizocilpine) are all very effective blockers.

Unfortunately, nothing in life is ever free. Lowered NMDA activity, called Olney's Lesions, NMDA Receptor Hypofunction (NRH), or NMDA Antagonist Neurotoxicity (NAN) seems to be itself responsible for excitotoxicity to other neurons. The theory is that normal NMDA activity keeps other neurotransmitters (glutamate and acetylcholine, and possibly dopamine) from being over-secreted. NMDA blockade releases this inhibition, and can therefore lead to hyperactivity at some neurons. It is possible that chronic NMDA blockade may be a cause for, or at least a factor in, schizophrenia and Alzheimer's disease (100).

NMDA blockade at recreational levels has not been well studied, and Olney's lesions appear only at doses far in excess of recreational levels. My hunch is that occasional NMDA blockade is probably not terribly traumatic to the brain; otherwise, John Lilly would be a lot dumber than he is. DXM in particular may be safer due to its lower potency at NMDA receptors and possible counteracting effects of sigma activity. For more information see Section 6.3.1.

One final note: infants may be particularly susceptible to this effect, so use of any NMDA antagonist during pregnancy or nursing is probably a bad idea (112). It has even been suggested that fetal alcohol syndrome is mediated in part by the effects of NMDA blockade.

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10.4 What are PCP_2 Receptors?

PCP_2 receptors were, obviously, the second PCP receptor to be positively identified (the first is the open channel site on the NMDA receptor). Their use by the body (if they have one) has not been determined. Most research indicates that the PCP_2 receptor is the dopamine reuptake complex, the very same one targeted by cocaine and methylphenidate (Ritalin™) and possibly by the antidepressant bupropion (Wellbutrin™) (70,126).

A reuptake complex (or reuptake site), incidentally, is a structure on a cell which takes used neurotransmitter back into the cell for recycling or breakdown. By blocking reuptake of a neurotransmitter, its activity can be increased. The tricyclic antidepressants block the reuptake of noradrenaline, dopamine, and/or serotonin (5HT). Fluoxetine (Prozac™) is a serotonin-specific reuptake inhibitor (SSRI), as are several other newer antidepressants. The dopamine reuptake site seems to be the only reuptake site targeted by recreational drugs (primarily cocaine).

Curiously, bupropion, a dopamine reuptake inhibitor, seems to have little recreational use potential; then again, it isn't a particularly strong dopamine reuptake inhibitor. It has been suggested that it is a competitive reuptake inhibitor, so that it is only capable of inhibiting reuptake of small amounts of dopamine. Large amounts of dopamine will overwhelm the effects of the competitive inhibition. about

10.5 What are Na^+ and Ca^{2+} Channels?

Sodium and calcium ion channels are two types of voltage dependent ion channels. These channels open or close not due to neurotransmitters, but instead due to voltage differences between the inside and outside of the cell.

Voltage dependent sodium channels are typically involved in the action potential - a domino-effect propagation of nerve impulses along the axon. The sodium channel opens when the voltage reaches a certain activation threshold; the resulting influx of sodium then further activates the neuron (leading to more sodium channels opening). Eventually a second part of the sodium channel closes (otherwise they would keep themselves open forever). Incidentally, voltage dependent potassium channels are involved in bringing the neuron back to its resting state.

Voltage dependent calcium channels are similar to voltage dependent sodium channels, and typically open on activation voltages. Their effect, however, is to cause calcium to enter the cell; the calcium then acts as a messenger to intracellular mechanisms. The most common example is at the end of the axon, where calcium influx causes neurotransmitters to be released. NMDA receptors may be structurally related to voltage dependent calcium channels.

Γ has been found to block sodium and calcium channels, although it is not particularly potent in this capacity. Ь .se of their extensive presence, blockade of these ion channels could have overall depressant effect upon brain function, and might explain DXM's toxic effects at very high dosages.

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10.6 How Does DXM Compare to Other Dissociatives at These Receptors?

PCP and ketamine both bind more strongly to NMDA, and less strongly to the PCP_2 and sigma sites, than DXM. In fact, some users report that DXM, at higher dosages, begins to resemble ketamine and PCP. The resemblance is still fairly limited. DXM's unique characteristics are most likely due to the PCP_2 and sigma sites.

10.7 Endopsychosin and the Big Picture

For whatever reason, some people involved in biological sciences like to talk about the "big picture." I'm one of them. I think the reason why the "big picture" seems so important is that science, especially biological science, has become so specialized and compartmentalized that it's difficult to keep one's perspective, especially when considering the possible relevance of things.

Endopsychosin (en-doe-sy-KOE-sin) is the name given to an endogenous ligand for the NMDA open channel site (PCP_1) and/or sigma receptors. The search for endopsychosins started several years ago in an attempt to find the endogenous ligand for PCP; at the time, the term was "angeldustin". Recently, the search for endopsychosins has resumed as NMDA and sigma receptors have become increasingly understood. As I write this, nobody has managed to positively identify an endopsychosin, although there are several candidates. The most promising candidates for the NMDA PCP1 site seem to be series of peptides (98-99). The endogenous ligand for the $sigma_1$ site may be an unknown aromatic chemical (97,99).

The original idea behind endopsychosin (or angeldustin, if you prefer) was that the body was capable of secreting a substance which would mimic the effects of PCP on the brain. It may be secreted in times of extreme stress, leading to a sort of detached, dreamy feeling. Endopsychosin may be responsible for such altered states of consciousness as religious ecstasy, speaking in tongues, possession, astral projection, and other paranormal experiences. Spontaneous releases of endopsychosin may account for experiences such as alien abductions, encounters with ghosts, and that sort of thing. On the other hand, these states might be better explained by temporal lobe complex partial seizures, or other e[illegible]cal mishaps.

Note the similarity of these experiences with aspects of DXM, ketamine, and PCP drug trips. In particular, the

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"emergence phenomenon" identified with ketamine (and present also with PCP and DXM) often consists of experiences with spiritual or alien beings.

What's going on here? Why the hell would the human brain secrete a chemical that makes us think we've been talking to Elvis and Jim Morrison on the far side of Mars? What's the big picture?

Well, to be honest, nobody knows. One potential clue is that the perforant path of the hippocampus (a neural circuit) seems to release endopsychosin when stimulated (138). Perhaps endopsychosin is a part of the memory process; or perhaps it is involved in dreaming and the conversion of intermediate-term to long-term memories. Another suggestion is that endopsychosin is involved in long-term depression (LTD), the flip side of long-term potentiation.

Another possibility is that endopsychosin is one of the brain's natural defenses against injury. I find it interesting that sigma/NMDA agents often mimic fever hallucinations; common characteristics include Lilliputian hallucinations, geometrical and linear hallucinations, and dysphoria. Perhaps the brain secretes endopsychosins during high fever in an attempt to prevent neurotoxicity.

In addition to potential neuroprotective roles, these substances may have significant roles in regulating cognition and (in the body) the immune and endocrine systems. A dysfunction of an endopsychosin, or of the sigma receptors (or both) may be one of the causes of schizophrenia. And if some steroids (e.g., progesterone and testosterone) turn out to be endopsychosins, this could explain a lot about the long-term behavioral effects of steroid use.

Or, it may simply be that altered states of consciousness are a natural part of animal life, and that our culture's fear of such states is abnormal. Certainly one doesn't need drugs to achieve altered states; even profoundly dissociative states can be achieved with a certain amount of ritual and faith. Most "primitive" cultures have some experience with dissociative states such as astral projection, shamanic journeying, possession, and that sort of thing. They may very well know something that we don't.

Finally, the perceived effects of endopsychosins (and the drugs that mimic them) may simply be side effects of something more fundamental going on in the limbic system. Perhaps these alien and spiritual encounters and other paranormal phenomena (see Section 8) are the way that the conscious mind interprets limbic network states that normally don't make it to consciousness.

So it is entirely possible that the similarity between NMDA PCP_1 and sigma receptors has a purpose. In any case, data about the effects of sigma-specific agonists (or antagonists for that matter) are limited, but our understanding of these receptors should improve in the next few years as research continues. Not to mention the possibility of some brave and/or stupid psychonaut deciding to experiment with sigma-specific agonists.

(+)-3-PPP and SKF-10,047 are good sigma-specific ligands; more $sigma_1$ specific ligands include 1-phenylcycloalkanecarboxylic acid derivatives (122,127) Anyone feeling brave? Maybe you can become the next Shulgin ("Endopsychosins I Have Known And Loved" anyone?). Then again, maybe you'd better not; I don't need to be sued if you develop a stubborn case of insanity.

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11 DXM Chemistry and Extraction

from the DXM FAQ
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This section has been completely rewritten, as new information has been received about acid-base extraction and about extraction of DXM+guaifenesin preparations. The "Agent Lemon" process has also been added.

Please remember to always wear safety goggles when working with chemicals, and be generally careful with these procedures. My thanks to all who did research on this subject.

11.1 How Can I Extract DXM From Cough Syrups and Gelcaps?

I'm going to present this as "kitchen chemistry" as I feel most people with adequate chemistry knowledge (and equipment) will be able to do it correctly without my help.

There are three procedures for DXM extraction that are commonly used: precipitation and filtration, single-phase acid-base extraction, and dual-phase acid-bsae extraction (the "Agent Lemon" process). The first method is by far the least popular because the DXM precipitate is often so fine that it passes through the filter paper.

You can, of course, still use the precipitation procedure; I just don't recommend it. If you do choose to precipitate DXM, try to get actual filter paper rather than a coffee filter - it will help.

11.1.1 Theory of Acid-Base Extractions

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The acid-base extraction process is a common method for isolating a desired chemical from undesirable "gunk". The t[illegible] is that certain chemicals (generally, alkaloids) occur in two forms: a water-soluble complex with an acid, and an oil-soluble free base form. For example, pseudoephedrine (Sudafed™), a decongestant, is usually supplied as the hydrochloride salt (pseudoephedrine HCl). It can also exist as a base, without an acid molecule (thus the term "free base"). You can convert an alkaloid from acid salt to free base (or vice versa) using a base (or acid).

The practical upshot is you take your chemical and "gunk", and raise the pH with a base (e.g., sodium hydroxide) until the chemical converts to free base form and precipitates out (since it's no longer soluble in water). Now you add a nonpolar solvent (an "oily" layer) for the chemical to dissolve in, shake for a long time, and all the chemical you want is in the nonpolar layer. Discard the polar (i.e., water) layer, and you're left with a nonpolar layer full of your chemical .....

Plus anything else that might be oil-soluble. So you reverse the process, by adding an acid until the free base turns into an acid salt, and precipitates out of the nonpolar layer. Add water, shake, and you can discard your nonpolar layer.

This is the acid-base extraction, and it's very frequently used to extract the active ingredients from plants (free clue: the THC in marijuana is *not* an alkaloid and thus won't extract this way).

11.1.2 Single-Phase Acid-Base Extraction of DXM

So how do we apply this to DXM? Well, it turns out that DXM is an alkaloid, and you can extract DXM from cough syrups using the same process. Furthermore, this procedure even works for DXM plus guaifenesin syrups, e.g., *Robitussin DM*, and generic equivalents (invariably called *Tussin DM*). The "DM" syrups usually only contain 10mg/5ml of DXM, so you won't get as much yield, but they're usually cheaper (and more commonly available).

This is actually a single-phase acid-base extraction, because we only go from acid form (DXM HBr) to base form (DXM free base). The final product ends up dissolved in an organic solvent, which is then evaporated to leave DXM free base.

I have added a new set of steps to this process to help to remove some of the gunk that can end up in the final product. These steps are in italics and may be omitted if desired.

Do NOT try this extraction procedure with cough syrups or formulations containing acetaminophen/paracetamol, pseudoephedrine, other decongestants, or antihistamines. Decongestants and antihistamines are usually alkaloids and will end up in the final product; as for acetaminophen, I'm not convinced yet of the safety of the final product.

For this procedure you will need:

- Cough syrup (obviously) or some other DXM-containing preparation. The **only** active ingredients that should be listed are *dextromethorphan* and *guaifenesin*. Avoid alcohol (check the inactive ingredients). If you can get DXM-only preparations, do so; the DXM+guaifenesin preparations tend to contain less DXM than the DXM-

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only ones.
- Two plastic two-liter bottles, washed and with the label removed. Of course, you can use flasks if you have them.
- A glass container to make your sodium hydroxide solution in (a mason jar works; you can also use a drinking glass).
- Two plastic bags with a slide-lock closure (e.g., Ziploc™), big enough to hold the cough syrup plus an additional amount of lighter fluid. The plastic bags should be non-pleated. They will be used as separatory funnels.
- A nonpolar solvent. The easiest to get is Zippo™ lighter fluid (or an equivalent) - note that this is *cigarette lighter* fluid, not charcoal lighter fluid. You want your solvent to evaporate quickly, leaving no residue. The easiest way to test it is by placing a drop or two onto a pocket mirror, and letting it evaporate; if it leaves no residue or smell, you can use it.
- Sodium hydroxide (NaOH). Photography supply stores carry this. In a pinch, some people have been known to use Red Devil™ Lye. **I do not advise this!** Lye is likely to be impure. If you must use lye, make sure you let your sodium hydroxide solution settle (see below). Note that sodium hydroxide is caustic and severely damaging to the eyes, so wear your safety goggles!
- A heat-resistant glass baking dish (smaller is better).
- Distilled water (tap water won't work as well due to the chlorine and dissolved ions).
- A pair of scissors
- Access to the outdoors.

To speed up the process (from overnight to about 30 minutes), you will have to evaporate the solvent with heating. For this you will require:

- An electric wok or skillet, or a hot plate with a pot of water on it. Basically, you want a flameless (electric) source of heat that will heat up a volume of water, which you can put your baking dish in (the hot water will heat the baking dish).
- A hair dryer
- An **OSHA-certified** organic vapor mask

Some warnings about organic vapors. The solvents you will in all likelihood be dealing with (hexane, heptane, petroleum ether, whatever) are bad for you. **Really** bad for you -- they can give you brain damage if you inhale too much of them. You do **NOT** want to breathe the fumes. Get it? So, if you want to speed up the process, pony up US$30.00 or so for an OSHA certified organic vapor gas mask (tell 'em you'll be painting with oil-based paint). Sure, it's uncomfortable and looks dorky. But it sure beats brain damage! Additionally, you **absolutely must**do the evaporation outdoors (unless you happen to have a fume cabinet handy. And **NO**, the stove or bathroom fan does **NOT** count as a fume cabinet).

A brief word or two about sodium hydroxide: it's caustic, especially to the eyes, and when you add it to water it will heat up. Always add the sodium hydroxide to the water, and not vice versa. If you get it on your skin, wash it off with water (it won't eat through your hand unless you let it sit there).

If you can't find sodium hydroxide at your local photo store, go get a photography magazine and look in the back for mail order suppliers. Many of them carry sodium hydroxide. It is a very common chemical and ordering it isn't going to bring the DEA knocking down your door. Please try to avoid using lye. If you still can't get sodium hydroxide, use the Agent Lemon process.

Okay, here we go:

Form a solution of sodium hydroxide (NaOH) by placing one tablespoon (15ml) of solid sodium hydroxide in one cup (about 236ml) of distilled water in the sodium hydroxide solution container. Stir until dissolved. If you are using lye (I don't recommend it), wait awhile to let any impurities settle out to the bottom. Note that

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dissolving the NaOH will generate some heat.

2. Empty your cough syrup or formula into the two-liter, rinsing the last of the cough syrup out of the syrup bottles with distilled water. If using gelcaps, break them open and rinse out the inside of the capsules.

The following steps in italics are suggested for removing some of the gunk that can make it through the extraction and leave you with a sticky residue instead of crystalline DXM.

Add in enough lighter fluid to the two-liter bottle to make a roughly 1/4 inch (or roughly 5mm) deep layer of lighter fluid per 4oz of syrup.

4. *Cap the two-liter bottle and shake the living hell out of it for at least five minutes. Let it sit undisturbed until the two layers separate again.*
5. *Pour the entire contents of the two-liter bottle into a sealable plastic baggie, and seal it shut. Hold it by one of the top corners so that a bottom corner is facing down. Let the layers separate again if necessary.*
6. *Holding the baggie's corner over a CLEAN two-liter bottle, snip off the very tip of the corner. Let the cough syrup layer drain into the clean two-liter bottle, but pinch it shut right before any of the lighter fluid drains out.*
7. *Discard the lighter fluid by placing it into an empty container and letting it evaporate outdoors. Do not put it down the drain or set it on fire.*

That's it ... now you should have cough syrup that has had a great deal of the flavorings and other gunk removed from it. You can repeat the italicized steps if you want to remove even more.

8. Add one tablespoon (15ml) of sodium hydroxide solution to the two-liter bottle. You should see a rapid formation of a milky precipitate. Swirl the bottle gently to mix the syrup evenly, and the precipitate should redissolve (because there's not enough base yet).
9. Repeat the above step, until the precipitate *doesn't* redissolve with swirling. The entire solution should be cloudy (stir well to make sure the base is evenly distributed).
10. Add one more tablespoon (15ml) of sodium hydroxide solution to the bottle.
11. Add enough lighter fluid to make a 1/8" (0.3mm) deep layer per 4oz bottle of syrup.
12. Cap the bottle, shake the hell out of it for five minutes, and let it stand until the layers separate again. If the layers don't want to separate, try adding table salt.
13. Carefully pour the contents of the bottle into the sealable plastic bag, and close it shut ("yellow and blue make green-it's sealed!"). Hold the bag by one of the top corners so that one of the bottom corners points down.
14. Let the two layers separate again (this should only take a few seconds).
15. Cut off the tip of the bottom corner and allow the water layer (the bottom layer) to drain out of the bag. When the water layer has drained out, pinch the bag shut.
16. Hold the bag over the baking dish, and allow the nonpolar solvent layer to drain out into the baking dish.
17. Take the baking dish outdoors. At this point, if you don't have a gas mask and a way to heat the baking dish, you'll have to let the solvent evaporate (which may take a day or so), so skip the next 4 steps.
18. Put on your gas mask and take the baking dish, hair dryer, and electric heat source outdoors.
19. Place the baking dish into the container of water (electric wok, electric skillet, hot plate with pan of water, whatever), and set it to simmer. If you can't set the temperature low enough, you'll have to turn the heater on and off manually to maintain a near-boiling temperature.
20. Plug in the hair dryer and *gently* blow hot air into the baking dish. Take care not to splash solvent over the sides of the dish. Incidentally, make sure you don't overload your circuit; it might be a good idea to alternate heating with the hot plate/wok/skillet and heating with the hair dryer.
21. Continue heating until all the solvent evaporates. At this point you may see a thin layer of crystalline material; you might see a shiny layer of goo that looks a lot like the glass itself (which can be confusing); or you might see a layer of brown gunk. Whatever. Anyway, make sure all the solvent has evaporated.
22. If your baking dish is covered with an oily substance (goo, gunk, whatever), you in all likelihood managed to extract some propylene glycol (or something else) along with the DXM. Blow hot air from the hair dryer onto the surface of the dish until the material dries completely (this may take 5 to 10 minutes). This should evaporate the propylene glycol, leaving behind only DXM.

Scrape the DXM off the baking dish with a razor blade or other convenient sharp edge. You now have DXM free base.

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A few comments. First, guaifenesin seems to itself convert to an oily layer if you add too much sodium hydroxide, so don't overdo it. Second, if you happen to have lab equipment you can of course use a separatory funnel (which is what tl stic baggie is for). Third, if you don't think you got anything, make sure the baking dish is completely dry; so.. ..imes the DXM free base plus propylene glycol can look a lot like the glass itself.

11.1.3 Agent Lemon: Dual-Phase Acid-Base Extraction of DXM

The Agent Lemon process is a newer and in all honesty a much better method for extracting DXM. It takes less time, doesn't involve playing with flammable and toxic fumes, and doesn't require sodium hydroxide. Here is the Agent Lemon method as posted on Usenet. I have inserted a few comments in italics, primarily with regards to separating the organic and water phases. They use a siphon tube, but I believe that the Zip-Lock™ bag separatory funnel is a better idea.

OPERATION AGENT LEMON
TOP SECRET

Reverend Jim Barris
Reverend Indole Ringh
Reverend Anastasia Albert

After establishing control over 80% of the world's Drixoral supply, our troop was in a position to change the face of DXMology forever, in the interest of accelerating human transcension.

The Mission: extract DXM from cough syrups with materials and equipment that one could buy without any trouble at your nearest Woolworth's.

Theory:

The DXM FAQ [1] describes an acid-base extraction method that requires materials (specifically Sodium Hydroxide) that are difficult to get in pure form for many people. Read it for the theory. Now, after you read it, we'll add on the following:

The "acid-base" extraction in the FAQ does not actually use an acid stage. We can add an acid stage, to remove the DXM from the solvent. Therefore, we can avoid the need to evaporate a lot of solvent -- we can just throw it out the drain. Thus, you can do this without producing vapors that will lead your neighbors to think you are running a meth lab.

The Materials: (this will blow you away)

- DXM-containing cough syrup. This process will probably produce a dangerous product if you use a syrup that contains any active ingredients other than DXM or Guaifenesin. DON'T! We used Robo Max Cough because CVS was closed.
- Ordinary Household ammmonia (clear, not lemon or some other scent)

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- Lighter Fluid (we used "Zippo"; check criteria in FAQ [1]). Make sure it evaporates with no residue.
- Citric Acid. Available as a canning supply at your neighborhood supermarket. We used lemon juice on the first attempt, but we switched to citric acid after consultations ([1], personal communication).

Equipment:

A brief interjection here. This paper suggests using a siphon to separate the layers. However, I think the plastic baggie separatory funnel is a superior method, for two reasons. First, rubber tubing (and many types of plastic) are attacked by organic solvents, and can degenerate, or (worse) dissolve into the solvent and possibly muck up the extraction. Second, you get much better control with a separatory funnel, even a kitchen chemistry version. I will follow up their method with my suggestion.

- Some containers and flexible rubber tubing to use as a siphon. We cut ours off our vaporizer because we don't know where we stashed the tubing.
- *Two large zipper-seal (e.g., Zip-Lock™) plastic freezer bags, unpleated (if you want to use the separatory funnel concept instead of the siphon).*

Concept:

Prepare ahead of time a solution of the citric acid in water. For two bottles of tussin (8 oz each) we used 3 tablespoons of citric acid in 8 fluid ounces of water.

Add ammonia to DXM. DXM converts from hydrobromide salt to freebase and precipitates out of water. Since it is now nonpolar it wants to go into a non polar solvent. Now you add a nonpolar solvent and shake hard. Free base goes in solution in solvent. Let solvent float to the top. (doesn't mix with water) Physically separate the layers. Now the DXM is in the nonpolar layer, mix that with the acid and shake well. The DXM converts back into the acid salt (since lemon juice has citric acid in it, we make DXM hydrocitrate). This is so beautiful because the DXM is practically pulled across the oil-water interface by the hydrogen ion gradient.

Now you throw out the oil layer, and the DXM is now acid salt in the lemon juice. Boil it for a few minutes in the microwave, stir it good, so any volatile solvent that remains will evaporate.

You are left with "Agent Lemon" or "DXemon juice", a highly concentrated product, which is superior to cough syrup -- if you really wanted to, you could probably boil away the water -- with no danger, since the amount of solvent is almost nothing, and get a crystalline product that might be cut with anhydrous citric acid. *I wouldn't suggest it, since it might irritate the stomach.*

Details:

1. Put cough syrup in 2 liter bottle.
2. Pour in a lot of ammonia. Excess is not a serious problem. The ammonia volume was about equal to the syrup volume.
3. Stir.
4. Pour into a tightly sealable vessel. A funnel is good to have.
   Incidentally, you can probably just use the same 2-liter bottle and pour the lighter fluid into that; the plastic won't dissolve.
5. Add about a 1/2 inch thick layer of lighter fluid.
   Shake the hell out of the vessel. We did it for about five minutes.
7. Pour the liquid back into 2 liter.
8. Let the organic solvent layer separate, it wil float on top of the water.

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9. We used a siphon to separate the layers. We filled the siphon (a flexible rubber tube) with water, and while covering one end, plunged the siphon deep into the water layer.

   Hold the free end of the siphon below the other end of the siphon, and let go of the end. Let the liquid drain into a jar. Throw out the watery layer.

   The other way to separate the layers is with a separatory funnel, or the approximate version (a plastic bag). Pour the entire contents of the bottle into the sealable plastic bag, seal it, let the layers separate, clip off the bottom corner, and let the watery layer (on the bottom) drain out into the drain. Then let the organic layer drain into the jar.

10. If you want to minimize the amount of water-ammonia-cough syrup inactive ingredients, add more water, let separate and siphon *(or separate)* again. We were paranoid and did this four times. The product we got towards the end didn't even taste like ammonia.
11. Now mix the solvent layer with the citric acid solution.
12. Transfer to snapple jar.
13. Really shake the hell out of it. We shook it for 5 minutes, splitting the work between the three of us.
14. It takes a few minutes to separate. Wait.

    Some have reported a soapy layer forms in between the two layers; if so, just let it sit until the soapy layer is completely gone (it may take a few hours).

15. Next stage. Use the siphon again, we recommend being conservative and not letting any solvent get into the siphon at all, so we left a little water layer.

    Or use a new plastic storage bag, and this time keep the water layer and discard the organic layer. Be friendly to the environment and let it evaporate outside; don't just pour it down the drain.

16. Boil the lemon juice for a few minutes (we did for seven), the theory is that if a little bit of the organic solvent is there, it will boil away.
17. Drink the Agent Lemon. We have not deterimined the best method, we think you could mix it with something, or maybe drink it straight. It tastes really bitter (that's the DXM).

Results:

(Note: This was a previous trial with 4 oz. of syrup and with lemon juice instead of citric acid. This may give an inferior product.) One of us (I.R.) volunteered to assay the material extracted. Since I am a 105 kg. male in good health (except for the tail end of a nagging cold) I was considered to be the best subject. I thinned the material from about 1 fl. oz. to about 8 fl. oz. and added six tablespoons of sugar. I consumed the material at approximately 4:20 in the afternoon. The extracted product seemed to have a washed-out lemon taste (some flavor oil probably went into the organic phase). There was a bitter taste which I believe is DXM. I tasted (very carefully!) a few microliters of the lighter fluid, and that didn't seem to match the weird taste.

After about 15 minutes (while the other investigators smoked a bong) I noticed significant pharmacological effects. At about 5:30 I was experiencing effects consistent with a dose of about 3.0 mg/kg. This suggests a yield in the 90% range. (about 315 mg of 350 recovered). At about this time, I took a couple of small bong hits myself, which produced instant second plateau effects. This backs up my assay of the dosage. At this time (9:30) I am still experiencing light e

The new citric acid product now sits in Mr. Barris's refrigerator. We plan to test it soon (possibly this weekend, Mar. 1

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1996) and will report.

[http://www.frognet.net/dxm

This research was sponsored by DDD Grant 3125-5-23. The Department of Dirty Deeds is an equal opportunity employer.

11.1.4 Precipitation Method

If you want to use the precipitation method, all you have to do is add sodium hydroxide to the cough formula as described above, until the DXM precipitates out. Let it stand (or centrifuge it), and filter. The (very fine) powder that hopefully was caught by the filter paper is the DXM free base. I don't know whether the precipitation method works with DXM+guaifenesin preparations.

11.2 How Can I Get Rid of Other Drug Ingredients?

I still haven't had a chance to find out much more about extraction in the presence of other active ingredients (I work 60 hours a week). Here is what I've found so far.

11.2.1 Acetaminophen

It appears that acetaminophen (paracetamol, APAP) doesn't survive the acid-base extraction process and so either of the above acid-base processes, preferrably Agent Lemon, may work. However, I wouldn't bet my life on it, and if you try this without some means of testing for acetaminophen in the final product, that's exactly what you will be doing.

If you want to try this out, find yourself a lab that can test for acetaminophen and do some research. It *may* be possible to test for acetaminophen, then again this test may not be effective. See Section 11.3 for one reader's suggestion.

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The other option is to use acetaminophen's low solubility in cold water to your advantage (this is frequently done by people who extract the codeine from codeine+acetaminophen tablets). The theory is that if you take your product dissolved in water and chill it to near freezing, the acetaminophen will become insoluble, and you can filter it out. If you want to try this, do it with the end product of the Agent Lemon process; chilling cough syrup will leave you with a thick goo that isn't easily filtered.

Again, let me emphasize: go ahead and try this if you have access to a lab that can test for acetaminophen; otherwise, don't risk liver damage or death. It's relatively easy to get cough syrups without acetaminophen anyway.

11.2.2 Guaifenesin

Either of the acid-base extraction processes will remove guaifenesin from the final product. The Agent Lemon process is recommended.

11.2.3 Antihistamines and Decongestants

Most antihistamines, and all decongestants, are alkaloids, and thus will follow DXM in the extraction processes. The only easy method for isolating these from the DXM that I can think of would be differential solubility.

The basic principle behind differential solubility is that different chemicals are soluble in different solvents. The relevant solvents that I have come up with (from various sources) are:

Table 3: Differential Solubility Data

Substance	Cold H_2O	Hot H_2O	Ethanol	Ether
DXM HBr	Soluble (<1.5%)	Soluble (25%)	Soluble (25%)	Insoluble
DXM free base	Insoluble	Insoluble	Soluble	Soluble?
Guaifenesin	Slightly (1g/20ml)	Soluble	Soluble	Soluble
d-Pseudoephedrine HCl	Soluble	Soluble	Soluble	Insoluble?
d-Pseudoephedrine free base	Slightly	Slightly	Soluble	Soluble
Acetaminophen	Insoluble	Soluble	Soluble	Slightly
Propylene Glycol	Miscible	Miscible	?	Soluble
Polyethylene Glycol 400	Soluble	Soluble	Soluble?	?

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This information is from the Merck Index; I'm trying to fill in the unknowns from other sources. In particular, I'm fairly certain that DXM free base is soluble in ether, and that d-pseudoephedrine HCl is insoluble in ether. *Note: I know, I h[illegible]s backwards before* due to a typo.

As you can see, DXM and pseudoephedrine pretty much behave alike in solvents. This is the problem. If anyone can come up with a solution, feel free to make suggestions. Until then, stick with extracting from DXM-only or DXM+gauifenesin products.

11.3 How Can I Test for Acetaminophen?

Based on the suggestion of one reader, it appears that a fairly simple test will detect acetaminophen, at least in neutral, aqueous solutions. I have briefly verified this, but not in detail, and I haven't checked to see if the results are backed up by a lab.

Acetaminophen turns a purplish-brown color on reaction with sodium hydroxide (NaOH). This is a fairly rapid reaction, which you can try out yourself by dissolving an acetaminophen tablet in water and adding some of this s[illegible]n to a sodium hydroxide solution. It does not appear that ammonia will work instead of sodium hydroxide. However, since you aren't going to be ingesting the final product, feel free to use lye instead of reagent grade sodium hydroxide.

So let's say you have a solution which you think may contain acetaminophen. Call it Solution A. Prepare a *concentrated* sodium hydroxide solution (Solution B) by dissolving as much sodium hydroxide as you can in a small amount (say, 50mL) of water. Be careful and wear your safety glasses! Now, take a dropper, and add a little bit of Solution A into Solution B. If you see a purple or brown color form, you can bet that there's acetaminophen in your Solution A.

