

A FACT SHEET FOR Athletes



This sheet has information to help you protect yourself from concussion or other serious brain injury and know what to do if a concussion occurs.

WHAT IS A CONCUSSION?

A concussion is a brain injury that affects how your brain works. It can happen when your brain gets bounced around in your skull after a fall or hit to the head.

What Should I Do If I Think I Have a Concussion?

Report It.

Tell your coach and parent if you think you or one of your teammates may have a concussion. You won't play your best if you are not feeling well, and playing with a concussion is dangerous. Encourage your teammates to also report their symptoms.



Get Checked Out by a Doctor.

If you think you have a concussion, do not return to play on the day of the injury. Only a doctor or other healthcare provider can tell whether you have a concussion and when it's OK to return to school and play.



Give Your Brain Time to Heal.

Most athletes with a concussion get better within a couple of weeks. For some, a concussion can make everyday activities, such as going to school, harder. You may need extra help getting back to your normal activities. Be sure to update your parents and doctor about how you are feeling.



GOOD TEAMMATES KNOW:
IT'S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON.



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How Can I Tell If I Have a Concussion?

You may have a concussion if you have any of these symptoms after a bump, blow, or jolt to the head or body:

-  **Get a headache**
-  **Feel dizzy, sluggish, or foggy**
-  **Are bothered by light or noise**
-  **Have double or blurry vision**
-  **Vomit or feel sick to your stomach**
-  **Have trouble focusing or problems remembering**
-  **Feel more emotional or “down”**
-  **Feel confused**
-  **Have problems with sleep**

A concussion feels different to each person, so it's important to tell your parents and doctor how you feel. You might notice concussion symptoms right away, but sometimes it takes hours or days until you notice that something isn't right.

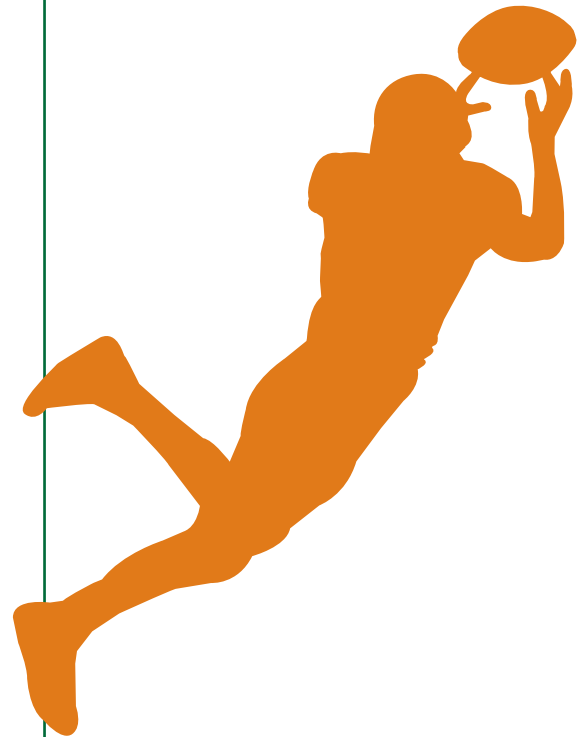
How Can I Help My Team?

Protect Your Brain.

All your teammates should avoid hits to the head and follow the rules for safe play to lower chances of getting a concussion.

Be a Team Player.

If one of your teammates has a concussion, tell them that they're an important part of the team and they should take the time they need to get better.



The information provided in this document 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 a physician or other healthcare provider.

Revised January 2019

To learn more,
go to [cdc.gov/HEADSUP](https://www.cdc.gov/HEADSUP)



A FACT SHEET FOR High School Parents



This sheet has information to help protect your teens from concussion or other serious brain injury.

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 my teens safe?

Sports are a great way for teens to stay healthy and can help them do well in school. To help lower your teens' chances of getting a concussion or other serious brain injury, you should:

- Help create a culture of safety for the team.
 - > Work with their coach to teach ways to lower the chances of getting a concussion.
 - > Emphasize the importance of reporting concussions and taking time to recover from one.
 - > Ensure that they follow their coach's rules for safety and the rules of the sport.
 - > Tell your teens that you expect them to practice good sportsmanship at all time.
- When appropriate for the sport or activity, teach your teens that they must wear a helmet to lower the chances of the most serious types of brain or head injury. There is no "concussion-proof" helmet. Even with a helmet, it is important for teens to avoid hits to the head.

Talk with your teens about concussion.

Tell them to report their concussion symptoms to you and their coach right away.



How can I spot a possible concussion?

