A Fact Sheet for
YOUTH SPORTS COACHES

HEADS UP CONCUSSION

One of the main jobs of a youth sports coach is keeping athletes safe. This sheet has information to help you protect athletes from concussion or other serious brain injury, learn how to spot a concussion, and know what to do if a concussion occurs.

What Is a Concussion?

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 causes 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.

How Can I Help Keep Athletes Safe?

Sports are a great way for children and teens to stay healthy and can help them do well in school. As a youth sports coach, your actions create the culture for safety and can help lower an athlete's chance of getting a concussion or other serious injury. Aggressive and/or unsportsmanlike behavior among athletes can increase their chances of getting a concussion or other serious injury. Here are some ways you can help keep your athletes safe:

Talk with athletes about the importance of reporting a concussion:

- Talk with athletes about any concerns they might have about reporting their concussion symptoms. Make sure to tell them that safety comes first and you expect them to tell you and their parent(s) if they think they have a concussion.

Create a culture of safety at games and practices:

- Teach athletes ways to lower the chances of getting a concussion.
- Enforce the rules of the sport for fair play, safety, and sportsmanship.
- Ensure athletes avoid unsafe actions such as:
  - Striking another athlete in the head;
  - Using their head or helmet to contact another athlete;
  - Making illegal contacts or checking, tackling, or colliding with an unprotected opponent; and/or
  - Trying to injure or put another athlete at risk for injury.
- Tell athletes that you expect good sportsmanship at all times, both on and off the playing field.

Plan ahead. How can you help encourage concussion reporting among your athletes?

Athletes May Try to Hide Concussion Symptoms

Among a group of almost 800 high school athletes:

69% **reported playing with concussion symptoms.**

40% **of these athletes said that their coach was not aware that they had a possible concussion.[1]**

Athletes may be less likely to tell their coach or athletic trainer about a possible concussion during a championship game or other important event.[2]

Keep up-to-date on concussion information:

- Review your state, league, and/or organization's concussion guidelines and protocols.
- Take a training course on concussion. CDC offers concussion training at no cost at www.cdc.gov/HEADSUP.
- Download CDC's *HEADS UP* app or a list of concussion signs and symptoms that you can keep on hand.

To learn more, go to www.cdc.gov/HEADSUP

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control

The Way You Talk and Think About Concussion Affects Athletes.

Make sure to tell athletes that safety comes first and you expect them to tell you and their parent(s) if they think they have a concussion.

HEADS UP CONCUSSION

Check out the equipment and sports facilities:

- Make sure all athletes wear a helmet that fits well and is in good condition when appropriate for the sport or activity. There is no "concussion-proof" helmet, so it is important to enforce safety rules that protect athletes from hits to the head and when a helmet falls off during a play.
- Work with the game or event administrator to remove tripping hazards and ensure that equipment, such as goalposts, have padding that is in good condition.

Keep emergency contact information handy:

- Bring emergency contact information for parents and health care providers to each game and practice in case an athlete needs to be taken to an emergency department right away for a concussion or other serious injury.
- If first responders are called to care for an injured athlete, provide them with details about how the injury happened and how the athlete was acting after the injury.

How Can I Spot a Possible Concussion?

Athletes who show or report one or more of the signs and symptoms listed below—or simply say they just "don't feel right" after a bump, blow, or jolt to the head or body—may have a concussion or other serious brain injury.

Signs Observed by Coaches or Parents

- Appears dazed or stunned.
- Forgets an 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 prior to or after a hit or fall.

Plan ahead. How can you help athletes lower their chance of getting a concussion?

Some athletes may not report a concussion because they don't think a concussion is serious.

They may also worry about:

- **Losing their position on the team or during the game.**
- **Jeopardizing their future sports career.**
- **Looking weak.**
- **Letting their teammates or the team down.**
- **What their coach or teammates might think of them.**[3,4,5]

Symptoms Reported by Athletes

- 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".

NOTE: Concussion signs and symptoms often show up soon after the injury, but it can be hard to tell how serious the concussion is at first. Some symptoms may not be noticed or may not show up for hours or days.

Enforce Safe Play. You Set the Tone for Safety.

As many as 25 percent of the concussions reported among high school athletes result from aggressive or illegal play.[6]

HEADS UP CONCUSSION

What Are Some More Serious Danger Signs to Look Out For?

In rare cases, a dangerous collection of blood (hematoma) may form on the brain after a bump, blow, or jolt to the head or body and can squeeze the brain against the skull. Call 9-1-1 or ensure an athlete is taken to the emergency department right away if, after a bump, blow, or jolt to the head or body, he or she has one or more of these danger signs:

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

What Should I Do If I Think an Athlete Has a Possible Concussion?

As a coach, if you think an athlete may have a concussion, you should:

Remove the athlete from play.
When in doubt, sit them out!

