

THE FACTS

- All concussions are *serious*.
- Most concussions occur *without* loss of consciousness.
- Recognition and proper response to concussions when they *first occur* can help prevent further injury or even death.

There's no doubt about it: sports are a great way for kids and teens to stay healthy while learning important team-building skills. But there are risks to pushing the limits of speed, strength, and endurance. And athletes who push the limits sometimes don't recognize their own *limitations*—especially when they've had a concussion.

That's where you come in. It's up to you, as a coach, to help recognize concussion and make the call to pull an athlete off of the field if you think an athlete might have one. Playing with a concussion can lead to long-term problems. It can even be *fatal*.

What Is a Concussion?

A bump, blow, or jolt to the head can cause a concussion, a type of traumatic brain injury. Concussions can also occur from a blow to the body that causes the head and brain to move rapidly back and forth—literally causing the brain to bounce around or twist within the skull. This sudden movement of the brain causes stretching, damaging the cells and creating chemical changes in the brain. Once these changes occur, the brain is more vulnerable to further injury and sensitive to any increased stress until it fully recovers.



Unlike a broken ankle, or other injuries you can feel with your hands, or see on an x-ray, a concussion is a disruption of how the brain works. It is **not** a "bruise to the brain."



How Can I Recognize a Possible Concussion?

On the football field, concussions can result from a fall or from players colliding with each other, the ground, or an obstacle, such as a goalpost. Even a "ding," "getting your bell rung," or what seems to be a mild bump or blow to the head can be serious.

As a coach you are on the front line in identifying an athlete with a suspected concussion. You know your athletes well and can recognize when something is off—even when the player doesn't know it or doesn't want to admit it.

Sometimes people wrongly believe that it shows strength and courage to play while injured. Discourage others from pressuring injured athletes to play. Some athletes may also try to hide their symptoms. Don't let your athlete convince you that he is "just fine" or that he can "tough it out." Emphasize to athletes and parents that playing with a concussion is dangerous.

Remember, you can't see a concussion, like you can see a broken ankle, and there is no one single indicator for concussion. Recognizing a concussion requires watching for different types of signs or symptoms.

So to help recognize a concussion, you should watch for and ask others to report the following two things among your athletes:

1. **A forceful bump, blow, or jolt to the head or body that results in rapid movement of the head.**
-and-
2. **Any concussion signs or symptoms, such as a change in the athlete's behavior, thinking, or physical functioning.**

What Are the Signs and Symptoms of Concussion?

Athletes who experience **one or more** of the signs and symptoms listed below, or who report that they just “don't feel right,” after a bump, blow, or jolt to the head or body may have a concussion.

SIGNS OBSERVED BY COACHING STAFF	SYMPTOMS REPORTED BY ATHLETE
<ul style="list-style-type: none"> • Appears dazed or stunned (such as glassy eyes) • Is confused about assignment or position • Forgets an instruction or play • Is unsure of score or opponent • Moves clumsily or poor balance • Answers questions slowly • Loses consciousness (<i>even briefly</i>) • Shows mood, behavior, or personality changes • Can't recall events <i>prior</i> to hit or fall • Can't recall events <i>after</i> hit or fall 	<ul style="list-style-type: none"> • Headache or “pressure” in head • Nausea or vomiting • Balance problems or dizziness • Double or blurry vision • Sensitivity to light or noise • Feeling sluggish, hazy, foggy, or groggy • Concentration or memory problems • Confusion • Does not “feel right” or is “feeling down”

Signs and symptoms of concussion generally show up soon after the injury. But the full effect of the injury may not be noticeable at first. For example, in the first few minutes the athlete might be slightly confused or appear a little bit dazed, but an hour later they can't recall coming to the practice or game.



So assess the player, then assess the player again, then re-assess the player even later. Make sure that the athlete is supervised for at least one or two hours after you suspect a concussion. Any worsening of concussion signs or symptoms indicates a medical emergency.

Why Should I Be Concerned about Concussions?

Most athletes with a concussion will recover quickly and fully. But for some athletes, signs and symptoms of concussion can last for days, weeks, or longer.

So why is it so important for you to remove an athlete from play?

