



Concussion Fact Sheets

For Coaches

SANFORD
ORTHOPEDICS
SPORTS MEDICINE



Concussions

A Fact Sheet for Coaches

To download the coaches fact sheet in Spanish, please visit www.cdc.gov/ConcussionInYouthSports Para descargar la hoja informativa para los entrenadores en español, por favor visite” www.cdc.gov/ConcussionInYouthSports

THE FACTS

- A concussion is a *brain injury*.
- All concussions are *serious*.
- Concussions can occur *without loss of consciousness*.
- Concussions can occur *in any sport*.
- An athlete can still get a concussion *even when wearing a helmet*.
- Affected athletes may not report their symptoms for *fear of losing playing time* or their positions.
- Recognition and proper management of concussions when they *first occur* can help prevent *further injury or death*.

WHAT IS A CONCUSSION?

A concussion is a brain injury that changes how cells in the brain normally work. A concussion is caused by a blow to the head or body that causes the brain to move suddenly inside the skull. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious. Concussions can also result from a fall or from players colliding with each other or with obstacles, such as a goalpost.

The potential for concussions is greatest in athletic environments where collisions are common. However, concussions can occur in *any* organized or unorganized sport or recreational activity. As many as 3.8 million sports- and recreation-related concussions are estimated to occur in the United States each year.

RECOGNIZING A POSSIBLE CONCUSSION

To help recognize a concussion, you should watch for the following two things among your athletes:

1. **A Forceful Blow** to the head or body that results in rapid movement or deceleration of the head.
and
2. **Any Change** in the athlete’s behavior, thinking or physical functioning. (See the signs and symptoms of concussion listed on the next page)

It’s better to miss one game than the whole season.

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
CENTERS FOR DISEASE CONTROL AND PREVENTION



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SIGNS AND SYMPTOMS

Signs Observed by Coaching Staff

If your player has experienced a bump or blow to the head during a game or practice, look for any of the following signs of a concussion:

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

Symptoms Reported by Athlete

- Headache or "pressure" in head
- Nausea or vomiting
- Balance problems or dizziness
- Double or blurry vision
- Sensitivity to light
- Sensitivity to noise
- Feeling sluggish, hazy, foggy or groggy
- Concentration or memory problems
- Confusion
- Does not "feel right"

Athletes who experience any of these signs or symptoms after a bump or blow to the head should be kept from play, practice, and conditioning until cleared by a health care professional with experience in evaluating and managing concussions. Signs and symptoms of concussion can last from several minutes to days, weeks, months, or even longer in some cases.

Remember, you can't see a concussion and some athletes may not experience and/or report symptoms until hours or days after the injury.

If you have any suspicion that your athlete has a concussion, you should promptly remove and keep the athlete out of the game, practice or conditioning.

PREVENTION AND PREPARATION

As a coach, you can play a key role in reducing the risk for concussions and responding properly when they occur. Here are some steps you can take to ensure the best outcome for your athletes and the team.

Educate athletes and parents about concussion.

Talk with athletes and their parents about the dangers and potential long-term consequences of concussion. For more information on long-term effects of concussion, view the following online video clip: http://www.cdc.gov/ncipc/tbi/Coaches_Tool_Kit.htm#Video.

Explain your concerns about concussion and your expectations of safe play to athletes, parents, and assistant coaches. Pass out the concussion fact sheets for athletes and for parents at the beginning of the season and again if a concussion occurs.

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PREVENTION AND PREPARATION

Insist that safety comes first.

- Teach athletes safe playing techniques and encourage them to follow the rules of play.
- Encourage athletes to practice good sportsmanship at all times.
- Make sure athletes wear the right protective equipment for their activity. (such as helmets, padding, shin guards, and eye and mouth guards). Protective equipment should fit properly, be well maintained, and be worn consistently and correctly.
- Review the athlete fact sheet with your team to help them recognize the signs and symptoms of a concussion.

