Department of Health

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Ohio Injury Prevention Partnership
Child Injury Action Group

Ohio Department of Health Concussion Information Sheet: *For Interscholastic Athletics*

Dear Parent/Guardian and Athletes,

This information sheet is provided to assist you and your child in recognizing the signs and symptoms of a concussion. Every athlete is different and responds to a brain injury differently, so seek medical attention if you suspect your child has a concussion. Once a concussion occurs, it is very important your athlete returns to normal activities slowly, so they do not do more damage to their brain.

What is a Concussion?[1]

According to the Center for Disease Control and Prevention (CDC) a concussion is a type of traumatic brain injury-or TBI-caused by a bump, blow, or jolt to the head or by a hit to the body that cause the head and brain to move quickly back and forth. This fast movement can cause the brain to bounce around or twist in the skull, creating chemical changes in the brain and sometimes stretching and damaging the brain cells.

Signs and Symptoms of a Concussion[1]

Signs and symptoms generally show up soon after the injury. However, you may not know how serious the injury is at first and some symptoms may not show up for hours or days. For example, in the first few minutes your child or teen might have a headache or feel confused or a bit dazed. But a few days later, your child might have more trouble sleeping or changes in mood than usual.

You should continue to check for signs of concussion right after the injury and a few days after the injury. If your child or teen's concussion signs or symptoms get worse be sure to share this information with their healthcare provider.

Signs Observed by Parents or Guardians[1]

- Appears dazed or stunned.
- Is confused about assignment or position.
- Forgets instruction, is confused about an assignment or position, or is unsure of the game, score or opponent.
- Moves clumsily.
- Answers questions slowly.
- Loses consciousness *(even briefly)*.
- Shows mood, behavior, or personality changes.
- Can't recall events before or after hit or fall.

Symptoms Reported by Athlete[1]

- Headache or "pressure" in head.
- Nausea or vomiting.
- Balance problems or dizziness, or double or blurry vision.
- Bothered by light or noise.
- Feeling sluggish, hazy, foggy or groggy.
- Confusion, or concentration or memory problems.
- Just not "feeling right," or "feeling down".

Dangerous Signs & Symptoms of a Concussion [1]

- One pupil larger than the other.
- Drowsiness or inability to wake up.

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- A headache that gets worse and does not go away.
- Slurred speech, weakness, numbness, or decreased coordination.
- Repeated vomiting or nausea, convulsions or seizures (shaking or twitching).
- Unusual behavior, increased confusion, restlessness, or agitation.
- Loss of consciousness (passed out/knocked out). Even a brief loss of consciousness should be taken seriously.

Be Honest

Encourage your athlete to be honest with you, their coach, and your health care provider about their symptoms. Many young athletes get caught up in the moment and/or feel pressured to return to sports before they are ready. It is better to miss one game than the entire season… or risk permanent damage!

Seek Medical Attention Right Away

Seeking medical attention is an important first step if you suspect or are told your child has a concussion. A qualified health care professional will be able to determine how serious the concussion is and when it is safe for your child to return to sports and other daily activities.

- No athlete should return to activity on the same day they get a concussion.
- Athletes should **NEVER** return to practices/games if they still have ANY symptoms.
- Parents and coaches should never pressure any athlete to return to play.

The Dangers of Returning Too Soon

Returning to play too early may cause Second Impact Syndrome (SIS) or Post-Concussion Syndrome (PCS). SIS occurs when a second blow to the head happens before an athlete has completely recovered from a concussion. This second impact causes the brain to swell, possibly resulting in brain damage, paralysis, and even death. PCS can occur after a second impact. PCS can result in permanent, long- term concussion symptoms. The risk of SIS and PCS is the reason why no athlete should be allowed to participate in any physical activity before they are cleared by a qualified health care professional.

Recovery

A concussion can affect school, work, and sports. Along with coaches and teachers, the school nurse, athletic trainer, employer, and other school administrators should be aware of the athlete's injury and their roles in helping the child recover.

During the recovery time after a concussion, physical and mental rest are required. A concussion upsets the way the brain normally works and causes it to work longer and harder to complete even simple tasks. Activities that require concentration and focus may make symptoms worse and cause the brain to heal slower. Studies show that children's brains take several weeks to heal following a concussion.

Returning to Daily Activities

1. Be sure your child gets plenty of rest and enough sleep at night – no late nights. Keep the same bedtime weekdays and weekends.
2. Encourage daytime naps or rest breaks when your child feels tired or worn-out.
3. Limit your child's activities that require a lot of thinking or concentration (including social activities, homework, video games, texting, computer, tablet, driving, job related activities, movies, parties). These activities can slow the brain's recovery.
4. Limit your child's physical activity, especially those activities where another injury or blow to the head may occur.
5. Have your qualified health care professional check your child's symptoms at different times to help guide recovery.