If an athlete has a concussion, his brain needs time to heal. A repeat concussion that occurs before the brain recovers from the first—usually within a short time period (hours, days, weeks)—can slow recovery or increase the chances for long-term problems. In rare cases, repeat concussions can result in brain swelling or permanent brain damage. They can even be *fatal*.

Did You Know?

- Athletes who have ever had a concussion are at increased risk for another concussion.
- Young children and teens are more likely to get a concussion and take longer to recover than adults.

What Are Concussion Danger Signs?

In rare cases, a dangerous blood clot may form on the brain of an athlete with a concussion and crowd the brain against the skull. Call 9-1-1 or take the athlete to the emergency department right away if after a bump, blow, or jolt to the head or body he exhibits **one or more** of the following danger signs:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that gets worse
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (a brief loss of consciousness should be taken seriously)

What Should I Do If a Concussion Is Suspected?

You know that one of the keys to being a good coach is keeping your athletes safe and preparing them for the future—whether it is learning good teamwork or honing their athletic skills. But you also know that there are *unacceptable risks in sports*, especially when it comes to the brain.



So no matter whether the athlete is a key member of the team or the game is about to end, an athlete with a suspected concussion should be immediately removed from play. To help you know how to respond, follow the “Heads Up” four-step action plan if you suspect that an athlete has a concussion:

- 1. Remove the athlete from play.** Look for signs and symptoms of a concussion if your athlete has experienced a bump or blow to the head or body. *When in doubt, sit them out.*
- 2. Ensure that the athlete is evaluated 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 or body
 - Any loss of consciousness (*passed out/knocked out*) and if so, for how long

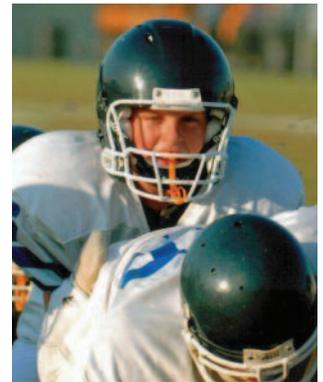
- Any memory loss immediately following the injury
- Any seizures immediately following the injury
- Number of previous concussions (*if any*)

- 3. Inform the athlete’s parents or guardians about the possible concussion and give them information on concussion.** This fact sheet can help parents monitor the athlete for sign or symptoms that appear or get worse once the athlete is at home or returns to school.
- 4. Keep the athlete out of play the day of the injury and until an appropriate health care professional says they are symptom-free and it’s OK to return to play.** After you remove an athlete with a suspected concussion from practice or play, the decision about when to return to practice or play is a medical decision.

How Can I Help Athletes to Return to Play Gradually?

Rest is very important after a concussion because it helps the brain to heal. After a concussion the torn or stretched brain cells need the body’s energy to heal. So the more energy an athlete uses doing activities, the less energy that goes to help the brain heal.

That’s why ignoring concussion symptoms and trying to “tough it out” often makes symptoms worse. For example, exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games may cause concussion symptoms (such as headache or tiredness) to reappear or get worse. So only when an athlete’s symptoms have reduced significantly, in consultation with their health care professional, should he slowly and gradually return to daily activities, such as school. Physical **and** cognitive activities—such as concentration and learning—should be carefully managed and monitored by a health care professional.



Progressive Return to Activity Program:

An athlete should return to sports practices under the supervision of an appropriate health care professional. When available, be sure to work closely with your team's certified athletic trainer.

Below are five gradual steps that you and the health care professional 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.

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 weight lifting 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 weight lifting (reduced time and/or reduced weight from the athlete's typical routine).

Step 3: Add heavy non-contact physical activity, such as sprinting/running, high-intensity stationary biking, regular weight lifting routine, non-contact sport-specific drills (in three planes of movement).

Step 4: Athlete may return to practice and full contact in controlled practice.

Step 5: Athlete may return to football competition.

As a coach, you should pay careful attention to an athlete's symptoms, as well as the athlete's thinking and concentration skills at each stage of activity. Any symptoms should be reported to their health care provider. If an athlete's symptoms come back or he gets new symptoms as he becomes more active at any stage, this is a sign that the athlete is pushing himself too hard. An athlete should only move to the next level of activity if he does not experience any symptoms at each level. If an athlete's symptoms return, he should stop these activities and the athlete's health care provider should be contacted. After more rest and an okay from his health care provider, the athlete should return to the first level and he should then restart the program gradually.

