

# HEADS UP CONCUSSION



## Addressing Concussion Among Kids and Teens: On and Off the Playing Field

Activity Report | 2011

U.S. Department of Health and Human Services | Centers for Disease Control and Prevention  
National Center for Injury Prevention and Control

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



THANK YOU!



The importance of the current (and future) **Heads Up** participating organizations in ensuring the success of these initiatives cannot be overstated. Through your consistent and tireless efforts, we are helping to keep young athletes healthy and active, and for this we THANK YOU!

Below is a quick summary of what we have accomplished together:

- ▶ **60+ million** media impressions through print media and TV public service announcements (PSAs)
- ▶ More than **4 million** print resources distributed
- ▶ **300,000+** coaches completing online trainings
- ▶ **200%** increase in CDC's concussion and TBI webpage views
- ▶ Over **40 Heads Up** products developed
- ▶ **4,000+** Facebook fans, and growing
- ▶ More than **85** participating organizations
- ▶ Close to **20 million** social-media impressions
- ▶ **2,000+** participants in **Heads Up** webinars
- ▶ **20+** radio PSAs and podcasts created

# *Heads Up* Participating Organizations

Amateur Athletic Union  
American Academy of Family Physicians  
American Academy of Pediatrics  
American Academy of Physical Medicine and Rehabilitation  
American Association for Health Education  
American Association of Cheerleading Coaches  
and Administrators  
American Association of Neurological Surgeons  
American College of Emergency Physicians  
American College of Physicians  
American College of Sports Medicine  
American Counseling Association  
American Medical Society for Sports Medicine  
American School Counselor Association  
American School Health Association  
American Society of Pediatric Neurological Surgery  
American Speech-Language-Hearing Association  
American Youth Soccer Organization  
Association of State and Territorial Health Officials  
Baltimore Ravens  
Brain Injury Association of America  
Brain Injury Association of Michigan  
Brain Injury Association of Washington  
Brain Trauma Foundation  
CDC Foundation  
Chicago Wolves  
Children's National Medical Center  
Children's Safety Network  
Detroit Lions  
Emergency Nurses Association  
EMSC National Resource Center  
Health Resources and Services Administration  
Huskers - University of Nebraska - Lincoln  
Institute for Preventative Sports Medicine  
Institute for the Study of Youth Sports  
Major League Soccer  
Massachusetts Department of Public Health  
Michigan High School Athletic Association  
National Alliance for Youth Sports  
National Assembly on School-Based Health Care  
National Association for Sport and Physical Education  
National Association of County and City Health Officials  
National Association of Elementary School Principals  
National Association of School Nurses  
National Association of School Psychologists  
National Association of School Resource Officers  
National Association of Secondary School Principals  
National Association of Social Workers  
National Association of State School Nurse Consultants  
National Athletic Trainers Association  
National Center for Sports Safety  
National Collegiate Athletic Association  
National Council for Accreditation of Coaching Education  
National Council of Youth Sports  
National Education Association  
National Education Association Health Information Network  
National Federation of State High School Associations  
National Football League  
NFL Players Association  
National Interscholastic Athletic Administrators Association  
National Program for Playground Safety  
National Recreation and Park Association  
National Operating Committee on Standards for  
Athletic Equipment  
National Safety Council  
National School Boards Association  
National Youth Sports Coaches Association  
North American Brain Injury Society  
Oakwood Hospital  
Pittsburgh Penguins Foundation  
Pop Warner Little Scholars  
President's Council on Physical Fitness and Sports  
Safe Kids Worldwide  
Safe States Alliance  
Seattle Seahawks  
Special Olympics International  
Sports Legacy Institute  
State and Territorial Injury Prevent Directors Association  
The Children's Hospital of Philadelphia  
USA Baseball  
USA Basketball  
USA Cheer  
USA Cycling  
USA Diving  
USA Football  
USA Field Hockey  
USA Hockey  
USA Roller Sports  
USA Rugby  
USA Skateboarding  
USA Softball  
USA Volleyball  
US Lacrosse  
US Ski and Snowboard Association  
US Soccer  
US Youth Soccer  
Wayne State University



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# *Heads Up* Initiatives— An Overview

***Heads Up*** is a series of educational programs, developed by the Centers for Disease Control and Prevention (CDC), that all have a common goal: to help protect people of all ages, especially children and teens, from concussions and their potentially devastating effects.