Check with your youth sports league or administrator about concussion policies. Concussion policy statements can be developed to include the league's commitment to safety, a brief description of concussion, and information on when athletes can safely return to play following a concussion (i.e., an athlete with known or suspected concussion should be kept from play until evaluated and given permission to return by a health care professional experienced in evaluating and managing concussions). Parents and athletes should read and sign the concussion policy statement at the beginning of the sports season.

Teach athletes and parents that it's not smart to play with a concussion.

Sometimes players and parents wrongly believe that it shows strength and courage to play injured. Discourage others from pressuring injured athletes to play. Don't let athletes persuade you that they're "just fine" after they have sustained any bump or blow to the head.

A repeat concussion that occurs before the brain recovers from the first—usually within a short period of time (hours, days, or weeks)—can slow recovery and increase the likelihood of having long-term or permanent problems. Sometimes, especially with repeat concussions, when signs and symptoms are present, a blow to the head can result in brain swelling, permanent brain damage, and even death. This more serious condition is called *second impact syndrome*. Keep athletes with known or suspected concussion from play, practice, or training until they have been evaluated and given permission to return to play by a health care professional with experience in evaluating and managing concussions. Remind your athletes: "It's better to miss one game than the whole season."

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For more practical information and free tools to provide athletes, parents and staff on preventing, recognizing and responding to a concussion, see <http://www.cdc.gov/concussion/sports/index.html>.

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Action Plan

WHAT SHOULD A COACH DO WHEN A CONCUSSION IS EXPECTED?

1. Remove the athlete from play.

Look for the signs and symptoms of a concussion, especially if your athlete has experienced a bump or blow to the head. Athletes who experience signs or symptoms of concussion should be immediately removed and not be allowed to return to play. When in doubt, keep the athlete out of play.

2. Ensure that the athlete is evaluated right away by an appropriate health care professional.

Do not try to judge the severity of the injury yourself. Health care professionals have a number of methods that they can use to assess the severity of concussions. As a coach, recording the following information can help health care professionals in assessing the athlete after the injury:

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

3. Inform the athlete's parents or guardians about the possible concussion and give them the fact sheet on concussion.

Make sure they know that the athlete should be seen by a health care professional experienced in evaluating and managing concussions.

4. Allow the athlete to return to play only with permission from a health care professional with experience in evaluating and managing concussions.

A repeat blow to the head that occurs before the brain recovers from a concussion can slow recovery or increase the likelihood of having long-term or even permanent problems. Prevent common long-term problems and the rare *second impact syndrome* by delaying the athlete's return to the activity until the player receives appropriate medical evaluation and approval for return to play.

Resources

1. Powell JW. Cerebral concussion: causes, effects, and risks in sports. *Journal of Athletic Training* 2001; 36(3):307-311.
2. Langlois JA, Rutland-Brown W, Wald M. The epidemiology and impact of traumatic brain injury: a brief overview. *Journal of Head Trauma Rehabilitation* 2006; 21(5):375-378.
3. Lovell MR, Collins MW, Iverson GL, Johnston KM, Bradley JP. Grade 1 or "ding" concussions in high school athletes. *The American Journal of Sports Medicine* 2004; 32(1):47-54.
4. Institute of Medicine (US). Is soccer bad for children's heads? Summary of the IOM Workshop on Neuropsychological Consequences of Head Impact in Youth Soccer. Washington (DC):National Academy Press; 2002.
5. Centers for Disease Control and Prevention (CDC). Sports-related recurrent brain injuries-United States. *Morbidity and Mortality Weekly Report* 1997; 46(10):224-227. Available at: www.cdc.gov/mmwr/preview/mmwrhtml/00046702.htm.