The problem is, if you don't see any color, that doesn't necessarily mean the acetaminophen (or some byproduct of it from the extraction) isn't there. Now, it may be that this is an effective test for detecting the presence and absence of acetaminophen, but I'm not sure yet. So consider this a point for further research, and nothing more.

11.4 How do I Use Free Base DXM?

The DXM you extracted is in free base form, so it is theoretically possible to smoke it using a vaporization pipe. This

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is, however, a difficult task; if you overheat it, it starts to smell like burning plastic, and in any case it's very harsh. Some have suggested that it's actually the small amounts of flavoring (and possibly thickening agents) left over from the extraction that are causing the problem; to my knowledge, though, even pure DXM is hard to smoke because of its high vaporization point.

One person reported that he was able to smoke freebase dextrorphan but not DXM, as the former would vaporize at a reasonable temperature while the latter would not. Another person reported one successful attempt at freebasing DXM, but said his lungs immediately began to hurt intensely and his breathing passages swelled to the point that he had to use an asthma inhaler and antihistamines. Generally, the consensus is that smoking DXM just isn't worth the trouble.

You can also dissolve it in alcohol, or load it into a capsule, and swallow it. In an ideal world, the hydrochloric acid in your stomach would react with the DXM to form DXM hydrochloride, which could then be absorbed. Unfortunately, we don't live in an ideal world, so it might be a good idea to form an acid salt with citric acid (or use the Agent Lemon process). The other option is to eat food with the DXM to increase both stomach acid production and lipid transport. **Please note that using excess HCl may convert the DXM to dextrorphan.** Incidentally, DXM itself tastes really nasty.

Or, you can use the free base DXM for further syntheses - see Section 11.6.

11.5 How Can I Synthesize DXM?

This section will be completed when translations of the original papers are completed.

11.6 What Can I Synthesize From DXM?

All chemical processes in this section require pure DXM. If you do not have pure DXM, you must extract from cough formulae as above (and purify it really well). Most of these processes require significant skill, and access to lab equipment and chemicals. To my knowledge none of this is illegal (but don't take my word on it). Don't fret if your yields aren't as good as specified. Most of the procedures are from the same source (96).

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11.6.1 Dextrorphan

This is probably the easiest by far. In fact, it's often accidental in the isolation of pure DXM. Any excess of acid (HCl or HBr) should produce dextrorphan. The primary reference for this section (96) used 48% HBr. It is possible that this occurs accidentally in some extraction procedures where HCl is used to convert DXM free base to water-soluble form. This may account for people indicating that extracted DXM is stronger than DXM in cough formulae. According to one user, DXO can be freebased at 190 C (pers. comm.).

11.6.2 Levorphanol / Levomethorphan

These compounds would most likely have opiate activity. Unfortunately, as someone (wish I remembered who!) once put it, the isomer fairy isn't going to descend from heaven and wave her magic wand. You'd basically have to get the cross bridge to flip around (if you could do this, the hydrogens would probably conform as desired). Good luck! Personally, I don't think it can be done, at least not easily. By the time you got the lab and chemicals to do it, it'd p[illegible]ly be easier just to make methylfentanyl from scratch.

If you **do** figure out a way to do it, please don't tell anyone; nothing would bring the DEA into this faster than someone making an opiate out of DXM. You don't need to tell me either, since I don't consider opiates to be much fun. Oh, and if the isomer fairy does show up, you might as well ask her to make you some methamphetamine from Vicks Nasal Inhalers™.

11.6.3 3-Substituted Analogs

Several 3-substituted DXM analogs have been synthesized. A few of these actually show interesting binding and anticonvulsant activity. Table 4, on the following page, lists the analogs, their binding, and their anticonvulsant activity in rats. All data on 3-substituted analogs comes from (96). Incidentally, this article is marked as "not subject to US Copyright"; therefore I've quoted large sections from it. Curiously enough, the research was sponsored by NIDA (the National Institute on Drug Abuse). **ED_{50} Rats** refers to the effective dose for anticonvulsant activity; **% Rats** refers to the percentage of rats protected. Sample size was 10 rats.

S[illegible] comments on the table. Both dextromethorphan and the $N(CH_3)_2$ derivative lost anticonvulsant activity at higher doses. The NH_2, OEt, and O2-Pr derivatives all showed no indication of psychotomimetic activity at anticonvulsant

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doses. Most showed little ability to displace [^{3}H]TCP. I think it's safe to say that the [^{3}H]TCP binding site is the NMDA open channel PCP_1 site, and that the [3H]DXM binding is occurring to DXM's high affinity sites ($sigma_1$ and P[illegible]. The authors do not address the PCP_2 site.

My guess is that the discrepancies between [^{3}H]DXM binding affinity and anticonvulsant activity relate to different binding at $sigma_1$ and PCP_2, and that the anticonvulsant activity comes from the $sigma_1$ activity. As far as any recreational use of these derivatives goes, I have no idea. Potentially, the NH_2 derivative might show effects limited to $sigma_1$ activity, and the OEt and O2-Pr derivatives might show $sigma_1$ and PCP_2 activity. It doubt any of the above are specific for PCP_2; the closest would be the H "derivative". This is all scientific wild-assed guessing; there's not much data on PCP_2 (or the sigma receptors for that matter).

Table 4: 3-Substituted DXM Analogs

3-Position Substitution	IC_{50} [^{3}H]DXM	IC_{50} [^{3}H]TCP	ED_{50} Rats	% Rats
OCH_3 (DXM)	0.59M (0.12)	2.0M (0.6)	38mg/kg	70
OH (dextrorphan)	7.7M (0.9)	1.2M (0.7)	5mg/kg	90
NH_2	45% at 10M	7.8M (1.4)	25mg/kg	100
$NHCH_3$	3.6M (1.4)	43% at 10M		0
$N(CH_3)_2$	4.4M (0.9)	45% at 10M	40mg/kg	40
Cl	1.1M (0.4)	5.5M (1.5)		10
NCS	1.5M (0.3)	60% at 10M		0
H (i.e., nothing)	1.3M (0.3)	53% at 10M		0
O-Et (ethyl)	0.42M (0.06)	75% at 10M	5.6mg/kg	90
O-2-Pr (2-propyl)	0.88M (0.18)	59% at 10M	3.9mg/kg	90
O-n-Bu (n-butyl)	1.5M (0.4)	58% at 10M		40
O-Bz (benzyl)	3.1M (0.6)	39% at 10M		30

So if you want to go about synthesizing any of these, I don't believe it would be illegal (I could be wrong). I wouldn't advise taking any of them, of course; in particular, there's been no LD_{50} determination. The authors doubt that the NCS derivative even gets to the brain. If it *did* get to the brain, it would likely bind irreversibly. You don't want that (imagine tripping for three months with permanent brain damage).

Formerly I quoted the synth procedures from the articles; I decided against that in this version of the FAQ. If you're interested, go get the article.

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12 DXM Drug Culture

from the DXM FAQ
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This section describes some of the current and past DXM culture. Most of this is one big unknown, and I'm attempting to write the definitive text on the history of DXM's recreational use (this will probably take me several years). If you have information on this topic, especially related to the use of DXM in the form of Romilar™ prior to 1975, please contact me.

12.1 Is There, or Was There, a DXM Drug Culture?

The answer is an overwhelming yes, although DXM use has always been deeply underground. For example, in the late 1980's, DXM was widely popular with the hardcore/punk movement, and in the 1970's, there seemed to be other groups of users. DXM users in the late 1980's, and possibly in other times, had a sort of "network" that stretched across the USA and into parts of Europe. The total number of users was probably less than 10,000. An interesting characteristic of their DXM use was that it was a group activity, whereas many DXM users today regard it as a solitary experience.

There seem to be (rare) medical references indicating DXM recreational abuse dating back to the 1960's. I'm trying to get more on this. I have talked to a few people who have said that recreational use of DXM in the form of Romilar™ tablets was extremely common. If so, then DXM's recreational potential may be the best-kept secret in the recreational drug world.

Some cities seemed to have considerable DXM use activity, notably with youth; in one town, there were empty bottles of cough syrup littering the street, and sale of cough syrups were restricted to people 18 and up. However, these incidents seem to be few and far between.

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12.1.1 DXM in the 1960's

Romilar™ was released in the US in as a non-narcotic cough suppressant to replace codeine, which was already being used recreationally. Although there is no evidence of this, I would assume that people who were familiar with codeine's recreational potential decided to try to "overdose" on the new product and see if it had potential.

I have received a few letters from people who were involved with the drug culture of the late Beatnik era, and who used DXM. Most seemed to consider it something to use when better drugs (primarily opiates, although eventually LSD) were unavailable. A few, however, preferred DXM, and eventually its reputation as a recreational drug led to Romilar™ tablets being taken off the market in the US.

It appears that nobody formal studies of recreational DXM use were published during its use, which many people have told me was widespread. A few who knew about its potential then have told me that the medical community was neither educated about, nor particularly interested in, DXM; there were larger drug problems to confront. Furthermore, drug use was still isolated to minorities and social outcasts, and most white Americans regarded the Beatniks as the latter. Remember, this was before drug use had become popular among the youth counterculture of the later 1960's and 1970's.

I am still looking for information about DXM use during this time, but I suspect it will be several years before I can make any sophisticated analysis of the phenomenon.

12.1.2 DXM in the 1970's

DXM-containing cough syrups replaced Romilar™ in the 1970's, and its use declined as most people were unwilling to drink a bottle of cough syrup to get high. Besides, in the late 1960's and 1970's, LSD, peyote, and a limited number of other psychedelics were widely available. Those who liked DXM probably turned to these, and eventually to PCP when it became available.

There doesn't seem to have been any particular subculture associated with DXM in the 1970's. Some of its users were ordinary people who enjoyed lower plateau experiences. From letters I have received, this has ranged from young drug enthusiasts to bored housewives. A fair number of Vietnam veterans evidently used DXM overseas and continued using it when they returned.

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12.1.3 DXM in the 1980's

I have considerably more information about the use of DXM in the 1980's. With the backlash against the drug culture of the 1970's and 1960's, and especially the accelerating War on Drugs, psychedelics became generally less available, especially in rural areas or smaller towns. There seem to have been clusters of DXM users, many (but not all) in rural or small urban areas, isolated in location or by subculture. I have the most data on DXM use among the hardcore punk culture of the late 1980's.

12.1.3.1 DXM in the Hardcore Punk Community

I don't know who among the hardcore punks first thought of drinking a bottle of cough syrup for fun, although conversations with former residents of punk warehouses has given me some ideas. In one case, the user's father had used DXM during the Vietnam war, and continued to use it when he returned (and in fact his wife had divorced him because of DXM). In another case the brief mention of DXM in the Anarchist's Cookbook started the individual on DXM use. Once people were familiar with its use, it spread widely among the community. It does not seem to have spread far beyond it, possibly because the entire community prided itself on isolation from the general culture which it viewed as socially deranged.

Someone somewhere must have done some medical research, because the community generally understood which p ations were safe and which were not. It certainly wasn't from the Anarchist's Cookbook, which is in general full o. stakes, misinformation, and lacking in safety precautions; some have even gone so far as to suggest that it was put out by the government in an attempt to get would-be anarchists to blow themselves up.

Robitussin DM™ and generic equivalents, then containing 3mg/ml of DXM, were the preparations of choice. Rarely people would return from foreign countries with tablets (especially Contac™ tablets from Canada). The typical dose was 4oz (360mg), 8oz (720mg), or 12oz (1080mg).

People among the subculture would use DXM primarily in group environments, at people's houses and in the warehouses where many of them lived. Often a theme was chosen for the DXM trip (although the term "vacation" was sometimes preferred to "trip"). Themes included locations, historic times, fantasy environments, emotions, and abstract concepts. DXM was almost never a solitary activity.

Not everyone in the subculture used DXM; some preferred other drugs, some were totally straightedge (drug-free). Nearly all seemed tolerant and even accepting of an individual's choice to use or not use a particular drug (except in the case of heroin and cocaine, which were shunned, at least among the people who have contacted me). Among those who used DXM, it was often a part of the sense of membership in the community.

Some have told me that DXM use was already beginning to decline before the subculture itself fell apart (due to a variety of factors including the rise of neo-Nazi skinheads, increasing violence, and the maturation and reintegration of its members into society). Some simply became tired of drinking cough syrup to get high, and noted increasing nausea and side effects, and decreasin leasure, with its use. However, in a few cases DXM developed a bad reputation as ir duals had problems with the drug.

DXM addiction seems to be isolated to particular individuals, and it is not known whether susceptibility is due to genetic factors, psychology, environment, use patterns, or other factors. However, rumors of suicides among chronic

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DXM users began to circulate, and many people were unwilling to use a drug which might lead to depression, addiction, and suicide. To what degree these rumors were true, I do not know, although I do have reliable evidence of at least one suicide attempt by an individual who became addicted to DXM and used it daily.

Because daily users often retreat from their social environment, they were often viewed as valuing the drug above their social network. Since use of the drug among most was intimately integrated into the social network, this isolation was an indicator that DXM may have a serious darker side. In a community that prides itself on its social cohesiveness, anything which threatens that is bad news.

In any case, the subculture eventually deteriorated, although to some degree there are (typically isolated) elements of it remaining. One example is provided in (377).

12.1.3.2 DXM in Other Subcultures

Sometimes DXM spread throughout an entire community. I have been told of a few small towns throughout the US where DXM was widely used among the high-school and early college youth. In one case, according to a former user, empty cough syrup bottles literally littered the streets. Utah was evidently particularly hard-hit by teenage DXM use. More than one former user has told me that DXM was primarily popular where there was nothing else to do. Most communities effectively solved this problem by placing DXM behind the counter, and requiring proof of age before allowing purchases.

12.1.4 DXM in the 1990's

During the early 1990's DXM remained isolated to subcultures according to users. It would sometimes spread among a group of friends, but never far beyond that. However, the increasing reach of the Internet, especially among college students, is totally changing the face of DXM use.

This change started before the FAQ was published, and I have no doubt that it would have occurred whether or not I had chosen to publish the FAQ. There are numerous Usenet newsgroups dedicated to discussion of drugs, and people who were familiar with DXM were eager to discuss it and point out its good qualities (unfortunately, many neglected to bring up safety precautions and side effects).

The Usenet drugs newsgroups were initially poorly distributed and its members formed a somewhat isolated community consisting of drug enthusiasts, psychonauts, former drug users, and the curious. However, as the Internet expanded beyond the domain of computer users and professionals, many college students began to investiage these drug newsgroups (and, later, the numerous drug-related webpages).

Numerous undergraduate students have told me that their interest in drugs started when they discovered that marijuana wasn't the evil demon-weed as they were taught, and that their brains didn't turn into fried eggs from smoking it. Nor

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did it take over their lives, as most who used marijuana maintained their grades, and restricted its use to weekends. If I had to make a generalization I would say that college marijuana users may be a lot more responsible with their drug use t[illegible]ollege alcohol users.

I don't believe in the "gateway" theory that marijauna use leads to use of other drugs. Instead, I think that it is the propaganda about marijuana that leads to experimentation with other drugs. People don't enjoy being lied to, and anyone with two hours of free time and the barest of scientific knowledge can go pick up medical journals and learn that marijuana is one of the safest recreational drugs known to man. Many have told me that once they knew they'd been lied to about marijuana, they were curious to see if other drugs weren't the evil chemicals they'd been portrayed as.

Thankfully, most seemed to confine their experimentation to psychedelics, including mushrooms, LSD, MDMA (ecstasy), DMT, 2CB, and others. Since these drugs induce profound and often puzzling experiences, users would turn to the Internet to find experienced users, discuss how to use them best, what to do under the influence, philosophies of the Universe, and so on. So it was inevitable I believe that DXM would become known among college students, at least among those who used illegal drugs.

Currently, as I write this, the FAQ has become the definitive source of information about DXM among users on the Internet. However, the spread of DXM use still seems to occur through networks of friends and those who share common interests. What the Internet has done is to transcend geography and allow people around the world to share their interests and knowledge, and provide a mechanism for the near-instantaneous spread of new interests and ideas.

This is in my opinion an undeniable good. You can now find an FAQ about most any drug, and most of them are well-written and discuss both the good and the bad sides of drugs. Often current and former users make well-presented cases f[illegible]y *not* to use the drug. As an example, most heroin users are extremely critical of the media's attention to, and g[illegible]rization of, the drug, and will actively discourage people curious about it from taking it. Psychedelic enthusiasts are often equally discouraging of people who wish to use psychedelics but are not emotionally and mentally prepared.

However, it is inevitable that whenever a taboo subject is brought out into the open, the curious will try it. This is why I wrote the FAQ in the first place, to give the curious a good look at the good and bad sides of the drug.

12.1.5 The Future of DXM Use

I believe a sort of threshold has been passed in that DXM use has now entered the mainstream of drug users. I suspect its use will continue to rise until either it is taken off the market, or it reaches a natural plateau. DXM is not, in my opinion, addictive enough to explode into popularity like cocaine, amphetamines, and heroin; instead, I suspect that, like most psychedelics, it will be popular among a limited number of people who will use it for a year or two and then stop. Fortunately DXM use does seem to be self-limiting, as the pleasurable aspects of its use decline and annoying but harmless side effects increase with time.

I [illegible] think DXM will be taken off the market entirely; instead, it will probably be restricted to preparations containing o[illegible] ingredients. My guess is that guaifenesin will be used, since it induces nausea with overdose. There will still be DXM enthusiasts willing to tough out the nausea, but most people, I think, will be unwilling to repeat the experience

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and unwilling to suggest it to others. The worst possible response, in my opinion, would be to add acetaminophen; while it would stop DXM use, it may do so at the expense of numerous deaths.

My greatest fear is that some "pop news" show will become aware of DXM and decide to do a feature on it. I have no desire to bring awareness of DXM to the overall public; I suspect that teenagers across the country, looking for a cheap buzz, would rush down to their nearest drugstore, buy a bottle of cough syrup, and take it without adequate knowledge of dosage, drug interactions, or side effects. DXM would probably be pulled from the market, and people with an actual need for it would be worse off. While many DXM users would of course stop using it, some would probably turn to ketamine or (even worse) PCP, attempt to find DXM "on the street", or find worse drugs to use.

If you really want to limit the use of DXM, the best response would be to consider those who are using it casually. Serious psychonauts are not, in general, using DXM on a regular basis, or if they are, they are at least aware of the risks. However, many young people who use DXM are simply looking for a cheap high. There are very few drugs which provide a cheap high and carry a low risk; the safest among these is marijuana. And more than one young person has told me they have used DXM because marijuana is illegal. You can draw your own conclusions.

12.2 Why Haven't I Heard About DXM Drug Culture?

There are, I think, four factors which have combined to keep DXM out of the public eye and limited to subcultures:

1. Only about 1/3 of people who try DXM enjoy the experience enough to repeat it.
2. The public is unaware of DXM, and most people are skeptical of the idea of getting high off cough syrup.
3. Many people who traditionally use DXM do not, in general, discuss their use outside of their social group or clique.
4. Medical authorities are either ignorant of DXM or unwilling to discuss it, either professionally or with the general public.

As a consequence, when someone uses DXM and does enjoy it, and tells his or her friends, many will dismiss the idea, and among those who try it, most won't repeat the experience. In tightly-knit social groups, both clusters of friends and larger subcultures, DXM use may expand to saturate the group (and involve from 30% to 60% of the group, as near as I can tell with my limited data). However, members outside of these cliques and groups do not typically hear about DXM, or if they do, they aren't willing to try it on the suggestion of someone who is obviously outside the social norm.

As far as the silence of medical authorities goes, my hunch is that at some point (probably when Romilar became popular as a recreational drug) the medical authorities and manufacturers of DXM-based preparations realized that they had two choices: take DXM off the market, or convince people they couldn't get high off of it. They took the latter approach, getting rid of DXM-only pills and leaving cough medicines in which DXM was combined with other ingredients. The majority of users decided it wasn't worth the effort of gulping down cough syrup (and possibly v ing due to guaifenesin), and the public remained ignorant.

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12.3 DXM "Drug Slang"

DXM doesn't have a drug slang like most other drugs, since its use has never been widespread. Instead, particular groups of users will make up their own terms for DXM and its phenomena. Here are some slang terms I have heard about. Keep in mind that my information is far from complete.

base

1) n Plateau. Thus, first base, second base, etc.
Evidently developed as a similar classification method for DXM dosage levels, independently of the FAQ's suggested terminology.

blue velvet

1) n Nitrous while on DXM c.f. *velvet*.
Probably a reference to the the David Lynch film of the same name and the use of nitrous oxide by one character, influenced by same derivation as velvet.

DM

1) n DXM.
2) n Any DXM-containing preparation, especially Robitussin DM[TM] and generics.
3) v.i. To take DXM, esp. as cough syrup. c.f. *robo*.
From Robitussin DM[TM] and generic equivalents. These typically contain DXM and guaifenesin and probably became popular for recreational use in the early 1980's.

dex (also *dextro*)

1) n DXM
2) n Any DXM containing product
2) v.i. To take DXM.
Short for dextromethorphan.

drix

1) n DXM, especially Drixoral Cough Liquid Caps[TM]
Fairly recent, and may be dated now that the brand is generally unavailable.

eighter

1) n An eight-ounce bottle of cough syrup. c.f. *sixteener*.
Used (evidently independently) among clusters of DXM users.

euphoria

1) n 4-methylaminorex
2) n DXM (rare). Was evidently in very limited use before 4-MAR because known as a recreational drug.

fry

1) v.i. To take DXM. Typically *frying*. c.f. *fryarrhea*.

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Currently popular

f[illegible]hea
1) n DXM-induced diarrhea c.f. *fry*.

Gel
1) n DXM
From the use of gelcap forms of DXM, also influenced by the feeling of "swimming through Jell-O[TM]".

groove c.f. *vibe*.
1) n DXM.
Possibly from DXM's effect on music and the sensation of being "in a groove", and riding with the flow of one's environment.

heebie-jeebies
1) n The hangover effect of high-dose or binge DXM use, characterized by amotivational syndrome and avoidance. ex. *I don't want to go to class; I still have the heebie-jeebies.*.
1980's hardcore punk subculture term.

Invisible Hat
1) n A feeling of light pressure partially or fully encircling the skull, very similar to the sensation of wearing a hat. Might be due to altered perception of one's hair.
Recent.

jc
1) v.i. To take DXM-containing cough syrups and ride up in down in elevators.
Evidently dates to the late 1960's and hasn't been used since then.

Lucifer
1) n DXM
Used only by one group of DXM users; suggested due to DXM's ability to "bring light" to one's memories and unconscious thoughts, not necessarily in a pleasant way. Unfortunately there are some rather negative connotations (added by Christianity) to this particular deity.

Mega-Perls
1) n DXM
German. "Persil Mega Perls" is a washing powder (detergent?) which resembles the little beads in the "tuss hustenstiller retard kapseln" DXM capsules produced by Dr Rentschler.

nexus
1) n 2-CB
2) n DXM (rare). Occasionally coined by DXM users unaware of the use of the term for 2-CB.
From the sensation of being at a temporal or cognitive "nexus point" where meanings, events, etc., begin to merge in nature, experieced on upper plateaus. Also influenced by the "nexus" in *Star Trek: Generations*, a region of space where "time has no meaning".

sky
1) n DXM
Possibly from the movie *Liquid Sky* and the perceived similarities between DXM and the psychotomimetic aspects of heroin.

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Rise
1) n DXM
Used by a small group of DXM users; derives from the sensation of rising into the air characteristic of the DXM rush.

Robite
1) n A DXM user
Recent.

robo
1) n DXM
2) n Any DXM-containing preparation, esp. Robitussin[TM] cough syrup. ex. *Hand me that bottle of robo.*.
3) v.i. To take DXM, usually by drinking cough syrup. ex. *I roboed last night.*.
From the popular brand Robitussin[TM], possibly influenced by the robot-like behaviour sometimes characteristic of DXM intoxication.

robo-cop (also *robocop*)
1) n Any store employee who keeps track of DXM purchases and/or requests proof of age with purchase. ex. *You go buy; the robo-cop there recognizes me.*.
A pun on the movie of the same name, from "robo" + "cop" (English slang for police officer).
2) v To shoplift a DXM-containing preparation. Transitive or intransitive. ex. *I just robo-copped a bunch of bottles for this weekend.*.
Again, a pun on the movie of the same name; from "robo" + "cop" (American slang meaning to steal or grab)
3) interj A "code word" exclamation made to indivate that one uses DXM; such drug "code words" are often used where open discussion is unwise.

robo-dose (also *robodose*)
1) v.i. To take DXM.
From "robo" + "dose" (to take a drug). Noun form does not seem to be used.

Robo Itch (also *The Itch*) (also *Tussin Itch*)
1) n A usually transient phase of intense itching that some people experience on DXM.

Robo Ring
1) n The tamper-evident plastic ring present on some bottles (typically glass) of cough syrup. Placed on the finger, it is a "covert" signal of familiarity with DXM to other DXM users.
The practice seems to be fairly recent, dating to later 1980's.

robo-shits (also *roboshits*)
1) n Diarrhea from drinking cough syrup.

Robo Shuffle (also *The Shuffle*) (also *Tussin Shuffle*)
1) n Disturbance in gait consisting of rigidity and "robot-like" movements, often involving slow, shuffling movement. Typical with high doses of DXM.

Rojo
1) n DXM
Recent; meaning "red", this term refers to the usual color of syrups and gelcaps containing DXM. Interestingly similar to "robo".

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roly-polies
1) n The desire to roll around, do cartwheels, spin, or otherwise engage in motions that alter one's perception of gravity and position; the roly-polies occur to some people during or after a DXM trip. Probably due to altered processing of signals from the middle ear (vestibular signals).
1980's hardcore punk subculture term. Singular is not used.

sea legs
1) n Disturbance in gait and balance somewhat like walking on land when accustomed to ocean balance (or vice versa). Differs from the "Robo Shuffle" in that this disturbance usually involves large, fluid, sweeping motions. Typical with low doses of DXM.
Late 1980's/early 1990's DXM users.

sixteener
1) n A sixteen-ounce bottle of cough syrup (rare). c.f. *eighter*.

spacing (also *skying*)
1) adj. Intoxicated on DXM at third or fourth plateau level.

Turbo-T
1) adj. At third plateau or above.

tuss
1) v.i. To take DXM. c.f. *tussin*.

ti
1) n DXM
2) n DXM-containing cough syrup. c.f. *robo*.
From generic brands called "Tussin" after Robitussin[TM].

Tussin Toss (also *"tossin' the Tussin"*)
1) n The act of drinking cough syrup.

velvet
1) n DXM c.f. *blue velvet*.
Probably from the sensation of being wrapped up in velvet that some experience on DXM.

vibe c.f. *groove*.
1) n DXM.

worm, the (also *skinworm*)
1) n The sensation of having something (described as an "invisible worm") crawling beneath one's skin, typically on the arms, chest, or face; appears rarely with DXM use.

12.3.1 Non-American DXM Drug Slang

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I have a little bit of information on (modern) drug slang in Germany. Please forgive (and make me aware of) any t[illegible]. The following phrases are, according to one person, used among his group of DXM users. "Rentschler" refers to [illegible] manufacturer of the DXM capsule brand *tuss hustenstiller retard kapseln*.

- *Na, hast du mal wieder getusst?*
  "So, have you tussed the last time"?
- *Warst Du mal wieder auf Rentschler?*
  "Have you been on Rentschler again?"
- *Hast du gestern wieder gerentschlert?*
  "Have you Rentschlered yesterday?"

Other German DXM users refer to DXM As "Mega-Perls" (see above).

12.4 How do I Tell My Friends I'm Getting High off Cough Syrup?

Good question. Lots of people consider DXM to be a "second-class" drug, good only for people who can't get the real thing. Here's some things to try and point out:

- Heroin was originally marketed as a cough suppressant. Nobody's calling it a kiddie drug now!
- DXM is in the same drug class as PCP and ketamine ("Vitamin K" or "Special-K"), with an added stimulant effect functioning like that of Ritalin or cocaine. Oh goodie!
- DXM's recreational use potential has probably been purposefully hidden by the medical community. So not only do you get a drug, you also get conspiracy theory material as well!
- DXM may have been a popular psychedelic before LSD was.
- DXM targets five different receptor sites - that's five times the complexity of most drugs.
- So what if you puke from drinking cough syrup? Peyote can make you puke, too!
- DXM is a three-letter acronym just like PCP, LSD, DOB, DOI, and THC (not to mention FBI, CIA, NSA, FEMA - oops, sorry, that's four letters).
- It must be interesting, because some neuropharmacology geek (yours truly) has now spent over 3000 hours researching and writing a book about it.

Note: In response to one criticism about this section ... get a fucking sense of humor! Believe it or not, people do seem to trust you more when you show yourself to be a normal human being and not a dry, humorless paragon of virtue.

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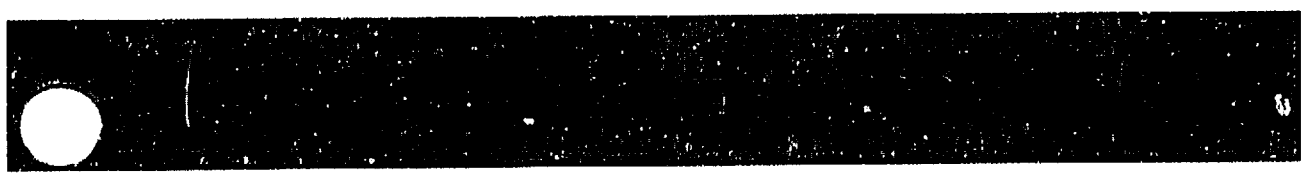

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13 Mixing DXM and Other Drugs

from the DXM FAQ
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Beware of mixing DXM and other drugs, legal or not. Any time you do, you risk an adverse reaction with your own physiology that cannot be predicted. Nonetheless, people have asked about it and here are the results from people who have combined DXM and other drugs. In addition to the sections below, you may wish to consult Section 14.4 to see what people have written about their experiences with DXM and other drugs.

13.1 Alcohol

Some users report that a small amount of alcohol (a beer or two) before the DXM can both enhance the trip and prevent some nausea. Alcohol following the DXM trip seems to be reduced in some, but not all, of its effects. Note that large doses of alcohol combined with DXM often cause prolonged vomiting (up to 2 hours!) Alcohol after the end of a high dosage DXM trip has been reported to temporarily bring back many of the dissociative effects (cannabis and nitrous oxide also do this). This seems possible up to five days after the DXM trip, depending on your metabolism and brain chemistry.

13.2 Barbiturates and Benzodiazepines

Barbiturates ("downers") include drugs like seconal and nembutal; benzodiazepines include drugs like diazepam

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(Valium™), Librium™, and other antianxiety drugs. Generally speaking most but not all prescribed sedatives, antianxiety drugs, and recreational "downers" fall into this category.

Some people have reported that combining DXM with a **low** dose of a benzodiazepine can prevent some of the more annoying side effects (mostly related to overstimulation, high blood pressure, and tachycardia). Clonazepam (Clonopin [tm]) in particular has been reported to have specific effects in combination with DXM, different from other benzodiazepines. These effects include enhanced CEV's (closed-eye visuals) and, of course, limiting or preventing sympathomimetic effects (high blood pressure and heart rate, sweating, etc.). I can't recommend this, and these drugs are of course prescription-only, but it doesn't seem to me that a **low** dose would be harmful. Just don't do it regularly.