For nearly 10 years, the ***Heads Up*** initiative has provided materials to key audiences who play a critical role in helping keep children and teens safe from concussions. Initially, ***Heads Up*** materials addressed health care professionals and their important role in diagnosing and managing concussions. More recent ***Heads Up*** initiatives focus on sports programs and schools as key places to share messages that will help improve traumatic brain injury (TBI) and concussion prevention, recognition, and response among children and teens.

Parents, coaches, school nurses, teachers, and other school professionals are frequently the first people in a position to recognize and respond to concussion symptoms, and thereby potentially help prevent long-term problems. They are also well-positioned to help educate others about concussions and how to respond.



**HEADS UP**  
CONCUSSION

For nearly 10 years, the **Heads Up** initiative has provided materials to key audiences who play a critical role in helping keep children and teens safe from concussions.

# What Is a Concussion?

A concussion is a type of traumatic brain injury (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 rapidly back and forth. This sudden movement can make the brain bounce around or twist in the skull, stretching and damaging the brain cells and creating chemical changes in the brain. Some researchers believe that children may be more vulnerable to the chemical and metabolic changes that occur in the brain as a result of a concussion.

## Why Is It a Special Health Concern for Children and Teens?

Falls account for half of all TBIs among children aged 0-to-14 years and, each year, kids and teens aged 5-18 years account for an estimated 65% of emergency department visits for sports and recreation-related TBIs, including concussions.<sup>1,2</sup>

Concussions can have a serious effect on a young, developing brain, causing short- and long-term problems affecting a child's thinking, language, learning, behavior, and/or emotions. While most kids and teens 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.

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1 Faul M, Xu L, Wald MM, Coronado VG. Traumatic brain injury in the United States: emergency department visits, hospitalizations, and deaths. Atlanta (GA): Centers for Disease Control and Prevention, National Center for Injury Prevention and Control; 2010.

2 Gilchrist J, Thomas KE, Wald M, Langlois J. Nonfatal traumatic brain injuries from sports and recreation activities—United States, 2001-2005. *Morbidity and Mortality Weekly Report (MMWR)* July 27, 2007; 56(29):733-37.

Developed in 2005, **Heads Up: Concussion in High School Sports** was the first education and awareness-building effort focusing on children and youth participating in sports and recreational activities. Designed for high school athletic coaches, this program aims to 1) educate coaches about concussions and the role that coaches can play both to help prevent them and to limit their effects when they occur, and 2) prepare those coaches to educate athletes and their parents about these same issues.

The success of **Heads Up: Concussion in High School Sports** led to the development of a second sports-related project, **Heads Up: Concussion in Youth Sports**, with similar objectives but a different target audience.

Many coaches in youth sports programs are volunteers—either parents or other interested people—who may have minimal or no training in coaching and safety and are generally juggling many other commitments.<sup>3</sup>

Yet, these youth sports coaches are also on the front line in the effort to identify and respond to concussions, and they can play an important role in sharing this information with the parents of young athletes and with the athletes themselves. The **Heads Up: Concussion in Youth Sports** initiative has experienced great success and has helped create a national conversation about this injury in training rooms and homes, and on sidelines and benches nationwide. The reach of this initiative is largely attributed to the participating organizations that have helped put this information in the hands of coaches, parents, and athletes.

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<sup>3</sup> Wiersma LD, Sherman CP. Volunteer youth sports coaches' perspectives of coaching education/certification and parental codes of conduct. *Res Q Exerc and Sport* 2005; 76(3):324-38.



Recognizing that concussions don't just affect students on the playing field, in 2010 CDC created ***Heads Up to Schools: Know Your Concussion ABCs*** for school nurses, teachers, principals, and other school professionals who work with students ages 5-18 (grades K-12) during the school day. ***Heads Up to Schools: Know Your Concussion ABCs*** focuses on prevention and recognition of concussion in school settings.

