



## The Hockey Doc on concussions

**By Dr. Rob LaPrade**

**QUESTION:** Since I wrote the article about concussion evaluation several months ago, I have had multiple questions about what type of helmet to wear, when to return after a concussion and what to do about a post-concussion headache. I will try to give some general guidelines to answer these questions.

**ANSWER:** First of all, it is important to remember that a concussion is basically a big bruise to one's brain. Since our brain is all about electrical signals, anything that disrupts those signals, either short-term or long-term, can affect our ability to function. Thus, often some athletes will complain of "seeing stars" after they get bumped in the head because of the effect on the electrical impulses in the brain.

Since a concussion is a bruise to the brain, the best way to prevent one, short of avoiding checks or contact altogether, is to wear a good quality helmet and a well fitting mouth guard. Without trying to advocate for a particular company or brand, we have found that the Nike Bauer-5000 and Nike Bauer-8800 helmets, with occipital straps, do seem to offer the best padding and protection against concussions. In addition, it is important to recognize that due to sweat and use, the padding in most helmets is most effective for absorbing shocks for 1-2 years.

In addition to a well-fitted and a relatively new helmet, a well-fitting mouth guard is also important to minimize in the effects of a concussion. This is because the mouthguard helps absorb some of the force transmitted to the brain by one's jaw (mandible). While most athletes utilize mouthguards that are one-size-fit-all and sized after placing in boiling water for a couple of minutes, athletes who have had concussions should seriously consider having a mouthguard made by their dentist or orthodontist which provides better overall protection against concussions.

In terms of what to do with a post concussion headache, I would first assume that the athlete has been evaluated by a physician, preferably a neurologist, and had either a CT scan or an MRI scan which does not show any visible damage to their brain.

First of all, no matter how much an athlete wants to return back to skating, they should not be allowed to skate until their headache has completely resolved. This is important because if they receive another concussion during this timeframe, the next concussion can be even more severe.

It is also important to recognize that the timeframe for a post-concussion headache to totally resolve is unpredictable. Even for professional athletes who have the best of care, like Jordan Leopold had a couple of years ago, or Corey Koskie of the Milwaukee Brewers currently has, the timeframe for resolution of the headache symptoms can take several months or longer.

If an athlete has a headache, either at rest or in the classroom, or with exertion while skating, this indicates that there is still something wrong with the electrical signals of their brain and they should rest, without any significant physical exertion, until the headache resolves. If it doesn't resolve after a couple of weeks, after one has been cleared by a physician, it would then be appropriate to be further evaluated by either a neurologist or a "concussion clinic" to further evaluate the ability for one to return back to skating.

In addition, for our athletes, we perform IMPACT testing both before the season and then after

any concussion to evaluate their memory and motor skills and they aren't allowed to return back to competition until they pass these portions of the IMPACT test.

Concussions are a very difficult problem to treat. There is no real medication or surgery to treat the average sports concussion, and after one receives a proper work-up to make sure that there is no other brain damage present, it is just a matter of time to let the brain recover. Perhaps the most important thing to recognize is that prevention of concussions, by wearing a proper helmet and mouthguard, is still the best way to treat this problem.

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