Central States Orthopedic Specialists

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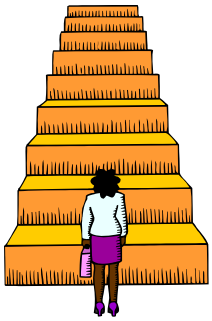
MANAGEMENT OF CONCUSSION: Future Efforts and Challenges



For the last year we have discussed appropriate management of concussions in the adolescent athlete. It has been our goal to provide straight-forward, research-based, information. Ideally, concussions would be a thing of the past and the likelihood of head injuries to our athletes would be removed. Until that day comes, there are a few common sense changes that can be made to reduce your athletes risk of sustaining a concussion.

#1. Never Lead with the Head:
Whether in football, soccer, field hockey, or basketball, make it a point to train all athletes to never lead with the head nor leave their head unprotected from collision.

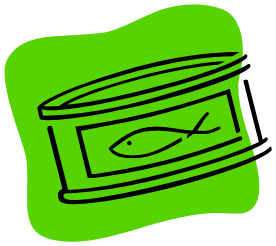
#2. Reduce the Prevalence of Contact/Collision in Practices:
As a simple adjustment, find ways to remove the incidence of contact and collision from practice. Yes, it may take a newer approach, but if we can reduce the prevalence of contact and collision overall, the likelihood of these injuries decreases as well.

#3. Be Conservative with Head Injuries:
When an athlete sustains any injury to the head, always consider the possibility of a concussion. More often than naught, this will not be the case. However, by keeping all possibilities open and your Certified Athletic Trainer's and your Orthopedic and Sports Medicine Team Physician's cell phone numbers handy, you will be much less likely to have an athlete who suffers from long-term complications or secondary injuries due to a concussion.

Omega-3 Fatty Acids

In orthopedics and sports medicine, it is sometimes common to hear patients question whether or not additional supplementation of calcium to their diet will speed up the time needed for a fracture to heal. Sounds good right? Your bones require calcium for their structural integrity so wouldn't adding calcium to your diet help a broken bone heal faster? The logic is good; the value is quite lacking. Most Americans receive their FDA recommended daily allotment of calcium through a normal diet so additional supplementation usually does not have the desired effect. Furthermore, fracture healing still requires a set time parameter, even in the most optimal calcium environment. Yes, calcium supplementation would greatly assist in the bone healing process in a calcium-deficient patient, but that situation would be much more prevalent in civilizations who don't usually eat cereal for breakfast and foods like yogurt, soybeans, pizza, cheeseburgers, almonds, and flour tortillas throughout the day.

So what about Omega-3 Fatty Acids? Well, Omega-3 Fatty Acids (O3FA) are essential fatty acids; which means your body cannot make them on its own and it must receive them from a proper diet. With good sources of O3FA being found in small feeder fish such as mackerel, sardines, albacore tuna, and freshwater fish such as lake trout, herring, and salmon, it is not surprising that many Americans in the Midwest and central portions of the country do not receive their recommended daily allotment. According to the American Heart Association, each individual should receive two servings (3.5 ounces each) per week. Why?



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Omega-3 Fatty Acids cont...

From a heart and blood vessel standpoint, O3FA have been shown to reduce the level of triglycerides in the blood, thus reducing the likelihood of arteriosclerosis and associated high cholesterol and blood pressure levels. What does that have to do with concussions you may ask?

From a neurological tissue standpoint, O3FA have been shown to increase neurological tissue pliability while also having an anti-inflammatory effect. Therefore, in theory, the brain and neurological tissue that has greater pliability and is less predisposed to inflammation would have a lesser likelihood of 1) sustaining minor neurological trauma and 2) be able to recover faster from the same. In plain reasoning, athletes could be less likely to sustain a minor concussion, severe concussions could theoretically be lessened in severity, and time needed for complete recovery could be reduced...just by a proper diet.

For those not prone to eating fish, always keep in mind that your very best source of nutrition will always be directly from food, and not from a supplement such as a drink, pill, or vitamin. In short, always go directly to the food source whenever possible; whether it be for O3FA, calcium, or whatever. However, if you are looking for a supplement of O3FA, keep in mind that research is just beginning in this area. Early reports and research though recommend that supplemental O3FA be taken in a 1000 mg per day, soft gel capsule that has, at a minimum, a 60% concentration of the O3FA EPA (Eicosapentaenoic Acid) and DHA (Docosahexaenoic Acid).

For more information, consider the following:

Brain Injury Research Institute
http://www.braininjuryresearchinstitute.org/

Center for the Study of Traumatic Encephalopathy
http://www.bu.edu/cste/

In Conclusion...

Concussion management is not an exact science, and still requires years of research and years of clinical practice. However, there are exceptional sources of research, clinical studies, and clinical practice that have come to the forefront in just the last 5-10 years. In fact, there is so much new and useful information prevalent in today's sports medicine community that it is not uncommon to see multi-day educational conferences in athletic training and sports medicine completely consumed by this one topic. Therefore, concussion has been the basis for the last several issues of this newsletter to provide you with the most up-to-date, best-practice management of concussions as they pertain to life and sports today.

As a coach, a parent, or an administrator, always look to your Certified Athletic Trainer or your Sports Medicine Fellowship-Trained Team Physician. Whether it pertains to concussions, ankle sprains, ACL reconstructions, or labral tears, they will always be your best qualified resource for the most up-to-date and appropriate management of injuries in the active population.

From all of us at Central States Orthopedic Specialists, thanks for reading, thanks for listening, and thanks for always helping us to make your healthcare and safety our highest priority. Enjoy your summer, and we'll see you once again in August of 2012.

A Note to the Reader……

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