I **strongly** suggest you avoid barbiturates, and be careful with benzodiazpeines; both barbiturates and benzodiazepines tend to be dangerous enough by themselves and are frequently fatal when combined with other depressants (such as alcohol).

13.3 Amphetamines and Other Psychostimulants

Y probably asking for high blood pressure problems, strokes, brain hemorrhages, and the like. While a few people enjoy this combination, most find it unpleasantly speedy anyway. Most who've tried it reported that DXM will potentiate other stimulants. Since DXM inhibits dopamine reuptake, combining it with a dopamine releasing agent (amphetamine or methamphetamine) will naturally produce a combined, synergistic effect. I'd suggesting avoiding this at all costs.

Combining DXM, a psychostimulant, and a monoamine oxidase inhibitor is a sure way to make your blood pressure skyrocket and will probably kill you (if you're lucky) or leave you with severe brain damage (if you aren't lucky).

13.4 Cannabis (Marijuana)

DXM and cannabis is a frequent combination, which most people seem to enjoy, at least at lower doses of DXM. High doses of DXM (third plateau and up) mixed with cannabis can be *very, very dissociative* and sometimes unpleasant. A few people have reported that cannabis with DXM makes them feel very stupid.

One user reported that 360mg DXM followed 3.5h later by "a bowl or two" produced a very profound, and unique, intoxication. Severe flanging of all sensory input was present, and there was an overall "vibration" feeling present in

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the muscles. With eyes closed, he could think fairly clearly, and solve simple and complex tasks much easier than on DXM or cannabis alone; however, with eyes open (or other sensory distraction) cognitive abilities deteriorated rapidly. M skills were possible only when performed automatically; any attempt to focus on them led to difficulties.

Several users have reported that cannabis and DXM generally "go well" together. Note that cannabis after the DXM trip is over seems to bring back some of the dissociative effects, much like alcohol and nitrous oxide.

DXM probably interacts with marijuana at a pharmacological level. Dissociatives decrease the analgesic response to THC (214) and downregulate THC receptors (218).

13.5 LSD, Psilocybin (Shrooms), and Other 5HT Hallucinogens

I've received a limited number (about 20) of reports of mixing DXM with 5HT hallucinogens, primarily LSD and mushrooms. While one person said this combination was "not recommended", most have had incredibly profound experiences. On the other hand, very few of these have said they would ever repeat the combination, as it was simply far too powerful and terrifying. One person told me that DXM helped him avoid unpleasant cognitive effects and "bad t ie might otherwise get from LSD alone. Regular use of DXM may alter the effects of LSD due to overall increase in 5HT binding (252) and decreased $5HT_2$ receptor binding (212).

A good description of the DXM + LSD experience was provided by one person:

> Anyways that day I had been up about 18 hours when I took the lsd. After doing some fingerpainting and noticing how the visuals were pretty good for only 1 hit and just having recently tripped I decided to give the dxm another whirl. So I took 300mg.
> At first I felt slightly out of it a bit drunk. As I sat in the chair however I began to feel like I was sinking deep within myself. It became very hard to focus on anything so I closed my eyes. Whew-wee what a mistake. The visuals were *intense* blinding lights, zooming, it was unlike anything I had ever seen. I opened my eyes and when they couldnt focus I began to feel horribly sick. So I went and threw up it lasted about 30 seconds and after I threw up (instantly) I began to feel incredibly fucked up. I was very depersonalized. I felt like I was nothing more than a dot inside my head. Focus on anything was next to impossible and my eyes began to shift a lot. The vertigo was immense if I looked at any repeating pattern. Enigma was playing on the stereo and it sounded so full and deep it was hard to listen to. I layed down and closed my eyes and began another rushing trip. This one was much more intenst than the first so intense that my brain began to feel very overloaded. I suddeny had to throw up again becase of the *music*; it was just too much to handle. At this point I felt incredibly horrible. My head felt like it was pulsating, as did my whole body. It was as though I was showering the room with excess energy. The music was turned off and I gained some composure. This time after thorwing up (just water) I felt wonderful. I relaxed and layed down again and then it began. The most wonderous experience of my life. There just are no words to describe the nenxt 4 or 5 hours. I would close my eyes and the visuals were so lifelike. It was like a waking dream where I had full control. Soemtimes it was hard to tell if my eyes were close or open. When they were open I was having mass hallucinations. Walls with paintings that werent there etc... It was just

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incredible...to sum up the pros and cons.
Dont do lsd+dxm if your not VERY stable. The possibility of a bad trip is easily much higher than the possibilty of a good one. Dont do dxm+lsd if you've ever had a bad trip due to repressed memories. Dont do dxm+lsd if your afraid of seeing wierd shit when you puke (if you puke on dxm) this I see as being extremely tramatic for a number of people. Dont do dxm+lsd if your worried about it. You will at time prolly feel like you are dying/or dead (the upside is you feel so content you dont really care).
Do dxm+lsd if you can take it and want the trip of your life. Quite simply I have never seen anything else that even came close to comparing.
Will I do it again? I doubt it. I achieved what I was looking for in the whole trip thing; complete and total fooling of my mind.

13.6 Opiates

One person says that small amounts of opiates tend to "mellow out" the DXM trip, and reduce the possibility for panic attacks or anxiety. Another user said opiates should only be taken after the peak of the DXM trip, because otherwise they would cancel each other out to some degree.

On the other hand, this may be a dangerous combination, and I'd recommend against it. Both DXM and opiates can depress respiration and high enough doses, and there might be a synergistic effect.

Recently, a new product has appeared on the streets containing heroin, scopolamine, dextromethorphan, cocaine, and thiamine. Called "Homicide" or "Super Buick", it presents extraordinary problems due to its high toxicity. Even worse, when naloxone is given for overdose, the toxicity of the other drugs can become apparent (371-372).

13.7 PCP and Ketamine

The few reports I have received have indicated that ketamine plus DXM was not much different from ketamine. One person said that a small dose of ketamine can boost the DXM experience by one plateau. I expect that most of DXM's particular effects on sigma receptors are overshadowed by ketamine's NMDA antagonism. Ketamine is a much more potent NMDA antagonist than DXM, and since they both compete for the same site, DXM isn't going to affect this r

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13.8 Nicotine

This is a combination I hadn't considered before, but which evidently is fairly interesting. Nicotine seems to vastly potentiate DXM's effects for some people, enough so that one user reported that one cigarette could floor him on a second plateau trip. Another user reported that nicotine helped him overcome some of the memory problems with higher doses of DXM, but tended to induce nausea.

On the other hand, several people have told me that DXM should be avoided if one smokes cigarettes regularly (even if you don't smoke during the trip), because of nausea, hot flashes, and other unpleasant interactions. This might be due to inhibition of MAO by cigarettes (378,379) and if so, cigarettes should be avoided.

13.9 Phenethylamines (MDMA, MDA, 2CB, etc)

I have very limited data on mixing these drugs with DXM. One person mixed DXM and 2CB ("bees") and had a wonderful experience:

> Ever since I first read D.M. Turner's excellent *Essential Psychedelic Guide* and saw his glowing reports on the combination of Ketamine and bees, I have had quite a hankering to try an entheogenic cocktail of that variety. Bees have been plentiful lately, but Ketamine is as hard as ever to come by for me. Recently I had an interesting idea - since DXM is relatively close chemically and experientially to K, as well as being cheap, legal, and easy to acquire, why not use it as a substitute in the combo?
>
> So the other night I took 300 mgs. of DXM in the form of Drixoral Cough Liquid Caps, a preparation that contains no other unwanted active ingredients like acetaminophen, guafinesen, or pseudoephedrine and has the added advantge of being low on sugars and syrups that can cause gatsric distress in large doses. This dose of DXM alone would not be sufficient to evoke a fully dissociative episode for me, but I decided to err on the side of caution as I usually do when trying a new mix. After an hour or so, I began to feel the euphoria that is my first alert with this particular material and took 20 mgs of bees. I was chatting on IRC at the time and within twenty minutes typing became much too complicated to deal with, so I lay down and relaxed into the trip.
>
> There were some uncomfortable somatic symptoms at first, such as a feeling of physical heaviness similar to that induced by alcohol, minor stomach upset, and hot flashes (which had me a little worried until I took my temperature and found it to be normal.) Fortunately, these passed quickly as my consciousness

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dissociated from my body. I began to feel as if my soul was a soaring kite that was connected to my physical form by only the thinnest etheral guide rope. Then my physical awareness seemingly vanished, and I found myself in a state that was nearly identical to the experience of Ketamine that I had on the two occasions I was lucky enough to acquire some. I felt that I reverted back to the ground of being, the original undifferentiated oneness, the primal monad. Everything was perfect, all was one, and it was me. Then something fantastic happened. I felt as though I was given an opportunity to experience the original creation process that produced the material universe. I saw/felt/percieved the monad make love to itself and give birth to what we know as the manifest cosmos. I **was** the monad making love and giving birth, and it felt incredible, like multiple orgasms of universal proportions. This was a very meaningful episode for me, because it seemed to afford a pointed insight into one of the main philosophical questions I've been thinking about for quite some time. The question was: why did the monad split in the first place? Why disturb that original pristine oneness at all? As I shivered and shook with the pleasure of the birthing process, the answer seemed very clear: simply for the joy of the **doing**, not because of any kind of expected result. The universe is a work in progress, not a finished product, and it is the **process** of creation that is most important.

That episode lasted maybe half an hour or so, and then I began to gradually regain my physical consciousness. I spent the rest of the trip in a lovely state that I can only describe in terms of post-coital glow on a cosmic scale accompanied by the lovely visuals that are characteristic of the bees. Near the end of the experience, I had the opportunity to smoke some salvia, and had the feeling of communing with the spirit of the plant. It felt great; very warm and comforting. Ska Maria definitely likes the bees, and she seems to like me too! I slept about four hours and awoke the next morning feeling reborn and refreshed, enjoying a quite delightful afterglow that lasted the entire day. I reccomend the combination of bees and dissociatives highly, and will most definitely be doing further exploration along these lines in the future when the opportunity presents itself.

13.10 Nootropics (Smart Drugs)

A few regular users of dimethylaminoethanol (DMAE), around 800mg per day, have reported that the regular use of DMAE prevents a lot of the memory and cognitive problems associated with DXM use, while still leaving the rest of its interesting effects. One user also reported that lecithin prevented some of the confusion associated with DXM.

A similar effect has been reported for piracetam. See also information on use of nootropics to limit hangover in Section 6.1.7.

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13.11 Miscellaneous Other Drugs

Several people have reported to me that nitrous oxide goes well with DXM, especially towards the end of the trip. This seems to be consistent with nitrous oxide's effects in combination with other hallucinogens. Specifically, nitrous oxide seems to intensely multiply the flanging, "stoning", and dissociative effects without added adverse side effects.

Do not under any circumstances use DXM with yohimbine or any other alpha-2 adrenergic antagonist. This combination could vastly potentiate the danger of Olney's lesions (see Section 6.3.1).

It might be a good idea to avoid tetrodotoxin, given DXM's sodium channel blocking ability. (This is a joke! No, don't go out and try zombie potion).

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14 DXM Experiences and Personal Reports

from the DXM FAQ
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This section covers various people's reports about their DXM use. All are given anonymously, sometimes with a pseudonym. Because I have literally hundreds of pages of data, I have chosen to present what I believe to be a representative sample. I fully admit there may be bias here, although I have tried to keep it to a minimum.

Note that I had a bit of a problem deciding how to sort this section. On the one hand, I wanted to sort by mg/kg; on the other hand, only about 20% of my reports list the subject's weight. So I settled on dosage, with mg/kg listed as well. If you see your experience listed here and I don't have your weight, feel free to tell me - just identify which one is yours, since I no longer have any original names or addresses.

Also, I divided the single experiences into first/second and third/fourth plateau trips based on certain elements which were present (or absent) in the descriptions. Sometimes this led to higher dosages in the first section than in the second, and sometimes the decision was difficult.

14.1 First and Second Plateau Experiences

14.1.1 Positive Experiences

W. A. (male, age 19, 110kg), 75mg (0.68mg/kg) + pseudoephedrine

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The entire bottle of children's DM, containing a total of 75mg of DXM, as well as pseudoephedrine (don't remember the amount), was drank over the course of about 45 minutes. The initial effect was a lightheaded, disassociated feeling. T ht patterns remained completely lucid and clear as ever. Very unusual perception of motion was also noticeable; it ... as if I was "gliding" around the room, rather than walking. Falling onto the floor into a pile of cushions was very very entertaining. No visual, or audio hallucinations or distortions were noticed. The effects set in around 1 hour after starting to drink the preparation (15 minutes after finishing the bottle). The effects were mainly emotional and physical, as previously stated. I'd heard that musical perception was altered, and I did notice that when listening to music, I really "got into it" (as with pot, but different), and I couldn't get the beat out of my head after turning it off. A friend, who is much smaller than I (5'11, 130lbs perhaps) experienced similar intensity and effects, even though he had taken the same dose as I did.

A slightly increased heart rate was also noted, as was a slight crawling skin feeling, but these were probably because of the pseudoephedrine.

Near the end of the experience, I got a horrid bloated gassy stomach ache, and spent the remainder of the 'trip' dealing with severe diarrhea. It wasn't pleasant. The friend who also did it, didn't experience these effects so it must have just been that my system can't handle the crap that makes up cough syrup (flavors, sugars, perhaps the pseudoephedrine). Or maybe I react badly to the DM itself. The entire experience lasted perhaps 6 hr.

Overall, somewhat pleasant and interesting, but nothing terribly spectacular or insightful. Planned on taking a higher dose the next time, to try for some actual hallucinogenic or psychedelic effects. It did almost feel as if I was nearing a threshold of some sort, sort of similar to a very low dose of LSD.

S ath (male), 240mg

Got ahold of 2 4-oz bottles of "Father John's Medicine"-10mg DXM per 5ml "dose" = 236mg per bottle. It took me nearly 10 minutes to down the first bottle-it was a thick black sludge that was supposed to be licorice but smelled (&tasted) much like FlyNap (that stuff at school that we use to temporarily knock out fruit-flies). Needless to say, I was already feeling nauseous and decided against trying to consume the second bottle. By about 45 minutes after consuming the liquid, I began to notice some unusual effects... the radio (I was listening to a talk show) began making weird almost flange-like effects... I stuttered somewhat when I tried to speak (I do not normally have this problem).

About an hour into this, I switched the radio over to an REM CD. The music was more beautiful than I have ever heard it before-each note was intense and vibrant. I stood up and discovered a floating, somewhat euphoric feeling with a little cloudiness of thought. These effects seem to be virtually identical to that of Vicodin (sp.?), a narcotic painkiller I had had prescribed for me following outpatient ear surgery last spring.

The nausea became extremely intense over the next several minutes, and I finally began vomiting violently into my trash can-however, almost IMMEDIATELY afterwards, I felt much, much better. My head felt big and swollen (not at all unpleasant, however) and the euphoria felt when walking around was exponentially more intense. Coordination seemed to be impaired-I tried playing "Tetris" on my computer only to find it impossible to think and act properly. I definitely would not want to drive in this condition.

After about four and a half hours, I began to come down gradually. No "crash" at all-I didn't even fall asleep (as I do with almost every other substance I've tried). By about six and a half hours, I was feeling no effects whatsoever and v le to continue with the rest of my day.

In short, I would try DXM again (just not in that vile toxic waste form). I'd recommend taking an meclizine antiemetic

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(e.g. Bonine or Dramamine II)-NOT, however, a dimenhydrinate one (e.g. Dramamine) as this causes drowsiness-to control the nausea.

M. T. (male), 250mg

I felt confident and tried a low dose (250mg). I loved it! Everything I read about it came true; music sounded "live", slight euphoria, etc. I did 250mg a few times before moving on to larger doses. Before long I had turned a few friends on to DXM.

B. D. (male) 250mg.

[I kept the original spelling and typing just to illustrate that DXM doesn't always improve one's typing skills.]

sorry abouyt not quoting, but i can't be bopthered. well, i'm currently on the tail enbd of a 250 mg dose of dxm, and fuck i feel *GOOD*. i can't imagine it being possible to have a bad trip on this shit.

oh, man, i feel so good.

well, if i can get this posted withougth screwing up roayally i will ta leastr remewmber it when i read this, and probably regret it...it's neat... ity's like being in a rpoom, with no lightsa except a whole bunch of tv's, and each tv is a different se[illegible]y input, and i have a few outputs toom but i can only play with ione atta time. so i cant think vetry well. oh, plese f[illegible]me, i am too happy to care. having tried this, i would definately reccomend it.

i walked through the woods for 2 hours with a freibnd who aslo tried dxm for the first time... we had such fun, oh damn i can't see the keyboard anymore am i typing still? oh, i can see the screen so i am. i am going away. TRY DXM, IT'S FUN.

J. W. (male), 300mg

Hello all. 2 hours and 8 minutes ago I ingested 300 mg of DXM, my first trip on anything. I've never done acid or anything like that. This is the most incredible thing I've ever experienced. Based on what I've read, I think I must be peaking right now. This is simply incredible. I can't even explain what's happening to me. I can't stay focused on anything, my mind is racing, and I feel totally relaxed. I can feel my body swaying back and forth to the music (which DOES sound absolutely incredible on DXM).

Okay now its 1:19 PM.... 3 hours and 25 minutes since I took 300mg of DXM. I have felt a little sick occasionally, and have itched tremendously on certain areas of my body for the past hour or so. There is a huge red rash on my chest that itches incredibly, almost like a sunburn. I have no idea what it is. I watched some television and that experience was very weird. I didn't like it at all. The only thing on TV was "The Golden Girls" which I find funny sober... It seemed very dumb and boring to me on this DXM. Please realize that the DXM is still obviously going strong in my body and my message may reflect it to some extent. However, since some people have expressed interest in reading other p[illegible]'s experiences (and I love to read other people's experiences myself), I will now try to describe exactly what is g[illegible]on, so long as I can remain cognitive. Instead of trying to remember what it was like and post it later, I will try to post it as it happens. I'll devote the next 45 minutes to writing this message...

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Both of my eyes feel very puffy, like I get when I'm around cats. My head spins occasionally, and the world around me seems to jitter every time I move my head. While laying down on my bed listening to music, everything was fine. In f find that I am almost perfectly normal (feeling, not thinking) when I'm laying down. As soon as I get up and w.. around, things get crazy. The more I move my head or change my sense of balance, the stranger things get. Neither of my eyes will focus on the same object. I have lost almost all of my 3-dimensional perception. My right eye stares straight ahead and so does my left. They no longer converge on an object to present my brain with a 3d image. Everything is flat. This is only when I let them go, however. I can control my vision. Perhaps with greater dosages I will not have this luxury <G>

Keep in mind, please, that this is my first trip-at only 300mg. For $.25 I got 300mg of pure DXM and I'd just like to tell you that it has been nothing short of incredible. I read articles about people smoking pot about 2 hours after taking DXM to get both drugs to peak at the same time... I didn't mix anything with DXM (yet).

Now its 1:24 PM and I have no idea how long this is gonna last. I think I peaked about 2.5 hours into the experience, that would be maybe an hour and a half ago. The peak was simply unexplainable. By far one of the most incredible experiences of my life. There was, however, nothing 'profound' about it. I didn't get any feelings of superiority or godlikeness, or anything like that. Perhaps it was the low dosage. I'm going to go pick up 750 mg's when I can finally drive <G> and take that sometime later this week. Having never experimented with many drugs (I haven't done all that many drugs like some of you veterans <G>) I must say that DXM is probably the strangest, most interesting thing I've done in my life. There's just no easy way to explain it. On this low dosage, I didn't get any "pink elephants." However, with my home stereo playing loudly, the bass shook my head (which was laying on a pillow which would obviously absorb the bass) and made the entire room shake. As I said, the bass could not have physically made my head move as I was on a pillow. It was more likely an affect of the drug/my eyes/the music. Music does certainly sound incredible with DXM.

I. 7 now. I've been listening to the Natural Born Killers soundtrack, Tori Amos' Under the Pink and Little Earthquakes, and "Chill Out," a ambient 2-disc set. I have also listened to all of Yanni's CD's in the past few hours. The music is simply incredible. I paged a friend of mine and she called me back. I told her about what I had done (this was about an hour ago when the peak was beginning to end) and we talked for a while. Quite an interesting conversation. She and her friend are going to try DXM with me next time I do it. I'm going to take probably 600 mg or so and they will get 300mg each. We'll see how it all turns out. Well now its 1:43 and it seems like I've been sitting here for hours. Time looses its meaning with DXM. Even in this low dosage, I guess. I could have been sitting here for a day and would never have known it.

Anyway, my brother and his friends are over here. They don't know what I've done. I find that when I smoke pot I tend to be more withdrawn and afraid of people. They just walked into my room just now and I was not at all alarmed. Personal interaction is very easy yet somehow complex. I have not experienced the "dizzy" feelings everyone always talks about. Perhaps, again, it is the low dosage.

I have heard that, after taking large dosages of DXM, people have experienced gas for the next few days. My entire body feels very warm and flush, but my pelvic area seems particularly warm. I have not "messed myself" or anything of the like, but I can hear my stomach growling constantly. My intestines must be doing something. Perhaps I should have taken the DXM with orange juice or something similar to help with the pH differences...

1:51 now. I'm wondering how long this stupid thing will end up being. My apologies in advance if I begin to ramble on and on. A while ago I made some cappuccino. I dipped my finger in the boiling water and felt NOTHING. I only kept it in for a few seconds because I cognitively knew that, even though I couldn't feel it, my skin was indeed burning. DXM c ly alters your perception and consciousness. I've read articles about people staring at trees, talking to dogs, th g they were things other than human, etc. on DXM. This whole time I have not forgotten than I am sitting here in my room, listening to my CD player, etc. I never had any thoughts of being something other than human or seen any wild hallucinations. The dosage is again probably to blame.

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1:55 now, I'll write until 2:00. To wrap up, I guess I'll talk about how I felt when I first took it. I was not really nervous or concerned. I have spent 3 months researching DXM. I always research something before I try it. When I finally took a pills, I grew impatient quickly. I had eaten about 45 minutes before, so I think that had something to do with how long it took to take affect. About 1 hour 20 minutes after I took the pills I began to definitely feel something. If there is anyone out there thinking of trying DXM, I suggest this: research it until _you_ feel you know enough about it. Talk to people who have done it. Read the FAQs, etc. If some guy came up to me on the street and said "There are 10 DXM tabs here. Take them." I would have totally freaked out. I personally need to know _everything_ about what I'm considering trying before I try it. Better safe than sorry, I guess.

Well its 2:00 now and I apologize for the length of this thing. I hope you all find at least something here useful or entertaining, as I don't want to waste bandwidth.

AN148627 (male, 73kg), 300mg (4.1mg/kg)

OK, I'll do that thing. Lately I've become a big fan of low-dosage (300 mg, I weigh 160 lb., and have a very low threshold for every drug I've ever tried) DXM trips. I guess "trip" isn't quite the right word...at that dosage, it's more like a buzz, admittedly a buzz with interesting cognitive effects.

Here is a log from a recent 300 mg experience:

3:30 - 4:00 PM - Took 10 Drixoral cough caps while reading alt.drugs. I used the timer on my watch to give me a beep every 3 minutes. At each beep, I took a cap, with water. This was about two hours after a light lunch (a 6" veggie & cheese sub from Subway).

4:45 - Began to feel a bit dizzy. Noticed a tendency to smile at nothing.

5:15 - Definitely feeling a buzz. I played a computer game for 15 minutes. When I stood up, I practically launched myself out of my chair! My limbs felt very light. I felt like I could jump up and hit my head on the ceiling (though I didn't...I was also feeling very relaxed.)

6:00 - Had dinner. Ate *very* slowly, and about half the usual amount. Talked to my wife at great length about exponential growth (I think she was laughing at me).

During this whole period (5:30 till I went to bed), I felt my thoughts frequently "spinning off." Like I would be thinking about one thing, and it would lead to a complicated spin-off, that in turn would lead to another spin-off etc. I had a vision involving mathematical processes. Hmmm, how to explain? Consider a convergent infinite sum (like 1/i^2, for I running from 1 to infinity). The sum tells you to add a term, add another term, add another and another and another, forever. But instead, you can just "do the sum" and get the answer (2, in this case). By this act of abstraction, you short circuit the process of infinitely adding terms. So I imagined doing the same with the act of abstraction itself. This leads to an infinite series of abstractions of abstractions. So do the same to that one! And so forth... I guess you had to be there...

7:00 - 8:00 - While my wife put the kids to bed, I lay down on the floor with the headphones, listening to Counting Crows, Dire Straits, Koyaanisqatsi, and Brandenburg concertos. Really got into it. As has frequently been noted on alt.drugs, music is greatly enhanced by DXM.

8:00 - 9:00 - Played a 2-player computer game with my wife (Oxyd). We had a great time!

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9:00 - Smoked a bowl. At first it seemed to cloud up my thoughts, but later I felt even better than before. Watched some TV, but couldn't handle the raw stupidity.

9:[illegible] - Took a hot shower. Felt great. Afterwards, very relaxed. Talked with my wife for about an hour, then just lay down on the couch with my eyes closed.

12:00 - Went to bed, slept great.

That was it. Never felt any nausea. The next day I felt fine, the effects were completely gone.

J. R. (male, 60kg) + friend (male), 300mg each (J. R. 5mg/kg; friend unknown)

10:03 Both: Took 300mg(10 capsules) each of Drixoral Cough Liquid Caps... might have been a bit much for a first time try, but we were feeling daring...(and we wanted it to be good) :)...

10:47 Both: Think we're starting to get a general 'nice' feeling

10:57 J.: Colors seem to be getting brighter. Listening to Nirvana's Bleach album, music seems kind of 'thin' but it's pretty easy to get into.

11:16 J.: Colors really brightening.

1[illegible] J.: Getting into it... K. doesn't seem to be having much fun yet..

11:53 Both: Went outside to have a smoke and walk around.

12:07 Both: came back in, J.: Things seemed to really be setting in. I first noticed it when I walked back up the stairs to come back into the house. I felt very bouncy, as if I were going to keep floating up... I also felt it when I stood up from a chair. Around this time I also started to notice things bouncing around a bit when I tried to fix my eyes on them.

12:20 I'm definitely getting weird, K. still isn't getting anything...

12:26 Turned off the lights and the monitor, stopped writing this log as things happened. Listened to music in the dark and had a pretty good time singing along. Now I popped in Nirvana's Nevermind. It was more melodic and cooler to listen to. I thought the more psychedelic parts of the music would be more stimulating, but it was really basic song structure and melody that got me going... Time started to get distorted. Couldn't keep my eyes from wandering.

1:00(or so) J.: Time getting really distorted. Songs seem to last for hours, still nothing really for K.. We just lied around and listened...

Things really hit around 1:30... All I can say is that I was FUCKED *UP*!!! My memory from then on is really screwed up, but I remember realizing just how fried I was when I found myself sitting up on the bed with my legs shaking, and asking K. if they were shaking. He told me to stop shaking them (By now he seemed pretty fried too) and when I stopped (it was fairly hard, I couldn't quite remember 'how' to). It felt weird stopping, so I just let them shake (They stopped when I laid back down). Standing up was hard and so was talking (although that didn't stop me). Just l[illegible] down, talking and listening was actually quite enjoyable.

Things I noticed: These things are DANGEROUS! I almost choked trying to swallow one of the pills :) (Really though,

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Make sure you have something to wash them down with). We were VERY heavily stoned. I remember K. remarking 'This is what retarded people must feel like' :). I just couldn't think straight at all...

I seemed to instantly verbalize most of my thoughts. According to K., I talked almost the whole time about absolutely nothing... I wonder if I would have talked so much if there weren't anyone there with me...I found myself contradicting myself often. "I want to try and go outside. No I don't." I also said completely senseless things. He would ask me a question like "Do you want to try and stand up?" and I'd say something like "No, because you'll try to kill me, and the windows can't handle that." Weird...

Part of our talking was telling each other all of our deepest darkest secrets. I can only remember a few of the milder ones, but I know I told him things about myself I wouldn't tell ANYONE normally... Luckily our memories of the experience are very bad, and many of the things we told each other were absolute hogwash (I distinctly remember "Hey man, I gotta tell you something. I have sex with furniture" "That's OK man, I have sex with guitars..."). The next day however, we both felt like a tremendous weight had been taken off of our chest, and I think we're much better friends.

I didn't seem to hallucinate as I thought I would. In fact, I really couldn't imagine anything visual at all. When I closed my eyes, I just saw kind of a slightly more intense normal-closed-eye pattern, and I just felt a general 'swirling' feeling in my mind. K., however, reported seeing Sonic the Hedgehog come running at him a few times. :)

I noticed my body seemed generally numbed, and severely in my mouth and face. The numbing of my mouth added to the difficulty of talking, and I think I had cottonmouth, but it might have just been the numbness.

At one point, for some reason I told K. to make sure all of his fingers were still on because DXM can me bad for them. He started nervously tugging on them to see if they were loose. I really freaked him out :-).

N ig around and dancing was REALLY cool. I was very disoriented and had a bit of a hard time standing up, but I didn't get motion sick or anything, and moving felt great. Looking back, I'm glad nobody sober was watching me dance, I pretty much made a fool of myself :)...

For part of the most intense part of the trip I seemed to be just 'Out of my head', Like the rest of my mind just wandered off and left me to just kinda lay there and stare at things. I also had a few 'waking up' experiences. It's hard to explain, but it was if I were dreaming, and then woke up to find things exactly as they were in the dream.

I only got nauseous twice for short periods, and it was very mild.

Sometime around 4:00, Both of us decided to go so sleep (I wasn't really tired, it was a decision we just kinda made) No weird dreams or anything... The next day, I didn't feel down after the trip, probably because I was still feeling the effects quite a bit. My memory wasn't doing too good, I felt mildly stoned, and I still got that funny feeling whenever I got up.

AN165416 (male). 300mg + alcohol

Tonight I took 300mg of DXM after getting drunk and I really liked it. I am sick and probably have the worst situation for having a "bad trip", if I had dropped acid I definitely would have lost it and felt like shit all night. But I got drunk and took 10 Drixoral cough caps and I really enjoyed the whole thing, sickness and all. At first I was nauseous and t up a couple of times but it was very painless and left me with a feeling of relief that was very pleasurable. Then I la own and listened to music for awhile as it kicked in and the only way to describe it was as a religious experience. It was *awesome*. For the next few hours I was restless and I walked around for awhile and just walking around was

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fun. Feeling no pain, pretty much feeling *nothing* was just the effect I was looking for. I had to take a shit a couple of times with the flu I have but it was not really unpleasant even though I'm sick (get it?).

No.. I'm starting to come down I guess, and I would have to say that DXM is good for those who are looking for a kind of narcotic type high but with some of the weird effects of the hallucinogenic type drugs. I think its especially good for those who want to get more than pot has to offer but for whom acid makes them anxious. At least for me DXM doesn't have that "on edge" feeling that acid and shrooms have. Anyway, I'm hungry and I've gotta get something in my stomach. Later.

Anonymous (male, age 16, 80kg). 350mg (4.4mg/kg) + cannabis

Although generally positive, this user had an exceptionally long (3 day) hangover which was definitely not an expected or pleasant experience.

