During a head injury, the brain can bang against the inside of the skull, leading to injury of the brain, tearing of blood vessels, and injury to nerves. When this happens, a person can get a concussion — a temporary loss of normal brain function. More than 300,000 concussions occur annually during contact sports in the United States, and too many people return to the field before they fully recover. Students should know how to prevent concussions, how to recognize the symptoms of concussions, and what to do if they think they may have had a concussion.

Related KidsHealth Links

Articles for Teens:

- Concussions minisite
  TeensHealth.org/en/teens/center/concussions-ctr.html

- Sports and Exercise Safety
  TeensHealth.org/en/teens/sport-safety.html

- Bike Safety
  TeensHealth.org/en/teens/bike-safety.html

- Babysitting: Dealing With a Head Injury
  TeensHealth.org/en/teens/babysit-head-injuries.html

- Brain and Nervous System
  TeensHealth.org/en/teens/brain-nervous-system.html

Resource for educators:

- Concussions Special Needs Factsheet
  KidsHealth.org/en/parents/concussions-factsheet.html

Discussion Questions

Note: The following questions are written in language appropriate for sharing with your students.

1. Name some concussion symptoms.
2. Why is it important to stop playing a sport after you’ve had a hit on the head or show signs of a concussion? What could happen if you keep playing?
3. Mental rest is part of the treatment for concussions. Activities that require intense concentration can cause concussion symptoms to worsen. What are some situations or mental activities that might have to be avoided during recovery from a concussion?
4. After a player’s concussion symptoms are gone, he or she may begin a supervised, gradual return to play. The player should advance to the next step only if there are no symptoms. What are some of the gradual steps that should come before resuming the sport or recreational activity?
Activities for Students

Note: The following activities are written in language appropriate for sharing with your students.

Concussions Paper Slide Video

Objectives:
Students will:
• Learn to recognize the signs of a concussion
• Demonstrate their knowledge about concussions by creating a paper slide video

Materials:
• Computer with Internet access, digital camcorder, tablet computer, or cell phone with video capability
• TeensHealth.org articles, CDC.gov resources (cdc.gov/ConcussionInYouthSports, cdc.gov/features/ConcussionABCs)
• “Concussion Paper Slide Video” handout, 8x11 paper (or chart paper or posterboard), markers (optional: magazines, note cards)

Class Time:
• 2 hours (can be done in two separate sessions)

Activity:
To help spread the word about concussions, we're going to create a paper slide video to share with other high school students. First, we'll break up into small groups, read the TeensHealth.org articles on concussions and sports safety, as well as resources from CDC.gov, and then take notes covering these key points:
• Activities and sports in which concussions are common
• Concussion symptoms
• What teens should do if they think they or a teammate might have had a concussion
• Possible long-term consequences of concussions
• How to protect yourself from getting concussions

[Note to instructor: You might want to review each group’s research notes at this point.] Now we'll write, and then edit, text for the paper slides and the voiceover script. The script should be printed clearly on paper or note cards. For the paper slides, write block text and draw pictures (or paste magazine images or images from the Internet) to illustrate the points. Assign one person as the speaker, another as the paper slider, and a third to be camera person. Point the camera at a well-lit desktop. As the speaker reads the script aloud off camera, the paper slider slides the sheets into the camera view on the desktop, one by one. The first slide should be a title slide. The final slide can say “The end” or “Credits,” and list the names of team members. It’s a good idea to practice before making a final video. [Note to instructor: Consider sharing the videos at a school assembly, posting the videos on the class or school website, or on a video-sharing website.]

Extension:
Arrange to show the award-winning documentary “Head Games” (www.HeadGamesTheFilm.com) to your class, grade, or school.
Covering All the Bases

Objectives:
Students will:
• Learn about the importance of concussion baseline testing for student-athletes

Materials:
• Computer and Internet access
• TeensHealth.org articles, CDC.gov resources (www.cdc.gov/concussion/sports/baseline_test.html)
• 8x11 paper, pens, markers

Class Time:
• 1 hour

Activity:
To help high school athletes understand what baseline concussion tests are and why it’s so important to get them before sports seasons start, we’re each going to make a trifold that we can copy and post on bulletin boards around the school. The front of your trifold should be eye-catching, and the messages on the inside panels and back panel should be brief and clear, so students can learn the basics about baseline testing and where they can get tested.