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Returning to Learn (School)[1,2]

1. Following an initial period of relative rest (24-48 hours following an injury, athletes can begin a gradual and incremental increase in their cognitive load. Progression through the strategy for students should be slowed when there is more than a mild and brief symptom exacerbation. *Mild and brief exacerbation of symptoms is defined as an increase of no more than 2 points on a 0–10-point scale (with 0 representing no symptoms and 10 the worst symptoms imaginable) for less than an hour when compared to symptoms reported prior to cognitive activity.

2. Inform teacher(s), school counselor, school nurse, or administrator(s) about the injury and symptoms. School personnel should be instructed to watch for:

   a. *Increased problems paying attention.*

   b. *Increased problems remembering or learning new information.*

   c. *Longer time needed to complete tasks or assignments.*

   d. *Difficulty organizing tasks or shifting between tasks.*

   e. *Inappropriate or impulsive behavior during class.*

   f. *Greater irritability.*

   g. *Less ability to cope with stress.*

   h. *More emotional than usual.*

   i. *Fatigue.*

   j. *Difficulties handling a stimulating school environment (lights, noise, etc.).*

   k. *Physical symptoms (headache, nausea, dizziness).*

A return to learn (RTL) strategy is listed below. Not all athletes will need a return to learn strategy or academic support.

Returning to Learn (School) Strategies[1,2]

1.FIRST STEP: Daily activities can be incorporated that do not result in more than a *mild exacerbation of symptoms related to the current concussion. These include typical activities during the day (e.g., reading) while minimizing screen time. Start with 5-15 minutes at a time and increase gradually.

2.SECOND STEP: School activities can be incorporated which include homework, reading or other cognitive activities outside of the classroom. Some school activities can be incorporated such as homework, reading or other cognitive activities outside of the classroom.

3.THIRD STEP: Return to school part time with gradual introduction of schoolwork. May need to start with a partial school day or with greater access to rest breaks during the day.

4.FOURTH STEP: Return to school full time and gradually progress in school activities until a full day can be tolerated without more than *mild symptom exacerbation.

If your child is still having concussion symptoms, they may need extra help with school related activities. As the symptoms decrease during recovery, the extra help or supports can be removed gradually.

For more information, please refer to return to learn at the ODH website.

Returning to Play[1,2]

1. Returning to play is specific for each person, depending on the sport. **Starting 4/26/13, Ohio law requires written permission from a health care provider before an athlete can return to play.** Follow instructions and guidance provided by a health care professional. It is important that you, your child, and your child's coach follow these instructions carefully.

2. Your child should **NEVER** return to play if they still have **ANY** symptoms. (Be sure that your child does not have any symptoms at rest and while doing any physical activity and/or activities that require a lot of thinking or concentration).

3. Ohio law prohibits your child from returning to a game or practice on the same day they were removed.

4. Be sure that the athletic trainer, coach and physical education teacher are aware of your child's injury and symptoms.

5. Your athlete should complete a step-by-step exercise-based progression, under the direction of a qualified healthcare professional.

6. A sample activity progression is listed below. Each step typically takes a minimum of 24 hours. It is important for an athlete's parent(s) and coach(es) to watch for concussion symptoms after each day's return to sports progression activity. An athlete should only move to the next step if they do not have any new symptoms at the current step. If an athlete's symptoms come back or if he or she gets new symptoms, this is a sign that the athlete is pushing too hard. The athlete should stop these activities and the athlete's medical provider should be contacted. After more rest and no concussion symptoms, the athlete can start at the previous step.

Sample Activity Progression[1] [2]

1.FIRST STEP: Back to regular activities-The athlete is back to their regular activities (such as school) and has the green-light from their healthcare provider to begin the return to sports progression.

2.SECOND STEP: Light aerobic activity- Begin with light aerobic exercise only to increase an athlete's heart rate. This means about 5 to 10 minutes on an exercise bike, walking, or light jogging. No weightlifting at this point.

3.THIRD STEP: Moderate Activity/Individual Sport-Specific Exercise (if sport-specific training involves any risk of inadvertent head impact, medical clearance should occur prior to Step 3- Continue with activities to increase an athlete's heart rate with body or head movement. Sport -specific training away from the team environment. This includes change of direction and/or individual training drills away from the team environment, moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weightlifting (less time and/or less weight from their typical routine). No activities at risk of head impact.

4.FOURTH STEP: Heavy, non-contact activity- Add heavy non-contact physical activity, such as sprinting/running, high-intensity stationary biking, regular weightlifting routine, non-contact sport-specific drills (in 3 planes of movement) integrated into a team environment.

5.FIFTH STEP: Practice & full contact- Athlete may return to practice and full contact (if appropriate for the sport) in controlled practice.

6.SIXTH STEP: Competition- Athlete may return to competition.

**Steps 4-6 should begin after the resolution of any symptoms, abnormalities in cognitive function and any other clinical findings related to the current concussion, including with and after physical exertion.*

Resources

[1]**Centers for Disease Control and Prevention**
https://www.cdc.gov/headsup/youthsports/

[2]**Consensus Statement Concussion in Sport**
Consensus Statement Concussion in Sport

ODH Violence and Injury Prevention Section
https://odh.ohio.gov/know-our-programs/child-injury-Prevention/vipp