Recently I decided to experiment with DXM as a recreational drug. Although the initial experience was not negative, I am now becoming a bit frightened. You see, it has been more than 54 hours since I took the DXM, and yet I am still feeling the effects. I'll get into the details of how I feel right now at the end of this article, let me tell you that I am still feeling slightly light-headed and numb.

Before I relate to you my story, however, let me tell you a bit about myself. I am 16 years old, white, male, and I weigh about 80 kg (180 lb.). I'm a good student, a junior in high school with a GPA of 3.8 and in many honors/AP classes. I have experimented with marijuana and LSD in the past. I'm not currently on any sort of medication.

Now my story: (all names are changed to protect the guilty.)

Wednesday, March 29th

3:00 PM: School gets out. After reading about dextromethorphan in the DXM FAQ and some positive stories from someone I met up in the city, I decided to go out to Long's drugs and buy some Drixoral gelcaps. I told my friend (who will now be known as Andy) about DXM, and he was interested, too. I drove Andy and myself over to Longs, where we split the cost of a 20 pack of Drixoral Cough. We then drove back to Andy's house. Andy actually lives with a foster family. Back at the house, Andy's foster brother Sam was home with a female friend named Pam. We told Sam about the Drixoral, but he scoffed at us for "stooping" to the level of cough syrup. This from a guy who used to get high from Vick's inhalers.

4:30 PM: Since nothing important is happening at school the next day, we decide to each take 5 caplets. That's 150 mg DXM, or 1.875 mg/kg. Andy weighs less than I do. Regardless, we figured this to be a rather tame dosage to take, so we swallowed the caplets with water and went outside with Sam and Pam. We talked, listened to music, etc.

5:15 PM: We don't feel any affects. We get the idea that this isn't going to work at all (we had a failed Morning Glory experience 5 days earlier) so we each take 5 more gelcaps, finishing off the box. We have now taken a total of 300 mg DXM, which for me is 3.75 mg/kg. Discouraged, we recall that pot is supposed to help enhance the effects of DXM. We get out our bong, and scrape out the resin so we can smoke it. Sam has some shake left in the bottom of a suede leather bag, so we put it along with the scraped off resin in cigarette paper and stick the whole wad in the bowl.

5 M: All four of us smoke out, getting quite pleasantly stoned. Andy and I have given up on the DXM, although we did notice that neither of us coughed at all when we smoked, unlike Sam and Pam. It truly is a good cough suppressant.

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7:00 PM: We've been eating and watching TV for a bit, but nothing is on. We get up. Andy and I look at each other. We don't feel stoned. We feel something more. We go upstairs to Sam's room and listen to some music. Andy and I feel g Really good. Sam and Pam go out to have a walk. My memory of the evening begins to get fuzzy

7:30 PM: I call my house and leave a message on the machine that I won't be coming home at 8, but that I'll be home at 10.

8:00 PM: Music feels really good. I'm seeing hallucinations now. The neat part about them is that I can control them, something I didn't experience on LSD. I've also lost my appetite. I try to force down a cookie, but I can't. I'm very thirsty, however. I drink some water.

8:30 PM: I'm completely delirious by now. I feel insanely good, and I'm getting a definite visual flanging effect. We both feel feverish. I also feel vasoconstricted in my lips and hands. Music is losing it's euphoric quality, but movement is great. Andy and I go out for a walk in the hills. Depth perception is gone, and I am getting double vision. Focusing on things is difficult.

9:45 PM: We get back to the house, and I need to go home, as Sam's mother has returned home. As usual, I am stuck driving in my VW Bug back home. The drive in uneventful. I don't run any stop signs, I don't see any cops, and I go the speed limit.

10:00 PM: I got home. I am able to talk with my father successfully. I am still very thirsty, so I drink a couple more glasses of water. I brush my teeth and at 10:30 I go to bed.

Thursday, March 30

6. M: I haven't slept a wink. I am still tripping. Over the past 8 hours I have tossed and turned, feeling very good, although a bit anxious. Getting up and walking around every so often has felt nice. I enjoy some more hallucinations. Then I realize that I'm going to have to drive to school still under the effects of DXM. I'm a bit worried now, but guess I'm just experiencing the "hangover."

6:45 AM: I take a shower. Neat experience. Felt weird.

7:00 AM: I go to the kitchen to get breakfast. My parents are up. I attempt to talk with them, but I have trouble forming sentences. I shut up. I make myself half a quesadilla, and force down about half of it. I have no appetite, but I don't want to come down not having eaten anything. I drink some more water.

7:30 AM: I drive to school. Pretty easy, although I still have a hard time focusing on things directly.

8:00 AM: School begins. I'm still light-headed and feeling "good." I want it to stop. I take a math quiz on limits. I feel like I'm taking forever to do it, but I finish in less than 10 minutes (about 10 minutes before everyone else.) My perception of time is still a little strange.

10:00 AM: I confer with Andy. He is no longer feeling any effects. We also come to believe that I felt it more strongly than he did the night before. My eyes still move slightly independently.

3:00 PM: I return home from school. I'm still feeling strange.

3 M: I finally take a nap, the first sleep I've gotten in 33 hours.

5:30 PM: I wake up. I feel much better. My vision is totally normal again. I call Andy up, let him know I'm okay.

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6:30 PM: Dinner. I interact with parents again and babble a bit.

9[illegible]M: I make brownies. It's a lot of fun. I'm feeling the effects of DXM a little stronger again. I'm getting a little fr[illegible]oned that my trip has gone for over 24 hours, so I call Andy up. We talk. I continue to see slight hallucinations in the dark (breathing walls, shifting shadows.)

10:45 PM: I've been watching TV with my Mom for a while, and now I'm beginning to feel a little stranger. I'm twitching a bit. Having things touch me feels very good.

11:15 PM: In bed. Fatigued, but not sleepy. I end up writing in bed for about two hours. I'm in a state of what I would call ecstasy. The sheets on my skin feel unbelievable good. Certain parts of me feel numb, however, especially around my genitals. Hallucinations have stopped.

Friday, March 31

1:45 AM: This is the last time I remember looking at the clock for a while.

3:30 AM: I wake up for a bit. I've stopped writhing.

7:30 AM: My dad comes in, wakes me up. I'm late, having slept through my alarm clock.

8:00 AM: I just make it to school on time. I'm very jittery. I blame all my remaining symptoms on lack of sleep - I've gotten about 5 hours of sleep in the past 48. I stutter a bit when I speak. My hands shake.

1[illegible] PM: I get progressively worse as the day goes on. I'm having troubles coping with people. I go home.

2:00 PM: I nap until 5:00. I feel slightly better.

This all leads up to me now. I've been typing this up for about an hour. I started at 11:15 PM. Here's my current situation. I am tired and woozy. I feel numbish all over - not totally number, and I still feel pain (pinching) just fine, but gently touching and squeezing of my body feels strange. I am developing a headache, but I'm loathe to take any medication right now. My hair is still sensitive to touch (scalp hair, arm hair, etc.) but the actual skin underneath isn't. The effect is most pronounced in my scalp skin, forehead, nose, face, arms and genitals. I still have feeling in all these places, it is just a different type of "feel", but it is different. I still feel pain normally, however.

Worst of all, I'm getting sort of used to feeling this way. I begin to forget that I'm not quite all here. Then I'll realize that I don't feel like I normally do.

I apologize if this gets harder to read as my article continues. I'm finding it more and more difficult to type. Also I am having trouble concentrating. I going to go to sleep.

I didn't get a chance to send this off last night. It is now 6:30 PM Saturday, and I'm feeling better. I'm still lightheaded and slightly numb, however.

Wow, a 72 hour "trip." I wasn't expecting this.

Ra[illegible]olnikov (male), 350mg

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[Note: this experience seems typical of day-time DXM trips. Most people's DXM experiences have occurred at night.]

I[illegible]ne 350mg during the day (before a lecture). What I noticed was that everything was pretty bright, I felt a great bu[illegible], and I was tremendously relaxed. Since I could see everything, the feeling of disjointed limbs was pretty intense, too. If you have roboed enough, I say go for it. I can pass for sober at this level easily, too, so it's safe to do in public. But YMMV.

J. W. (male), 360mg

I tried my first robodose this Friday. I went up to Walmart's and bought 8oz of Vicks 44. I was planning on doing it with a friend, but right after I had downed about 2oz(of the 4 that I did) a girl called and asked me on a date.

Well, I asked my friend that I was dosing with if it would be all right if I ditched him. He said it was fine(knowing that I don't get too many dates, especially good looking ones). I finished off the other 2 oz, then I met her at a smoking hall. We sat around and talked awhile, I told her that I was drugged and that I may not be completely coherent throughout the night ;)

We couldn't find a movie to watch, so we went back to my place(she was driving, obviously) and talked a bit more. I was just beginning to feel the effects when we were talking at my house. (The initial were having trouble walking, and a slight distortion in background noise) During when we talked, I had "Indiffence" by Pearl Jam on... the music felt great, it just ran through my body. My whole body and mind felt as if they were new, like I was five years old again. I actually managed to hold a decent conversation.

I [illegible] to put in The Wall (movie) by Pink Floyd. We sat back on my bed and watched it, this is when the visual distortions began to come on. At first there were slight trails, then there were waves, like the fabric of the universe was flowing. At about "Another Brick in the Wall part 3" I couldn't get both my eyes in sync, one looked normal, the other was rotated off at 45'. By the end of The Wall, the effects were lessening, and I was still feeling good, no hard come down. She took me to get my car(I felt as if I could drive now), and we went back to her place. We sat down on her bed and talked for another 4 hours. A really good date, and a very good trip. In the morning, I felt fresh, a little tired because of only getting 3 hours of sleep, but no cotton mouth, no hang over.

Unfortunately, my friend, who I ditched :(, went to a party and started puking. But he understood(although he says he'll never robodose again ;) I would recommend robodosing to anyone who can hold down the syrup...I think it was the best trip in my life.

Derf (male, age 21). 360mg + cannabis

I've posted a few DXM experiences a while back, and recently had another... every time I think I have this drug figured out, something REALLY odd happens! This time, it started at a friends house where we all smoked a little pot. After that, I went home and ate 12 Drixorals. (good thing that's all I had). I've experimented with a lot more than this, but I didn't feel like going to get more caps! Anyway, after the caps started working, my earlier high had settled into a really mellow feeling.

W[illegible] the DXM peaked, the most I can remember is laying on my bed thinking "wow, that's odd how I can still move m[illegible]s even though they aren't attached to my body anymore!" This was WAY cool and didn't bother me in the slightest bit at the time. I was totally convinced that my body had separated into 2 parts, but I was amazed that I could still control them both. I was laying there for a loooong time just wiggling my feet and stuff just because it seemed so

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strange!!

C han that and one other incident which I'll describe later, the trip was just your standard flying around and stuff. The other weird thing that happened to me was when I was just sitting and listening to some pink floyd. All of a sudden, there was a lot of confusion in my mind of what I was seeing, and what I was imagining. I've always been able to pretty much distinguish the two before. this time, it felt a lot more like an acid trip than usual. It felt like I discovered another set of "eyes" somewhere just above my real eyes, and that these eyes were looking out at a different reality. Once I straightened that out in my mind, I could switch back and forth!

When I switched to the new reality, I remember at one point being confused as to which was actually my original reality. I couldn't remember whether I was sitting at home or standing in this long hallway. that's about all I can remember tho. =(

Derf (male, age 21), 420mg

I dunno if anyone has had similar experiences, but I started thinking ... when I'm on a trip, I have a life in that reality. when the trip is over and that reality disappears, that life must die, right? So... then I started thinking about what if my life as I know it now is only a similar sort of occurrence, then what will happen to me when this "trip" is over? Hmm.... then I started thinking that it would be possible for me to be the only person who is actually "real" in my reality, and that anyone and everything else is just produced by my thoughts. This was a GREAT part of the trip... I felt like I was a god. in fact... Later on I created a reality for a small population of beings, then destroyed it... well, just because I could. =)

Derf (male, age 21), 420mg

Well, here goes my weekly DXM trip report! hehehehee... this one was pretty boring.(420mg) it started getting good around 2:30am and I was already REALLY tired, so I didn't get a lot of good visuals like I usually do. Anyone else ever have this happen??? But the one cool thing that I remember from last night was the conversation with my friends ducks. Yeah, sounds odd... but these ducks convinced me that they were the keepers of time or something to that effect, and that they could control time itself. I remember chatting to these ducks at great length in my mind.

Derf (male, age 21), 420mg

Well, I had recently posted an article stating that my most recent DXM trip was practically uneventful... I think I spoke too soon! Over the past few days, I've slowly began to remember more and more of it! Now that I'm able to recall a few strange new experiences, I'll try to describe them.

This is definitely a new feeling for me on a DXM trip... I remember at one point I found myself living out one of my memories of when I was 5 years old and staying at my grandparents house. I remember thinking I was actually there again. I was outside on a bright, clear, summer day riding my tricycle with a neighbor girl while my grandmother was watching me. This was a really short memory, but it made me feel great being there again since my grandmother died a 2 years after this. (I'm 21 now) for some reason, I felt like the period of time while I was tripping was linked to t le period of my memory... that's the only way I can describe what it felt like immediately after living through the memory again.

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D. (male). 560mg

Hmmmm so far the max dosage I've taken has been 560mg (yesterday), and I think I knew who I was . . but it got really strange. Having downed a bottle of Formula 44, I put some Front 242 into my walkman (which I listened to continually until dark when I switched to White Zombie) and just took a long walk. As I walked down the trail near my house I began to pace my walk to the beat of the song, snap my fingers, do little spins on the road, none of which I normally don't do (no shit), but it just felt so good to move. And when I think my trip was peaking I saw/felt something invisible, yet incredibly large and fast, moving around me in the forest. Very intense. So much more than an acid smurf, I felt as though it WAS the forest, trying to contact me.

D. M. (male). 600mg

I started my journey about 8pm. Finished the pills in a span of about 30 minutes. About 30-45 minutes later, I started feeling the familiar effects of drowsiness. I decided that it would be best to get out and do something before I fell asleep and wasted my time. It was about 9:00, so I went to my favorite alternative club where there was an awesome "mind candy" band called Mindseye playing. There weren't more than 20 people in the club including the two bands that were playing. I just kicked back in a booth, closed my eyes, and went on an internal trip that lasted at least 45 minutes, although it felt like hours.

I had a sensation of moving into a higher realm of thought. I was so focused on the music that it became a part of my consciousness and my being. Opening my eyes just became a letdown because it reminded me that I was in reality. :) I just closed them again and enjoyed the phosphenes that were running rampant through my brain. The only part I didn't like was the feeling of being in a Doom game without the monsters. I felt like I was running through the corridors and riding the elevators. Oh, well. Nobody promised that it would be COMPLETELY enjoyable.

Anyway, after the set, I went to the bar to order a Miller Lite. The barkeep said that they didn't have Miller Lite. I asked for Coors Light. He said he didn't have Coors Light. [blank stare with severely dilated pupils] "What light beers do you have?" "Lite." "Lite?" "Lite." "Lemme have that, then" "$1.50" ("Hey, great price", I thought) It was Miller Lite. Oh, well. It felt like I was arguing for 30 minutes. Gawd, I hate interacting with people in that condition.

I staggered back to my booth (at least it FELT like staggering ... it felt REALLY weird to walk) and sipped my beer while watching the band take down their equipment. They looked like a bunch of worker bees from my perspective, and is was really interesting to watch. Drinking was an unusual experience, too. It was like the first time I had ever drunk anything. All my movements were very slow, methodical, and calculated.

After I finished my beer, I went down to a techno club I had been meaning to visit. It was about midnight. I know that this is a big lapse in time. I guess I wasted 2 1/2 hours in that bar listening to the jukebox and watching the band. It was only 4 blocks, but the way my legs were moving, it felt like I was walking stiff-legged the whole way. Fortunately, it was a slow night on my city's version of Bourbon St., and I only passed about 5 people on the way.

The doorman was the next big hurdle. Actually, I managed to keep myself fairly composed. He warned me that it was kinda slow, and I went into a repeat of the beer discussion. "Slow?" "Slow." "Okay." (trying to avoid giving myself away, even though my pupils filled my eyeballs) I handed him the two bucks he asked for and walked in. I found an empty couch and plopped down. It was heavily padded and had a low back. Perfect for slouching. The DJ was playing a fantastic mix of techno and classic rock. As the night wore on, she was playing almost constant techno. They have a light show that is really something to be seen. The dance floor is surrounded by mirrors that reflect the blue lights from the bar and make it look like a cityscape from the year 2020. VERY impressive in my condition.

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The only times I got up were to go to the john twice and to the bar once for water. Walking got stranger and stranger. I think I was having trouble keeping my balance, but I don't remember staggering. The worst part was the feeling that I was choking on my uvula. My mouth felt dry, and water wasn't helping. It must have been the anesthetic effects of D..M. I stayed there for two hours in the same spot only moving the three times I mentioned. I was still not bored, but I figured that since it was 2am, it was about time to get home. This may have been a mistake. The streetlights had started tracing, and the blinking lights were playing hell on my perception.

In retrospect, I probably shouldn't have driven home, but I was broke, so a cab was out of the question, and there was no way I could have sobered up. I didn't feel drunk. It just felt like all my surroundings were foreign. I paid extra-close attention to my driving, but still nearly jumped out of my skin at the sight of police. I got home in one piece and fell asleep to the mellow sounds of Pink Floyd's Ummagumma disc 2.

I woke up around 9:30am, fully alert. Checked my eyes. Fully dilated. Made an excuse to get out of the house, wearing shades. Went to see a movie with a friend, which was pretty fun. I was still feeling a bit weird. The dark theater helped me relax. Got out of the movie and went home. My eyes were normal by this time, although I still felt a little strange. That feeling lasted until about 7pm. So the brunt of the trip lasted about 12 hours and the after-effects lasted another 11. WOW!

Anonymous (male). 600mg

I had just got home from work and decided to do DXM, so I took about 600mg and went downstairs and turned on the radio to wait for it to begin. Well, I guess what happened next is I fell asleep before I started tripping. Boy, about 3-4 hours later I woke up from having the most incredible dreams/hallucinations ever! The best part was that the dreams were under my control {even the really funky ones}. While dreaming, I had started to make my own, and have fun with the ~normal~ ones. They were very imaginative, creative, and about the most visually clear dreams I have ever had. And what is even better, the music on the radio, influenced my later dreams so that the theme of the song was sometimes the visual side of the dream I was having.

Well anyway, I later found out by experimenting, that if you choose songs with good themes or stories in them you could almost live them while they sang. I find that to be a very wonderful side of DXM, I can not wait until next time.

AN172244 (male, age 23, 82kg). 720mg (8.8mg/kg)

I felt heavily stoned. It was hard to track objects with my eyes, and I often had double vision. Objects looked far away, but not out of proportion (e.g. the small TV a few feet away looked like a HUGE TV many feet away). Walking was difficult-I felt like a robot. I had preloaded my 5 disc changer (Pink Floyd Animals, Dark Side, Beethoven Sym #9, Shostakovich #5, and Electric Ladyland). Laid on my couch w/ a good pair of headphones, and only the light of the Xmas tree, and entered another world. The music totally pulled me in, I could no longer feel my body or the headphones, I felt like I was in some strange video game, flying over computer generated terrain. I often felt like I was in a huge concert hall listening to the music come from all around me. I was always in control, though. If I opened my eyes I could return to 'reality'. Incredible!!

(side note: I _highly_ recommend the Shostakovich #5 for DXM trips. The music has a real dramatic Russian flair, and is alternately dreamy and very intense. Being a 'modern' classical piece, it is strange enough to sound like it is from another world when on DXM. The Bernstein recording of it should be less than 10 bucks.)

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S, T, (male, age 28, 110kg). 960mg (8.7mg/kg) + cannabis

..s real mellow. A body warming. Slightly drunk and dizzy. In a very good way. A "boozy" drunken feeling it is not, maybe like Seconal. A definite "in the body" thing. Started cutting corners close, bumping into walls. Distortions in my spatial perception. Sight slightly blurry. Impossible for me to read small print. Underlying calmness.

Music is much more enjoyable. A kind of craving for louder and harder beats. Enjoying the textures of the tape hiss between tracks.

Strange disjointed thought process. Underlying calmness. Full warping of subspace. Pin Head with expansive arms/legs. Incredible head size. Warping and folding of body. Incredible spatial distortions.

Had to lie down on bed with no light. Wind was howling but I was calm. Continued spatial and mental distortions, but with a calmness telling me the trip was going to be okay. Never "totally" lost it like with LSD. Underlying calmness throughout entire trip which is unlike LSD for me. LSD tends to be a "speedy", tense kind of trip for me. Hard for me to ride an LSD trip because of the tenseness.

P. L. (male) Unspecified dosage of DXM

[I don't usually include unspecified dosage trip descriptions, but P. L. writes exceptionally well, and I think this particular piece may capture the essence of a high second plateau trip better than anything else I've yet found. Though probably written after the trip itself, the form of his writing is in many ways characteristic of the thought processes of a trip. Enjoy!]

Hello friends. Yesterday I was feeling a touch lethargic. I had woken up only around 2pm and generally felt like a lazy bum. I messed around for a while on the computer, reading email and news. Well not really a while because I emerged from a semi-comatose state at around 6 PM. I decided shutting the computer off would be the wise thing to do at that point so that is what happened as it were.

Grabbing a bit or 10 from the cafeteria, I pondered the slogan of Jester cafeteria: "What you Don't Know Can't Hurt You." I didn't know what I was eating but so it didn't hurt me unless you count starch overload and gaseous pain as bad, which I don't. Upon returning to my room I arrived. The roommate of mine, Mr. James was entirely present at once giving studying a go of it.

"James, I lamented," I said at the time, "Studying on a Saturday night?"

"Yeh," he said. Noting that he did not say "Yeah" but more of a "Yeh" with a long uuuh sound. I seated myself on the seat infrontwise of the computer and flicky the switch that turney it on. Reading news and mail for even more longer periods of time I morosed at my situation again. Spotting the presence of many drixoral cough caps in my desk drawer I suddenly developed a rather severe cough requiring immedietly medical attendonitis.

Writing myself a perspiration is wont to help being the situation as it pleased me so, I consumfed the pills regularly quick. Putting clothes on (nekkid was I this whole time) rendered me fully clothed and I discovered that my ears were detecting strains of bizarre religious Korean music wafting from a box adorning Mr. James' desk. "Thinking this won't d said quietly determined to find my own tunes. I put on the headphones and started to play the Musak of all. C ly finding the bright light unappealing, and noticing I was on the higher floor of the dorm, I elected to faraway to a more pastoral clime.

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Gathering my belongs into a green bag that materialized in my paws, I forgot to include a wonderfully handy Mini-Mag lite that would have solved woeful problems I encountered later in the evening. Note the clever use of foreshadowing in previous passage. I included amongst these materials a Walk-man and tapes of various important American rock-a.. . roll bands the devil's music as it were. Also was cigarettes and the important useful lighter, black in color. I considered flooding my guitar into my pocket and percolating that too, but the accoustics were suffering as a result of the stuffage so I left saying, "Good-bye, Mr. James! I will see you later."

Shaky swagger down the hall stopping to release bladderfuls of concerns into porcelain. My heart was heavy and my eyes were dim as I realized it was almost 45 minutes since ingesting the ahem medicine and the effectingness were starting to notice upon me. I stepped outside into the lovely cool air noting the temperature was neither hot nor cold. It seemed to me to be like one of the oft-remembered nights-on-the-town of Incline yore.

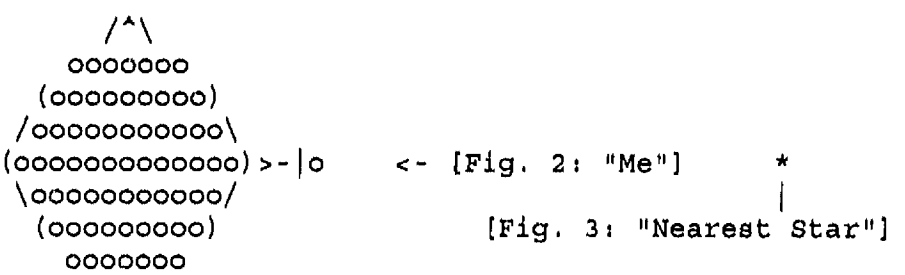
I stooped beneath an old oak tree adorning the lawn at the corner of East 21st Street, Austin Texas 78705-9005 postal code and the nearby adjacent San Jacinto street. I smoked a filthy cancer stick noting that the taste was unusually pleasantly remindful of smoking past with the combination of the evil grass leaf, cannabis sativa. You see, I usually smoked Camel Special Lights (TM) (R) along with the bad mary jee-wana and the taste is remindful as I was smoking the selfsame ciggies last night. The music was continually playing note after note in my left and right ear, being the Dead (who are ironically alive) playing a lovely China Cat Sunflower -> I Know You Rider which is lovely. The notes started to close my eyes and I rode along the golden crest of waves.

Simply sitting under the tree was the time first of all that I realized that the miniature Mag-lite would have been useful to sort my assortment of un-sorted musical tapes. As it was dark. I decided to move myself closer to the light-source illuminating and perched high humpty-dumpty style on a wall of sorts nearto and overlooking the street aforementioned. Many people passed nearby (but never touching) as this was a busy sort of street near many dorms in[illegible]ding the one in which I lived. I looked at the popel but touching was not done. Bored getting was I though I had [illegible]arely begin to tripppp out.

In the U of T, A there is a feature architechtually or landscaping-known in some circles considered to be a South Mall to which I decided to rest my bones. In front of the largest Penis in the Sated of Texas is a large Lawn named the South Mall. At the North End of the South Lawn is a statuesque of Jefferson who is also holding a dildo in his left hand (this is true.)

Across the lawn is clearly visible the State Capitol of Texas forming a large line across the city of Austin, Tekas. Walking wise the mile or less to this site seemed to take a longishly short amount of time as my feet moved very very fast it seemed. I knew at this point that the effects of my uh cough medication were takingly effects. I found the South Mall where I left it from Last Time which was friday. I walked across the ocean of green (though sort of blue in the flourescent and moonlight) grass to the exact center of the lawn. I was now part of the line betweenwixt the afro mentioned objects. Laying on the underside of of my back I noticed the milky way gladcy was lining up to me too.

My rain falls like crazy fingers. I straighting out my possesions including the hat atop my head blocking my access to the ground. If not for hair, we would all be bald so be thankful. Many times when you are thinking about the Earthy you picture your place being that one of a flat area plane. Rarely is it an enticing thought to actually see yourself in a round sphere at the apex. Well my friends at this point in the Tale I will draw a diagram:



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[Fig. 1: "The Earth"]

In other words I was sitting at the very nearest point of the Eard to the point in space I was looking straight up at. Believe me it took a long time to draw that stupid Earth Fig 1. I don't even know what figs have to do with it.

I thought of Sumner also at that instant, though I am not sure what connection he has here at this time. I flippeded the tape over and listening to "Loser" no not the recent Dylan-esque pop-bubblegum classique recorded by the late Beck but the old Dead song. I am telling you now (in just a second) that the guitar solo was more than I had heard. Wow. Well I just told you. I flipped the tape over and started hearing the following song that I heard, which was "Good Lovin" and I got some. Following that was the Drums solo and that was wild so I was just a grovin' to everything.

I lit up another ciggie and noticed the taste was even more loveler and before. I beheld that I only had a few left so I had best conserve them lest I run out before the night was through. "So this will be the last one for a while" was my line of thought here.

Now here comes the crux of the story, or the je ne sais quai or the climax if you are sexually obsessed: I don't know what I did with the lighter. I mayhaps have tossed it aside into the yon fields of grass or stuffed it into a nook and or a cranny or put it aside, but the being point I was making is that it's GONE. No light no smoke. I realize this as Drumz goes back into Good Lovin. Finally the words start again, and aghast I say out loud to myself, "This was all one song?! I thought it was, well," more songs, I said. I lookie at all the peeplies walking aboust on a proustly Saturday night. Many of them are perhaps wondering to themselves as, "Who is this guy on the grass anywhays," or "Damn, my last joint," or perhaps as, "I wonder if that guy on the grass has a really bad cough or something?" But the answer was for) o see.

Rather surprising at once point was when a guy walking merrily about his way down the bath suddenly stooped and did a cartwheel. As this person was now spinning about a purple axis, I wondered, "Did my eyes just decieve me or did that person suddenist spin around a pooply axis, bold as love?" Such recriminations were nost in order though as I heard "Dancing in the Streets" and "Morning Dew" in the next order. I had by now rolled around considerably on the grass and perplexing the poor stuff. It felt rather soft and nice to my trippy hands. Finally I took out my Dead 5/2/70 tape and put in the Beetles 'own "Blue Album" collection of song materials.

Listening to "Strawberry Fields Forever" as I surveyed the surrounding architecture I noted a large Church religious shire near. Thinking the origional Strawberry Fields was religious related in Liverpudlian, I floated up and down the lawn lamenting the lack of personages familiar to me. Penny Lane was in my ears and in my eyes, beneath the dark star filled sky. I did discover the missingosity of my beloved lighter used to create fire. I spent quite a long unfortunate time seaching for this piece of machinery. It was becoming the focal point of my existance. As all of the people currently reading this epic toem have been under the influenced of the evil mary Juanta plant can attest to this feces: LOOKING FOR SOMETHING WHEN STONED IS BAD NEWS. Everythingly seems to take forever whike you wonder, "Did I look here before?" I searched my green bag which was laying leisurely near me. I searched my pockets and my jacket and the ground near me, but the lighter had mysteriously vanished into the nether-lighter realm. Eventually drugging the passages of "A Day In The Life" I gave up my quest (temporaly) and gathered my remaining belongings up and walked to the North.

Wondering abits with nothing to do, I feeled the need to urinate again (After all I had drank quite a bit of liquids in re- -ling the drixorals to my stomach) so headed to the nearest Building. Which happened to be the Undergrad Library, v happened to be closed. I proceeded to the NEXT building, which was the infamous Student Union upon entering. Mostly it was closed as well but some areas of the large structurly were open for business of any ports. Finding it very berry difficult to walk at this time, I turned off my headphones. It seems that the bassline of "All You

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Need Is Love" was effecting the movements of my feet in such a way that made walking impossible. The walls were beginning to melt and Greg Brady was emerging from the woodwork in a way that I Wish he wouldn't. Feeling OK for the moment though, I thought about Where I found a Bathroom on my Summer Vacation. Near the bowling a. .

Bowling Alley?! No bowling alley in a Student Union, were there? Sure enough there was and it was quite packed with younders enjoying all sorts of sports infolving throwing heavy balls at white pins. Luckily for me the balls of all sorts were evading my head and extremities, but Not for Long! I wondered how could that last after all I Was standing in the "alley" as they termed it for throwing the balls at the pins. "Cries of," hey what's that moron thinks he's doing, and Get out of the way, dummy! "Accompanied my fusilade." Jimping merrily dodging heavy black spheres, I foundst my way to the pretty potty. Ah, relief I shouted as the stream of pee-pee failed to erupt. "Oh yeah," I thought, "I gotta turn it on!" And so it were. I urinated most merrily.

My lighter, I thought, is still missing. Perhaps I could find it by the light of my faithful dog Cragsemere. The sauana bathroom light provided the illumination neccesary to conduct another investigation into the whereabouts of the light but no further progross was made. A FREAK was in the bathroom with me. I gourd hardly see the poor man though as cough pills tend to alleviate that nasty vision thing, and he was melting and falling to bits as it were. Ruminating should I held the fellow get back together in one piece, no Fuck him! I shouted and ran out of the room (it was a bathroom.)