Extension:
Have students watch and read these CDC resources — “Keeping Quiet Can Keep You Out of the Game” (www.youtube.com/watch?v=ylqZDbk3M40), “Keeping Quiet Can Keep You Out of the Game … a Mother’s Story” (www.youtube.com/watch?v=uO-ordcPWSU), “Sarah’s Story: Concussions Can Affect Kids and Teens in the Classroom” (www.cdc.gov/concussion/pdf/sarahs_story-a.pdf) — then lead a classroom discussion about how concussions can affect high school students’ lives.

Reproducible Materials
Handout: Concussions Paper Slide Video
KidsHealth.org/classroom/9to12/problems/conditions/concussions_handout1.pdf

Quiz: Concussions
KidsHealth.org/classroom/9to12/problems/conditions/concussions_quiz.pdf

Answer Key: Concussions
KidsHealth.org/classroom/9to12/problems/conditions/concussions_quiz_answers.pdf
Concussion Paper Slide Video

Instructions: After researching concussions at KidsHealth.org and CDC.gov, write notes for your paper slide video about concussion symptoms, treatment, possible long-term health consequences, and prevention. On this handout, write notes from your research that you want to include on the slides or in the voiceover script. Then, on a computer or on note cards, write a draft for the paper slides and the voiceover script. Finally, edit your drafts and create paper slides and the final voiceover script. Make sure to write them so the video appeals to high school students.

Research notes: ____________________________

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Quiz

1. Which of the following is not a symptom of a concussion?
   a) nausea or vomiting
   b) slurred speech
   c) feeling anxious or irritable
   d) feeling happy
   e) “seeing stars”

2. Which of the following is not a common reason that high school sports injuries occur?
   a) improper training
   b) drinking too much water during the game
   c) wearing the wrong type of shoes
   d) lack of safety equipment

3. List three tips about bicycle helmets:

4. True or false: As one sign of a good fit, a bicycle helmet should pull down a bit when you open your mouth.

5. Which is a good way to heal from a concussion?
   a) Physical and mental rest
   b) Exercise and problem-solving video games
   c) Brain transplant

6. True or false: People who get repeated head injuries can have long-term or permanent brain damage if they try to resume their normal routine too quickly after a concussion.

7. True or false: If you don’t lose consciousness, you don’t have a concussion.

8. True or false: If you (or a friend or teammate) think you might have had a concussion, you should tell a coach or parent immediately.

9. Student-athletes should get _____________ testing before their sports seasons start.

10. When it comes to a head injury in sports, the best thing to remember is:
    a) “No pain, no gain!”
    b) “When in doubt, sit out!”
Quiz Answer Key

1. Which of the following is not a symptom of a concussion?
   a) nausea or vomiting
   b) slurred speech
   c) feeling anxious or irritable
   d) feeling happy
   e) “seeing stars”

2. Which of the following is not a common reason that high school sports injuries occur?
   a) improper training
   b) drinking too much water during the game
   c) wearing the wrong type of shoes
   d) lack of safety equipment

3. List three tips about bicycle helmets:
   Any three of the following: Helmet straps should always be fastened when you’re riding; the helmet should never be worn over a bandana, baseball cap, or anything else that could cause it to shift in a crash; the helmet should sit level and firmly but comfortably on your head and not be tilted forward, backward, or sideways; the helmet should be replaced if it takes a serious hit, even if it looks undamaged.

4. True or false: As one sign of a good fit, a bicycle helmet should pull down a bit when you open your mouth.

5. Which is a good way to heal from a concussion?
   a) Physical and mental rest
   b) Exercise and problem-solving video games
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