Teens 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 parents

- Appears dazed or stunned
- Is confused about events
- Answers questions slowly
- Repeats questions
- Can't recall events *prior* to the hit, bump, or fall
- Can't recall events *after* the hit, bump, or fall
- Loses consciousness (even briefly)
- Shows behavior or personality changes
- Forgets an instruction or assignment

Symptoms reported by teens

- Headache or “pressure” in head
- Nausea or vomiting
- Balance problems or dizziness
- Blurry or double vision
- Sensitivity to light or noise
- Feeling sluggish, hazy, foggy, or groggy
- Difficulty concentrating or remembering
- Just not “feeling right” or “feeling down”



CONCUSSIONS AFFECT EACH TEEN DIFFERENTLY.

Although most teens with a concussion feel better within a couple of weeks, some will have symptoms for months or longer. Talk with your teens' healthcare provider if their concussion symptoms do not go away or if they get worse after they return to their regular activities. **Be sure to offer support during their recovery and allow them to stay connected with friends and others.**

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 take your teen 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 (the black part in the middle of the eye) larger than the other
- Drowsiness or cannot be awakened
- A headache that gets worse and does not go away
- Weakness, numbness, or decreased coordination
- Repeated vomiting or nausea
- Slurred speech
- Convulsions or seizures
- Difficulty recognizing people or places
- Increasing confusion, restlessness, or agitation
- Unusual behavior
- Loss of consciousness (even a brief loss of consciousness should be taken seriously)

What should I do if my teen has a possible concussion?

As a parent, if you think your teen may have a concussion, you should:

1. Remove your teen from play.
2. Keep your teen out of play the day of the injury. Your teen should be seen by a healthcare provider and only return to play with permission from a healthcare provider who is experienced in evaluating for concussion.
3. Ask your teen's healthcare provider for written instructions on helping your teen return to school. You can give the instructions to your teen's school nurse and teacher(s) and return-to-play instructions to the coach and/or athletic trainer.

Do not try to judge the severity of the injury yourself. Only a healthcare provider should assess a teen for a possible concussion. You may not know how serious the concussion is at first, and some symptoms may not show up for hours or days. A teen's return to school and sports should be a gradual process that is carefully managed and monitored by a healthcare provider.

Teens who continue to play while having concussion symptoms or who return to play too soon—while the brain is still healing—have 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 a teen for a lifetime. It can even be fatal.

Revised August 2019

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A FACT SHEET FOR Youth Sports Coaches



CDC HEADS UP
SAFE BRAIN. STRONGER FUTURE.

Below is information to help youth sports coaches protect athletes from concussion or other serious brain injury, and to help coaches know what to do if a concussion occurs.

What is a concussion?

A concussion is a type of traumatic brain injury 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 brain cells.

What is a subconcussive head impact?

A subconcussive head impact is a bump, blow, or jolt to the head that *does not* cause symptoms. This differs from concussions, which *do* cause symptoms. A collision while playing sports is one way a person can get a subconcussive head impact. Studies are ongoing to learn about subconcussive head impacts and how these impacts may or may not affect the brain of young athletes.

How can I keep athletes safe?

As a youth sports coach, your actions can help lower an athlete's chances of getting a concussion or other serious injury. Aggressive or unsportsmanlike behavior among athletes can increase their chances of getting a concussion or other serious injury.³ Here are some ways you can help:

Talk with athletes about concussion:

- Set time aside throughout the season to talk about concussion.
- Ask athletes about any concerns they have about reporting concussion symptoms.
- Remind athletes that safety comes first and that you expect them to tell you and their parent(s) if they think they have experienced a bump, blow, or jolt to their head and “don’t feel right.”

Focus on safety at games and practices:

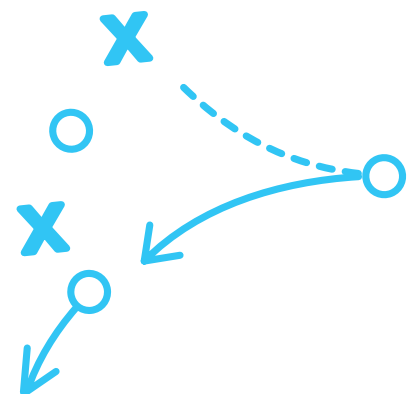
- Teach athletes ways to lower the chances of getting a hit to the head.
- Enforce rules that limit or remove the risk of head impacts.
- Tell athletes that good sportsmanship is expected at all times, both on and off the field.
- Bring emergency contact information for parents and healthcare providers to each game and practice in case an athlete needs to be seen right away for a concussion or other serious injury.