How Can I Help Prevent and Prepare for Concussions?

Insist that safety comes first. No one technique or piece of safety equipment is 100 percent effective in preventing concussion, but there are things you can do to help minimize the risks for concussion and other injuries. For example, to help prevent injuries, ensure that athletes:

- Practice "Heads Up" football—never lower your head during a hit.
- Use proper techniques in blocking and tackling. Learn and apply the fundamentals.
- Follow the rules of play and practice good sportsmanship and self-control at all times.
- Wear properly-fitted helmets and protective equipment. Helmets and other protective equipment should be well-maintained and be worn consistently and correctly. This includes buckling the chin strap on helmets at all times.
- Understand that helmets can help protect their head and brain, but they are not 100 percent effective in preventing concussions.

Check with your league, school, or district about

concussion policies. Concussion policy statements can be developed to include the school or league's commitment to safety, a brief description of concussion, and information on when athletes can safely return to play. Parents and athletes should sign the concussion policy statement at the beginning of the football season.

Involve and get support from other school or league officials—such as principals, certified athletic trainers, other coaches, school nurses, and parent-teacher associations—to help ensure that school or league rules and concussion policies are in place before the first football practice.



WHEN IN DOUBT, SIT THEM OUT

For more information and safety resources, visit:
www.cdc.gov/Concussion or www.usafootball.com.



SIGNS AND SYMPTOMS

These signs and symptoms may indicate that a concussion has occurred.

SIGNS OBSERVED BY COACHING STAFF

Appears dazed or stunned

Is confused about assignment or position

Forgets sports plays

Is unsure of game, score, or opponent

Moves clumsily

Answers questions slowly

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"

ACTION PLAN

If you suspect that a player has a concussion, you should take the following steps:

1. Remove athlete from play.
2. Ensure athlete is evaluated by an appropriate health care professional. Do not try to judge the seriousness of the injury yourself.
3. Inform athlete's parents or guardians about the known or possible concussion and give them the fact sheet on concussion.
4. Allow athlete to return to play **only** with permission from an appropriate health care professional.

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

For more information and to order additional materials **free-of-charge**, visit:
www.cdc.gov/ConcussionInYouthSports



A Fact Sheet for **ATHLETES**

CONCUSSION FACTS

A concussion is a brain injury that affects how your brain works.

- A concussion is caused by a bump, blow, or jolt to the head or body.
- A concussion can happen even if you haven't been knocked out.
- If you think you have a concussion, you should not return to play on the day of the injury and not until a health care professional says you are OK to return to play.

CONCUSSION SIGNS AND SYMPTOMS

Concussion symptoms differ with each person and with each injury, and they may not be noticeable for hours or days. Common symptoms include:

- Headache
- Confusion
- Difficulty remembering or paying attention
- Balance problems or dizziness
- Feeling sluggish, hazy, foggy, or groggy
- Feeling irritable, more emotional, or "down"
- Nausea or vomiting
- Bothered by light or noise
- Double or blurry vision
- Slowed reaction time
- Sleep problems
- Loss of consciousness

During recovery, exercising or activities that involve a lot of concentration (such as studying, working on the computer, or playing video games) may cause concussion symptoms to reappear or get worse.

WHAT SHOULD I DO IF I THINK I HAVE A CONCUSSION?

- **DON'T HIDE IT. REPORT IT.** Ignoring your symptoms and trying to "tough it out" often makes symptoms worse. Tell your coach, parent, and athletic trainer if you think you or one of your teammates may have a concussion. Don't let anyone pressure you into continuing to practice or play with a concussion.
- **GET CHECKED OUT.** Only a health care professional can tell if you have a concussion and when it's OK to return to play. Sports have injury timeouts and player substitutions so that you can get checked out and the team can perform at its best. The sooner you get checked out, the sooner you may be able to safely return to play.
- **TAKE CARE OF YOUR BRAIN.** A concussion can affect your ability to do schoolwork and other activities. Most athletes with a concussion get better and return to sports, but it is important to rest and give your brain time to heal. A repeat concussion that occurs while your brain is still healing can cause long-term problems that may change your life forever.