Strugglying to find my way to the street I came across an endless field. It shimmered and shimmied for a moment and a bus stop filled the void. A bus came buy and I got on that's when it all began. There was a Cowboy named Neal at the wheel of the bus to never-ever land. Finally tombledown I reached the end of the Union and emerged blasphmeming into the street. Music resumed playing at this thyme, goo goo gaa joob was the ralleying cry.

S y my eyes aren't decieving me, but I swore this girlie that I knew from way back on the Island walks by and says, ")" as she is want to do. Me as I was fiddeling with stuff didn't realized it until after the time, Butt I said "Hallo" anyway. Who knew? Maybe next year I will get a right hook too. Walking down Guadalouppe (the Drag) why a drag it was, too. I found myself in the West Mall this time, which is different from the South Mall in that it plays to the West rather than Southerly, and there is little to know grass here. Turn that damn guitar down! Well I float in liquid gardens and Arizona's new red sands. I sat to recoup and gain my senses and possibly replace the tape I am playing with.

Sitting on the bench my eyes become rather bizarrely orientated. Have you seen the films of the science-fiction? It is somewhat approximately like that. A small roving portion of my eye becomes disctinctly focued and magnificationly wise. I use this new-found super power for the dardest of deeds, to look for that darnded lighter again. Instead my roving eye focuses in on a steady stream of ants coming this way! Now I hate ants dearly and I stand up to avoid them at all costs. Sure enough one clings to my hand which I shake off.

Finding another place to stand, I realized that my music was not playing the correct notes! Often times the notes were slower than intended. So I replace the batteries (this is hard with 1 hand, 1 hook, and 34 drixorals.) And select a new tape, one with a mix of many bands. That def dumb and blind kid sure plays a mean pinball. By now I am surely an adjective descriped as "PEAKING" and since I have lost my lighter I am near the point of crying tears. My vision is not so good as because things are dripping and rearranging right before my eyes, surely not an effect of a psychadelic drugs?

I decide to make my way gently and slowly to my home-time abode. I wonder, "What time is it?" so I check my watch to find out the answer to this lovely question. It seems the watch face has melted onto my wrist. It is therefore impossible to find out the time, but fortunately the U of T, A is equipped with an extra-large Penis as noted before. This P chimes out the hour every hour on the hour. I found it to be by now 12 midnightly by my reckoning.

I found my way back to the South Mall and gave the damn grass a once-more going over to find my lighter. No luck so

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I lay down on the grass. My body quite literally melts into the earth, leaving the essence of my soul clinging to the ground like a vapor. However, perhaps the source of this disturbance can be found. You see I cannot verily go to [illegible]h class on Monday if my body has melted into the Earth, can I now? The musak goes out of Space (for those of ye [illegible] don't know, a very bizarre sound-effects weird thing done at Dead shows) and into a song, "The Other One." The guitar notes emerging from Space into Other One is the life-force that slowly ebbs back into my body. It rises from the ground, engulfs my body, and I rise from the Dead so to speak.

I was very pleased that my soul found a home again, because I had a paper due in English coming up and it's hard to type if your soul's body has melted into the ground. I decide now would be a good time to return sightly home again. I make my way back to the lovely Moore-Hill dorm (my home). Smoking (en francais, fumar) is verboten dans el Universitudo, so you have to smoke your dagga outside. I cleft a ciggie to my lips and learn again that I have no light. Damn! However, there is a studnut run radio station in the next building. some nasty hippie kids are standing by the door smoking, so I figure how can I get a light from them? Being near them would be a good start. I try to be near them but they have disappered. They are gone. I go back to my corner of the universe, and sure enough there they are again. I am afraid that I cannot speak, so I forget about the whole situation and smoke an unlit cig. Making my way inside and up to my room, I put the key in the lock and twist and turn for ages. Finally the door is agahst and Mr. James is standing lookin' perplexed. "The door was open the whole time," he scowls at me.

"Oh. Still studying?" I ask nochalantly but I am given away. I was speaking a foul alien tounge and now HE KNOWS. "Yeh." But then he leaves so I am left alone. I run into the shower and cleanse myself. This is a difficult task while still frying fully. Several times I have to remind the water to behave itself. Eventually I am done and return to my room. I turn the light off and sit down on the bed.

For the first time that night, I realize exactly what went on (that I was tripping, etc.) I think I have come down, but not c[illegible]letely. I turn on the music again and relax to the edifying tunes of music. I fall asleep abliss and think, "Tomorrow [illegible] write my mates and remind them of my learnings and travels."

Well, what did you think? I am suprised you read this far without flicking off the screen, thinking, "What a loose screw."

But I am off to get some chowder.

14.1.2 Negative Experiences

Anonymous (male, 73kg). 135mg (1.85mg/kg)

[This experience is atypical for such a low dose, and I believe that this unfortunate individual lacked the normal P450-2[illegible]nzyme. As a consequence, the duration and strength of the trip were much greater than usual, and very little of th[illegible]XM was converted into DXO. Thus, this may be a good example of the effects of a sigma agonist with little or no NMDA activity.]

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It began OK about 40 minutes after taking the Robo, but without any especially interesting effects. I began to feel very relaxed and warm, almost feverish (although without a real fever). Talking took a little concentration.

Soon I began to feel a little nauseated. Any time I moved my head, I became VERY nauseated, but if I sat still the nausea was only mild. I began to see double, which was expected from what I'd read before, but could usually correct this with a little effort. Walking gradually grew almost impossible because, when moving around, I couldn't tell which way was up. Then I began to have spells of worse nausea, accompanied by an intense feverish feeling and sweating, then by waves of coolness. Downing a lot of cold water seemed to help the nausea and feverish feeling as much as anything, but at its worst I really wondered if I might be dying, although that possibility seemed devoid of emotional content (as did most everything else that was happening the whole time).

I took the DXM at 6:00 PM. By 8:00 I was thinking "Hmm, I probably won't try this again any time soon" and feeling very bad, especially when I tried to eat some guacamole. It was becoming impossible to concentrate on the TV show that was on, and difficult to talk. My lips became mildly numb. Finally, about 9:00, I decided to see if laying down would help (I'd been leaning back in a reclining chair). Whenever I closed my eyes or turned out the lights, I began to hallucinate in a completely boring way: I began to see what seemed like many parallel streams of type, in a variety of typefaces, sizes, and colors, emerging simultaneously from a multitude of invisible sources. Most of the time they didn't seem to make any sense, but sometimes I felt that there was a message in them that I should understand. Later I could see, in brief flashes, brightly colored cartoon-like moving faces and what seemed to be animated billboards or TV commercials. Sometimes the streams of type would be replaced by streams of musical notes on multiple musical staves, all in color (but without any accompanying sound). The waves of nausea and fever also continued, though more widely spaced and less severe.

All this I found very tiresome, though not frightening: I just wanted it to go away so I could rest. I tried listening to the radio. Music was impossible to take, but talk radio seemed to give me some distraction from the hallucinations (even though I couldn't focus on the conversations). Finally at about midnight it began to fade away. I dozed off several times over the next 5 hours, once for as long as an hour; the first couple of times, when I awoke, I had some trouble telling where I was.

All the next day I felt weak and nauseated, but my emotional disposition was even better than usual (go figure!). I had to force myself to eat. By 9 PM that night (i.e., about 27 hours after the dose of DXM) I was feeling about normal again, though nausea still came and went over the next 12 hours.

A. L. (male, 68kg). 150mg (2.2mg/kg)

What I bought was a 10 pack of Contac CoughCaps, 30 mg per capsule. I read the box over carefully and the instructions said that the product contained lactose. Since I have a lactose intolerance I decided it would be a good idea to take a LactAid pill before the trip. My lactose intolerance is pretty bad - if I chug a glass of milk without adding the enzyme I get leg cramps so severe that I can't walk. But with the enzyme it's no problem at all.

Anyway, I ate dinner at around 6:30 and then decided to see the 9:35 show - Bad Boys. (it sucked rocks compared to OutBreak). We got there REALLY early and I took 5 CoughCaps at 8:30 along with one LactAid pill. This was my first time on DXM so I wanted a low dose in case of any adverse reaction. 30mg X 5 pills for a total of 150mg.

I was expecting the effects to start in about half an hour and peak in 1.5 to 2 hours. However, even with food in my stomach, I felt the initial effects in 15 MINUTES. There was a slight tension in my pineal gland, the same feeling I get when the clotter starts to hit. (take a sharp pencil and slowly bring the sharpened end between your eyebrows and up a little bit. You will probably be able to feel a weird sensation even before the pencil is near your skin - that's the feeling I get)

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My girlfriend smoked half a j before we went into the theater; I didn't smoke any. So, we went in and the staff had the area roped off until five minutes before the show. I swear we were standing in a hot, crowded, and loud room for a day st. (actual duration of the wait was about 45 minutes) This was when it really kicked in - not a good place to get high very quickly. I felt like I was PISSED OUT OF MY TREE. I started to get really hot and I wanted to take off my jacket but I couldn't because I was smuggling a couple bottles of pop in. I was getting dangerously close to bugging out but managed to control it without too much difficulty. I think I felt like bugging out because it was simply a new experience. I'd never dosed on it before and the effects hit me far more quickly and strongly than I had expected; based on the FAQ. I'm pretty experienced and careful when it comes to drugs so that wasn't a factor in being unprepared.

Anyway, the staff moved the ropes and every stampeded to get into the fucking theater. I felt like slammin' people. 8) Once we got a good seat and sat down I felt FAR more relaxed and in control of my mental state. I was looking forward to watching a cool show while being high - especially listening to the music and effects.

It actually sucked rocks. The DXM didn't make music seem more enjoyable. I found myself analyzing the show instead of enjoying it. Oh well. That club hell place looked pretty cool. I peaked during the previews and was COMPLETELY CRASHED by the end of the show. (11:45pm).

I wasn't really impressed with the shit at all. Maybe it was because of a shitty setting. Driving home afterwards in THICK juicy snowflakes really blew as well. At least I hadn't reduced myself to chugging cough syrup. I found that the DXM was too much like alcohol in it's 'blunt hammering effect'. I hate getting pissed and this just reminded me of it. I can't imagine what it would be like if I took, say, 300mg (the whole package). That would have just been fucking hostile.

I think it would be a better drug for partying rather than just sitting down and chilling with a beer or two. Now that I know what to expect from it I think I'll try more small doses at doing different things to get a fairer judgment on it.

Oh ya - this shit will make your pupils dilate just like blotter does. I noticed this when I got home. I never noticed any itching at all and had only a mild cramp in one leg after the trip. I think another LactAid pill would have been helpful. I felt great coming down; really smooth and gradual compared to the initial shock. Had some great sex afterwards and felt great in the morning.

W. A. (male, age 19, 110kg). 150mg (1.4mg/kg)

An entire 100ml bottle of 15mg/10ml DM was ingested, in about the same timeframe as the first experience. There was no pseudoephedrine (or any other active ingredients) in the preparation - just DM, and I believe a bit of alcohol, tho at the dose taken, I don't believe this altered the experience any. The same friend who had tried it with me the first time, also ingested it. (same amount as I used)

The effects came on in a similar fashion to the ones stated above, only the drunkenness became much worse, as did the disassociated feeling (as if my mind was separated from my body and the surrounding physical world). Friend's condition appeared to be the same, perhaps a bit more intense. The motion-perception became very very unusual, it really did feel as if I were gliding smoothly along (like a slug), or hovering, when I walked.

For awhile this was interesting, we spent what felt like perhaps an hour in subjective time (I'm not sure how much time actually passed) playing in a park with all sorts of stone structures & fountains and waterfalls, and twisting pathways, tr and a big pond. (I love that place. Whoever designed it had psychedelic users in mind ;) It was night-time. E ually the effects (especially the slowed down, drunken feeling) started getting really intense, and we decided it would be best to return to the apartment. Again, there were no significant visual or audio hallucinations. There were

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some slight visual effects, similar to those experienced on pot or hash. My thoughts still felt fairly clear and lucid, although there was a very odd feeling, again it sort of felt as if I were nearing a threshold to a real mind-altering ...ience, but not quite able to make it there. Something in my head was definitely f*cked, but in a subtle way - I c... ..dn't quite put my finger on it. It was more of an emotional change than perceptual, as with acid.

After returning to the apartment, things got really bad. Both of us could barely move, we ended up laying on the balcony moaning and thinking we were dying. It was not fun, certainly not an enlightening "psychedelic" experience that most people seem to think DM is. Eventually we realized that we were starting to come down, and believed that perhaps we might survive the experience. The fear that I was dying was almost unbearable. I also got the diarrhea again, however it was not as severe (perhaps because I had ate plenty of solid food that day, unlike the previous experience). It might be worth mentioning that neither of us mentioned that we were afraid we were dying until we began to return to reality a bit- so this rules out suggestion being the cause of it all.

Anonymous, 240mg.

The next day, I got a little bolder. I downed the remaining portion of the bottle. This amounted to 240 mg (80 ml or 16 teaspoons or 2/3 of the bottle). I ate some food both times, so this may have delayed the start of the effects. Perhaps there was a little bit left in my system from the day before.

I was sitting down, doing some reading, and nothing happened for well over an hour or maybe two hours. Then, all of the sudden, I got a severe heat flash. It felt like a sick wave flowing over my entire body. I could even feel a strong buzzing (almost like pain) in the roots of my teeth. Every inch of skin on my body felt like it was next to a hot water b...le. I was very light headed and thought I was going to die. I quickly scribbled information on a piece of paper to tell ...e that found me what I had taken. The heat flash went away after what seemed like 5 or 10 minutes. Actually it was probably only a minute or two. I felt my forehead and it was dripping with sweat.

I was OK for a while after that. I talked with a friend for about 10 or 15 minutes, but it seemed like hours. Again, I was very talkative. I felt like I was making sense, and having an enjoyable time. I just felt spacy. There were no visual hallucinations, but things did look a bit foggy.

After my friend left I got several more heat flashes. They seemed to be getting closer together. Each time, I thought I was going to die or at least pass out. Each time it happened, I just kept telling myself, "I'm going go get through this." over and over. VERY unpleasant!

I walked around a little bit. My head seemed to be bobbing up and down like you feel while sitting in a small boat on the waves. Things were a little distorted. I felt like a midget walking down the hall. I had some difficulty talking coherently. My eyes started to burn, and my mouth became excessively dry. I couldn't concentrate on anything for more than a few seconds. I tried to focus on reality so I wouldn't loose control. I used to use MJ so I was able to keep from panicking, but it is still a scary to face the unknown.

As the frequency of the heat flashes increased, I began to wonder if the DM was still getting into my system, and making things worse. I had serious doubts about whether or not I could get myself home in this condition. I determined that if things got any worse, that I might die, so I picked up a phone book and started looking for emergency numbers. I remember being totally frustrated because I knew I wanted to find a number to call to get help, but all I could do was flip the pages. I couldn't figure out exactly what to look up. Finally, I looked inside the front cover. 911 seemed a little d... The only other number was poison control. After several attempts, I finally dialed the number successfully. The p...m was that I couldn't remember which digit I had just dialed or which one to dial next. I was quite incoherent on the phone, and had a lot of difficulty giving my address, phone number, etc. The lady told me that I had taken quite a lot, and that I should have someone take me to a hospital. I asked what might happen to me if I didn't go, and she said

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that I possibly could go into a coma and/or stop breathing. This scared me enough that I decided I needed to go in.

[illegible]id a friend that was willing to take me in. Thank goodness for friends. In the Emergency Room, I experienced s[illegible]ral more heat flashes. My heart rate was up to almost 120 beats per minute when I was at my calmest point. They pumped my stomach and put activated charcoal down me to absorb any remaining DM. That is an experience well worth avoiding! I even preferred the blood and urine tests to the gastric lavage.

My nose and throat were quite sore for several days afterward. I started coming down in less that an hour after these treatments. The doctor told me that the dose wasn't fatal, but if I hadn't come in, I might have passed out, and probably would have continued to experience the symptoms for at least another 8 hours. It would have been a real trick to explain that one to my family. It was hard enough to explain as it was. DM seems to be much more toxic than I had anticipated.

As I came down, my vision cleared up. I realized that the emergency sprinkler system in the ceiling was actually covered with dust. When I first got in there, it looked like it was covered with some crystalline jelly; I didn't even know it was a mild hallucination at the time. So, what good is a hallucination if you don't know it's a hallucination? I wonder what else I hallucinated.

They let me go within about 4 hours after I was admitted to ER At that point, I had a significant head ache, like a heavy hangover. My nose ached deep inside where they had put the tube in. I think it took several more hours for my heart rate to go back to normal. There was also a jittery twitchy feeling in the back of my legs. I didn't sleep well that night. The hangover feeling lasted for another day.

Three days later, I took half of an imipramine (a prescription antidepressant left over from a legitimate prescription) b[illegible]se my head felt a little foggy. A few hours later, I got a miniature heat flash, and felt a little spacy. That never i[illegible]ned before when I was on these antidepressants.

All in all, I think it was a VERY bad experience! Sure there were a few weird effects, but the negatives far outweighed the positives. The dose I took was significantly lower than what some people claim to have taken. I'm just glad I didn't chug the whole bottle at once. Perhaps some people's bodies can handle DM better than mine, but I have also noticed a large increase in people telling about bad experiences with it.

I don't think it's a very good idea to take a chance with DM. But, if you do, please start with lower doses, let a few days pass between doses, and increase the doses gradually. Not like me where I took twice as much as the time before. As for me, I don't think I will ever take DM again! As for you, try something safer, or at least be very careful! BTW, I now hear that the tussin high is quite a bit different than being high on LSD, so I guess I still don't know what acid is like.

Anonymous (male), 300mg

As the result of a car accident, my friend had a freak stroke at the age of 18. (The circumstances which caused the stroke are too long and complicated to explain here.) The stroke left him with minimal control of his left arm and a permanent blind spot in a portion of his left eye. One night, over three years after his stroke, he decided to try dextromethorphan with a group of friends. He drank 5 ounces of generic "tussin" (300 mg of dextromethorphan hydrobromide.) Although he consumed less syrup than the rest of us, the drug effected him more than anyone else in our group. In addition to experiencing extreme de-personalization, he reported active hallucinations in his blind spot. H[illegible]uld only describe these hallucinations as "cartoon-like." It was the first time images had appeared in this spot s[illegible]his stroke. Although these "cartoons" diminished over time and are now gone, they persisted for several days.

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My friend did not like the experience and said that he would probably not try DM again. Despite his stroke, my friend is a normal, intelligent guy who does not seem prone to "bad" trips. He enjoys mushrooms and marijuana. Neither of drugs produce any activity in his blind spot, nor do they have the de-personalizing effect of DM.

Anonymous 360mg

Let me provide my testimonial about roboing. Yesterday I picked up an 8 oz. bottle of generic brand extra-strength cough syrup, containing only Dextro as its active ingredient. I immediately downed somewhere under 4 oz. of the stuff. Taste wasn't as bad as I expected. Chugged a good deal of water to wash it down anyway, and nibbled on some bread. Nausea was not a problem at all.

About an hour later it started to hit. Motor skills were definitely impaired. Pupils were very large. I felt like I was on shrooms, but without mood-alterations or significant visuals. Television images appeared to be moving in slow motion like when on acid. Unlike what I've heard posted here, music did not sound very interesting. This was a big disappointment since claims to the contrary were what convinced me to give it a try. I did not feel particularly euphoric or bad. My mood was essentially an unchanged neutral, which was weird since in other respects I was definitely "tripping". I kept saying to myself, "OK, the good part of the trip should be coming soon..." but it never did!

Walking was definitely difficult, although mental functioning seemed to be OK. I carried on many conversations with little difficulty, in contrast to my experiences with shrooms and 'cid. I was hoping the amount I consumed would be a mild dose, but I must say I was significantly affected. I can't imagine what would have happened if I finished the bottle!

It's now 16 hours after the initial consumption. I slept fine last night, but I still feel the effects. My pupils are still huge and still feel like my motor skills are impaired. (I'm typing much slower now than my usual 100 wpm.).

In short, I guess it was worth the experience but I can't see any reason to try it again. It's lasting longer than any shroom or acid trip I've ever had, and it just ain't nearly as much fun. I'll stick with pot thank you.

AN45874 (male, 81kg). 540mg (6.66mg/kg).

THE CHRONOLOGY:

0730: Cold cereal & coffee breakfast.

0830: Took Drixoral (300 mg.)

0930: No effects, took Tussin (240 mg.)

1000: Difficulty walking without noticeable effects (but I think I was able to.) Not unlike mild alcohol inebriation.

1030: Everything kicks in. (I think the caps took a while to dissolve). Only severe motor control difficulties and a general loss of tactile sensation. Lay down.

At this point I spent the next 3 hours lying in bed, not out of necessity, I just didn't feel like moving. I alternated between eyes-open and eyes-closed 'images'. Not acid-like hallucinations, more like visions. Static, unchanging (as opposed to 'melting' or 'swirling') images. I distinctly remember three: The bedspread looked like a far-off mountain

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range; my leg looked like it was hundreds of feet long, and I remember the peculiar feeling of rotating in a plane in both directions at once (like alcohol 'spins') with no feeling of nausea. This was accompanied by the inexplicable visual alent (of spinning both ways at once). There was a period when I was beset by words rather than images. At some p ..t I crawled across the room and pet the cat. I believe that walking would have been practically impossible.

There were no periods of ego-loss or understanding the mysteries of existence, no epiphanies experienced, no greater truths discovered. But hey, it's a narcotic, not a hallucinogen.

1330: Made it onto the couch, watched TV. Feeling pretty much 'normal' except for an unpleasant, whole-body 'ache' and lack of motor skills.

1600: Able to move about almost normally, ache diminishing. Tried to eat a cookie (could only nibble) and drink some Diet Coke(*) (could only sip. WAY to sweet). No nausea.

1700: Able to 'fake' normality (movement, conversation).

The ache continued for another 36 hours, I had very little appetite that evening and the next day. Never felt nauseous. All in all I doubt that I will do it again.

14.2 Third and Fourth Plateau Experiences

14.2.1 Positive Experiences

P. G. (male, age 26, 70kg): 525mg (7.5mg/kg)

At 7 p.m., on a mostly empty stomach (he had last eaten at 12:30), he drank 6 oz. of Vicks 44 cough syrup for a DXM dosage of about 525 mg. While he waited for the effects to come on he listened to music. He certainly "enjoyed" it, but felt nothing like euphoria. He started feeling his first effects around 8:30, noting "definite rubber-body sensations." Half an hour later, after a loud clap of (real) thunder "scared the living crap out of" him, he noticed a surging, vibrating sensation in his muscles, and a general body speediness. The effects were mostly physical at this point.

9 'Hey, what is this? I just coughed."

Perceptive effects started to become apparent. Music seemed to be less ambient, more "attached" to the speakers; the

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room no longer contained music as a whole but two units of music. He took a few more swigs from his second bottle of cough syrup as he noticed his 3D perception deteriorating. By 9:30 he was enjoying simply walking around. "I'm doing 'andfather walk and waddling."

9:35: He finished the second bottle, for a total DXM dose of 700 mg. Sometime around here his clothes felt uncomfortably warm, moist, and sticky, and he changed into a T-shirt and shorts. Mental effects were strong now; he began to write more, though writing itself was more difficult since he was losing physical coordination.

"I feel really 'stoned' now, and it's always strange to see such facticity as a toilet in this state."

The ambiance of music continued to diminish:

"Music really went away into its own sucking holes. It doesn't escape far out into the room before it falls to the ground."

At 9:45 he went to the door to see if his cat wanted in; this happened like a normal automatic process (i.e., have thought, get up, walk to door) except for the extreme strangeness of his gait, which he only became conscious of near the end of his movement and which astonished him. It was nothing like a drunken stagger; he walked almost on his toes, with legs bowed and feet about 3 feet apart, and with an exaggerated left-right bobbing.

Music "came back" for one song and he felt like square dancing. Then it went away again. He noted that rhythm seemed to be very important.

9:50: "Smell note- I just farted and the place smells like an outhouse that hasn't been emptied for a month and has not h ny sort of modern sanitizer device installed. But the smell disappeared quickly."

And then in his notebook he goes on to complain about how his memory is deteriorating and that he's finding it hard to write more than one sentence about anything. He felt annoyed that he had experienced a host of interesting stimuli but forgot them before he could get to his notebook. In fact his memory seemed to be worse here than at any other time during the trip (it got better later even as the trip intensified).

10:10: "The splatter on the bathroom mirror seemed extraordinary. I wondered what caused it- I thought something I'd done today must have done it. It was just toothpaste splatter. Flying toothpaste particles mixed with water and being shot through the air by the toothbrush bristles."

In the next few minutes, the trip took on a different character. He became physically inactive, lying down on the floor, and external events seemed to matter less and less. Though music was still playing, he was barely conscious of it. At around 10:20, he began to experience a fairly deep dissociative effect, becoming a "free-floating 'I'," his body sinking back into an indifferent realm of matter and flesh.

This free-floating "I" was unique in that, though it was definitely an "I", it also lacked all subjectivity. He experienced this deeply, but feels it is impossible to explain. His mind itself joined his body in the indifferent realm, becoming "just a thing, not too complicated." When he looked at his body, it seemed like a thing that just happened to be there at the time, coincidentally there with the "I". He thought about such things as suicide and murder and was somewhat puzzled that such a big deal was made of them in the human world. They were merely destruction of matter. When he began to consider all the attention the world was devoting to "human issues" in general, he was genuinely perplexed. How strange to worry so much about living bodies, humans!

A 9:35, covering his ass for these objectionable thoughts, he wrote of them: "Not very serious, just a thought train. But it's incredible how removed the 'I' feels from this lump of flesh."

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He explored this a bit further: "This lump of flesh is my surrogate, a carrier. It hoists me up on its shoulders and carries me through the marketplace."

' ...ere are a lot of living bodies in the world. What is life? It's just a process. Something in the FAQ about the complete annihilation of the self comes to mind. I seem to feel it." - Yet, there was no anxiety associated with this.

"My TIME seems to have shrunk- I only seem to have existed for a day. Not 26 years. That is incomprehensible. Strange- work on the body for 26 years, etc., - where is it? what is it?"

He then turned to other things. He developed a slight fear that a cop would begin pounding on his door- he felt that his altered state was diffusing through the walls of his apartment and into the outside world, where it would surely attract attention.

By 11:15, he was noticing the physical again. His balance was severely disrupted, and his visual field seemed to update with smearing sluggishness. He sensed his mouth and teeth as a unit; he could no longer discern anything but a unit when he moved his tongue around inside his mouth. He felt a strange sensation he called "swimcap head."

The trip still seemed to be on the upswing. He wrote in short bursts- "intense trip- extreme," "SEVERE loss of balance," "don't know if these words are getting to paper," "just seems to keep increasing in intensity, intensity."

He felt giddy and exuberant, but nonetheless wrote: "Anxiety: This is where I live NOW! it's an apartment! People will see me living in it! Reminds me of life, like a [illegible]." He can't remember what was going through his head while he wrote this.

:50 he noticed that his pupils were greatly dilated, and his eyes seemed bugged out, making his appearance very ...e and disturbing; later he found that he would also unknowingly raise his eyebrows whenever he looked in the mirror. His neck felt swollen and bloated. He found it nearly impossible to write, but could do it better if he covered one eye, though the notebook then seemed to shrink to 1.2" x 1.2".

12ish: "still tripping heavily"

12:45: "still heavily stoned"

1:00: "HUMAN reality. I'll be sliding back to this soon. I really felt outside of the human, the biological human. Human life is what I need to look into. The 'I' is slipping back into the body."

He wrote no more, and at 1:30 went to bed. He still felt strong effects, but sleep was coming easily. As his relaxation grew deeper and he spent long periods without moving, he often felt a sensation that his innards had become disordered or relocated to improper places. But at the slightest movement they instantly reordered themselves. He felt no other effects apart from his general stone, and by 2:15 or so he was asleep.

The next morning he had a slight hangover, and his gait was still mildly disturbed. His pupils were dilated all day. He felt a bit spent, but didn't really mind since he was experiencing a fine afterglow from his trip, which on the whole he greatly enjoyed.

---

male): 600mg

Took my 1st dosage of DM Friday night, the gelcaps, 600 mg. Took 'em at 8:30 with a friend, walked around till about

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11:00, neither of us was feeling anything and I was *most* disappointed. I caught a train back to my house, and in the station waiting to change trains it started to hit *hard*. I was hanging out alone in the station, hacky-sacking, and the v[illegible]tarted to bend to greet me. By the time I got to my local station, things were getting pretty intense. I *floated* ho...., as far as I could tell at the time. Two hours later I was hanging out with a bunch of friends, one of whom was also on. I was warm, I was fuzzy, I loved everyone, and I was directly aware of being a higher being making its temporary abode in this body and this mind. Oh; and I *itched* like nobody's business. Anyone else had this? I forgot a lot of things on my way down, but based on what I did bring back I think that the forgetting was because the normal ego-bound me couldn't have understood too much of what was happening. I realize I'm raving pretty thoroughly about it, but I haven't had this life-changing, life-affirming of an experience since my first couple of LSD trips many many years ago. In short, I was *impressed*, and I want to use it again just a couple of times, to open up the kind of intense spiritual communication that it made possible with a couple of the people in my life.

S. C. (male, mid 20's, 64kg): 600mg (9.4mg/kg)

[Note: The following is very long, but I believe it is both very well written and highly characteristic of the third plateau experience.]

From the experiences of others, I believed I knew pretty well what to expect. Still I realized it was not something to be undertaken lightly. My only previous experiences had been with alcohol and marijuana, and I had never gotten more than lightly buzzed off of the latter. I spent a day and a half mentally psyching myself up for the experience. When the time came, I prepared a journal in which to note some of my experiences as they occurred.

12/05/94, 5:30 PM

I prepare. 20 cough caps into a bowl (= 600mg DXM). Christ - must I swallow all of these?! A big mugful of water sits nearby. Had a very large meal 2 hr. ago - waiting to digest it well before I start. Topical antihistamine spray sits nearby in case of itching. [Note: I never used it.]

Setting: Apartment is lit subtly by overhead lights on dimmer switch. Music is playing - radio now. Selected tapes + CDs are laid out for later on. [Note: I never got to them.] I have chosen strongly thematic themes as suggested, while avoiding anything that might be a 'downer'. There is also some lighter, mood-lifting stuff like pop + techno.

I cleaned the apartment today to make things seem more cheerful. [Note: I don't think it made a difference. A book of ancient Chinese philosophical verse...] sits before me to read while waiting for the onset - only because I find it comforting and familiar.

Set: I began 'psyching' myself up yesterday. I feel confident and fairly at ease. Also curious. Curiosity, I think, is my main reason for doing this. Perhaps I'll even learn something about myself? I don't know. [Note: I still don't.]

The journal goes on to note the circumstances of the ingestion of the caps. I note that I found it both physically and psychologically easier to down them than I expected, though there was a transient problem with gas (which I eventually dealt with by taking the caps with milk). To keep my mood up I sang with the radio and read. It took from 5:55 to 6:46 to down them all (with a few long pauses to burp up gas and let my stomach settle).