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Concussion Services

Services for coaches

Post-Injury Care & Evaluation

Sanford Orthopedics & Sports Medicine offers:

- Full clinical consultation and evaluation
- Pre and Post-injury testing (ImPACT™ and other measures as needed)
- Written report of findings and specific recommendations to parents, primary care physicians, and school administrators, coaches and athletic trainers
- In-person and over-the-phone consultation as needed

Return to play guidance & support

It's hard to hold athletes back. They want to return to play as quickly as possible. However, it's important to make sure it's done safely. Most athletes who experience an initial concussion can recover completely, as long as they are not returned to physical or mental and contact play too soon. An athlete whose injury is not managed properly and returns to play before the brain has had time to heal is at great risk for further, more serious injury. This medically based program provides parents, coaches, physicians, school administrators and athletic departments the right plan and more confidence that the correct return-to-school and play decisions are made.

What is a concussion?

A concussion is a brain injury that is caused by a sudden and violent rocking of the brain inside the skull prompted by a traumatic blow to the head or upper body. Concussions change the way the brain normally works. Concussion symptoms can last various lengths of time and may include:

- Headache
- Nausea
- Vomiting
- Balance problems
- Dizziness
- Fatigue
- Trouble falling asleep
- Sleeping more than usual
- Drowsiness
- Sensitivity to light
- Sensitivity to noise
- Irritability
- Sadness
- Nervousness
- Feeling more emotional
- Numbness or tingling
- Feeling slowed down
- Feeling mentally foggy
- Difficulty concentrating
- Difficulty remembering
- Visual problems

Symptoms are not always definite and the decision to allow an individual to return to school or play is not always clear. Contact a Sanford Sports Medicine Physician if any of these symptoms occur.

For more information regarding the Sports Concussion Program at Sanford Orthopedics & Sports Medicine, call:

- Sioux Falls (605) 328-2663
- Fargo (701) 237-9712
- Bemidji (218) 751-9746



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Concussion Services

Services for coaches

Being the parent or coach of a young athlete is exhilarating. But you also know there are risks. You want your young athlete to be safe. To perform his or her best—but be safe.

Sports Concussion Program

The CDC estimates that as many as 3.8 million sports-and recreation-related concussions occur each year in the United States, including those not treated by a health care provider. As many as 40 percent of youth athletes who sustain a concussion return to the field or court sooner than modern guidelines suggest. Among people aged 15-24 years, sports are now second only to motor vehicle accidents as the leading cause of traumatic brain injury.

Sanford Orthopedics & Sports Medicine provides concussion evaluation and management for anyone—an athlete, recreational athlete or non-athlete who participates in activities that may pose a risk for concussion or after a concussion has occurred. About our program:

- Our integrated team of concussion specialists has experience with youth, high school, college and professional athletes.
- We are a Certified ImPACT™ Consultant site and offer baseline as well as post-injury testing.
- The focus of care is to provide an individualized and comprehensive approach to concussion management.

Education

Managing a concussion can be tricky. We provide information for athletes, parents, and coaches on concussions to help them recognize the injury and respond appropriately. Following a concussion, guidance is provided to make necessary modifications to daily routines such as school, work and activities to ensure each athlete receives adequate rest. Free online educational resources can be viewed at: www.sanfordhealth/headsup.org

Impact Testing

ImPACT™ (Immediate Post-concussion Assessment and Cognitive Testing) is a computer- based neurocognitive test battery that has been scientifically validated to measure the effects of sports-related concussion. In the preseason, each athlete is given a baseline test. When a concussion is suspected during the season, a follow-up test is administered to see if the results have changed from the baseline. This comparison helps to evaluate and safely and appropriately manage the concussion.

ImPACT™ can help answer difficult questions about athletes' readiness to return to school and play, protecting them from the potential serious consequences of returning too soon. While traditional neurologic and radiological procedures such as CT and MRI are helpful in identifying serious head injuries (e.g., skull fractures, hematomas), these tools are ineffective at identifying the chemical changes in the brain and the functional effects of concussion. Consequently, clinicians must often rely on subjective observations or patient self-reports to diagnose and track a concussion. This is where ImPACT™ can help.

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