Multiple concussions

Athletes who have ever had a concussion have a higher chance of getting another concussion. A repeat concussion can lead to more severe symptoms and longer recovery.^{1,2}

Coach's to-do list:

- ✓ Talk with athletes about concussion.
- ✓ Teach athletes ways to lower their chances of getting a hit to the head.
- ✓ Encourage concussion reporting among your athletes.
- ✓ Know what to do if you think an athlete has a concussion.
- ✓ Learn how to help an athlete safely return to play after a concussion.



Make sure athletes do not perform these unsafe actions:

- Use their head or helmet to contact another athlete.
- Make illegal contact or check, tackle, or collide with an unprotected opponent.
- Try to injure another athlete.

Stay up to date on concussion information:

- Review your state, league, and organization's concussion plans and rules.
- Take a training course on concussion. The Centers for Disease Control and Prevention (CDC) offers free concussion training at [cdc.gov/HEADSUP](https://www.cdc.gov/HEADSUP).
- Download CDC's HEADS UP app or another resource that provides a list of concussion signs and symptoms.

Check equipment and sports facilities:

- Make sure all athletes wear a helmet that is appropriate for the sport or activity; ensure that the helmet fits well and is in good condition.
- Work with the game or event manager to fix any concerns, such as tripping hazards or goal posts without proper padding.

One study found that nearly 70% of athletes continued to play with concussion symptoms.⁴



How can I spot a possible concussion?

Athletes who show or report one or more of the signs and symptoms listed below—or who 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. 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 show up for hours or days.

Signs coaches or parents may observe:

- Seems confused
- Forgets an instruction or is unsure of the game, position, score, or opponent
- Moves clumsily
- Answers questions slowly or repeats questions
- Can't remember events before or after the hit, bump, or fall
- Loses consciousness (even for a moment)
- Has behavior or personality changes

Symptoms athletes may report:

- Headache
- Nausea or vomiting
- Dizziness or balance problems
- Bothered by light or noise
- Feeling foggy or groggy
- Trouble concentrating or problems with short- or long-term memory
- Does not “feel right”

Signs of a more serious brain injury

In rare cases, a concussion can cause dangerous bleeding in the brain, which puts pressure on the skull. Call 9-1-1 if an athlete develops one or more of these danger signs after a bump, blow, or jolt to the head or body:

- A headache that gets worse and does not go away
- Significant nausea or repeated vomiting
- Unusual behavior, increased confusion, restlessness, or agitation
- Drowsiness or inability to wake up
- Slurred speech, weakness, numbness, or decreased coordination
- Convulsions or seizures (shaking or twitching)
- Loss of consciousness (passing out)

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 losing playing time during a game,
- Putting their future sports career at risk,
- Looking weak,
- Letting down their teammates or the team, and/or
- What their coach or teammates think of them.⁵⁻⁷

What should I do if 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! Record and provide details on the following information to help the healthcare provider or first responders assess 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) and for how long
- Any memory loss right after the injury
- Any seizures right after the injury
- Number of previous concussions (if any)

Keep an athlete with a possible concussion out of play on the same day of the injury and until cleared by a healthcare provider.

Do not try to judge the severity of the injury yourself. Only a healthcare provider should assess an athlete for a possible concussion and decide when it is safe for the athlete to return to play.

Inform the athlete's parent(s) about the possible concussion.