HOW CAN I HELP PREVENT A CONCUSSION?

Every sport is different, but there are steps you can take to protect yourself.

- Follow your coach's rules for safety and the rules of the sport.
- Practice good sportsmanship at all times.

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

For more information, visit www.cdc.gov/Concussion.



A Fact Sheet for PARENTS

WHAT IS A CONCUSSION?

A concussion is a type of traumatic brain injury. Concussions are caused by a bump or blow to the head. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious.

You can't see a concussion. Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury. If your child reports any symptoms of concussion, or if you notice the symptoms yourself, seek medical attention right away.

WHAT ARE THE SIGNS AND SYMPTOMS OF A CONCUSSION?

Signs Observed by Parents or Guardians

If your child has experienced a bump or blow to the head during a game or practice, look for any of the following signs and symptoms 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
- Loses consciousness (even briefly)
- Shows mood, behavior, or personality changes

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
- Just “not feeling right” or “feeling down”

HOW CAN YOU HELP YOUR CHILD PREVENT A CONCUSSION OR OTHER SERIOUS BRAIN INJURY?

- Ensure that they follow their coach's rules for safety and the rules of the sport.
- Encourage them to practice good sportsmanship at all times.
- Make sure they wear the right protective equipment for their activity. Protective equipment should fit properly and be well maintained.
- Wearing a helmet is a must to reduce the risk of a serious brain injury or skull fracture.
 - However, helmets are not designed to prevent concussions. There is no “concussion-proof” helmet. So, even with a helmet, it is important for kids and teens to avoid hits to the head.

WHAT SHOULD YOU DO IF YOU THINK YOUR CHILD HAS A CONCUSSION?

1. SEEK MEDICAL ATTENTION RIGHT AWAY.

A health care professional will be able to decide how serious the concussion is and when it is safe for your child to return to regular activities, including sports.

2. KEEP YOUR CHILD OUT OF PLAY.

Concussions take time to heal. Don't let your child return to play the day of the injury and until a health care professional says it's OK. Children who return to play too soon—while the brain is still healing—risk a greater chance of having a repeat concussion. Repeat or later concussions can be very serious. They can cause permanent brain damage, affecting your child for a lifetime.

3. TELL YOUR CHILD'S COACH ABOUT ANY PREVIOUS CONCUSSION.

Coaches should know if your child had a previous concussion. Your child's coach may not know about a concussion your child received in another sport or activity unless you tell the coach.

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

For more information, visit www.cdc.gov/Concussion.



Parent/Athlete Concussion Information Sheet

A concussion is a type of traumatic brain injury that changes the way the brain normally works. A concussion is caused by bump, blow, or jolt to the head or body that causes the head and brain to move rapidly back and forth. Even a “ding,” “getting your bell rung,” or what seems to be a mild bump or blow to the head can be serious.

WHAT ARE THE SIGNS AND SYMPTOMS OF CONCUSSION?

Signs and symptoms of concussion can show up right after the injury or may not appear or be noticed until days or weeks after the injury.

If an athlete reports **one or more** symptoms of concussion listed below after a bump, blow, or jolt to

Did You Know?

- Most concussions occur *without* loss of consciousness.
- Athletes who have, at any point in their lives, had a concussion have an increased risk for another concussion.
- Young children and teens are more likely to get a concussion and take longer to recover than adults.

the head or body, s/he should be kept out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says s/he is symptom-free and it’s OK to return to play.

