



The Sports Concussion “Epidemic”

Oak Park- River Forest High School
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New NFL Concussion Policy

"Once removed for the duration of a practice or game, the player should not be considered for return-to-football activities until he is fully asymptomatic, both at rest and after exertion, has a normal neurological examination, normal neuropsychological testing and has been cleared to return by both his team physician(s) and the independent neurological consultant."



Concussion Facts

- **Definition: Any change in neurologic function**
- **Only about 10% of concussions involve loss of consciousness**
- **All concussions are serious**

Concussion Symptoms

- Various symptoms may occur, may be intermittent and may not be noticed immediately. Common symptoms include:
 - Confusion
 - Headache
 - 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

CONCUSSION

A Must Read for Young Athletes

Let's Take Brain Injuries Out of Play

CONCUSSION FACTS

- A concussion is a brain injury that affects how your brain works.
- A concussion is caused by a blow to the head or body:
 - from contact with another player, hitting a hard surface such as the ground, ice, or court, or
 - being hit by a piece of equipment such as a lacrosse stick, hockey puck, or field hockey ball.
- A concussion can happen even if you haven't been knocked unconscious.
- If you think you have a concussion, you should not return to play on the day of the injury and until a health care professional says you are OK to return to play.

CONCUSSION SYMPTOMS

- Concussion symptoms differ with each person and with each injury, and may not be noticeable for hours or days. Common symptoms include:
 - Headache
 - Nausea or vomiting
 - Confusion
 - Bothered by light or noise
 - Difficulty remembering or paying attention
 - Double or blurry vision
 - Balance problems or dizziness
 - Slowed reaction time
 - Feeling sluggish, hazy, foggy, or groggy
 - Sleep problems
 - Loss of consciousness
 - Feeling irritable, more emotional, or "down"

WHY SHOULD I REPORT MY SYMPTOMS?

- Unlike with some other injuries, playing or practicing with concussion symptoms is dangerous and can lead to a longer recovery and a delay in your return to play.
- While your brain is still healing, you are much more likely to have another concussion. Repeat concussions can increase the time it takes for you to recover and the likelihood of long term problems.
- In rare cases, repeat concussions in young athletes can result in brain swelling or permanent damage to your brain. They can even be fatal.

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.

*For more information about concussion and other types of traumatic brain injuries, go to

www.cdc.gov/Concussion

A part of CDC's Heads Up series

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.

All concussions are serious. *Don't hide it, report it. Take time to recover.*
It's better to miss one game than the whole season.



Concussion:

10% of HS athletes, 135,000 ER visits (5-18 yo)

Pediatrics. 2010 Sep;126(3):e550-6. Epub 2010 Aug 30.

Emergency department visits for concussion in young child athletes.

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Abstract

OBJECTIVES: The objective of this study was to characterize emergency department (ED) visits for pediatric sport-related concussion (SRC) in pre-high school- versus high school-aged athletes.

METHODS: A stratified probability sample of US hospitals that provide emergency services in the National Electronic Injury Surveillance System (1997-2007) and All Injury Program (2001-2005) was used. Concussion-related ED visits were analyzed for 8- to 13- and 14- to 19-year-old patients. Population data were obtained from the US Census Bureau; sport participation data were obtained from National Sporting Goods Association.

RESULTS: From 2001 to 2005, US children who were aged 8 to 19 years had an estimated 502 000 ED visits for concussion. The 8- to 13-year-old group accounted for approximately 35% of these visits. Approximately half of all ED visits for concussion were SRC. The 8- to 13-year-old group sustained 40% of these, which represents 58% of all concussions in this group. Approximately 25% of all SRC visits in the 8- to 13-year-old group occurred during organized team sport (OTS). During the study period, approximately 4 in 1000 children aged 8 to 13 years and 6 in 1000 children aged 14 to 19 years had an ED visit for SRC, and 1 in 1000 children aged 8 to 13 years and 3 in 1000 children aged 14 to 19 years had an ED visit for concussion sustained during OTS. From 1997 to 2007, although participation had declined, ED visits for concussions in OTS in 8- to 13-year-old children had doubled and had increased by >200% in the 14- to 19-year-old group.

