St.Charles Hospital

Think Smart- Concussion Management

What is a concussion?

A concussion is a common but serious traumatic brain injury that alters the way the brain functions. Effects are usually temporary but can sometimes result in prolonged difficulties with headache, memory, concentration, balance and other symptoms.

How does a concussion occur?

A concussion is caused by a blow or bump to the head, a fall or any injury or impact that jars or shakes the brain inside the skull. Although there can be bumps, bruises or cuts on the face or head, most concussions occur without any visible signs. Even a small jolt, "ding" or "getting your bell rung" can be serious. You don't have to "pass out" to have a concussion and in fact 90% of incidents causing concussion do no result in a loss of consciousness. Concussions are common in contact sports but also occur in non-contact sports, leisure activities, motor vehicle accidents, falls and a variety of other mechanisms. While CT-scans are used to rule out more serious brain trauma, a concussion is not evident on CT-scan or x-ray.

Getting the facts

- **Most concussions occur without any loss of consciousness**
- **Athletes who have had a concussion have an increased risk for another concussion**
- **Young children and teens are more likely to sustain a concussion and take longer to recover than adults**
- **The majority of victims of second impact syndrome are under the age of 18**

What is baseline testing?

A "baseline test" is a computerized neuro-cognitive test that can be given to individuals that are at a potential risk to sustaining a concussion. This may include but is not limited to students participating in contact sports. This "baseline test" can be given at any time and can be re-administered after a suspected concussion to detect subtle changes in cognitive function. Utilization of baseline testing and post-injury testing is only *ONE* component of a comprehensive concussion management protocol.

What are the signs and symptoms of a concussion?

Symptoms of a concussion can range from mild to severe and can last for hours, days, weeks or even months. Symptoms can occur immediately but it is not uncommon for symptoms to begin to emerge days after the injury.

Signs that can be observed

- Appears to be dazed or stunned
- Confusion
- Loss of consciousness (even brief)
- Memory loss of events prior to injury
- Memory loss of events after injury
- Staggers or moves clumsily
- Slow to answer questions
- Behavior changes

Symptoms Frequently Reported

- Headache
- Difficulty with balance
- Nausea or vomiting
- Feeling "foggy"
- Difficulty concentrating
- Visual disturbances
- Light Sensitivity
- Dizziness
- Sleep disturbances

What are the signs of an emergent situation?

Seek immediate medical attention should any of the following signs be present:

- A persistent headache that worsens
- Weakness or numbness in the limbs
- Loss of consciousness (even if brief)
- One pupil larger than the other
- Slurred Speech
- Convulsions or Seizures
- Decreased Coordination
- Repeated vomiting

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When in doubt, sit them out- What should be done if a concussion is suspected to have occurred?

Do not try to judge the severity of the injury yourself. If any of the above signs and symptoms are observed or reported following a bump, blow or jolt to the head, the individual should immediately be removed from the game and kept out of play until they are symptom free and a physician experienced in evaluating and managing concussions says they can return to play.

Keys to recovery

Resting the brain is the key to recovery following a suspected concussion. Physical activity or activities that require concentration may cause concussion symptoms to reappear or worsen. The following activities may need to be restricted and monitored during recovery.

- Participation in sports
- Physical Education
- School participation, work, and testing
- Video games
- Reading
- Texting

Return to Play

It is imperative to implement a gradual return to play to ensure recovery has occurred and activity does not bring on symptoms. Individuals will be taken through a gradual, step-wise progression starting with light aerobic activity, progressing to sport specific activity, to non-contact drills, then full contact drills and then ultimately back to game play. Depending on each individual's progress and readiness, a supervised return to play progression can be completed with your physician, physical therapist or athletic trainer. ***NYS Law requires return to play clearance following a concussion to be provided by the school's Chief Medical Officer (CMO). The CMO for Rocky Point is Dr. John Gil. In addition, the physicians from the St. Charles "Think Smart" Concussion Management Program are approved as CMO's for concussion and can also provide Return to Play clearance following a concussion.***

What are the risks of returning to sports too soon?

The most common risk of returning too soon is causing symptoms that would typically clear up quickly to be prolonged for weeks or months. Athletes who have had more concussions and return too soon also risk developing long lasting or permanent symptoms. The most alarming risk of all is Second Impact Syndrome, in which an athlete who has returned to play while still symptomatic sustains a second concussion, resulting in severe permanent neurological disability or death. Fortunately, these cases are rare but almost always involve high school age athletes.

Prevention and Preparation

You play an important role in preventing concussions. These steps can be taken to help ensure the safety of student athletes;

- Education: All key individuals including coaches, trainers, parents and athletes should be educated about what a concussion is, how it occurs, the signs and symptoms and why it is so imperative that any suspected concussion be reported. Promote that it is not smart to play with a concussion and discourage others from pressuring injured athletes to play.
- Safe Play: Teach athletes safe playing techniques encourage them to follow the rules for play and practice good sportsmanship and at all times.
- Safety Equipment: Make sure athletes wear the right protective equipment for the sport of choice. This includes helmets, mouth guards, eye protection, shin guards, etc. Protective equipment should fit properly, be well maintained, and worn consistently and correctly.

Concussion Management is a Team Sport!

For more information refer to:

- **NYS Department of Health:** http://www.health.ny.gov/prevention/injury_prevention/concussion.
- **Centers for Disease Control and Prevention:** http://www.cdc.gov/concussion/sports/index.html
- **St. Charles Hospital "Think Smart" Concussion Management Program:** (631)476-4323