SIGNS OBSERVED BY COACHING STAFF	SYMPTOMS REPORTED BY ATHLETES
Appears dazed or stunned	Headache or “pressure” in head
Is confused about assignment or position	Nausea or vomiting
Forgets an instruction	Balance problems or dizziness
Is unsure of game, score, or opponent	Double or blurry vision
Moves clumsily	Sensitivity to light
Answers questions slowly	Sensitivity to noise
Loses consciousness (<i>even briefly</i>)	Feeling sluggish, hazy, foggy, or groggy
Shows mood, behavior, or personality changes	Concentration or memory problems
Can’t recall events <i>prior</i> to hit or fall	Confusion
Can’t recall events <i>after</i> hit or fall	Just not “feeling right” or “feeling down”

CONCUSSION DANGER SIGNS

In rare cases, a dangerous blood clot may form on the brain in a person with a concussion and crowd the brain against the skull. An athlete should receive immediate medical attention if after a bump, blow, or jolt to the head or body s/he exhibits any of the following danger signs:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that not only does not diminish, but gets worse
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (*even a brief loss of consciousness should be taken seriously*)

WHY SHOULD AN ATHLETE REPORT THEIR SYMPTOMS?

If an athlete has a concussion, his/her brain needs time to heal. While an athlete's brain is still healing, s/he is much more likely to have another concussion. Repeat concussions can increase the time it takes to recover. In rare cases, repeat concussions in young athletes can result in brain swelling or permanent damage to their brain. *They can even be fatal.*

Remember

Concussions affect people differently. While most athletes with a concussion recover quickly and fully, some will have symptoms that last for days, or even weeks. A more serious concussion can last for months or longer.

WHAT SHOULD YOU DO IF YOU THINK YOUR ATHLETE HAS A CONCUSSION?

If you suspect that an athlete has a concussion, remove the athlete from play and seek medical attention. Do not try to judge the severity of the injury yourself. Keep the athlete out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says s/he is symptom-free and it's OK to return to play.

Rest is key to helping an athlete recover from a concussion. Exercising or activities that involve a lot of concentration, such as studying, working on the computer, or playing video games, may cause concussion symptoms to reappear or get worse. After a concussion, returning to sports and school is a gradual process that should be carefully managed and monitored by a health care professional.

It's better to miss one game than the whole season. For more information on concussions, visit: www.cdc.gov/Concussion.

Student-Athlete Name Printed

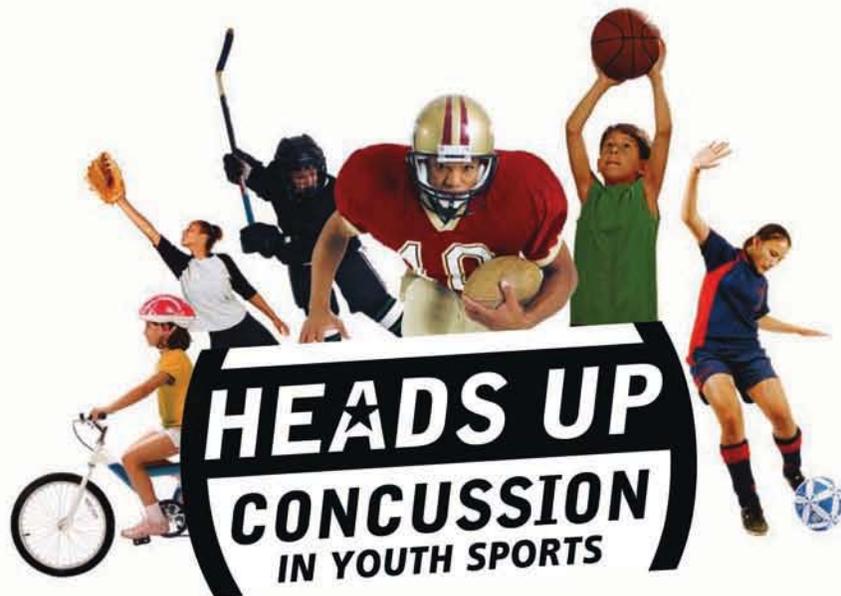
Student-Athlete Signature

Date

Parent or Legal Guardian Printed

Parent or Legal Guardian Signature

Date



SIGNS AND SYMPTOMS

These signs and symptoms may indicate that a concussion has occurred.