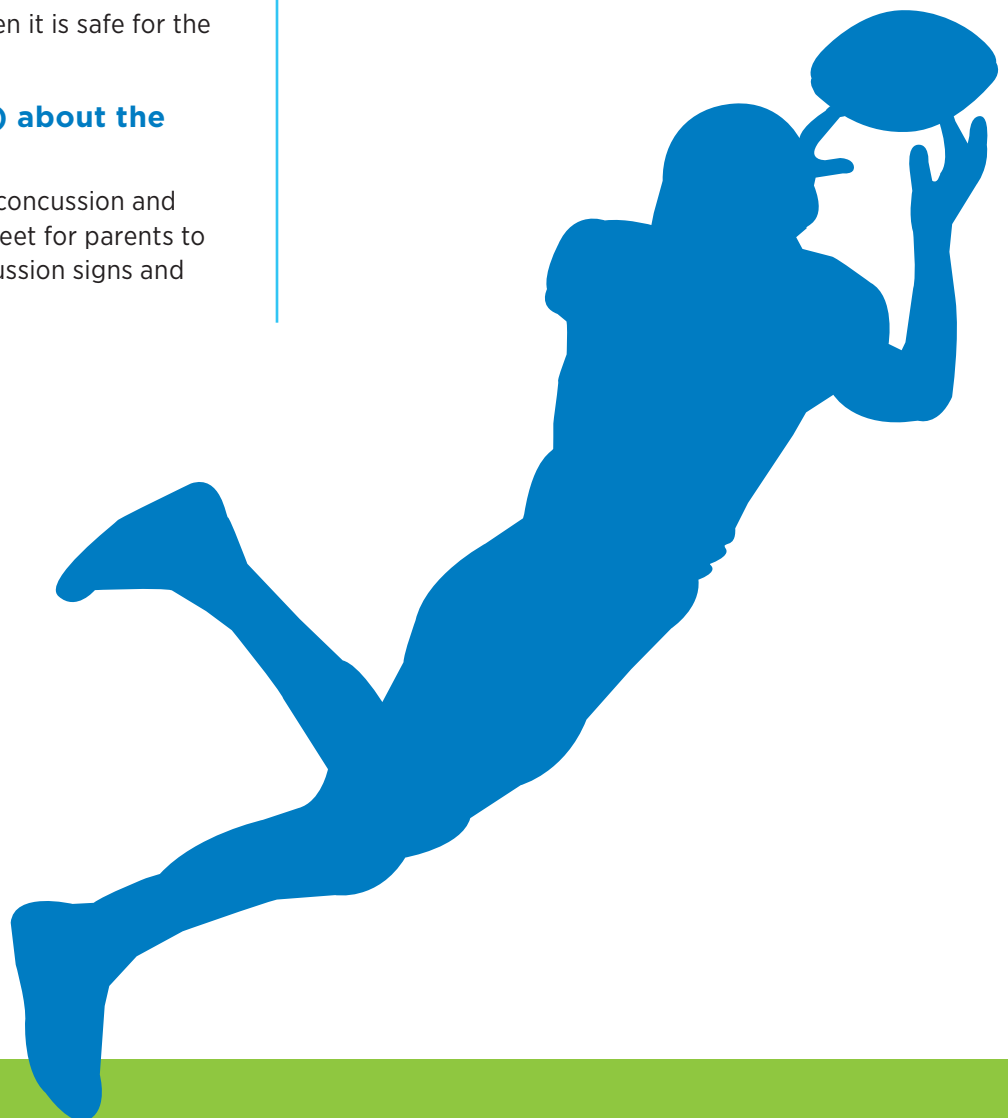
Let parents know about the possible concussion and give them the CDC HEADS UP fact sheet for parents to help them watch the athlete for concussion signs and symptoms at home.

Ask for written instructions from the athlete's healthcare provider on return to play.

This should include information about when the athlete can return to play and steps you should take to help the athlete safely return to play. Athletes who continue to play while having concussion symptoms have a greater chance of getting another concussion. A repeat concussion that occurs before the brain has fully healed can be very serious and can increase the chance for long-term problems. It can even be fatal.

Offer support during recovery.

An athlete may feel frustrated, sad, angry, or lonely while recovering from a concussion. Talk with them about it, and allow an athlete recovering from a concussion to stay in touch with their teammates, such as cheering on their team at practices and competitions.



What steps should 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 healthcare provider. When available, be sure to also work closely with your team's certified athletic trainer.

There are six gradual steps to help an athlete safely return to play. These steps should not be done in one day, but instead over days, weeks, or months. **An athlete should move to the next step only if they do not have any new symptoms at the current step.**

Step 1: Return to non-sports activities, such as school, with a greenlight from the healthcare provider to begin the return-to-play process

Step 2: Light aerobic exercise

- Goal: Increase the athlete's heart rate
- Activities: Slow to medium walking or light stationary cycling

Step 3: Sport-specific exercise

- Goal: Add movement
- Activities: Running or skating drills; no activities with risk for contact

Step 4: Non-contact training drills

- Goal: Increase exercise, coordination, and thinking
- Activities: Harder training drills and progressive resistance training

Step 5: Full-contact practice

- Goal: Restore confidence and have coaching staff assess functional skills
- Activities: Normal training activities

Step 6: Return to regular sports activity

Remember: It is important for you and the athlete's parent(s) to watch for concussion symptoms after each day's activities, particularly after each increase in activity. If an athlete's concussion symptoms come back, or if he or she gets new symptoms when becoming more active at any step, this is a sign that the athlete is working too hard. The athlete should stop these activities, and the athlete's parent should contact the healthcare provider. After the athlete's healthcare provider says it is okay, the athlete can begin at the step before the symptoms started.



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2. Guskiewicz KM, McCrea M, Marshall SW, et al. Cumulative effects associated with recurrent concussion in collegiate football players: the NCAA Concussion Study. *JAMA*. 2003;290(19):2549-2555.

