

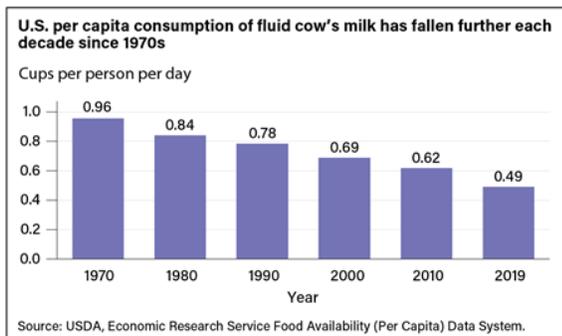
Representative Thomas and House Agriculture Committee,

Greetings, I will be giving testimony in person but I thought I would link the citations of what I will be discussing.

In short, Please support this bill and amend it to make it possible for smaller, non commercial dairy farms to also raw dairy. The reason I am this is SO vital will be at the end of my talk.

As you know, dairy consumption has been on a decline for years. I want to explain one reason, and what we can do about it.

Fluid cow's milk has long been a grocery staple for most U.S. households. However, as dietary habits change, individuals are drinking less milk on average. The USDA, Economic Research Service (ERS) Food Availability (Per Capita) Data System shows that U.S. daily per capita consumption of fluid milk decreased over each of the past seven decades. Between 1990 and 2000, it fell from 0.78 cup to 0.69 cup (an 11.5-percent decline). By 2010, it was down to 0.62 cup (10.1 percent lower than it had been in 2000). Compared with each of the previous six decades, U.S. daily per person fluid milk consumption fell at its fastest rate in the 2010s. In 2019, it was 0.49 cup (20.7 percent lower than in 2010).



#### Highlights:

- U.S. per capita fluid milk consumption has been trending downward for more than 70 years and fell at a faster rate during the 2010s than in each of the previous six decades.
- From 2003 to 2018, U.S. consumers of all ages drank less milk as a beverage, the primary way in which fluid milk is consumed.
- Plant-based milk alternatives explain only a small portion of the decline in U.S. fluid milk consumption.

<https://www.ers.usda.gov/amber-waves/2022/june/fluid-milk-consumption-continues-downward-trend-proving-difficult-to-reverse/#:~:text=However%2C%20as%20dietary%20habits%20change,of%20the%20past%20seven%20decades.>

One of the reasons that is, is that at least 10% of people are allergic to dairy and its constituents. (This data is in reference to IgE allergies, not IgG reactivity, which are MUCH more common, to develop, which I will get to later.

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Original Investigation | Allergy

January 4, 2019

## Prevalence and Severity of Food Allergies Among US Adults

Ruchi S. Gupta, MD, MPH<sup>1,2,3,4</sup>; Christopher M. Warren, BA<sup>5</sup>; Bridget M. Smith, PhD<sup>1,6</sup>; et al

> Author Affiliations | Article Information

JAMA Netw Open. 2019;2(1):e185630. doi:10.1001/jamanetworkopen.2018.5630

**Results** Surveys were completed by 40 443 adults (mean [SD] age, 46.6 [20.2] years), with a survey completion rate of 51.2% observed among AmeriSpeak panelists (n=7210) and 5.5% among SSI panelists (n=33 233). Estimated convincing food allergy prevalence among US adults was 10.8% (95% CI, 10.4%-11.1%), although 19.0% (95% CI, 18.5%-19.5%) of adults self-reported a food allergy. The most common allergies were shellfish (2.9%; 95% CI, 2.7%-3.1%), milk (1.9%; 95% CI, 1.8%-2.1%), peanut (1.8%; 95% CI, 1.7%-1.9%), tree nut (1.2%; 95% CI, 1.1%-1.3%), and fin fish (0.9%; 95% CI,

<https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2720064>

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Milk PROCESSING increases the allergenicity of cow's milk.:

CLINICAL & EXPERIMENTAL ALLERGY TRUSTED EVIDENCE IN ALLERGY

ORIGINAL ARTICLE | Open Access

### Milk processing increases the allergenicity of cow's milk— Preclinical evidence supported by a human proof-of-concept provocation pilot

Suzanne Abbring, Daniel Kusche, Thomas C. Roos, Mara A. P. Diks, Gert Hols, Johan Garssen, Ton Baars, Betty C. A. M. van Esch

First published: 03 April 2019 | <https://doi.org/10.1111/cea.13399> | Citations: 31

This study demonstrates that raw (unprocessed) cow's milk and native whey proteins have a lower allergenicity than their processed counterparts. The preclinical evidence in combination with the human proof-of-concept provocation pilot provides evidence that milk processing negatively influences the allergenicity of milk.

<https://onlinelibrary.wiley.com/doi/10.1111/cea.13399>

This isn't hard to understand when you understand the basic mechanisms of the digestive process, along with how food allergies develop.

## RESEARCH PAPERS

### Milk Enzymes: Their Role and Significance<sup>1,2</sup>

K. M. SHAHANI

Department of Dairy Science, University of Nebraska, Lincoln

#### Abstract

Enzymes are delicate organic catalysts produced by living cells, either animal or plant, but work independently from the cells that produce them. They do not necessarily remain at the site of production but are often transported to the site of action through the circulatory systems. Enzymes can be differentiated from other catalysts on the basis of their specificity, chemical nature, and sensitivity. An important characteristic of an enzyme is a strict specificity of the reaction it can catalyze. Enzyme specificity is a vital biological phenomenon for metabolic order and for life itself since, without specificity, every enzyme would degrade haphazardly and indiscriminately every component of the life-giving cell material. Enzymes are proteins, and they function within a narrow pH and temperature range. In general, they are fairly sensitive to heat.

