

Concussion

1. Trauma to the brain caused by a blow to the head (normally the brain is cushioned by a layer of fluid, but a hard hit may cause the brain to hit up against the skull, causing bruising/swelling.)
2. Characterized by confusion, memory loss, headache, unsteadiness, nausea, vomiting, lightheadedness, and possibly loss of consciousness – any **one** of these or all of these can be present.
3. Most important is that your **CHILD NEEDS TO BE TAKEN OUT OF THE GAME RIGHT AWAY AND NOT SENT BACK IN UNTIL CLEARED BY US!** Discuss this with your child in case they are at a game or practice where you're not present. It is **non-negotiable**.
4. If there has been any loss of consciousness, medical care should be obtained immediately. Otherwise, the player can be observed for several hours after the injury at home.
5. Subsequent symptoms can include headaches, fatigue, lack of concentration, difficulty performing in school, nausea, irritability, tearfulness, poor sleep, and moodiness.
6. While most concussions are simple, and resolve spontaneously over the course of several days, concussion symptoms can be prolonged – anywhere from one day to several months until full recovery. It is hard to predict the course in each individual child.

When to worry:

1. Increasing headache, recurrent vomiting, radical changes in behavior, unsteadiness
2. Post-concussive symptoms that are very prolonged or preventing your child from resuming normal activities – i.e. tearfulness, fatigue etc.
3. Once your child has stopped having any symptoms at all it should be a full **2 weeks** before they return to sports, including sports that don't have contact – they need to rest. We have a conservative approach. Our goal is to avoid every seeing **second impact syndrome** (where a child gets another injury after having a concussion and has a much more serious brain injury).

When to come in:

1. The day after the concussion occurs, have your child checked and guidelines reviewed
2. Re-examination once all symptoms have been completely resolved for two weeks – we will help guide you on a return to activities and school.

What to expect/how to treat:

1. Fatigue, headaches, difficulty concentrating, tearfulness, trouble sleeping.
2. Initially treat headaches with acetaminophen, once your child has been seen and cleared of serious injury switch to ibuprofen; rest when he/she is tired, and return to activity gradually as tolerated (i.e. shorter school days when they first return). Counsel your child not to get frustrated if they are unable to do schoolwork for some time, we will help notify the school and teachers of what your child is capable of doing.
3. Past advice generally consisted of **PHYSICAL REST**; we now know that **MENTAL REST** is essential to recovery. This means no television, reading, schoolwork, video games, or texting

until the headaches have subsided. Your child will not like this recommendation, but will recover faster if followed.

Return to play protocol:

1. No activity, complete rest until all symptoms have resolved. Once asymptomatic, proceed to level 2.
2. Light aerobic exercise such as walking or stationary cycling, no resistance training.
3. Sport specific exercise- for example, skating in hockey, running in soccer, progressive addition of resistance training at steps 3 or 4.
4. Non-contact training drills.
5. Full contact training after medical clearance.
6. Game play.

If any post-concussive symptoms occur, the patient should drop back to the previous asymptomatic level and try to progress again after 24 hours.

What is Impact Testing?

1. Objective testing of a child's cognitive function using a computerized program – it is a way to gauge the impact of the concussion and help decide when a child is ready to return to play. This is best done when symptoms have resolved, to confirm resolution of cognitive symptoms.
2. Call us for more information on where to have this done. Some high schools have begun doing baseline testing in all their athletes. This should be considered in all athletes competing in contact sports, particularly football, ice hockey, soccer, wrestling and basketball.