At 6:33 (while taking caps #9 and 10) I note feeling "different. Hard to describe." The first spelling errors appear at this p[illegible] I was aware of them at the time, but left them uncorrected.

At 6:38 I note reminding myself that no matter what happens, it's only temporary, and that if I just relax I'll be O.K..

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At 6:46 I wrote,

C 5, 16 w/ milk. I think it's about to hit me! There's this sense of 'impending'. Especially when I get up to walk around. Head feels heavy somehow. [....] Feet light as I get up to check the time. It's [now] 6:51. Cap #17,18, w/ milk. What the hell. #19+20 while I'm at it. 600 mg in system. No turning back now!

Indeed. I must admit I felt at least a mild sense of foreboding in that.

At 6:55 I note feeling no noticeable difference in the quality of music. Disappointing, as music-related euphoria was an effect I had heard often associated with DXM and had hoped to experience. I decided to go outside and catch some air, leaving the journal behind.

I walked some blocks to a familiar pond in a nearby city park. The odd feeling in my feet and head had passed (or was at least being ignored), but as I walked I observed a new phenomenon. Buildings seem to stand more starkly outlined against the night sky. Yet they seem somehow absurd in proportion, like children's toys blown up to gratuitous scale. Stars were clear and bright.

Reaching the pond, I gazed out across the water at the surrounding city scape. I noticed the first 'tracing' effects. As I swept my gaze from left to right or vice versa, the lights would pan not continuously, but in blocks - about four blocks per 120 degree sweep. A mildly unpleasant phenomenon, and one which was to last the length of the trip. It was as if my brain were no longer able to keep up with the sudden changes in scene causes by rapidly moving my eyes or head.

I stayed at the pond only minutes. On the way back, I was feeling fairly good. I was substantially stoned. I wasn't really euphoric, just upbeat and at peace. Everything seemed exceptionally clear and still, as though viewed through a layer of d limpid water. Contrasts seemed much starker. I briefly lost track of where I was a time or two but quickly r ated myself and proceeded home.

Arriving at my apartment, I made the following journal entry in rather scrawling letters:

I have returned. I visited the pond several blocks away. Dark, with city lights shining about. [No duh. No-one ever accused DXM of improving mental acuity.] Noticed tracing effects.

Immediately following two or three thoughts were started and aborted in succession:

Profoundly everything seemed dar [This line is crossed out.]

Just as soon, the next *[third]* plateau hit me. Thank god it had waited until I got home. I turned the radio and lights off, turned the TV up (for "company", I think) and dropped into bed, feeling totally stupefied. The chatter on the tube was entirely irrelevant. Occasionally a snippet would float through to me, and I could make sense of larger stretches if I concentrated. For the most part, however, the chatter was ignored. Through closed eyes, I could see the light from the TV reflecting off the wall and penetrating my eyelids. I seemed particularly sensitive to it. But whenever the light intensified or dimmed gradually, it did so in steps. Pulling the covers overhead, I began to see visions.

These took on the character of glowing, multicolored taffy, being pulled and stretched in many directions at once. Most entertaining. I kept my eyes closed throughout - the real world was not entirely pleasant with all that blocky shifting and tracing. These visions, visible only with eyes closed, flowed smoothly and soothingly. I had expected the cartoon-like visuals many DXMers had described, but these were nothing of the kind.

Gradually, these shifting forms were taking on more substance. They were coalescing into life-forms; entities really - spectacular, bioluminescent, massy things that churned like thick, boiling, liquid. They came in various colors - white,

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black, dark blue, and purple, mainly. Some were like churning walls of gel. Some were like complex blobs, jellyfish, or worms with thousands of pseudopodia. All were constantly writhing and huge. I could sense they were intelligent.

I seemed to be an interesting specimen to them. They approached freely. Some of them picked me up and passed me around. But I never felt as if I were in danger. These things seemed not only friendly, but affectionate. I felt affectionate toward them as well. Their appearances were not monstrous so much as stunningly beautiful. I was in awe, really. "Glorious" was the word that came to mind at the time.

One by one, an 'entity' would come over and 'play' with me, like a child with a new toy. They would touch me, sensing my thoughts. There were immensely powerful yet gentle. It was somehow very pleasurable. Each entity had it's own character and personality. I tried talking to them, but they couldn't understand speech. They responded only to empathy and simple thoughts.

Occasionally I found myself looking at my surroundings (though just as often they were not visible in the blackness). I saw living vault-like walls so huge and distant they staggered the mind. Once something like a quivering city of Jell-O came into view. Sometimes I seemed to floated toward nebulae deep in space.

At some point I attracted the attention of the Great Queen Mother (literally) of the entities. Words are inadequate. The Queen Mother was a wasp-like thing so immense that her body was like a pocket universe unto itself. I could never see more than a small fraction of her at a time. I journeyed inside her and communed with her for hours. We were empathically linked somehow. I realize this sounds utterly insane, and it is. We felt overwhelming affection for each other. I made up a song and kept singing it for her. She alone could understand not only my emotions, but my words. I somehow felt it necessary to record the song in my journal. And to answer nature's call! Eventually, I mustered up the willpower to stagger out of bed.

Ma d, what a sight things were. Even through my double vision, I could see how incredibly screwed up my proportions were. I felt like a big insect. My body seemed proportioned vaguely like some kind of praying mantis in human skin. And yet it was all so consistent. Proportions were screwed up in a very stable manner. I could look at something, look back, and it would look the same. Distances seemed exaggerated and contrasts were abnormally sharp. Outlines, while similarly sharpened, were made up of more than just one line (probably due to my double vision). This gave the illusion that I could see a little more of the sides of an object than would be normally visible. It was a little like looking through everything through the wrong end of a misaligned pair of binoculars. I thought of it as "insect vision". My steps were short and slow. I shuffled to the bathroom automaton-like and took a wizz. Then I emerged to make my journal entry, in childish, blocky letters. The M's in "mother", "human", and "almost" have 3 humps instead of two. I could really barely see what I was writing, and couldn't be sure it would be readable the next day.

10:51. I LOVE THE GREAT QUEEN MOTHER. ACCCPT [= "accept"] THE LOVE I OFFER. I OFFER ALL MY HUMAN LOVE. [Such was my song.] THIS IS MOST INTERESTING. [Referring to my 'insect vision'.] ALMOST CUBIST!

Things were getting more 'rigid' somehow. My thinking and movement were both very stilted. I staggered back to bed and fell back into communion with the Queen Mother a while longer. The trip was getting very heavy - time and motion were losing all meaning. My visions were starting to freeze in place, as if everything were crystallizing or being coated in wax. I felt as if the Queen Mother were sealing me inside a waxen cell within her body. Yet I wasn't afraid - I figured she knew best. It felt very protective in a way.

Before long though, just like a fever breaking, I felt that peak of the trip passing. Things 'unfroze' or 'decrystallized' and t ions started subsiding substantially. They quickly became intermittent rather than constant, and I was beginning t able to think again, though in that stilted way. Disconcertingly, my 'insect vision' was still in effect and my motor skills still very 'rigid', as I discovered upon hauling myself up to make the following entry (in the same blocky lettering

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as before, with a 3-humped 'M' in the first 'many').

T GREAT QUEEN MOTHER HAS MANY CHILDREN. I AM BUT ONE. I HAVE MANY SIBLINGS. [So it se..ed at the time; I had learned that the entities encountered earlier had been siblings.] IT IS 11:10? THE PEAK IS PAST. DOUBLE VISION.

I turned the TV off and the radio on, then went back to bed to catch some sleep, praying that my vision and movement would be back to normal when I awoke. As I waited for sleep, I watched some entertaining hallucinations. One was like sliding down a tunnel of molten bronze. Another was like gliding over a weird, undersea city. Occasionally something playing on the radio seemed particularly stirring, especially if it had heavy electric guitar riffs, but that's as close as I ever came to DXM music euphoria. Then I slept.

My next journal entry says, in almost normal looking cursive:

2:33. Wake up. Dread to open eyes proves unfounded when I look at clock and see double vision is gone.

I had actually been awake for 15 minutes or more, but had dreaded to open my eyes and see two of that damn LED clock. My heart had been beating rapidly as if in anxiety. Getting up to make that entry, proportions seemed normal again and I felt much more human (though not entirely back to normal). It was quite a relief. I relaxed and realized I'd be O.K.. I took another wizz, went back to bed, and said my good-byes to the Queen Mother and her brood (yes, really). They were forming into a sort of fleet and preparing to fly away. It was rather touching in it's way, though of course utterly insane. The Q.M. understood that I had to return to the human world, and bid me farewell. I promised to remember her.

M xt (and last) entry:

2:55. The Queen Mother has departed. I have promised to write [well] of her. She was very special. We have said our goodbyes. Human perceptions returning. This experience has been most interesting. Starkly beautiful. I will write fondly of it - and her.

Obviously my mood was still altered. Bear in mind that in retrospective sobriety, the experience seems much less warm and fuzzy, (though not less interesting). In fact even at the time I think I was aware that this would be the case. I believe I was attempting to preserve in my journal some of the powerful emotional content of the experience, which my memory could preserve only dimly.

I slept some more, and awoke at about 4:30 feeling much more myself. It felt good to be a human being again. Only tiredness (from too little sleep) and a slight stone remained, and I began this expose'. It is now several hours later. There was no hangover, nor any incidence of deja vu (which some users have described). On the other hand, the feeling of being 'reborn' which some have described is also not in evidence.

Reflecting upon the possible influences on my trip, I've come to the conclusion that the fact that I've been reading a book on the social lives of ants may have had some bearing at least on the appearance and character of the Queen and her brood. What did they represent? Fragments of my own psyche? The fevered attempts of a stoned brain to codify sensory data and enhanced emotional states it no longer comprehended? I don't know (though offhand I would consider the latter explanation more likely).

My sober thoughts about this experience are on the whole positive. There were only a few slightly scary or d certing moments. I'm not sorry I did it, but I have no real desire to do it again anytime soon, nor would I urge o s to try it. Curiosity was my main motivation, and my curiosity has been satisfied. Moreover, the experience was overpowering in a way - too much so to be repeated lightly. I can see how had it turned out badly, it could have been

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very bad indeed. It is not impossible that someday I'd again visit that insane Wonderland (or another) for further exploration (I am considering growing my own magic mushrooms next) but I am content to let it wait until I again feel e y prepared.

M. T. (male). 720mg

One day we felt like a major trip should happen so we downed 2 bottles 3mg/ml DXM. We paced ourselves since DXM does irritate the stomach at higher doses. 45 minutes later weird thing began. The first plateau came and went quickly. We were then whooshed into the 2nd plateau where time and space meant very little. I recommend closing your eyes and either laying down or sitting cross-legged. DON'T WALK AROUND!!!

Everything below may sound insane but it seemed like reality at the time

Anyway, I perceived myself much larger and only my head could fit into the room (like a helmet). I was hurtling around the room spinning like there was no gravity. The music was replaced by feeling the sound instead of hearing it. Each note seemed to come from a separate entity that was in the room with us. I saw myself walking around in a Japanese Garden (saw myself as second person). Time meant nothing. I then moved myself closer to the stereo. There I fell backward (not far since I had crawled) and became, sorry for the blasphemy, Jesus himself. I was on the cross and floating up toward heaven. I passed through clouds as the music lifted me up. I believe Pink Floyd's COMFORTABLY NUMB had just begun... Anyway, I saw god and many people behind him (prophets I assume). I really did not know where I was or how fast time was moving.

A I stress that closed eyes make the trip MUCH more visual. Not once did I feel like I was overdosing, it was b ful... Then I became, brace yourself, 3 different people. I truly believed that I was 3 separate entities and each one was communicating with the others.

J. W. (male). 900mg

Well, I dosed 900mg this morning at 8:00 am and was done by 1:00pm. Anyhow, the stuff hit me REALLY hard (I did it on an empty stomach :)) and I ralfed three times. Oh well. I wrapped myself in a blanket for like 2 hours because I was FREEZING. I felt like I was naked at the north pole, man. You know how the outdoors look when the sun goes under a cloud (the light level increases and decreases, etc.)? Well I've experienced that every time I dose DXM. Way phat.

Anyhow, I also made a trippy phone call to my friend, told him some dude was experimenting on my brother (who was 70 miles away at the time), and then asked him for help. My poor friend replied "I don't understand" and I hung up. Anyhow, I also petted my dog and his fur felt REALLY thick. I also stared at myself in the mirror and kept repeating over and over "How can anyone like this ugly face?" Weird. Not quite the "I am evil" experience of acid (which I have yet to do, dammit), but strange nonetheless.

I also listened to a lot of "The Movement" and that techno trance stuff really buzzed me out. I didn't get too many hallucinations, even at 900mg, tho :(I tried to write a message earlier in the trip-the text was floating in front of me and then my mailer said some crap like "message rejected" and I found out that it didn't get posted. That sucks man. I was q litzed when I wrote that message so I was hoping it would get posted so I could study my use of language. I was p g when I posted that dammit! Why did it reject my message?! <G> Anyhow, it was a nice experience, once again.

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I wish I could get more visuals, tho. There were several moments when it could have REALLY turned into a bad trip (j- when I was puking in the toilet ;-)) but fortunately all went well. A close call, but fun nonetheless.

D. P. (male). 900mg

I went down to the lake one Saturday morning and took a few boxes of Drixoral cough liqui-caps. Invited some friends along, but nobody could come with me, so I took ALL the little motherfuckers. I walked along the side of the lake for a few miles, not feeling any major effects yet. Then, suddenly, it hit. I felt very dizzy, and very out of place. I couldn't walk so I sat down on a park bench.

It was foreign... here I was on a park bench in some strange place, with everything spinning around me. Cars hissed by on lake shore drive, seem like some kind of deadly monster, or dangerous presence. I was very confused & decided to walk back. It was hard to walk when everything was twisting in strange directions, but I made it all the way down to where there was a tree in the sand. (I'm not sure if there really WAS a tree there, but at the time there seemed to be). Walked down to the tree and collapsed beneath it. Looking at the sky thru its branches, the cars seemed very far away. It was somehow very comforting... sky & sand & tree & me, everything else seemed distant & unimportant. Wanted to stay there, but after a while (minutes or hours - sense of time totally gone) I got up and went on.

A mile or so further I sat down on a rock looking out on the water. The patterns of the light on the water were endlessly fascinating, & when I closed my eyes I vividly saw a field of flame, wild naked girls running thru it, somehow unharmed by the flame because they were just a part of the flame, & I was a part of the flame, & everything was unified in the flame. When I opened my eyes, all I saw was water... after a while of experiencing the fire world & the w world I got up & decided to crawl home. I was very paranoid of getting hit by a car but somehow I made it.

Realized I was getting dehydrated (which might have been causing some of the delirium) so I drank something. Then I sat down on the couch... & realized that maybe I wasn't on the couch at all, I was still on the rock on the beach & this whole thing had been a very strange hallucination. For the next few hours I was sure that's what was going on, & kept expecting to open my eyes...

Finally things returned more or less to normal. later that night there were some kind of weak residual visuals (fireworks)... who knows? Maybe I still AM on that rock...

P. L. (male). 900mg; friend (male), 600mg

Around 9 PM I took 30 drixorals, around 900 mg. My friend, T, took 20, which is 600 mg. I was experienced, he was not.

9:30: The power goes off! It's a really intense thunderstorm, even for Texas. The lights (and my computer, which was playing Acid Warp) shut down. My sister calls T and I into her room to watch the thunderstorm. I start to realize I am a bit fucked up (like stoned on pot.)

10:00 T and I retire to my room again. Am I tripping now. I leave the window open so I can watch the beautiful lightning... let me tell you that is a trip on any drug! I have a perfect little tripping environment set up. My friend T is v g me from out of town, and he is sleeping in my bed. I am laying on a few blankets on the floor. I have a CD p ., a stack of Hendrix, Beatles, and THE GRATEFUL DEAD (emphasis to show that this is the all-time great tripping band) and a really good set of headphones. Also I have a journal and a few pens. I decide to start writing down random thoughts.

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After checking to see if T is tripping or not (he isn't) I turn out the light and put in Jimi Hendrix's Electric Ladyland. Oh my god. If any of you aren't experienced with this album, GET IT. It's availible on a CD reissue with good liner notes. F time the actual song "Electric Ladyland" came on, I was on the upswing of my trip. Since I was on a rather large amount of DXM, let me tell you I was flying. Literally. I closed my eyes and entered a new universe of Jimi. I started on a tall cliff overlooking a craggy valley. The sky was a deep purple. I took a single step off the cliff and dropped many hundreds of feet. Eventually my fall turned into a gentle swoon and I soared up over "Electric Ladyland."

Believe me words fail to describe exactly what I saw and did, but it is comparable to what I have read about DMT: you enter a different universe. Once again, your mileage may vary of course.

I won't write out exactly what I was thinking about to each track on EL, but the climax was the Rainy Day -> 1983 -> Moon Turn the Tides -> Still Raining suite. This is in some ways the opposite of Electric Ladyland because instead of flying over purple mountains, I was swimming in the deep blue ocean. I explored a shipwreck on the bottom of the ocean. In the sunken ship was a door. I opened the door and saw my old friend Matt whom I was semi-estranged from. We had a reconciliation and I started crying (in real life.)

T turned on the light and asked me what was wrong. I said nothing, I was just going over some issues in my past. (* note this is described as the primary effect of a high DXM dose, so beware if that's not your thing...) I asked him if he was tripping yet and his eyes got very large and he just nodded. He started waving his hand in front of his face and basically just looking stunned. You see he had never smoked pot or done any other drugs than (a large amount of) alcohol. So this was an entirely new, and pleasant, thing for him. He was listening to a "trip mix" that I had crafted for him of a lot of Grateful Dead and Beatles.

I opened my journal and scrawled (it's hard to write on DXM) something to the effect of describing what had just h ned. Then I went back into the dream. I finished exploring 1983 (the ocean) and listening to the rest of Electric L nd. Of course a lot of stuff "happened" in between that but I won't cover it here.

I put in the White Album by the Beatles and affirmed the reasons why I have listened to them for so many years. The White Album is another must-have, BTW. It seems to fit roboing so well, because it is at times harsh and at others gentle. The imagery of the lyrics and music are conducive to tripping. I guess this is why it's considered Psychedelic... Dear Prudence is a fantastic song.

Later I listened to Europe '72 by the Dead. Like the images of the Beatles from A Hard Day's Night, the Dead have a very carefree fun image in my mind. In other words they are a bunch of guys (and gals if you include Donna) that you would just want to hang around with. Well, that's what I did. :) During "Sugar Magnolia," I got onstage with the band and played guitar and sang along. Bob and I were trading licks. (I had sort of "become" Jerry Garcia.) T later reported to me that during "Crazy Fingers -> Drums -> The Other One" (which I put on his tape) he was the audience, meaning the ENTIRE audience, and the Dead were shining their music on him. Later he got picked up and passed around the audience (like crowd-surfing) which turned into the ocean.

During "Truckin -> Prelude -> Morning Dew" I was walking around the Sierra mountains (my home growing up) watching the trees and listening to the birds. My friends were there, and each one had an alter ego in the band. In other words, I was Jerry, T was Mickey Hart, my friend Scott was Bob Weir, etc. We all just had fun and walked around in the forest.

I listened to a lot of other music (I didn't get to sleep until 5 the next morning) but this gives you an idea what a lovely and beautiful trip I had. DXM is a wonderful drug.

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T. M. (male). 1020mg

At one point I was sitting in front of my computer with the lights out and I thought to myself, "I'm going to create another person." I closed my eyes and concentrated real hard. Then I opened them and looked to my right. I was surprised to see myself sitting there. I looked at myself and said, "Hi!" Then my other self looked back at me and said, "Hi!"

Then I buggged out. 8)

Anonymous 1100mg

We had just gotten back from a football game, and we decided to stop at the drug store on the way home for some tussin. I was with 3 friends, Joe, Eli, and Matt. We got back to my house, and me and Joe started drinking. Eli just wanted to smoke, so I hooked him up on my vaporizer. Matt is a straight edge, so he just sat watching us.

I finished off 12 oz, and Joe had about 6. He's much less tolerant than me, so that put as at the same level. I noticed the effects in 30 min. I have discovered, that unlike most other drugs, DXM comes on quicker if my stomach is full. NO idea why this happens.

I started to feel very drunk. Joe has described the initial effects of DXM "I feel like I'm so drunk, that if I had drunken alcohol, I'd be dead". I was quite dizzy, and the room was spinning slightly. Getting up and moving around was initially an effort, but it also felt GREAT. I had a great urge to dance to techno music. We decided to go take a walk around and have a cigarette. We got up, and walked out, with incidentally, my parents and younger sister all home and awake at the t.

We got back and I felt that I was starting to peak. It felt A LOT like acid in may respects. I had just received a package from my girlfriend in Cal, and when I opened it up, she spilled all over the floor. What I actually think this was, was me recalling a whole lot of memories about her at once. So many, and so intense, that I forgot they were memories, and thought that she was actually there with me. This happened later, with two other people we knew. They actually seemed to be in the basement with us for a very long time. It also seemed like we were traveling in time, by what I think, was both of us recalling memories of the past so intensely that it seemed like reality. VERY cool.

After a while Matt and Eli left, and me and Joe just hung out. We kept entering this trance, where we would stare at each other and say very strange things like, "Enter the Seventh Gate, where the nexus ends", and at the same time, make strange hand motions. At one point, this trance was so powerful, that we had to avoid looking at each others faces, or else it would happen automatically. Many times I felt as if I understood the nature of the universe, and the secret to life. For this reason, it was like acid. No hallucinations though. These effects continued for several more hours. Music was cool, like usual, and had the effect of freeing our minds from our bodies and allowing them to walk on the astral plane. We put in some techno and just tranced for a while.

At about 3 am (we took the stuff at 9) we decided to go to sleep. I had problems falling asleep, and it was a little scary but only for a second. I had this problem, that if I tried to fall asleep, I would suddenly hear jazz music playing loudly. VERY loudly. It was more real than normally hearing music in my head, and it sounded just like it was coming out of my stereo. After I have no idea how long, I eventually drifted off. The next morning I felt just fine. Lots of fun.

T. M. (male). 1560mg + cannabis

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[Another long description, characteristic of the fourth plateau.]

I[illegible] an interesting experience to say the least. I had been going through some of my old Amiga disks and came across th[illegible]ame 'Lemmings' and popped it in the drive. I started from the very beginning (since I no longer have any idea where the sheet of paper is that I wrote the level codes down on when I first played it a few years ago) and alternated swallowing Drixorals and smoking bowls in between levels. (I never realized that that game would be so much fun when stoned!). Later, I washed down the Drixorals with some syrup and decided to logon and send my buddy some email. This endeavor didn't last very long as I soon found myself floating in a pink space with planets in beautiful pastel colors around me. My dorm room and everything in it were completely nonexistent.

I've roboed several times before and NEVER have I had visuals like that WITH MY EYES OPEN. Always I see things around me and only interpret them differently; it's not until I close my eyes that I completely lose myself. The closest I have come to that in the past was when I was tripping on 1260mg and I thought I was in a forest. But then my desk and computer were in the forest with me. This time I had no connection with this world whatsoever. When I came out of that hallucination I decided the email thang just wasn't going to happen - can't type if I can't see the keyboard!

So I went over to my bed to smoke one last bowl. I was lying on my stomach and looking out the window. For some reason I got it into my head that I was a cat. This didn't bother me.. felt perfectly normal in fact . I thought I had always been of the feline persuasion.

Some time later (It's really hard for me to put the events of that night together.. There are a lot of gaps in my memory and what I do remember I just remember as events without any kind of time stamp on them) I was lying down listening to music and I had another full blown vision like the pink space one... oh boy, this is gonna be hard to describe.. hummm I was no longer in my body - I was just a consciousness floating in space - and I was looking at a spiral. It was li[illegible] spring but instead of each loop being circular, they were perfect squares. This square spring extend out to infinity i[illegible]n directions. Each square loop was flat on the top and bottom and thick.. as if someone had cut a square spiral out of paper and pulled it out. The loops were divided into sections and each section was a window into another reality. I was looking at a portion of the spiral that had the window to this world. Each window opened onto a different part of my existence: moving down the coil, the window adjacent to the one I was looking at opened ont[illegible]he world of my life before this one and the next window after that revealed my life before that and so on. Likewise, moving up the coil, the window adjacent to the one I was looking at revealed the my next life after this one and the next window after that revealed one more life and so on. So, up were my future lives and down were my past lives..

The next thing that happened to me I'd like to mention because it was rather scary. Normally, I use the music coming through my headphones as that one last thread of this reality. I know that no matter what happens, if I can still hear music then (a) my body is still alive and functioning properly no matter what I may think and (b) I will always be able to find my way back; there's no possibility of getting lost. It's like a security blanket.

I had been looking at a large blue shape that was a sphere with a concave trench dug out around its equator and there were movies playing inside the trench that I was watching (I can't for the life of me remember what they were unfortunately). Suddenly, everything stopped and.. oh man, here we go again.. I felt myself falling into the very fabric of the universe. As I was falling I had the vague notion that I was dying. It didn't bother me at the time and I was curious so I reached out further with my mind. It was like I was growing smaller and smaller.. I shrunk down past the subatomic level. And as my mind reached.. outward?.. inward?.. downward? I dunno.. I touched something.

Unfortunately I only retained part of the feeling and nothing more.. but I remember being overwhelmed. I really wish I could remember more of it. Any words I could use to describe what I felt just don't seem to correctly describe it.. a s[illegible]of energy and a feeling of 'correctness' like I actually belonged somewhere for once. Anyway, the full meaning of n[illegible]rlier thought of death sunk in. I was sure I had died and I felt that if I stayed there any longer I'd never get back. I pulled myself away, which was no easy task because I didn't want to leave.. it felt so good there.. so right. But once I

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made that initial move, I started racing back faster than I had come. I found myself floating above my body and looking down at it. It was then that I realized that I wasn't hearing any music.. In fact, when I thought about it, I couldn't remember hearing any music during that entire trip.. my security blanket was gone and I freaked out.

In a frenzy I forced myself back into my body and with some difficulty managed to open my eyes. I could hear the music once again but this was little consolation since my body was cold.. felt like I had been lying outside with my clothes off. And I couldn't feel any part of it.. not even the familiar beating of my heart (yes, I know this is normal for robo but I was in a big paranoia fit at the time and the MJ wasn't helping). I tried to reach over and feel my heart, but I only got my arm a few inches off the bed before it feel limply at my side. That did it.. I was really scared now and I was sure that my heart had stopped and if it hadn't yet it was real close to it and I only had seconds left on this earth. I decided my only chance at survival was to try and get my body moving to keep my heart stimulated. I gathered up all my willpower and with one big effort managed to sit up. I pulled the headphones off, got out of bed and started jumping up and down.. Then I did some push ups.. I did those push ups like a wild man; thinking that if I stopped, my heart would stop and I would die.

Eventually I calmed down enough to think, "if you can do all these push ups, your body must be all right." So I sat back on my bed and just for peace of mind I checked my pulse (by this time I had come down enough that I could accomplish this task.. still had to close one eye though because of that double vision). It was at a low 47 bpm.. and I had just been exercising not too long ago! my body was still cold and numb but 47 is a good healthy pulse rate (my norm is around 52-55 resting) so I had a cigarette and then went to bed.

The next day I woke up late.. late enough that my vision was back to normal. But my body felt weird. felt all tingly all over like there was a layer of helium just under my skin. And when I walked I felt like I was sloshing around inside it. I went outside and everything was new to me. The world engaged my senses like never before.. sight, smell, hearing, touch it was pure sensory overload. I passed by a group of people and a wave of energy hit me that nearly knocked me to my knees. This happened several more times but each time it was less intense until I could stand next to someone again and only feel mild sensations within me.

It is now 5 days since then, and my body still feels different. My overactive senses have managed to return to normal, but I still feel like I'm sloshing around in my body.. even now while I'm sitting down. And I still have that helium feeling only it's no longer all over my whole body at once.. it's localized to various areas and those areas are constantly moving around. I played some vball and it doesn't seem to affect my coordination.. in fact I feel that I can use my body better now than I could before (a good thing too 'cause I've gotta play away games in Reno and Chico this weekend.. I'd hate to have to explain to the team that I can no longer play ball because I roboed to hard and fucked my body up!)

I wasn't expecting this to turn out to be so long.. but I just had to share this experience.. I couldn't keep it to myself any longer. I hope I didn't bore y'all too much! 8)

Repo Man (male). 1050mg

When I was stationed in Korea, we could buy these little yellow pills over the counter that we only knew as Romilars. We had no idea what they were and because the people selling them to us wanted to keep the mystery up (I guess so we didn't just go to another store and order whole caseload of them) they just gave them to us in little paper bags.

Anyway, if we ate about 70 of them, we would get so absolutely wasted we were literally walking around in our house for 8 hours or more at a time. Really a beautiful feeling where you lose your peripheral vision and space expands and you have very vivid, very solid looking hallucinations in 360 degrees. Your entire reality changes, BUT your minds alertness doesn't disappear. i.e.-you never THINK you can fly or anything. You are able to deeply enjoy music and cheap b-grade horror movies are INTENSE!! Shit, I stayed up ALL NIGHT once watching The Evil Dead II

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over and over and feeling like I was in the movie.

14.2.2 Negative Experiences

A. P. (male, age 18, 82kg).. 600mg (7.3mg/kg)

Everything seemed like a dream and I honestly think I was dying. I was walking around in public and most people seemed like inanimate objects. I was definitely on a higher astral plane than them, although I didn't look down on them in any way. they just ignored me completely though. I walked past a chapel and saw two guys. although there were many people around, I knew that all three of us were on the same plane (later, I even heard them mention using acid so I was right). I wanted to talk to them but was afraid to and so quickly walked away to the drug store which was a mile or two away in my bedroom slippers to buy more DXM (at this point I was not yet completely gone). I was very dizzy and the sea legs had just hit me. (Before my walk, I sat in the sun and enjoyed the light-headedness. My body felt very light.)

By the time I made it to the shopping center, it was just like being a ghost. On the way, I knew I was dying but it was very pleasant. My soul gradually dissociated from my body and the world seemed so strange, uncertain and mysterious. I mber seeing a leaf blowing in the wind and I knew that it and I (along with everything else) were really the same th. Near the end, however, my hands and arms started to tingle a lot (the same feeling that you get if you wake up after having slept on one of your limbs), my face and neck were getting paralyzed, my heart was beating very fast, and I was having severe robo movements. Added to all this, it was getting harder to move but I was at McDonald's by myself and had to get home.

I kept thinking, "I have to call my friend, I have to call my friend" (who I had told about my plans). My life started to flash in front of me and for a second I saw myself from the outside (although I think it was just my image). This was all very freaky. I knew then that I was really dying. Everyone in the restaurant (and everywhere else) was acting as if I were either normal (unlikely) or already dead (invisible). Everything seemed like a series of pictures (flanging) and I got on the bus. Excuse the incontinuity, but life lost its linear character and so its hard for me to remember this in a linear fashion.

About then, I kept on thinking about significant people from my past (one in particular) and his (not the person I finally called) image and then mine flashed in my mind. I had a strong urge to call him and say good-bye. I wanted to share with him (& everyone) my insights on life and I was aware that I was closing one chapter of my life and starting a completely new one. I then realized that I had to get out of McDonalds while I could still move. I had just taken 60 mg more.