[https://www.journalofdairyscience.org/article/S0022-0302\(66\)87980-8/pdf](https://www.journalofdairyscience.org/article/S0022-0302(66)87980-8/pdf)



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[J Pain Res](#), 2021; 14: 2359–2368

PMCID: [PMC8352645](#)

Published online 2021 Aug 5. doi: [10.2147/JPR.S316619](#)

PMID: [34385841](#)

Association of Migraine with Its Comorbidities and Food Specific Immunoglobulin G Antibodies and Inflammatory Cytokines: Cross-Sectional Clinical Research

Zhiming Zhao,<sup>1</sup> Huiwen Jin,<sup>1</sup> Yang Yin,<sup>1</sup> Yanwei Hou,<sup>1</sup> Jingyan Wang,<sup>1</sup> Chunling Tang,<sup>2</sup> and Jun Fu<sup>1</sup>

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Participants in the positive IgG group (n = 67) were more likely to have longer time elapsed since diagnosis, more frequent and severe migraine, a higher risk of developing anxiety and gastrointestinal symptoms, along with higher IL-6 and TNF- $\alpha$ . Subgroups with more food allergens generally had worse conditions as well. After adjusting for the inflammatory cytokines, the effect of IgG was reduced.

# The development of allergic inflammation

Stephen J. Galli, Mindy Tsai &amp; Adrian M. Piliponsky

[Nature](#) 454, 445–454 (2008) | [Cite this article](#)
16k Accesses | 1201 Citations | 52 Altmetric | [Metrics](#)

## Abstract

Allergic disorders, such as anaphylaxis, hay fever, eczema and asthma, now afflict roughly 25% of people in the developed world. In allergic subjects, persistent or repetitive exposure to allergens, which typically are intrinsically innocuous substances common in the environment, results in chronic allergic inflammation. This in turn produces long-term changes in the structure of the affected organs and substantial abnormalities in their function. It is therefore important to understand the characteristics and consequences of acute and chronic allergic inflammation, and in particular to explore how mast cells can contribute to several features of this maladaptive pattern of immunological reactivity.

<https://www.nature.com/articles/nature07204>

### Bloodprint (110)

**Patient Name:** Steven Nagel  
**Sex:** Male  
**Age:** 39  
**Date of Birth:** 08-18-1979

**Lab ID Code:** R-484468  
**Patient ID:** 383611  
**Sample ID:** 198762  
**Spec. Coll. Date:** 02-19-2019  
**Testing Date:** 02-22-2019

**Physician:**  
 Dr. Steven Nagel  
 2008 Twin City Dr.  
 Mandan, North Dakota 58554



### Reactive Test Results (Your blood serum reacted to these food antigens)

Almond +2	Crab +2	Mustard +1	Sesame +3
Barley +2	Egg, White +3	Pea +1	Shrimp +1
Bean, Garbanzo +4	Egg, Yolk +4	Peanut +1	Soybean +2
Casein +4	Ginger +1	Perch +2	Tuna +4
Cashew Nut +2	Kiwi +1	Pork +1	Turkey +1
Chicken +1	Lobster +4	Potato, White +1	Wheat +1
Coconut +1	Milk, Cow's +4	Seed, Chia +2	

Total number of IgG sensitivity reactions: 27

### Non-Reactive Test Results (Your blood serum did not react to these food antigens)

Amaranth	Celery	Milk, Goat's	Rice, White
Apple	Cherry	Millet	Safflower
Artichoke	Cinnamon	Nut, Pistachio	Salmon
Asparagus	Cod	Nutmeg	Scallops
Avocado	Coffee	Oat	Seed, Hemp
Banana	Corn	Olive	Spinach
Basil	Cranberry	Onion	Strawberry
Bean, Green	Cucumber	Orange	Sugar, Cane
Bean, Pinto	Cumin	Oregano	Sunflower
Beef	Date	Peach	Tapioca
Beet	Flaxseed	Pear	Tea, Black
Blackberry	Garlic	Pecan	Tea, Green
Blueberry	Grape, White	Pepper, B/W	Tomato
Brazil Nut	Grapefruit	Pepper, Green	Vanilla
Broccoli	Kale	Pineapple	Venison
Brussels Sprouts	Lemon	Plum	Walnut, English
Cabbage	Lentil	Potato, Sweet	Watermelon
Cacao-Chocolate	Lettuce	Pumpkin	Yeast, Baker's
Cantaloupe	Lime	Quinoa	Yeast, Brewer's
Carrot	Mango	Rape Seed (Canola)	Zucchini
Cauliflower	Melon, Honeydew	Raspberry	

### Scoring and Evaluation (Key) +1 +2 +3 +4 (Increasing levels of antibodies)

IgE-8 Food Allergy Assay

**Patient Name:** Steven Nagel  
**Sex:** Male  
**Age:** 39  
**Date of Birth:** 08-18-1979

**Lab ID Code:** R-484431  
**Patient ID:** 383611  
**Sample ID:** 198762  
**Spec. Coll. Date:** 02-19-2019  
**Testing Date:** 02-22-2019

**Physician:**  
Dr. Steven Nagel  
2008 Twin City Dr.  
Mandan, North Dakota 58554



**Foods**

Almond +1	Corn +2	Milk, Cow's	Shrimp +3
Bean, Soy +1	Egg, Whole	Peanut	Wheat

The total number of IgE allergic reactions is 4.

Why is it important for smaller farms to be able to sell raw dairy, because grass fed dairy in many ways, is superior, including the bacteria content of the milk. Commercial grass fed dairy farms are rare.

Dr. Steve Nagel, DC, BSN

180 Health Solutions