Keep an athlete with a possible concussion out of play on the same day of the injury and until cleared by a health care provider.
Do not try to judge the severity of the injury yourself. Only a health care provider should assess an athlete for a possible concussion. After you remove an athlete with a possible concussion from practice or play, the decision about return to practice or play is a medical decision that should be made by a health care provider. As a coach, recording the following information can help a health care provider in assessing the athlete after the injury:

- Cause of the injury and force of the hit or blow to the head or body.
- Any loss of consciousness (passed out/knocked out) and if so, for how long.
- Any memory loss right after the injury.
- Any seizures right after the injury.
- Number of previous concussions (if any).

Inform the athlete's parent(s) about the possible concussion.
Let them know about the possible concussion and give them the *HEADS UP* fact sheet for parents. This fact sheet can help parents watch the athlete for concussion signs or symptoms that may show up or get worse once the athlete is at home or returns to school.

Ask for written instructions from the athlete's health care provider on return to play.
These instructions should include information about when they can return to play and what steps you should take to help them safely return to play.

Plan ahead. What should you do if you think an athlete has a concussion?

Concussions Affect Each Athlete Differently.

While most athletes with a concussion feel better within a couple of weeks, some will have symptoms for months or longer. Talk with an athlete's parents if you notice their concussion symptoms come back after they return to play.

Work with the athlete's health care provider and follow the five gradual steps for return to play. An athlete's return to school and sports should be a gradual process that is carefully managed and monitored by a health care provider.

HEADS UP CONCUSSION

Plan ahead. How can you help an athlete safely return to play after a concussion?

Why Should I Remove an Athlete With a Possible Concussion from Play?

The brain needs time to heal after a concussion. An athlete who continues to play with concussion has a greater chance of getting another concussion. A repeat concussion that occurs while the brain is still healing from the first injury can be very serious and can affect an athlete for a lifetime. It can even be fatal.

What Steps Can I Take to Help an Athlete Return to Play?

An athlete's return to school and sports should be a gradual process that is approved and carefully managed and monitored by a health care provider. When available, be sure to also work closely with your team's certified athletic trainer.

Below are five gradual steps that you, along with a health care provider, should follow to help safely return an athlete to play. Remember, this is a gradual process. These steps should not be completed in one day, but instead over days, weeks, or months.

BASELINE: Athlete is back to their regular school activities, is no longer experiencing symptoms from the injury when doing normal activities, and has a green light from their health care provider to begin the return to play process.

An athlete should only move to the next step if they do not have any new symptoms at the current step.

STEP 1: 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.

STEP 2: Continue with activities to increase an athlete's heart rate with body or head movement. This includes moderate jogging, brief running, moderate-intensity stationary biking, moderate-intensity weightlifting (less time and/or less weight than a typical routine).

STEP 3: 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).

STEP 4: An athlete may return to practice and full contact (if appropriate for the sport) in controlled practice.

STEP 5: An athlete may return to competition.

REMEMBER: It is important for you and the athlete's parent(s) to watch for concussion symptoms after each day's return to play progression activity. If an athlete's concussion symptoms come back, or he or she gets new symptoms when becoming more active at any step, this is a sign that the athlete is pushing him- or herself too hard. The athlete should stop these activities, and the athlete's health care provider should be contacted. After the okay from the athlete's health care provider, the athlete can begin at the previous step.

To learn more, go to www.cdc.gov/HEADSUP

You can also download the CDC *HEADS UP* app to get concussion information at your fingertips. Just scan the QR code pictured at left with your smartphone.

[1] Rivara FP, Schiff MA, Chrisman SP, Chung SK, Ellenbogen RG, Herring SA. (2014). The effect of coach education on reporting of concussions among high school athletes after passage of a concussion law. Amer J Sports Med, May, 2014, 42(5):1197-1203.

[2] Bramley H, Patrick K, Lehman E, Silvis M. (2012). High school soccer players with concussion education are more likely to notify their coach of a suspected concussion. (2012). Clin Pediatr (Phila), 2012 April, 51(4):332-336.

[3] Kerr ZY, Register-Mihalik JK, Marshall SW, Evenson KR, Mihalik JP, Guskiewicz KM (2014) Disclosure and non-disclosure of concussion and concussion symptoms in athletes: Review and application of the socio-ecological framework. Brain Inj. 2014;28(8):1009-21.

[4] Register-Mihalik JK, Guskiewicz KM, McLeod TC, Linnan LA, Mueller FO, Marshall SW. (2013a). Knowledge, attitude, and concussion-reporting behaviors among high school athletes: A preliminary study. J Athl Train, July 12, 2013.

[5] Chrisman, S. P., Quitiquit, C., Rivara, F. P. (2013). Qualitative Study of Barriers to Concussive Symptom Reporting in High School Athletics. J Adolesc Health. March, 2013, 52(3): 330-335.

[6] Collins CL, Fields SK, Comstock RD. (2008). When the rules of the game are broken: What proportion of high school sports-related injuries are related to illegal activity? Inj Prev, 14(1):34-38.

The information provided in this fact sheet or through linkages to other sites is not a substitute for medical or professional care. Questions about diagnosis and treatment for concussion should be directed to your physician or other healthcare provider.

5/2015