Then, all my religious insights vanished and my panic began. I waited on the bus for a long time. After I was on it, I then felt trapped, scared, very dizzy and sick. We stopped at a busy stoplight next to a motel. I went to the front of the bus and asked to be let off, she first said no but I told her I was really sick and she agreed. 5 seconds later I puked three times in front of all these cars and rushed into the motel's men's room. I threw up some more. I was in a cold sweat and f y sick. the room was dizzy and if I hadn't been already familiar with the place I wouldn't have recognized it. I sat fo out 5 or 10 minutes and then robotically walked back home, where I called my friend, who was an absolute blessing. I told him everything and soon started to come back, although I could only lie down and was breathing very

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heavy with a fast heartbeat. My experience was horrible (except for the brief insights) and I'm truly convinced that the DXM high is identical to dying.

Anonymous (male, age 19, 55kg).. 600mg (10.9mg/kg)

A few weekends ago, none of my friends were available to do anything, so I decided to try some DXM. I had eaten about 4 hours before, and had a Super Big Gulp, but I was bored and had time to waste. I bought a package of generic DXM liquicaps (the Smith's store in Arizona sells 10 30mg tablets for $1.49...), and took them.

I waited for over an hour, and I could feel no effect. I figure this is probably because my stomach was full. So, I went to the store. I bought another 10 tablets, and took them. With both packages, I took a total of 600 mg DXM, which was probably a bit too much for my first time, and my weight (120 lb.).

I watched TV for a while, and I began to feel a bit different. I walked up to go to the bathroom, and I walked like I do when I'm drunk. I returned to my room, and watched some more TV. By now, it had been over an hour since I finished my second package of tablets.

I sat in my room, and began to look around. Where was I? I looked around and the room seemed to be so foreign to me. It was like I had stepped into someone else's room in a different location entirely. I just stared at a cardboard box on the other side of my room.

I began to get very confused, very disturbed. Who am I? What is happening here? More confusion. About 2+ hours into th[illegible]p, I began to forget who I was. I had to ask myself, and strenuously think, "who am I?" It took me a while, but I v[illegible]le to say "I'm C." and I figured out who I was. _But_ it didn't seem like me. I could think of who I was, and say who I was, but I didn't feel like that person.

I lost track of time. I lost track of what was happening to me. I wanted to know what happened to me. It was like I somehow got into a different dimension, with strange things going on in my head, and I didn't know what. "WHAT IS HAPPENING?" I soon figured out that I had taken something called DXM, and that was the cause of my confusion. But it was bizarre.

I went to my bed to lay down to sleep. I fell asleep. Then, I was flying in the air - actually, I was being suspended by my shoulders. I was being lifted up in the air by my shoulders, and it was dark out. I was lifted over buildings. The buildings were really simple (skyscrapers). I opened my eyes, and I wasn't flying. I closed my eyes, and I was being suspended in the air again.

Then, I was going down a slide. But it wasn't like an ordinary slide at a park, it was like a slide in a totally abstract world. Everything around me was black and grey and maybe there were a few white lines around. But I was in this strange world, and I couldn't stop myself from falling down this slide. I was on my stomach, and I kept falling down, and down. It was really disturbing.

I woke up after feeling this. I had to think who I was again. I had to think what was happening. I was out of control, and I didn't like all the intense hallucinations, since they were more than visual, as I _was_ being lifted in the air, or going down the slide. I didn't like any of this at the time.

I [illegible]p sleep again. I felt something warm, then hot in my chest. I grabbed the garbage can sitting next to the bed (how c[illegible]nient) and puked. And puked. And puked. And puked. But it didn't really bother me at the time, I was so far out of reality that it didn't feel that bad. I just wanted to puke it all up so it could stop.

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I went back to bed. I slept most of the next day, and didn't feel well at all.

J. M (male).. 600mg

[I find this an interesting description of some of the "darker" sides of a third plateau trip. Note how J. M. felt as if he were insane, and also how it seemed to him that life was a sort of game that he wasn't sure he wanted to continue playing.]

Easter Sunday, April 16, 1995

2:15pm: I had been out on a bike ride for about 01:15 hours, and bought 2 packages of Drixoral "Cough and Congestion Liquid Caps". Each package contained 10 caplets, with 30mg of DXM per cap. I stopped at a nearby university and swallowed the 20 caplets, for a total of 600mg DXM.

2:20pm: Finished with the caps, and done with my water, I rode home. This took about 40 minutes. The overall ride lasted 2 hours (23 miles). Bike rides usually bring me in contact with my more positive emotions, and I was not afraid of the impending trip. This surprised me, because past experiences with LSD were usually prefaced with a good deal of anxiety.

3:00pm: Shortly before arriving home at 3pm, I started noticing a tingling sensation in my head - a "pins and needles" effect. Started keeping a diary of what takes place.

3:[illegible]m: Taking a shower. Physical sensations are were intensified on my head: washing my hair, rinsing, and shaving n[illegible]e seemed unusual. I heard myself say "wow" a couple times.

3:15pm: A heightened awareness of the opinions of my body. I was choosing clothes based on how they would sense during the day.

3:20pm: I began to notice motor control problems, similar to having a beer or two. I knew something was not quite right with my coordination but was not sure exactly what it was.

3:35pm: Detail work with my hands was becoming difficult. I had bought a thermometer with the Drixoral to make sure I could have some objective measure of my temperature during the day, and found it quite difficult to open the case.

3:40pm: Temperature: 97.8 F. Pulse: about 156 per minute (39 in 15 seconds) (way high) It is noticeably strange to bend down and pick something off the floor. Also strange standing up again.

3:50pm: Felt like a head buzz w/herb. Sat on my futon and watched Dennis Miller on the Comedy Channel. Felt unusually comfortable there. My perception was happening at fewer "frames per second" than usual. (In other words, if I normally experience 10 units of perception per second, it seemed like I was experiencing about 5 now.)

3:55pm: Realized that this was the definition of "lazy Sunday". Awareness of how much time was still left in the day.

4:00pm: Felt like being drunk. Saw the "Dave Matthews Band" for a few minutes in an MTV Spring Break concert, a[illegible]s acutely aware of how bored they were of playing that damn song so many times. Smells are being perceived st[illegible]ger than usual (i.e., the smell of my water glass.) Starting to notice a mild nausea, not too disturbing.

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4:01pm: Suddenly the nausea became quite strong. Not surprisingly, TV also took a turn for the worse, and seemed unpleasant. I was probably misinterpreting my instinctive discomfort for an emotional response to the TV.

4:[illegible]pm: Threw up about three times. Hands, knees and head were reporting "pins & needles" (hereafter referred to as "P&N"). Total effect reminds me of having a bad hangover. Had the thought, "do I really want to do this?" Noticed imagination of being found dead, choked on my own vomit.

4:05pm: Water difficult to drink, because it was reminding me of the nasty taste in my mouth. Ate four crackers, and was amazed at how incredibly dry my mouth became, literally needing water to swallow. Starting to feel better after getting sick. The crackers seemed to "ground" me and help me feel a little more normal. My eyeglasses seemed oppressive, and I turned off the TV.

4:10pm: Realized that my penis and balls had become incredibly small. There is usually "shrinkage" (in the Seinfeld sense of the word) after riding my bike, but this was spooky. Felt the urge to have fresh air, so I went out onto my apartment's balcony (third floor). My vision was definitely affected, and I had difficulty focusing on distant objects such as houses and clouds. It was difficult to look at the sky, it seemed brighter than usual. Emotionally satisfying to sweep the birdseed off of the balcony.

4:15pm: Definitely noticing psychological effects of the drug. (See "frames per second" and vision above.) Feel much better physically now, fully recuperated from earlier vomiting.

4:20pm: Setting on my balcony in an office chair. Heard a far away rumbling, not sure if it was from cars or thunder.

4:25pm: Realized how strange it is that we always are looking for "something to do". Riding a bike, taking a drug, g[illegible] to a movie, etc...., never content to just "be" right here. Found the present moment interesting and not boring.

4:27pm: Found it difficult to follow moving objects visually (cars, people walking by, etc....). Writing seems okay. Probably down to about three "frames per second" now - this is probably what people refer to as "strobing". Found it interesting but not particularly good or bad.

4:32pm: Awareness of how alone I am in this town. Taking an effort to focus on objects visually.

4:35pm: Convinced that my awareness and sensitivity were lower than normal due to the drug. (Some drugs let you notice more perceptions, or intensify them, but I now knew for sure that DXM was in the alcohol-class of drugs that just brings your awareness to a lower level. (For me.))

4:38pm: P&N throughout my body. Came inside the apartment again. Ate four more crackers.

4:41pm: Starting to miss normal functional vision. Wrote "wish my eyes worked again!"

4:45pm: Temperature: 97.8 Pulse: about 132/minute (33 in 15 seconds) Tried playing guitar. Unlike herb, I felt somewhat indifferent to it, and music was not feeding me emotionally. Realized for the first time that I tend to avoid certain guitar chords because they are connected to certain sad memories in my past when I was learning them.

4:47pm: "There is a deadness to this drug." I was feeling broken, in the sense that my body and mind were operating wrongly. (Contrast to feeling of intensified sensitivity with other drugs.) Felt that I knew what deranged street people must be experiencing, with both their minds and bodies irreparably damaged. (This is not a fun thought.)

4:[illegible]pm: Staring at my face in the mirror. Realized that inside the abstract thing I call "my head" is actually a lot of bone. Fascinated briefly by my jawbone. Felt strange to "be me", as though I usually interpret my reflection in the

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mirror as some other person. Thought my haircut looked too feminine.

5[illegible]n: Stomach was feeling full, probably due to the water I'd been drinking. Listening to Peter Gabriel's "Us" album. U[illegible]o lay on the floor and read Wired. Realization of how my glasses make me look gay.

5:10pm: Reading is quite difficult, the eyes not wanting to focus or move at the speed of my intellect.

5:15pm: Saw a phrase in an article, "our current US government", and it made me realize how I always take it for granted that I am going to live forever. It is only 1995.

5:17pm: Realizing that I had been crawling to the stereo and back from my spot on the floor. My first time crawling in a long time.

5:25pm: Realized that I like music which puts our situation in a larger scale of the planet as a whole. I felt as though I was not sure whether I liked it here on Earth. Did not like the idea of having to die someday. Felt slightly nauseous, especially upon standing.

5:29pm: Body feels coarse, cold, meat and bones. "Not me." Feeling of not wanting to play this game anymore (on this planet).

5:40pm: Threw up a few times. P&N in hands again, unpleasant. Noticed a purple pimple on my leg and felt as though it was "Jim's leg", not "me". Wrote, "Jim, if you read this later, do not do this drug, it sucks!"

5:45pm: Again, felt that this was the experience of being insane. Realized simultaneously how long life is, and how s[illegible]t is. The day seemed to be passing super-slowly. Brushing my teeth after vomiting was another "grounding" e[illegible], making me feel better. Had to stop listening to music, it was too intense and was becoming oppressive.

5:50pm: Turning on the computer, hoping it will "ground" me more. Still feeling crazy in an unhealthy way.

5:55pm: Since puking, my breathing has been quite deep and has attracted my attention. Noticed a certain amount of background fear that thinks I will always be this messed up. Hard to focus on the screen.

6:06pm: Felt sad for humanity without knowing why. Felt "bad" for being human, the same feeling of "badness" as when your father yells at you. Felt that we ought not to be human. Felt guilty, ashamed of myself for trying DXM, felt ashamed to "something higher" or god. (I hardly ever have feelings of being in the presence of a higher intelligence, so this was odd for me.)

6:10pm: Wondered who looks out for the people on the Earth.

6:20pm: Wondered if this is how it feels to die. Time seeming to go on and on... Last ten minutes since my last entry seems like an hour. Ate eight more crackers.

6:25pm: Starting to feel as though I am heading back towards mental health. Felt strong urge to read messages on a Usenet group relating to a particular system of consciousness. Started to notice a stomach ache.

6:35pm: Stomach ache more pronounced. Feeling of coming back to psychological well-being returning.

7 [illegible]n: Threw up. Talked to my brother on the phone for about an hour, and he said I sounded lucid and relaxed. I felt that I was being much more open than usual when talking about emotionally sensitive areas. My voice was much lower and more rich than usual. (That also happens for me with hangovers.)

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8:30pm: Watching TV, laying on the couch under a blanket. Still major stomach aches.

9[illegible]n: Temperature: 98.9 F (above normal) Finally able to poop - had felt bloated since about 7:30pm and had w[illegible]d to pass gas or poop. When standing up (from futon and from toilet) felt light-headed and slight urge to throw up.

10:20pm: Transcribing this record from notes into the computer. P&N in face, hands, and legs. Bobby McFerrin / YoYo Ma album soothing.

11:15pm: Finishing this document, about to post it to the net, still sensing P&N in jaw, hands, and calves. My mind and vision seem 100% normal again, but my body still feels beaten.

Torch (male?),. 570mg + 2 friends, 675mg each (??)

[This experience can be either a good or a bad one depending on your point of view, but I put it here to illustrate Torch's friend's negative experience as a "mescalibur worm". Note that I'm fairly certain Torch miscalculated the dosage; 1/3 of 16oz of DXM-only cough syrup should be 480mg each, not 157mg each, bringing the dosages to 570mg for Torch and 675 for each of his friends, which is consistent with a third plateau trip level.]

I had a very interesting experience with DXM last Friday night. I had two friends over and we split 16 ounces three ways - 157 mg each. We started watching an old movie we remembered from out childhood - The Last Unicorn. About halfway through the movie the effects set in, and the story became very hard to follow, but watching all the animation w[illegible]ool. After the movie we started talking and had all kinds of conversations... We thought about a cure for AIDS, d[illegible]sed our fears of being 'big people' (growing up, going to college), and many other things I can't remember. A few hours later my two friends split 75 mg more each; I didn't want any because I was feeling nauseous from drinking the syrup earlier. About an hour after that we each took three pills, but one of my friends took 4.

That fourth one seemed to push him over into the third plateau, because he talked about all of his weird feelings and all of the other things he could not explain. About half an hour into his being on the third plateau the sun began to rise and we decided it was time to sleep. We laid down and my friend started talking about all the strange things he saw when he closed his eyes - I don't remember exactly what he said. A little later he started saying some really weird shit - "I'm gonna ram your boat! Watch out!" We'd say back to him, "Ram it! Ram it!"

Then he started babbling about how he was a mescalibur worm. We didn't know what the hell he was talking about but I was extremely tired so I told my other friend to tell him a story that ended in him sleeping. At this point my tripping friend was flying through space as this worm, so my other friend told him a story about going into a space station and seeing NASA beds. He laid down in the NASA beds, they were very comfortable, and he fell soundly asleep.

He was quiet for a little while and we thought it worked, but then he started screaming "Oh, shit! Oh, shit!" We were worried about him so we tapped him trying to wake him up but he wouldn't stop and he kept talking about how he was a mescalibur worm and his job was to go through the green tunnels very fast. We stood him up and he still thought he was that worm, so we started to freak out recalling stories about people who have tripped on acid and thought they were a dog or an orange for the rest of their life. We held him and started saying "Your name is X, and you're not a worm, your a human being. You're a HUMAN BEING. Now what are you?" And he would reply "A human being." We said "Not a mescalibur worm.." and he would gasp and look really scared... It took us about 30 minutes to convince him that h[illegible]s a human and not a worm.

We turned on the TV and had him watch it, explaining that the animals he saw on it were humans, just like he was.

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Then we started playing Piggy by NIN and let him sing along to it so he could participate in something familiar to him (we got kind of worried when the lyrics were 'nothing can stop me now, 'cause I don't care, any more' It turned out that h n't paying attention to the words, just singing along.)

This whole time I was scared out of my mind... I didn't know how to explain to his mother that he now thought he was a mescalibur worm and all he talked about was flying through tunnels. When he finally came out of it he told us about the experience of going through the green tunnels, and then flying through space and sleeping in NASA beds.

The whole experience was frightening but fun to look back on. After we brought him back I tried to sleep and saw some interesting things myself. I saw this strange string made up of many long, intertwined fibers, and I was that string. I had to destroy all of the squares of the quilt I was covered with or else I couldn't fall asleep. And if I couldn't even do that, some voice told me, I was worthless. And later as I was asleep I had to put my head on red glowing squares or else my body wouldn't metabolize the DXM. It did this, but the squares disappeared one by one until there were none left, and then I was worried that I wouldn't be able to get rid of it.

I slept 'till two the next day and when I awoke I felt strange all day. The next day (today) I felt fine, and my bad-trip friend seemed to suffer no ill-effects from his experience, but he is reluctant to try DXM again.

S. C. 700mg

The dosage was about 700 mg - the most FOAF had ever choked down. After experiencing the normal start-up body stone and perceptual distortions, he fell asleep. Now picture yourself waking up in the Abyss. You are an amnesiac. Y an remember only the following facts:

1. You are something called a "human being" (although you're not quite sure what that is).
2. Your name, and how to spell it.
3. The name of your employer.
4. The fact that it is something called "Saturday night" - or is it "Sunday night"? This is important because you must be back to something called "work" on Monday! Except for this disconcerting notion, the concept of time is irrelevant to you.
5. Vague awareness of the fact that the reason you are here (in this Abyss) is because you took some sort of drug.
6. Vague awareness that there is another reality somewhere, where your body is located (in which you belong). If you do not get back to it, eventually it will be found and taken to an place called a "hospital" and there will be much unpleasantness when at last you return.

Now picture yourself spending several hours lapsing between unconsciousness and consciousness, your amnesiac trip through the Abyss seemingly beginning anew each time you wake up. You have no idea how many of these cycles you have gone through, or how many more you must endure. Perhaps this is the whole of existence? But no, you vaguely recall the fact numbered 6 above. This nightmare existence lasts until eventually you begin realizing you are finally coming back to that thing called "reality". Next time you wake up, you are almost there and the amnesia is gone (for which you are most deeply relieved).

As for the physical appearance of this personal hell - well, it a series of enormous, dim dingy rooms through which you float. They look like giant basements, often streaked with stains and filled with rubble. Sometimes you see something else to break up the monotony. FOAF won't bother describing them, but suffice it to say you don't appreciate the s eness of them at the time (since you've lost the memories of reality by which you could compare them). Flowing c ns of streaky, stainy gunk are common, dismal sights. Yuck.

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This is experience FOAF is not eager to repeat. The amnesia was definitely something he'd not experienced (at least, not to the point of crises) in previous trips. FOAF intends to lay off the "dark hallucinogen" for a while.

AN17016, 720mg.

It hit pretty fast (within a half an hour) with light headedness and slight disorientation. After an hour there was SEVERE disorientation and depersonalization. He felt almost as if he were outside himself looking in. There weren't especially harsh visual effects as in real hallucinations. Things were very grainy and somewhat distorted. Unable to keep focus on much of anything. He got severe itching fits several times (the only way around it was to ignore the itching, stop and wait til you forget about it). Breathing often felt slightly constricted as if you were wearing a tight shirt collar. There were severe heat flashes so that we had to turn a fan on high in an air conditioned house. Walking was very difficult. Hard to keep a balance. Time was VERY distorted. The whole trip lasted about an 1.5-2 hr. for the strong effects but it seemed like FOREVER. He was also very dehydrated and found it hard to get the damn cherry taste out of his mouth. Also, this person has taken many trips on acid and several shroom trips and has never had anything as scary as this experience. Several times he wondered if he would make it through it alive. Probably due to the fact that it was an unknown experience. 4 hr. after taking the tussin he was driven home from the friends' place he was at. He through up twice between the stairs and the door to his room. Apparently the car ride had disturbed his stomach. Luckily almost all he had in his stomach was liquid from drinking. Coming down took a while. Effects were very similar to coming down off of acid. Unable to sleep, small muscle jitters. All in all something he would never do again and which is really going to turn him off of drugs for a while, if not forever.

A **'mous**, 720mg

By the time I finished the second bottle things started getting weird, I felt like I was getting hot flashes in my head (sort of like doing 500mg Niacin) shortly after that all hell broke loose, I was projectile vomiting, thank god I made it to the can, the next two hours were spent just trying to get over the nausea. I have been hesitant to repeat this experience.

Anonymous (male): 720mg + 3-4 beers + 1 joint cannabis

Needless to say, many of my would-be companions to the outer planes of consciousness faltered somewhere along this path-not many could keep up past step 2. In fact, once we were watching the "Grateful Dead Movie" and, at the first there's this little animation sequence that's kinda neat but not too heavy, and, just as the robo was beginning to take effect, one unfortunate traveler arose suddenly, and proclaimed that he "could not take it anymore", then fled from the room at approximately 4 am, alone. To this day, neither I nor my other companions of that fateful night have seen him since. Wherever he is, may his road be clear and burdens be light.

Roto (98kg male), 800mg (8.2mg/kg), "some" cannabis

Friday evening I took about 800mg of DXM HBr. About one hour later I smoked some marihuana (I could feel the eff-ts of DXM coming) and some minute later my heart rate jumped to almost 200 and stood there for about one hour. I eally scared and had some moments of true panic. Afterward my pulse stabilized at about 130.

Now... Since Saturday morning I feel a pain in my chest and in the back, between the shoulders. I saw three (3) doctors,

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had an EKG and everything seems to be OK. Anyway, I have an appointment for tomorrow with a fourth doctor and I wanna ask for a EKG under load. Today my situation seems improved a bit.

By the way, I weigh about 98 Kg, am pretty fit and absolutely healthy (until Saturday, at least). During this experience I've never lost consciousness, I never felt any acute pain (at least not acute enough to be felt in the conditions I was), I didn't bleed from the nose neither I had blood in the urine/feces or broken blood vessels in my eyes.

[Note: it's my general conclusion that Roto suffered from a panic attack, and that the chest and back pains were a combination of muscle soreness and possibly indigestion. The physicians basically came to the same conclusion, and eventually told him that he had probably not been in any serious danger. One physician pointed out that stomach pain can appear to come from the chest area.]

Guru (male?), 14.5mg/kg DXM

I have done DXM about ten times, from 3.5 mg/kg up to 11 mg/kg. I have always had a good time. Then, one Friday night, I decided to try 14.5 mg/kg. At 8:30pm I swallowed the stuff, despite my not feeling totally at ease, bodily as well as mentally. I might simply have been too nervous. Shortly before 10pm, the effects began. I already felt a bit sick at that time, but I didn't blame the DXM, because before I have never been nauseous from it. Other than that, I was also wondering why it took almost 1.5 hours to start; normally it would take just over an hour.

Suddenly, I had to concentrate very hard on breathing. I felt that if I didn't will myself to breathe, I would stop and die. Then, I started thinking about my life - I was feeling guilty and ashamed for so many things. For things I had said to my friends; for things I have done, or have not done but should have. Looking back, the reasons for feeling bad look ridiculous to me now, but at the time, I really decided that my time had come, and I was ready (but not willing) to die.

From time to time, I would get myself together and think, "Hey, this is not real, this is a bad trip. I needn't have these bad feelings". This would help for a short while, but then I would fall back into endless loops of thinking.

During the whole trip, I was in complete darkness. On other DXM voyages, I have always had nice visual impressions, fractals floating by, or when I was listening to music, it converted itself to beautiful images in my field of vision. But not this time. No lights, no sights at all. This wasn't really helping to improve my mood, too.

Several times, I felt the presence of "beings". Some of them seemed to watch me; well, not really watch, because it was all dark, but I could feel their stare, or rather their interest in me. They knew what I was experiencing. Others didn't seem to bother at all. Those were just there.

When I finally got back to this world, I immediately took some notes. It was 1:10am. I was still tripping hard, but I suddenly remembered that I had puked at some point, and I had spilt the rest of the drink which I had used to wash the pills down. I sat up on my bed in order to see whether there was a mess... Somehow, I had managed to reach the dustbin before shouting buick.

For the rest of the night, the flight went on; I was having a rather good time again. I listened to some music for a while, and finally fell asleep. The next morning, I was perfectly myself again.

A **J16**, Unspecified amount of DXM, probably 3rd plateau

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Last night, while I was tripping, 2 of my 3 companions for the evening decided they'd get in on the excitement a bit with some handy Robitussin. The third was a) not interested, and b) the requisite babysitter/driver. Anyway, At some t[illegible] the chronological blur of last night, the Tussin user at whose we were decided that he wanted to try to astrally p[illegible]ct. After this, he started acting strangely, and in a very disturbing manner.

It took awhile for my effects to wear off to the level at which I could be certain that it was he and not I who was behaving strangely, but this morning's happenings have ultimately confirmed that. It was ten hours ago (from now, 8:30 AM) that he capped off his cough syrup, and since he tried to project, he's been speaking in a very monotone, broken speech. Very precise and inarticulate. He sounds like a robot, and very noticeably. He cannot think straight or focus on objects that are far away, says he "doesn't know" when asked how he is, and cannot specify where his limbs are unless he looks directly at them.

This matches nothing I have experienced, nor anything that anyone I have read of has experienced, with the exception of an individual that mentioned a friend with a "manic" response to DM and LSD that has required hospitalization for up to a week. My friend, however, has used LSD a handful of times with no undesirable effects during or after the trips. Indeed, he tends to love the stuff. This experience, too, was thrilling, and he found it very amusing until his speech was decaying. Well, to be fair, he found the speech amusing for a couple hours, and recorded himself before getting bored/disturbed with it.

Also, I was amazed that he wasn't tired. DM _should_, in my understanding, produce a sedating effect. He couldn't fall asleep, though, and didn't know whether or not he wanted to. He eventually did, with the help of the Valerian root that is kept around to cushion the "ride back down". The only problem is that he awoke in seemingly the same state. Through the entire drive to get me home, he seemed very disturbed, crossing his eyebrows and looking around a lot, sitting in a contorted position. The other person in the car, [Driver's name here], asked if I was used to it lasting this lo[illegible] I wasn't, and I reminded them that even if I was, I wasn't used to any of the other properties of his experience. The c[illegible]ning any of us could think of was getting me home without causing alarm, and probing for information, specifically on the 'net.

14.3 Long Term Use Experiences

I'd like to point out once again that long-term use of DXM may cause tolerance and lead to very unpleasant, and possibly dangerous, withdrawal symptoms. Please think twice before using DXM on a regular basis.

S. D. S. (male):

[A[illegible]ugh not really a positive or negative long-term use experience per se, I didn't know where else to put this, and I t[illegible]t is characteristic of how small "pockets" of DXM use can appear in space-time.]

I have to share a little bit of my past with you; I grew up in a smallish town here in Wisconsin where drinking

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Robitussin, "robing" it was called, was quite popular, this being about 5 years ago. Punk rock was also unusually popular, we had a lot of punks, and they all drank Robitussin. It became quite a phenomenon, making the front page of t[illegible]al newspaper a number of times, until it got to the point where you had to be 18 to buy cough syrup anywhere. "[illegible]" was the generic brand, most popular, of course. The downtown of the city was littered with Robitussin bottles, and quite a lot of kids ended up in the hospital rehab unit over it. There was talk of it causing sterility, etc., (standard bullshit), as well as "eating holes in your intestinal walls". The regular dose for regular users was 12-16 ozs. I drank it a number of times, large doses, and it had _no_ effect whatsoever, save heavy perspiration and giddiness. Was my town unique, or was "robing" something most kids in the 80's did?

14.3.1 Positive Experiences

P. M. (male), 1200mg per day

I'm up to 40 gels (30mg or 1200 per trip) per day (or every other day). I've since passed the hallucination stage, and it's pretty much white light proper, and no more of that endless infinity stuff.

I certainly don't tell people (other than a few on the net) about this stuff, and I don't recommend it in the kind of doses I d[illegible]e had maybe 5 out of 300 trips go slightly bad. Usually these happened when I was in need of sleep. Essentially I l[illegible]y core identity and was basically fair game for whatever entity wanted to possess my being. This also bought grand delusions of making me think a lot of stuff was happening that really wasn't (even though I was sitting in a chair the whole time).

I used to meditate a lot, and I'm sure that is why I've had such great success with this stuff - it is really a drug that forces one to stay in the moment if it is to be enjoyed properly. Oh, and I used to take acid a lot, so that also did a good job of lubing my mind.

Anyway, I'd probably sum-up the effect by saying it causes unused brain cells to be accessed by the conscious mind. Cells which are strongly linked to creativity and pure animal senses. And what gets blocked out is all the worry-type thinking stuff.

And far as damage goes ..... I have noticed that if I don't take it for a couple days, I feel these sudden momentary spurts of being pulled to an unconscious state. It is as if all these new areas of my brain that I've opened-up are no being closed down when the DXM catalyst is removed. Pretty scary.

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14.3.2 Negative Experiences

Azanoth (male):

At any rate, the first truly psychoactive drug I ever ingested was DXM in the wonderfully aromatic form of cherry flavored Robitussin. This occurred at age 15, and, at that age, it produced an effect which was characteristic of what you describe as a "second plateau" high, at its most intensive levels, without actually reaching the "third plateau" (by the way, I agree with your distinctions between the types of highs produced by DXM). Later in life, I was introduced to LSD, and actually found it to be a let-down as compared to the third plateau DXM experience. It was neither as euphorically pleasing nor did it (and I say this with a bit of skepticism, now) seem to offer the insight into the inner workings of the universe that DXM seemed to afford at times.

However, I found that the experiences that I sought from DXM became fewer and farther between as I grew older. Eventually I stopped using it altogether because my trips no longer had the shamanic quality that I sought, but rather became dull, shallow highs that had little if any psychedelic character at all- in fact, the effect was almost like codeine, and not as intensively euphoric.

C. D. (male):

The second point that I would like to bring up is a hacking dry cough as a result to chronic usage. I've had this happen to me from using the drug twice a week for two to three months. I also know personally several other people who e' 'enced this exact same reaction to repeated close range usage of the drug, one of whom who actually had to visit a d about it. Unfortunately I don't know any details about this doctors visit, I just used it to illustrate DXM's cough inducing affect.

14.4 Multiple Drug Experiences

This section covers some of the more interesting multiple drug combinations; generally I placed DXM + cannabis and DXM + alcohol in the above sections. Note that I **do not** advise any of these combinations, and some - such as combining DXM with an opiate or any kind of depressant - may be a very bad idea.

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14.4.1 DXM + Cannabis + Alcohol + Opium

Shostiru (male, age 24, 82kg), 840mg (10.2mg/kg) + cannabis, alcohol, opium

My friend C. and I had gone over to visit two other friends, and the four of us planned to toke our way through a *Beavis and Butthead* marathon they had taped at one point. I took along some DXM for myself; I offered some to the others but they all declined. This left me with two 360mg bottles of cough syrup and two boxes of 30mg gelcaps, 10 per box.

The night's events began at about 8:30PM, when I drank a 4oz bottle of Tussin Maximum Strength Cough, for a total of 360mg DXM, and chased it down with a beer. I also took about 400mg DMAE to help me remember the events of the trip, as well as a B5 and a 500mg tyrosine capsule.

B. broke out the doobage, and we decided to start off with some low-grade opium they happened to have, since I'd never tried it before. The four of us shared two pea-sized pieces, of which I got the lion's share. Thus far, no effects; the opium tasted wonderful but that was about it. C. packed the bowl of the water bong with a combination of relatively high-grade bud and relatively low-grade hashish. The bowl was about the size and shape of a stack of pennies, maybe about 3/4" high, and was filled. We smoked that bowl, and then finished off another, this time mostly just bud. I also finished off another beer.