CONCLUSIONS: The number of SRCs in young athletes is noteworthy. Additional research is required.

Soccer



- Most injuries are to feet and legs: 50-80%
- Concussions are 2-3% of all injuries: same as football
- Most caused by head-head contact

Lacrosse



- Fastest growing sport for women
- Concussion is 3rd most common injury for men and women

Baseball and Softball



- Concussions: 10% of all sports injuries
- 2nd leading cause of brain injury



COACHING AND TECHNIQUES

- Greater emphasis needs to be placed on teaching fundamentals and techniques, such as proper and safe blocking and ball handling



HOW ADULTS CAN HELP MINIMIZE RISK FACTORS IN SPORTS CONCUSSIONS

- Awareness of developments at advanced levels of play
- Coaching and techniques
- Unique experience for youthful athletes

HEADS*UP CONCUSSION IN BASEBALL



SIGNS AND SYMPTOMS

Athletes who experience any of the signs and symptoms listed below after a bump, blow, or jolt to the head or body may have a concussion.

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 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 (even briefly)	Feeling sluggish, hazy, foggy, or groggy
Shows mood, 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" or is "feeling down"

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

ACTION PLAN

If you suspect that an athlete has a concussion, you should take the following four steps:

1. Remove the athlete from play.
2. Ensure that the athlete is evaluated by a health care professional experienced in evaluating for concussion. Do not try to judge the seriousness of the injury yourself.
3. Inform the athlete's parents or guardians about the possible concussion and give them the fact sheet on concussion.
4. Keep the athlete out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says they are symptom-free and it's OK to return to play.

IMPORTANT PHONE NUMBERS

Emergency Medical Services

Name: _____

Phone: _____

Health Care Professional

Name: _____

Phone: _____

School Staff Available During Practices

Name: _____

Phone: _____

School Staff Available During Games

Name: _____

Phone: _____

IT'S BETTER TO MISS ONE GAME THAN THE WHOLE SEASON.

HEADS*UP

CONCUSSION FACTS FOR COACHES



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.

A bump, blow, or jolt to the head can cause a concussion, a type of traumatic brain injury (TBI). Concussions can also occur from a blow to the body that causes the head to move rapidly back and forth. Even a "ding," "getting your bell rung," or what seems to be mild bump or blow to the head can be serious.

On the lacrosse field, concussions can result from a fall, being struck in the head by the stick or ball, or from players colliding with each other or with obstacles.

RECOGNIZING A POSSIBLE CONCUSSION

To help recognize a concussion, watch for or 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 change in the athlete's behavior, thinking, or physical functioning, or any other signs or symptoms of concussion. (See the Signs and Symptoms chart.)

Athletes who experience **any** of the signs and symptoms listed on the next page after a bump, blow, or jolt to the head or body should be kept 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.



For more information and safety resources, visit:

www.cdc.gov/Concussion and www.uslacrosse.org/safety



CENTERS FOR DISEASE CONTROL AND PREVENTION



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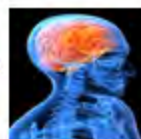
Chin straps: The New Concussion Indicators

Jan. 11- High school football players participating in the Jan. 8th US Army All-American Bowl (NBC Sports) will be outfitted with chinstraps that play a dual role as safety strap and concussion indicator. If the embedded software detects a hit that is deemed to be cause for concern, a yellow light will blink indicating a 51% chance of concussion, blue light indicates a 70% possibility, and red means there's a 90% chance. Any blinking light gives sideline personnel a signal to pull the player off the field for an evaluation. The prototypes worn by athletes in Sunday's game are made by Battle Field Sports who intends to have a marketable version before next fall at a cost of around \$40.