SIGNS OBSERVED BY COACHING STAFF	SYMPTOMS REPORTED BY ATHLETE
Appears dazed or stunned	Headache or "pressure" in head
Is confused about assignment or position	Nausea or vomiting
Forgets sports plays	Balance problems or dizziness
Is unsure of game, score, or opponent	Double or blurry vision
Moves clumsily	Sensitivity to light
Answers questions slowly	Sensitivity to noise
Loses consciousness (even briefly)	Feeling sluggish, hazy, foggy, or groggy
Shows behavior or personality changes	Concentration or memory problems
Can't recall events prior to hit or fall	Confusion
Can't recall events after hit or fall	Does not "feel right"

ACTION PLAN

If you suspect that a player has a concussion, you should take the following steps:

1. Remove athlete from play.
2. Ensure athlete is evaluated by an appropriate health care professional. Do not try to judge the seriousness of the injury yourself.
3. Inform athlete's parents or guardians about the known or possible concussion and give them the fact sheet on concussion.
4. Allow athlete to return to play **only** with permission from an appropriate health care professional.

IMPORTANT PHONE NUMBERS

FILL IN THE NAME AND NUMBER OF YOUR LOCAL HOSPITAL(S) BELOW:

Hospital Name: _____

Hospital Phone: _____

Hospital Name: _____

Hospital Phone: _____

For immediate attention, CALL 911

If you think your athlete has sustained a concussion... take him/her out of play, and seek the advice of a health care professional experienced in evaluating for concussion.

For more information and to order additional materials **free-of-charge**, visit:
www.cdc.gov/ConcussionInYouthSports



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**.
- Recognition and proper management of concussions when they **first occur** can help prevent further injury or even death.

WHAT IS A CONCUSSION?

Concussion, a type of traumatic brain injury, is caused by a bump, blow, or jolt to the head. Concussions can also occur from a blow to the body that causes the head and brain to move quickly back and forth—causing the brain to bounce around or twist within the skull.

This sudden movement of the brain can cause stretching and tearing of brain cells, damaging the cells and creating chemical changes in the brain.

HOW CAN I RECOGNIZE A POSSIBLE CONCUSSION?

To help spot a concussion, you should watch for and ask others to report the following two things:

1. A forceful bump, blow, or jolt to the head or body that results in rapid movement of the head.
2. Any concussion signs or symptoms, such as a change in the athlete's behavior, thinking, or physical functioning.

Signs and symptoms of concussion generally show up soon after the injury. But the full effect of the injury may not be noticeable at first. For example, in the first few minutes the athlete might be slightly confused or appear a little bit dazed, but an hour later he or she can't recall coming to the practice or game.

You should repeatedly check for signs of concussion and also tell parents what to watch out for at home. Any worsening of concussion signs or symptoms indicates a medical emergency.

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

SIGNS AND SYMPTOMS¹

SIGNS OBSERVED BY COACHING STAFF

- 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
- Loses consciousness (even briefly)
- Shows mood, 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
- Just "not feeling right" or "feeling down"

Adapted from Lovell et al. 2004

WHAT ARE CONCUSSION DANGER SIGNS?

In rare cases, a dangerous blood clot may form on the brain in an athlete with a concussion and crowd the brain against the skull. Call 9-1-1 or take the athlete to the emergency department right away if after a bump, blow, or jolt to the head or body the athlete exhibits one or more of the following danger signs:

- One pupil larger than the other
- Is drowsy or cannot be awakened
- A headache that gets worse
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Cannot recognize people or places
- Becomes increasingly confused, restless, or agitated
- Has unusual behavior
- Loses consciousness (even a brief loss of consciousness should be taken seriously)

WHY SHOULD I BE CONCERNED ABOUT CONCUSSIONS?

Most athletes with a concussion will recover quickly and fully. But for some athletes, signs and symptoms of concussion can last for days, weeks, or longer.

If an athlete has a concussion, his or her brain needs time to heal. A repeat concussion that occurs before the brain recovers from the first—usually within a short time period (hours, days, weeks)—can slow recovery or increase the chances for long-term problems. In rare cases, repeat concussions can result in brain swelling or permanent brain damage. It can even be fatal.^{2,3}

HOW CAN I HELP ATHLETES TO RETURN TO PLAY GRADUALLY?

An athlete should return to sports practices under the supervision of an appropriate health care professional. When available, be sure to work closely with your team's certified athletic trainer.