At this point it had been about 1 hour since I took the DXM, and I still wasn't feeling much other than being stoned. I took four gelcaps, for a total of 120mg. We started watching *Beavis and Butthead*, and spent the next 30 minutes laughing like idiots at Cornholio needing cappuccino for his bung-hole. And then the DXM kicked in, and it felt like I'd b erked up into the air and was soaring. The ordinary "buzz" feeling of being stoned was suddenly enhanced and a ned, and everything around me looked like it was under a strobe light. Evidently I acted kinda weird for awhile, staring off into space with an ecstatic look on my face.

We smoked another bowl, smaller, this time about half hash and half bud. I drank the other bottle, bringing my total up to 840mg of DXM. I could barely manage to work the pipe; by the end, I collapsed on the couch and was only semi-conscious. It was weird - the strobe action effect seemed to slow down more and more, and ever so often it would seem like the strobing would merge together into a moment of lucidity. I was reminded of a spinning fan under a strobe or a fluorescent light - as it slows down, the strobe lines will occasionally stop moving, seem to stand perfectly still, and then start moving again as the fan blade keeps slowing down.

I was definitely in my own realm of awareness. Time seemed to stop, and then to become nonlinear. I re-experienced the same moments several times, and each time it seemed like my viewpoint was subtly different. Sometimes I would experience the same thing from several different viewpoints simultaneously, as if my personality had fragmented into several splinters. Several times I tried to write down what I was feeling, and although I could manage the mechanics, the English language was a mystery to me. I took notes in a sort of hebephrenic shorthand, a combination of ordinary English words, nonsense words, and scribbles.

As the strobe slowed, it seemed that I was entering another realm, almost like waking up from a dream. I felt like the reality I had known was somehow not real, it was like a movie I was watching - or rather, participating in - and that if I just let myself go, I would slowly, surely, wake up to the "real" reality. I watched what was on the television at the time, not understanding a word of it - it seemed that English was no longer my natural language at all.

A point the strobing slowed down and stopped, and everything went grey and then white. I don't know how long I wa t that state, nor do I remember much about what happened there. I do recall a feeling that I was navigating a realm of probabilities, connections, and synchronicity. And then, suddenly, consciousness came back to me, and I was awake.

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At that point the more interesting aspects of the trip ended, and yet my senses were still weird. Sight worked, and yet it seemed like a dream sight, where everything was fuzzy. It felt more than anything like I was really just dreaming with my eyes closed, and yet I knew that they were open. I finally went to sleep, and awoke the next day. It was another day and a half before vision and my other senses returned to normal; in the mean time I felt like I was stuck at the bottom of a very deep well, or perhaps manipulating my body via remote control.

All in all the trip was pleasant, or at least interesting, but I wouldn't advise combining this many intoxicants.

14.4.2 DXM + Cyclazine

Anonymous (male, 84kg). 600mg (7.1mg/kg) + 150mg cyclizine

I'd been playing with the combination of DXM and Cyclizine. I took 600mg of DXM (I weigh 84kg) over a period of about 2 hours. I was going slow because I wasn't sure if my body had completely recovered yet from a rather unfortunate experience a week before. When I finished off the last of the Drixorals I killed the lights and put on some music. It was a nice relaxed feeling but I didn't get any visuals (which was to be expected from such a low dose). Since my body was reacting okay, I ate three Marezine tablets (150mg Cyclizine). Then the hallucinations came on in force.

Cyclizine definitely changes the character of a DXM trip. There's a lot of motion.. and I mean a LOT! 8) I was lying there on my bed with my eyes closed and I'd feel the mattress lift up and start twisting and twirling around. I grabbed on to the bed and hung on for dear life. It was like riding a roller coaster.

I would see a bunch of abstract patterns of color and while watching it some idea would flash through my head. The colors would then come together around the idea and form a solid scene with the detail gradually increasing. It was like when you have a supersaturated solution and you drop a seed into it and crystals form around it.

When the scene reached the resolution where it became real I'd start accelerating through it. For example, one time a road came into view with me and my bed in the middle of it. Landscape then formed around the road and I took off along it zooming up and down over hills and hitting turns at immense speeds (I was surpassed that I didn't go flying from the bed at each turn). Then a brick wall appeared across the road on the horizon and I was approaching it quickly. I tried to will myself to stop but couldn't. There was nothing I could do. I thought "Oh shit I'm gonna hit the wall and get plastered all over it!" I gritted my teeth, grabbed the blankets, and watched as I zoomed toward certain death.

At the last second, the bed started braking. I slowed down and came to a halt with my nose kissing the wall. It was such a thrill.. better than any amusement park! I looked over the wall and tried to will myself over it, but couldn't seem to move. I just hovered there. Then the entire scene disintegrated and I was watching colors again.

I also noticed that the Cyclizine caused the DXM visuals to be unstable. Things were always shaking around like I was in a large earthquake. Trees would wobble around violently and the ground would rock from side to side constantly.

It also nice because I could open my eyes and leave the DXM world and enter the Marezine hallucinations whenever I wanted. Heh, there was no escape. I opened my eyes and saw my ceiling covered with cool interference patterns. There was that jelly shit jiggling over everything and every so often bits of it would stretch of towards me.

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Strange thing about Marezine... When I closed my eyes, I'd still see my room. I could lift my arms up in front of my closed eyes and see them clearly. I didn't get any auditory hallucinations this time. I guess that's because the music was g[illegible]constantly... The last time I tried this stuff, I walked into my room to find my sister washing clothes in my di[illegible]er. She looked at me and asked, "Do you have any dirty white clothes?" I said, "Sure, hold on a minute." and proceeded to gather up all my dirty clothing. I returned to the desk with my arms full of clothes and my sister was no where in sight. 8)

A friend of my had brought some beer and a bong over a few days before. We had left several empty beer cans scattered about and I had been too lazy to deal with them. While I was tripping, he came back. He walked into my room (right through the closed door), gathered up all the beer cans and left. The next morning, I got up to find all the cans still in the same places they've always been in... it came as quite a shock. I was sure he had taken them.

As I was coming down I went out for a smoke. I was sitting on the steps watching some formless jelly shit moving about in the bushes when a cat came out of the bushes to my left (I think it was a real cat... I'll never know for sure tho). It stared at the jelly stuff I was looking at and crouched down and tensed up in the standard kitty ready-to-pounce position. I found this to be rather curious.. After all, I'm the only one who should be seeing my hallucinations right? As I puzzled about this, the cat darted headlong into the jelly mass, passed through it and ran up some steps to my right out of sight. I nearly dropped my cigarette. I thought the jelly might eat that poor cat.

As the cat passed through the jelly, the jelly stopped jiggling and took on the form of the cat in mid run, like a 3D snapshot. It remained like that unmoving.. I could look away and look back and would still be an image of a translucent kitty. It was just butt odd!

Anyway, I guess that's enough for now. I had fun. No psychedelic effects.. just hallucinogenic. So I guess it's a nice c[illegible]n when you just want a crazy time and aren't interested in spiritual growth.

14.4.3 DXM + Mushrooms + LSD + Cannabis + Nitrous Oxide

M. C. (male) suggests:

A while back there were some discussions here about seeing God. I would like to make my own suggestion.

1. Pop 600mg DXM; wait 1 hour
2. Eat 3-4 grams of cubensis [mushrooms].
3. Drop a few tabs [of LSD]; wait approximately 1 hour.
4. Smoke as many bowls as pot as you can before your lungs start leaping out your mouth
5. Get the 2 cans of whipped cream out of the refrigerator that you purchased earlier for this purpose.
6. Sit down and do the 2 whippets one after the other.
7. Make sure you pay attention because you only get about 10 seconds.

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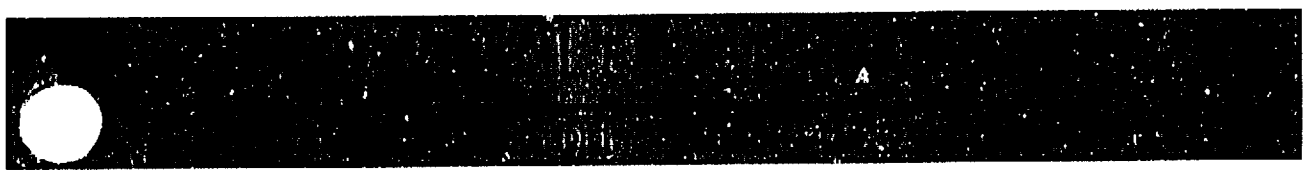

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15 Appendices

from the DXM FAQ
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15.1 Appendix 1: P450 Inhibiting Drugs

T s a partial list of recreational and medical drugs which inhibit the P450 enzymes 2D6, 3A4, and 3A5. Not all of them will inhibit all of the P450 enzymes, but it's safe to say that a substantial number of these will interact with DXM.

Generally speaking, inhibitors of P450-2D6 include antidepressants (both SSRIs and tricyclics, and possibly MAO inhibitors), antiparasitics (especially antimalarials), antihistamines (both prescription and over-the-counter), neuroleptics, beta blockers (drugs for high blood pressure), and antineoplastics (anti-cancer drugs). Methadone is a P450-2D6 inhibitor, and it is likely that many alkaloids, especially of plant origin, may be mild to moderate P450-2D6 inhibitors.

P450 Inhibitors

Drug	Uses	P450-2D Enzymes	Potency	Ref
ajmalicine		2D6	strongest	(164)
carbon monoxide	poison	2D6		(160)
chloroquine	antiparasitic	2D6	med-low	(172)
chlorpheniramine	antihistamine	2D	med-high	(151)
citalopram	antidepressant	2D6	med-low	(166)
clozapine	antipsychotic	2D6	low	(171)
desipramine	antidepressant	2D6	low	(152)
diphenhydramine	antihistamine	2D	med-high	(151)
d rubicin	anticancer	2D6	med-low	(165)
l etine	antidepressant	2D6	med-high	(152)
fluvoxamine	antidepressant	2D6	med-high	(152)

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imipramine	antidepressant	2D6	med	(152)
[illegible]tine	anticancer	2D6	med	(165)
ni[illegible]yramine	antihistamine	2D6	high	(151)
methadone	addiction treatment	2D6	med	(162)
moclobemide	MAO-A Inh. (reversible)	2D6, also 2C19, 1A2		(147)
nortryptiline	antidepressant	2D6	med-low	(155)
oxamniquine	antiparasitic	2D6	med-low	(172)
paroxetine	antidepressant	2D6	high	(152)
PCP	recreational	2D		(150)
primaquine	antiparasitic	2D6	med-low	(172)
propranolol	beta-blocker	2D6	low	(156)
quinidine		2D6		(148)
quinine	antiparasitic	2D		(151)
sertraline	antidepressant	2D6	med-high	(167)
triprolidine	antihistamine	2D	med-high	(151)
vinblastine	anticancer	2D6	med-low	(165)
vinorelbine	anticancer	2D6	med-low	(165)

Drug	Uses	P450-3A Enzymes	Potency	Ref
[illegible]nzoflavone		3A4 (activator)		(153)
cannabidiol	component of marijuana	3A	med	(161)
cocaine	recreational	3A	low	(157)
clotrimazole	agricultural fungicide	3A (activator)	very high	(154)
cyclophosphamide		3A	low?	(158)
ifosfamide		3A	low?	(158)
ketoconazole		3A		(145)
pilocarpine	cholinomimetic	3A	low	(149)

Drug	Uses	P450-3A Enzymes	Potency	Ref
1-aminobenzotriazole		Nonspecific	med-high	(159)
chlorophyllin	geriatric	Nonspecific		(146)
general anaesthetics		Nonspecific		(163)

One reference ((164)) gives the general characteristics of P450-2D6 inhibitors as
a positive charge on a nitrogen atom, and a flat hydrophobic region, the plane of which is almost perpendicular to the N-H axis and maximally extends up to a distance of 7.5 A from the nitrogen atom. Compounds with high inhibitory potency had additional functional groups with negative molecular electrostatic potential and hydrogen bond acceptor properties on the opposite side at respective distances of 4.8-5.5A and 6.6-7.5A from the nitrogen atom.
A [illegible]mputer model of the P450-2D6 cytochrome has been constructed ((170)).

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15.2 Appendix 2: Neuropharmacology of Recreational Drugs

2CB
: Like many phenethylamines, has mixed properties of a dopamine releasing agent, serotonin (5HT) releasing agent, and probably binding specifically to 5HT receptors (likely including 5HT2A and 5HT2C). Compare amphetamine, MDA.

alcohol
: Mechanism unknown; may affect membrane permeability or alter ion channel function. Functionally potentiates GABAergic activity and blocks NMDA receptors, and also has actions on other ion channel receptors.

amyl nitrite
: Vasodilator; recreational effects probably derive from this effect rather than being specific to a set of receptors.

amphetamine
: Causes a non-vesicular release of dopamine and noradrenaline by neurons which normally secrete them. May have some direct effect on dopamine and noradrenaline receptors, but this is insignificant compared to its neurotransmitter releasing effect.

barbiturates
: Targets and binds to a specific site (called the picrotoxin site) on GABA receptors, which activates them. This is a different site from alcohol and benzodiazepines, so that if you combine any of these three, they will not compete for the same binding sites. Consequently, there is a synergistic effect, which can be quite dangerous.

benzodiazepines
: Similar to barbiturates, except for two factors. First, the binding site is the benzodiazepine site on the GABA receptor. Second, when a benzodiazepine binds to this site, the GABA receptor is not immediately activated; instead, the natural action of GABA is enhanced. This is the main reason benzodiazepines are safer than barbiturates, and have different effects.

"blues"
: An antihistamine (targeting and activating the H_1 receptor) which probably has $sigma_1$ antagonist properties; when used in combination with pentazocine, it probably blocks the sigma activity of the latter. Rarely found. The only reason I'm mentioning it is because I heard about it in a comedy skit called "Rock and Roll Doctor" and always wondered what "blues" were (until I found out). Well, if you wondered too, now you know.

caffeine
: Targets and blocks an adenosine receptor, probably A_2 but possibly A_1. This is an inhibitory presynaptic receptor, i.e., when activated it decreases the amount of neurotransmitter released by a neuron. Thus, caffeine blocks some of this inhibition, increasing neural activity.

cannabis
: Targets a specific receptor (or family of receptors) designated anandamide. It is not yet known whether cannabis (actually, THC) is an agonist or antagonist at this receptor, although most think it is an agonist.

codeine
: See morphine.

coffee
: See caffeine.

c e
: A dopamine reuptake inhibitor; cocaine blocks the transporter which takes used dopamine out of the way. Thus, dopamine secreted by a neuron keeps activating receptors over and over. Cocaine is also a $sigma_1$ agonist, and

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has blocking abilities on certain ion channels (by which it exerts its local anesthetic effects).

Demerol
: See morphine.

glue
: See solvents.

heroin
: See morphine.

ketamine
: Blocks NMDA receptors at the same site as DXM and PCP.

LSD
: Targets $5HT_{2A}$ and $5HT_{2C}$, where it acts either as an antagonist or a partial agonist. Also has some dopaminergic activity; however, the majority of its effects are mediated through the 5HT receptors.

marijuana
: See cannabis.

MDA
: See MDMA. Release binding spectrum is probably different, and MDA may have additional effects on receptors.

MDMA
: Similar to amphetamine, except that MDMA causes a nonvesicular release of dopamine and serotonin (5HT). Probably has other effects as well, some of which may be significant.

methamphetamine
: Similar to amphetamine, possibly with more dopamine release.

morphine
: Targets opioid receptors mu, kappa, and delta, where it acts as an agonist. Slight differences in binding spectrum to opiate receptors exist among the various natural and synthetic opiates.

nicotine
: Stimulates and then blocks nicotinic acetylcholine receptors.

nitrous oxide
: Seems to affect phospholipid membranes, although some effects may be mediated by NMDA and GABA channels, and other ion channels. General anesthetics are similar to nitrous oxide, although more toxic.

opium
: See morphine.

PCP (phencyclidine)
: PCP and related cycloarylpiperidines block NMDA receptors, as well as having a variety of other effects, including sigma agonism, dopamine reuptake inhibition, and specific effects on an unknown cerebellar receptor.

Poppers
: See amyl nitrite

Psilocybin (mushrooms)
: Similar to LSD; acts via 5HT2A and 2C receptors and possibly additional ones.

Quaaludes (methaqualone)
: See barbiturates.

Ritalin
: Similar to amphetamine, prescribed for Attention Deficit Disorder

Rohypnol
: See benzodiazepines.

seconal
: See barbiturates.

solvents
: Same general theory as alcohol and nitrous oxide, but considerably more toxic to neurons (and the liver).

Valium
: See benzodiazepines.

yohimbine

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Targets and blocks alpha2 adrenergic receptors. These are autoreceptors, which normally limit the activity of adrenergic neurons. By blocking $alpha_2$ receptors, yohimbine increases the activity of these neurons.

15.3 Appendix 3: Other Sigma and NMDA Ligands

Here are a few sigma ligands you may wish to research (if you are interested in that sort of thing):

$Sigma_1$ ligands in rough order of potency:

- (+)-pentazocine
- haloperidol
- DTG
- (+)-3-PPP
- DXM
- (+)-SKF 10,047
  (+)-cyclazocine
  (-)-pentazocine
- PCP
- (-)-SKF 10,047

$Sigma_2$ ligands in rough order of potency:

- DTG
- haloperidol
- (+)-3-PPP
- (-)-pentazocine
- PCP
- (+)-pentazocine
- (-)-SKF 10,047

P> A known sigma antagonist is N-[-2-(3,4-dichlorophenyl)ethyl]- N-methyl-2-[1- pyrimidinyl-1-piperazine] butanol; a $sigma_1$ selective antagonist is (1-(cyclopropylmethyl)- 4-2'4"-fluorophenyl)- (2'-oxoethyl)piperidine HBr.

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16 Glossary

from the DXM FAQ
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3HM
3-hydroxymorphinan, a metabolite of DXM.

3MM
3-methoxymorphinan, a metabolite of DXM.

AMPA
A subtype of ion channel excitatory amino acid receptors.

APAP
Acetaminophen / paracetamol.

Agent Lemon
A process for extracting DXM from syrups into DXM citrate; also the DXM citrate extraction.

CEV
Closed-eye visuals.

CNS
Central nervous system.

CYA
Cover Your Ass.

CYP
Cytochrome P450.

DEA
Drug Enforcement Agency.

L
A sigma/NMDA ligand used in research.

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DXM
Dextromethorphan.

DXO
Dextrorphan.

DZ
Dizocilpine (q.v.).

EAA
Excitatory Amino Acid.

FAQ
Frequently Asked Question(s); also refers to a document answering those questions.

GABA
Gamma-Aminobutyric Acid, a neuroreceptor type and neurotransmitter.

GHB
Gamma-Hydroxy Butyrate.

IM
Intramuscular.

IP
Intraperitoneal.

IUPAC
International Union of Pure and Applied Chemistry.

IV
Intravenous.

LD50
Lethal dose for 50% of a given population (usually lab rats).

LTP
Long-Term Potentiation (of synaptic weight).

Lilliputian hallucinations
Sensations or hallucinations of mistaken size, where objects are either too large or too small, or both; occurs on dissociatives, during temporal lobe seizures, and high fever.

MAOI
Monoamine Oxidase Inhibitor. A drug which inhibits the enzyme MAO.

MDMA
Methylenedioxymethamphetamine (ecstasy).

MK801

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Dizocilpine (q.v.).

N

NMDA Antagonist Neurotoxicity, i.e., neurotoxicity caused by blockade of NMDA receptors.

NH4OH

Ammonium hydroxide.

NMDA

N-methyl-D-aspartate, a type of excitatory amino acid receptor.

NRH

NMDA Receptor Hypofunction, another term for NAN.

NT

Neurotransmitter.

NaOH

Sodium hydroxide (lye).

OEV

Open-eye visuals.

OTC

Over the Counter, i.e., a drug available without prescription on drugstore shelves.

P450

Cytochrome P450, an enzyme family.

PC

Posterior Cingulate.

PCP

1-(1-phenylcyclohexyl)piperidine, phencyclidine; a widely available illegal dissociative.

PGP

Pretty Good Privacy, an encryption scheme.

PPA

phenylpropanolamine, a decongestant.

PPP

A sigma/NMDA ligand used in research.

RC

Retrosplenial Cortex.

S

Scientific Wild-Assed Guess.

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TCP
A sigma/NMDA ligand used in research.

T[illegible]
Tetrahydrocannabinol, the active ingredient in marijuana.

Usenet
A "virtual network" of computers in which articles (documents) posted in a given newsgroup are propagated to all other computers.

VGAC
Voltage-gated anion channel.

VGCC
Voltage-gated cation channel.

VGIC
Voltage-gated ion channel.

WoD
War on Drugs.

YMMV
Your mileage may vary (i.e., your experiences may be different from those listed).

a[illegible]inophen
APAP, paracetamol; an over-the-counter painkiller which is toxic in high doses.

acid-base extraction
A process for extracting desired chemicals (usually alkaloids) from unwanted impurities through the use of acids and bases to change the solubility of the desired chemicals in polar and nonpolar solvents (e.g., water and naptha).

agonist
Activator; an agonist at a given neuroreceptor activates that receptor.

alkaline
Having a pH above 7; basic. Lye and baking soda are both alkaline.

ammonia
Technically NH3, a gas, but "household ammonia" is actually ammonium hydroxide (q.v.).

ammonium hydroxide
NH4OH; a basic solution of ammonia gas in water.

amotivational syndrome
A syndrome characterized by lack of motivation, apathy, lethargy, etc., and which may be linked to use of marijuana or other drugs (this is highly debatable).

amphetamine

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Speed (though this usually refers to methamphetamine, q.v.). A potent stimulant used recreationally which is illegal in most countries.

an[illegible]esic
A substance which relieves pain.

angeldustin
Endopsychosin (q.v.).

antagonist
Blocker; an antagonist at a given receptor blocks or lowers the activity of that receptor.

antihistamine
A drug which blocks histamine, typically used to treat allergic reactions.

aspartate
An excitatory amino acid.

basic
Having a pH above 7; opposite of acidic.

binding
site A location (on a receptor or other structure) where a given chemical attatches itself.

b[illegible]ic amine
A family of neurotransmitters (consisting of serotonin, acetylcholine, histamine, dopamine, and noradrenaline).

blockade
Blockage of.

bupropion
An atypical antidepressant which blocks the reuptake of dopamine.

chlorpheniramine
An antihistamine.

competitive antagonist
An antagonist that works by competing with the neurotransmitter for the same binding site.

cross-tolerance
A phenomenon in which tolerance to one drug induces tolerance to another; LSD and psilocybe mushrooms show cross-tolerance.

cytochrome
A type of enzyme.

de[illegible]ngestant
A drug which relieves congestion.

demethylation

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Removal of a methyl group.

dextromethorphan
The subject of this text; a cough suppressant and dissociative.

diphenhydramine
An antihistamine.

dissociation
As used in this text, refers to a condition by which certain mental functions are dissociated or "separated" from others, to varying degree; in particular refers to the dissociation of sensory input and emotion from consciousness and memory.

dissociative
A sigma/NMDA ligand drug which induces dissociation; derives from "dissociative anaesthetic" (q.v.).

dissociative anaesthetic
A drug which induces anaesthesia via dissociation of the conscious mind from sensory input.

dizocilpine
MK801, DZ; a dissociative.

downregulation
A process in which the number or activity of receptors decreases, typically in response to abnormally high activity (e.g., from a drug).

dysphoria
The opposite of euphoria; a feeling of emotional or mental discomfort.

ego annihilation
The loss of sense of self-awareness and/or self-identity that occurs on many psychedelics.

eidetic imagery
As used in this text, refers to abnormally vivid, often fully realistic, imagination.

endopsychosin
A proposed endogenous (produced by the body) neurotransmitter or ligand for the sigma and NMDA open channel sites. The body's own PCP.

enzyme
A chemical produced within the body which degrades or changes substances or increases the rate of a given reaction.

ethnobotanical
A plant used by humans; often refers to a drug plant.

excitotoxic rebound
A process by which removal of a drug which suppresses neural activity causes a "rebound" during which too much neural activity occurs; during this rebound, neurons can suffer damage or die.

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excitotoxicity
Toxicity to nerve cells and processes resulting from too much activity.

expectorant
A drug which increases production of, and thins, the phlegm (mucus) production.

finger
An Internet protocol which allows one to check a user's login information.

flanging
As used in this text, a phenomenon of sensory perception in which sensory data seems to be split up into obvious "frames", often with an echo effect. Nitrous oxide is well known for auditory flanging.

free base
The "free" base form of an alkaloid, i.e., not paired with an acid molecule. The free base (or freebase) form of an alkaloid can usually be vaporized and inhaled (this is called "freebasing" the drug).

full agonist
An agonist which fully activates a given receptor.

gelcap
A capsule formed of a gel material, sometimes gelatin but commonly a synthetic polyvinylpyrrolidone polymer.

glutamate
An excitatory amino acid; also a term for an excitatory amino acid receptor.

guaifenesin
An expectorant.

haloperidol
An antipsychotic drug used to treat schizophrenia which also has sigma activity.

harmaline
A plant-derived MAOI.

harmine
A plant-derived MAOI.

hippocampus
A seahorse-shaped formation in the limbic system which is involved in the storage of memory for intermediate periods and the consolidation of those memories into permanent form.

histamine
A neurotransmitter (in the brain; in the body, histamine initiates an allergic reaction).

hypoxia
Lack of oxygen.

ion channel
A structure which lets ions enter or leave a cell; ion channels are sometimes paired with neuroreceptors which

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open or close the channel depending on the presence of a neurotransmitter.

ionotropic receptor
An ion channel receptor.

irreversible antagonist
An antagonist which binds permanently with a receptor, effectively destroying it.

ischemia
Cutoff of blood (typically due to artery blockage or damage).

ketamine
A dissociative anaesthetic used in animals, children, and burn victims; also used recreationally.

ligand
A chemical which binds somewhere; e.g., a "sigma ligand" is a drug which binds to sigma receptors somewhere. Ligands can be agonists or antagonists (or neither).

lye
Sodium hydroxide.

meclizine
An anticholinergic (i.e., drug which blocks acetylcholine receptors) used to prevent or treat nausea.

metabolism
Transformation of a chemical by the body; metabolism of a drug usually results in a form which can be more easily excreted.

metabolite
A product of metabolism (transformation by the body) of another drug.

metabotropic receptor
A receptor where activation leads to some change in metabolic processes within the cell, rather than opening or closing of an ion channel (c.f. ionotropic receptor).

methamphetamine
Speed, crank, crystal, etc., a potent and (in most countries) illegal stimulant.

microsome
Refers to one of several membrane-containing structures within a cell; there isn't one structure which is the "microsome", as the term refers to a fraction found after centrifuging a cell sample.

nM
Nanomoles (or nanomolar); a measure of concentration.

naloxone
An opiate receptor antagonist used to treate opiate overdoses.

naptha
A low boiling nonpolar fraction derived from petroleum distillation; typically includes pentane, hexane, heptane,

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and derivatives thereof.

n[illegible]eptide
A peptide (short chain of amino acids) neurotransmitter.

neurotoxic
Toxic to neurons or neural processes.

noncompetitive antagonist
An antagonist at a given receptor which doesn't bind to the same site as the neurotransmitter (c.f., competitive antagonist).

nootropic
Capable of enhancing mental function. "Smart drug".

noscapine
A cough suppressant derived from opium.

pH
An indication of the acidity of alkalinity of a substance.

paracetamol
Acetaminopen (q.v.).

p[illegible]l agonist
An agonist which partially activates a given receptor; may behave as an antagonist in the presence of enough neurotransmitter.

pentazocine
An opiate with strong sigma agonist properties.

perforant path
One of the neural pathways in limbic system which carries hippocampal signals.

pharmacokinetic
Refering to the metabolism of a given drug.

pharmacological
Refering to the action (including the neuroreceptor binding) of a given drug.

phencyclidine
PCP; an illegal dissociative commonly available ("angel dust", "greens", "hog", etc.).

phenyleprine
A decongestant typically found only with antihistamines.

ph[illegible]lpropanolamine
A decongestant and appetite suppressant.

phosphene

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A light or pattern which appears in the field of vision with eyes closed (and occasionally open). Phosphenes seem to come from the back of the eyelids, but are actually a result of slight but harmless abnormalities in retinal and visual processing networks.

photophobia
Literally "fear of light"; refers to discomfort from too much light.

plateau
As used in the FAQ, refers to a given dosage range of DXM in which the strength of the effects change but the character of the effects do not.

polistirex
A time-release polymer compound.

polyamine
A chemical with more than one amine group; the polyamine site on the NMDA receptor will bind with several polyamines.

polymorphism
Having multiple forms. Genetic polymorphism of an enzyme (such as P450) means that there are genetically based differences in forms of that receptor.

posterior cingulate
The posterior (rear) region of the cingulate cortex, a distinct part of the cerebral cortex located in the temporal lobe.

pseudoephedrine
A decongestant.

psychedelic
A drug eliciting or producing altered states of consciousness, mind, and/or perception.

psychoactive
Having effects on the mind.

psychonaut
Someone who explores consciousness, the mind, and "inner space" through the use of meditation, drugs, sensory deprivation, and other methods.

psychotomimetic
Literally, "psychosis mimicking". The "approved" medical term for any drug which has psychedelic effects (although not necessarily pleasant ones).

receptor
A structure on or inside a cell which receives a chemical signal.

reregulation
A process in which the number or activity of receptors changes, typically in response to an abnormally high or low level of activity at that receptor. c.f., upregulation, downregulation.

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retrosplenial cortex
A section of the temporal cortex which is involved in limbic pathways and may be damaged by high doses of dissociatives.

reuptake
The process by which used neurotransmitters are taken back into cells to be recycled or destroyed.

self-titration
Adjusting the dosage of a drug onesself to achieve a given effect. Cigarette smokers quickly become adept at self-titrating nicotine levels to maintain a particular level of nicotine in the blood and brain.

sensorium
One's sensory environment.

sodium hydroxide
NaOH, lye. A base.

spontaneous memory
The sudden and unexpected recall of a memory episode.

spoonerism
Swapping the first letter or syllable of adjacent or near-adjacent words, often resulting in equally valid words, e.g., "I made a spoonerism" to "I spade a moonerism".

sympathetic
Referring to the subset of the peripheral nervous system activated in "fight or flight" behaviours.

sympathomimetic
Mimicking or potentiating sympathetic nervous system activity.

synesthesia
Perceiving sensory data of one sense with another, e.g., seeing sounds or hearing colors.

tachycardia
Fast heart rate.

tartrazine
A dye commonly found in some cough syrups; some people are allergic to tartrazine.

tetrodotoxin
An ion channel blocker; also the active ingredient in "zombie potion".

tryptophan
An amino acid and the precursor to the neurotransmitter serotonin.

tyrosine
An amino acid and the precursor to the neurotransmitters dopamine and noradrenaline.

up-regulation
A process in which the number or activity of receptors increases, typically in response to abnormally low activity

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(e.g., from an antagonist drug).

v[illegible]nstriction
Constriction of blood vessels.

vasopressin
A neuropeptide which has peripheral effects on blood vessels and kidney action, and which may also be a nootropic.

vestibular
Refers to signals from the middle ear; vestibular sensations include floating, low-frequency vibrating, and similar sensations.

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