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

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

5. Kerr ZY, Register-Mihalik JK, Marshall SW, Evenson KR, Mihalik JP, Guskiewicz KM. Disclosure and non-disclosure of concussion and concussion symptoms in athletes: review and application of the socio-ecological framework. *Brain Inj*. 2014;28(8):1009-1021.

6. Register-Mihalik JK, Guskiewicz KM, McLeod TC, Linnan LA, Mueller FO, Marshall SW. Knowledge, attitude, and concussion-reporting behaviors among high school athletes: a preliminary study. *J Athl Train*. 2013;48(5):645-653.

7. Chrisman SP, Quitiquit C, Rivara FP. Qualitative study of barriers to concussive symptom reporting in high school athletics. *J Adolesc Health*. 2013;52(3):330-335.

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Revised August 2019

To learn more,
go to cdc.gov/HEADSUP



A FACT SHEET FOR Sports Officials



The information in this fact sheet can help you protect athletes from concussions or other serious brain injuries and know what to do if an athlete might have a concussion.

Understand concussion

A concussion is a type of traumatic brain injury 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.

Help keep athletes safe

As a sports official, you help set the tone for safe play and can help lower an athlete's chances of getting a concussion or other serious injury. When athletes are overly aggressive or make illegal actions, they can increase the risk for concussion for themselves and other athletes. Here are some ways you can keep athletes safe:

- Enforce the rules for fair play, safety, and good sporting behavior.
- Learn to recognize the signs and symptoms of concussions so you can be confident about when an athlete should be removed from a game or competition.
- Stop play whenever there is a concern for the safety of athletes, and remove an athlete from a game or competition if you observe concussion signs or if the athlete reports concussion symptoms.
- Penalize athletes for unsafe actions, such as:
 - Using their head or helmet to contact another athlete.
 - Making illegal contacts or checking, tackling, or colliding with an unprotected athlete.
 - Trying to injure or put another athlete at risk for injury.
- Use correct terminology, such as concussion and brain injury. Avoid words, such as *bell ringers* and *dings* to describe a concussion because these can make light of a serious problem.
- Use pre-season and pre-game meetings to remind coaches to promote a culture of concussion safety with athletes.

Take action for a possible concussion

If you suspect that an athlete might be experiencing concussion symptoms, pull them from play. **When in doubt, get them out.**



An athlete who is allowed to continue playing with a concussion, or who is returned to play too soon, is at risk for a repeat brain injury. This can lead to a longer recovery and poorer health outcomes.

Stay up to date on concussion policies and information

- Review your state, league, and organization's concussion policies. Be aware that concussion policies may vary by location and sport. Most policies state that an athlete cannot return to a game or competition on the same day the possible concussion occurred and cannot return before being cleared by a healthcare provider.
- Take a training course on concussion. The Centers for Disease Control and Prevention (CDC) offers free concussion training for sports officials at www.cdc.gov/HEADSUP.
- Talk with other sports officials to share strategies that enforce safe and fair play.

GOOD SPORTING BEHAVIOR
MODEL IT. EXPECT IT. ENFORCE IT.



ENFORCE SAFE PLAY. SPORTS OFFICIALS SET THE TONE FOR SAFETY.

Spot a possible concussion

Athletes with one or more of the signs and symptoms listed below after a bump, blow, or jolt to the head or body may have a concussion or other serious brain injury.

Concussion signs that sports officials, parents, or coaches might observe in athletes:

- Appearing confused, dazed, or stunned
- Looking unsure of game, score, or opponent
- Moving clumsily (appearing off-balance or dizzy)
- Being slow to answer questions
- Being unable to remember events before or after the hit, bump, or fall
- Losing consciousness (only occurs in about 10-15% of concussions)
- Showing behavior or personality changes

Concussion symptoms that athletes might feel and report:

- Having a headache
- Feeling nauseated or vomiting
- Experiencing balance problems or dizziness
- Seeing double or having fuzzy vision
- Feeling sensitive to light or noise
- Feeling sluggish
- Feeling mentally foggy
- Having difficulty concentrating or remembering plays
- Being confused about what play it is or what part of the game it is

Signs of a more serious brain injury

Have someone call 9-1-1 if an athlete develops one or more of these danger signs after a bump, blow, or jolt to the head or body:

- Drowsiness or inability to wake up or inability to stay awake
- Repeated vomiting
- Convulsions or seizures (seizures can include violent, uncontrollable shaking or twitching)
- Unusual behavior, increased confusion, restlessness, or agitation
- Slurred speech, weakness, numbness, or decreased coordination
- One pupil larger than the other
- A headache that gets worse and does not go away

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Revised August 2022

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