[New Device Detects Concussions in Football Players:](#)
[KSBY.com](#)

[Concussion Basics](#)

[A concussion is a brain injury signs and symptoms](#)



[Parents](#)

[What to do if your child suffers a concussion](#)



[Return-to-Play](#)

[When is it safe?](#)



[American Academy of Neurology](#)

[guidelines](#)



[Helmets](#)

[Dr. Robert Cantu/CNN video](#)



[Founder Jean Rickerson's](#)



[SportsConcussions.org's latest concussion news:](#)

[Chinstraps used to detect concussions in high school football players](#)

[Boxing champ Micky Ward subject of the movie "The Fighter" pledges brain to BU](#)

[NFL sees 21% increase in reported concussions over last season](#)

[German researchers find 10-20% of boxers have persistent impairment from brain trauma](#)

[American Academy of Neurology: Concussed athletes should see a specialist before returning to play](#)

THE CONCUSSION BLOG

[Mayo Clinic Hockey Summit recommendations include ban on all hits to the head at all levels](#)

[Army identifies blood protein marker which may help identify brain injuries including concussions](#)

Concussion in Sports

What Should I do If a Concussion Occurs?

If you suspect that an athlete has a concussion, implement your 4-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, keep the athlete out of play.
2. **Ensure that the athlete is evaluated by a health care professional experienced in evaluating for concussion.** 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 the fact sheet on concussion.** Make sure they know that the athlete should be seen by a health care professional experienced in evaluating for concussion.
4. **Keep the athlete out of play the day of the injury and until a health care professional, experienced in evaluating for concussion, says they are symptom-free and it's OK to return to play.** 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 or increase the likelihood of having long-term problems. In rare cases, repeat concussions can result in edema (brain swelling), permanent brain damage, and even death.

ImPACT: Immediate Post-Concussion Assessment and Cognitive Testing

[About ImPACT](#)[Concussion Resource Center](#)[FAQ](#)[Research & Publications](#)[News](#)[Clin](#)[Overview](#)[Recommendations](#)[Mild Traumatic Brain Injury](#)[Primary Prevention](#)[Diagnosis](#)[Ma](#)

Concussion Resource Center

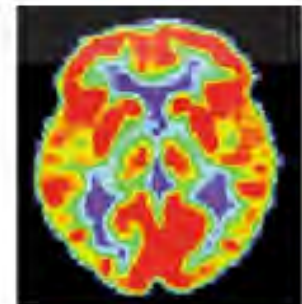
Content Source: [National Center for Injury Prevention and Control, Division of Injury Response Heads Up! Concussion Information for Physicians Centers for Disease Control and Prevention](#)

Heads Up 

Concussion Overview

A concussion is a disturbance in brain function that occurs following either a blow to the head or as a result of the violent shaking of the head.

In the United States, the annual incidence of sports-related concussion is estimated at 300,000. Estimates regarding the likelihood of an athlete in a contact sport experiencing a concussion may be as high as 19% per season.



A prospective study of physician-observed concussions during junior ice hockey: implications for incidence rates

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Object. The objective of this study was to measure the incidence of concussion (scaled relative to number of athlete exposures) and recurrent concussion within 2 teams of fourth-tier junior ice hockey players (16–21 years old) during 1 regular season.

Methods. A prospective cohort study called the Hockey Concussion Education Project was conducted during 1 junior ice hockey regular season (2009–2010) involving 67 male fourth-tier ice hockey players (mean age 18.2 ± 1.2 years, range 16–21 years) from 2 teams. Prior to the start of the season, every player underwent baseline assessments using the Sideline Concussion Assessment Tool 2 (SCAT2) and the Immediate Post-Concussion Assessment and Cognitive Test (ImPACT). The study protocol also required players who entered the study during the season to complete baseline SCAT2 and ImPACT testing. If the protocol was not followed, the postinjury test results of a player without true baseline test results would be compared against previously established age and gender group normative levels. Each regular season game was observed by a qualified physician and at least 1 other neutral nonphysician observer. Players who suffered a suspected concussion were evaluated at the game. If a concussion diagnosis was made, the player was subsequently examined in the physician's office for a full clinical evaluation and the SCAT2 and ImPACT were repeated. Based on these evaluations, players were counseled on the decision of when to return to play. Athlete exposure was defined as 1 game played by 1 athlete.

