

### North Dakota Legislature Concussion Statement

Hi, my name is Tim Juelson and I am currently practicing orthopaedic sports surgery at The Bone & Joint Center in Bismarck. I want to thank all of you for taking an interest in the health of North Dakota's young athletes. Concussions and return to play have garnered significant press in the last few years and are a major concern for many of us in the sports world.

In medicine we always start off with disclosures when we are speaking at a conference, so this should also apply to the North Dakota Legislature. This helps the audience to be aware of any inherent biases that the speaker or authors may have. I have two important disclosures. The first is that I do not have any kind of financial conflict as I do not receive any kind of income or benefit from the treatment or imaging of concussions. My second disclosure is that my loyalty as an orthopaedic team physician lies with the athlete's best interest. This is sometimes unpopular with coaches or parents. Ultimately, we must base our decisions upon what is best for the athlete in question. This is the perspective that I will be speaking from today.

Locally, I have had the privilege of serving as an orthopaedic team physician for the Dakota Wizards and the University of Mary football team. The bulk of my concussion interaction comes along with my duties as a team physician. During my sports fellowship at The Andrews Institute we were fortunate to serve as team physicians for a multitude of athletic teams, including a national championship football team (Auburn). Division I football in the SEC produces many traumatic head injuries, and even at this level, the least severe concussions required 7 days AFTER medical clearance to enable an athlete to return to the competitive arena.

The first step is recognizing that an athlete has sustained a concussion. It is fairly easy to recognize a concussion as symptoms include confusion, inability to remember the last few plays, increased difficulty following instructions, headache and sometimes a 'ringing in ears' sensation. Sometimes it is a referee or another player on the field who first recognizes their teammates confusion. Once a concussion has been recognized, then ensuring the athlete is withheld from further competition is essential. Evaluating the athlete is the next step. Sometimes evaluation will occur at the sidelines by various personnel, but this does not substitute for further examination at a later date. The vital component is that the athlete must be evaluated by a physician who is comfortable with concussion management and evaluation. As long as there are no neurologic deficits then the athlete can likely avoid going to the emergency room.

Recognizing a concussion and preventing the athlete from returning to play on the day of the injury is the first step in protecting the athlete. However, another skill set is required to actually manage an athlete's head injury and determine when it may be safe to return to play. Appropriately gauging the severity of the injury, obtaining and interpreting imaging studies which may include a CT scan of the brain requires significant medical training. Additional training and knowledge is required to be able to interpret the results of a CT scan or MRI of the brain, the patient's clinical symptoms, and determine when they may safely return to play. Occasionally the patient will require referral to neurology for further management. In the most severe cases, the patient may require urgent neurosurgery consultation.

The key in this matter is first of all being able to obtain the appropriate evaluation, which often requires advanced imaging studies. This narrows the field of those that may participate in return to play evaluation and management. Interpreting these studies, integrating that information with the condition and symptoms of the patient requires another level of knowledge and training. Medical doctors (M.D.'s) or doctors of osteopathic medicine (D.O.'s) have the highest level of training of any health care professional.

In Florida we experienced a multitude of issues with concussion clearance as previous laws were ambiguous as to who could clear an athlete to return to competition. The team physician on the sideline has responsibility for the athletes, but when a parent takes an athlete to see a chiropractor who clears him/her to return to play 3 days after losing consciousness, it creates a very challenging situation. I just spoke with Dr. David Chandler at The Andrews Institute and many of these issues have been resolved as a new law was recently passed by the Florida Legislature, specifying that a sports medicine board would dictate who can clear athletes after concussions. At this point, those who are eligible to clear athletes for return following concussions are medical doctors and doctors of osteopathic medicine. Parents must also give written consent for return to play and acknowledge the risks involved. This law will take effect July 1, 2012.

I hope that we can avoid some of these issues here in North Dakota. As orthopaedic sports surgeons, we can fix many sports injuries, but a devastating brain injury leaves few medical options. It is important to keep in mind that withholding an athlete from play after a concussion and determining medical clearance are two different processes requiring different knowledge bases. We should also keep in mind that once an athlete is cleared by a physician to return to play, the quickest return to the competitive field is typically seven days after medical clearance IF the athlete progress without any problems. Parental involvement and education is crucial at all stages of concussion management and must be emphasized for participants below the age of 18.

Thank you for your time and attention.

Timothy J. Juelson, MD

The Bone & Joint Center

310 North 9<sup>th</sup> Street

Bismarck, ND 58501

W 701 530 7000

C 816 500 3547