Below are five gradual steps that you and the health care professional 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: Athletes should not have any concussion symptoms. Athletes should only progress to the next step if they do not have any 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 weight lifting 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 (reduced time and/or reduced weight from your 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: Athlete may return to practice and full contact (if appropriate for the sport) in controlled practice.

STEP 5: Athlete may return to competition.

If an athlete's symptoms come back or she or he 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 more rest and no concussion symptoms, the athlete should begin at the previous step.

PREVENTION AND PREPARATION

Insist that safety comes first. To help minimize the risks for concussion or other serious brain injuries:

- Ensure that athletes follow the rules for safety and the rules of the sport.
- Encourage them to practice good sportsmanship at all times.
- Wearing a helmet is a must to reduce the risk of severe brain injury and skull fracture.
 - However, helmets are not designed to prevent concussions. There is no "concussion-proof" helmet. So, even with a helmet, it is important for kids and teens to avoid hits to the head.

Check with your league, school, or district about concussion policies. Concussion policy statements can be developed to include:

- The school or league's commitment to safety
- A brief description of concussion
- Information on when athletes can safely return to school and play.

Parents and athletes should sign the concussion policy statement at the beginning of the season.

ACTION PLAN

WHAT SHOULD I DO WHEN A CONCUSSION IS SUSPECTED?

No matter whether the athlete is a key member of the team or the game is about to end, an athlete with a suspected concussion should be immediately removed from play. To help you know how to respond, follow the Heads Up four-step action plan:

1. REMOVE THE ATHLETE FROM

PLAY. Look for signs and symptoms of a concussion if your athlete has experienced a bump or blow to the head or body. When in doubt, sit them out!

2. ENSURE THAT THE ATHLETE IS EVALUATED 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 or body
- 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.

Let them know about the possible concussion and give them the Heads Up fact sheet for parents. This fact sheet can help parents monitor the athlete for signs or symptoms that appear or get worse once the athlete is at home or returns to school.

4. KEEP THE ATHLETE OUT OF PLAY.

An athlete should be removed from play the day of the injury and until an appropriate health care professional says they are symptom-free and it's OK to return to play. After you remove an athlete with a suspected concussion from practice or play, the decision about return to practice or play is a medical decision.

REFERENCES

1. 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.
2. 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 Academies Press; 2002.
3. 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.

***If you think your athlete has a concussion...
take him/her out of play and seek the advice of a health care professional
experienced in evaluating for concussion.***



SIGNOS Y SÍNTOMAS

Estos signos y síntomas podrían indicar la presencia de una conmoción cerebral.

SIGNOS QUE NOTAN LOS ENTRENADORES

El atleta luce aturdido o inconsciente
Se confunde con la actividad asignada
Olvida las jugadas
No se muestra seguro del juego, de la puntuación ni de sus adversarios
Se mueve con torpeza
Responde a las preguntas con lentitud
Pierde el conocimiento (así sea momentáneamente)
Muestra cambios de conducta o de personalidad
No puede recordar lo ocurrido antes de un lanzamiento o un caída
No puede recordar lo ocurrido después de un lanzamiento o un caída

SÍNTOMAS QUE REPORTA EL ATLETA

Dolor o "presión" en la cabeza
Náuseas o vómitos
Problemas de equilibrio o mareo
Visión borrosa o difusa
Sensibilidad a la luz
Sensibilidad al ruido
Se siente débil, confuso, aturdido o grogui
Problemas de concentración
Problemas de memoria
Confusión
No se "siente bien"

PLAN DE ACCIÓN

Si usted sospecha que un jugador ha sufrido una conmoción cerebral, debe hacer lo siguiente:

1. Saque al jugador del juego.
2. Haga que el jugador sea examinado por un profesional de la salud. No intente juzgar usted mismo la seriedad de la lesión.
3. Informe a los padres o tutores del jugador que éste ha tenido o es posible que haya tenido una conmoción cerebral y deles la hoja informativa sobre la conmoción cerebral.
4. Permita que el jugador regrese al juego **sólo** tras la autorización de un profesional de la salud.

Es preferible perderse un juego que toda la temporada.

Para obtener más información o solicitar más materiales **de forma gratuita**, visite:

www.cdc.gov/ConcussionInYouthSports