Results. Twenty-one concussions occurred during the 52 physician-observed games (incidence 21.5 concussions per 1000 athlete exposures). Five players experienced repeat concussions. No concussions were reported during practice sessions. A concussion was diagnosed by the physician in 19 (36.5%) of the 52 observed games. One of the 5 individuals who suffered a repeat concussion sustained his initial concussion in a regular season game that was not observed by a physician, and as a result this single case was not included in the total of 21 total concussions. This initial concussion of the player was identified during baseline testing 2 days after the injury and was subsequently medically diagnosed and treated.

Conclusions. The incidence of game-related concussions (per 100 athlete exposures) in these fourth-tier junior

TBI: Sports Injuries

- **Cycling: 69, 476**
- **Powered recreational vehicles: 27, 213**
- **Football: 25, 515**
- **Basketball: 24,320**
- **Baseball/softball: 22,671**
- **Water sports: 18,860**
- **Winter sports: 18,566**
- **Skateboards/scooters: 15, 125**
- **Soccer: 14, 465**
- **Horseback riding: 10,669**



**In U.S., one child dies every day
from a biking accident**



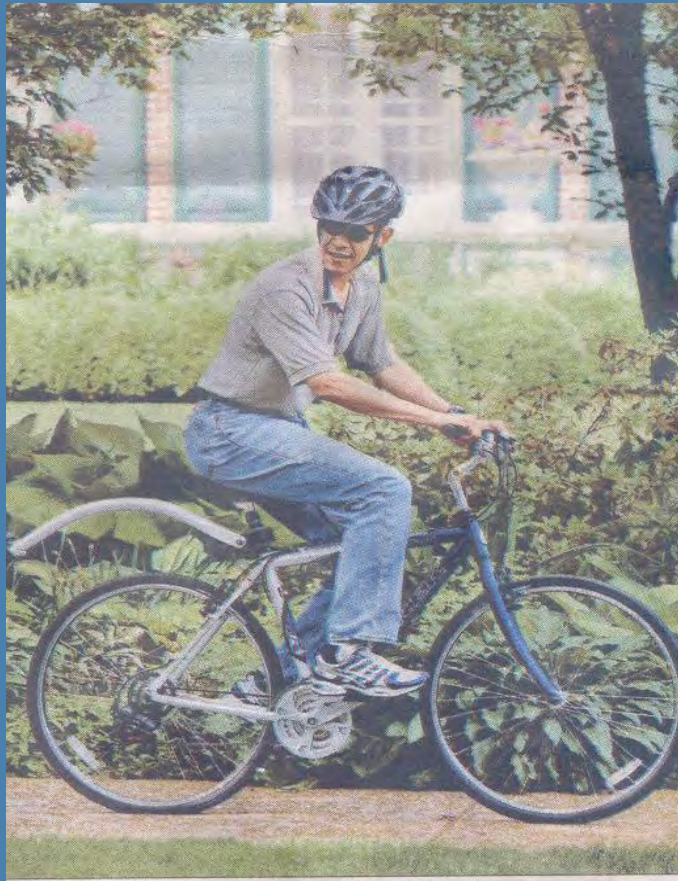
WMJ. 2005 Feb; 104(2):35-38

Only $\frac{1}{4}$ of children wear helmets as often as $\frac{3}{4}$ of the time



Clin Pediatr. 2003 Oct; 42(8):673-7

Setting a good example: Sen. Obama, June, 2008



ThinkFirst



- ◆ Founded in 1986 by AANS/CNS
- ◆ Decrease neurological trauma by prevention, education and advocacy
- ◆ The premier neurotrauma prevention association

Chicago: Recent Programs



Algeria 2009



ThinkFirst

All Concussions Are Serious

- Don't hide it
- Report it
- Take time to recover



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