Because teachers and other school professionals see their students regularly, they are often among the first to recognize that a student may be experiencing concussion symptoms. Thus, it is important to educate school professionals about the signs and symptoms of concussion—and the need for cognitive rest among students who are recovering from a concussion—so that they can help students return to school and, in partnership with the student's parent(s) and health care professional, assist with proper management of a concussion.

*The reach of this initiative is largely attributed to the participating organizations that have helped put this information in the hands of coaches, parents, and athletes.*

# Supporting Materials and Resources

CDC has developed a set of materials designed to meet the educational objectives of each of these **Heads Up** audiences—health care professionals, high school coaches, youth sports coaches and program administrators, school nurses, teachers, and other school professionals—as well as tools for those audiences to use in reaching secondary audiences such as athletes/students and parents.

Representatives from each audience provided feedback to ensure that the content was relevant and actionable, and that the design and format were appealing and usable. Other research methods used include literature reviews, interviews with experts, focus groups, and individual in-depth interviews.



# HEADS UP CONCUSSION IN HIGH SCHOOL SPORTS

## Resources

- Online training for high school coaches developed in partnership with the National Federation of State High School Associations
- Guide for coaches
- Fact sheets for parents (in English and Spanish)
- Fact sheets for athletes (in English and Spanish)
- DVD of Brandon's Story
- Clipboard sticker
- Coach's wallet card with tips
- Poster with concussion signs and symptoms
- Athlete videos
- Radio PSAs
- Podcasts
- e-Health cards
- Web buttons and banners

Visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion) to download or order all materials for free.

## Heads Up: Concussion in High School Sports

The initial set of materials was developed in 2005 with the help of an expert work group representing health professionals, high school administrators, coaches, and athletic trainers. The materials were later updated, and a revised set of materials was released in 2010 with input from an additional expert work group.

The collage features several key materials:

- HEADS UP CONCUSSION IN HIGH SCHOOL SPORTS A FACT SHEET FOR ATHLETES:** A document with sections on "What is a concussion?", "What should I do if I think I have a concussion?", and "What are the signs and symptoms?".
- CONCUSSION: Don't hide it. Report it. Take time to recover.** A poster with images of athletes and the slogan "It's better to miss one game than the whole season."
- Clipboard sticker:** A small document with "SIGNS AND SYMPTOMS" and "ACTION PLAN" sections, including a table of symptoms and a list of actions to take.
- Video:** A video titled "Concussion in Sports: What You Need to Know" featuring a CDC representative.

## Heads Up: Concussion in Youth Sports

To develop the **Heads Up: Concussion in Youth Sports** initiative and materials, CDC conducted additional research to understand the unique needs of youth coaches and the types of organized youth sports activities around the country.

This research revealed that youth sports coaches were eager for materials and support to help them do their jobs well and protect their athletes.

CDC conducted six focus groups with youth sports coaches and administrators—to test a pilot version of the materials—and formed relationships with dozens of participating organizations to gain further input into the creation of the revised materials for the target audiences. Participating organizations not only contributed to refining the materials, but also proved critical to accessing the diverse audiences and marketing the materials.

In addition to providing educational materials and suggestions, the resources for **Heads Up: Concussion in High School Sports** help coaches set up a four-step **Heads Up** Action Plan before the sports season starts. A fact sheet for coaches in the **Heads Up: Concussion in Youth Sports** offers similar guidance for coaches—most of them volunteers—who work with youth athletes in a wide variety of sports.

**HEADS UP CONCUSSION IN YOUTH SPORTS**

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
Is confused about assignment or position	Nausea
Forgets sports plays	Blurred or double vision
Is unsure of game, score, or opponent	Disorientation
Moves clumsily	Tired
Answers questions slowly	Sleep
Loses consciousness (even briefly)	Feeling sluggish
Shows behavior or personality changes	Concentration
Can't recall events prior to hit or fall	Dizziness

**ACTION PLAN**

If you suspect that a player has a concussion, you should:

- Remove athlete from play.
- Ensure athlete is evaluated by an appropriate health care professional to judge the seriousness of the injury yourself.
- Inform athlete's parents or guardians about the known or suspected signs and symptoms of concussions.
- Allow athlete to return to play **only** with permission from a 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](http://www.cdc.gov/ConcussionInYouthSports)

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

**HEADS UP CONCUSSION IN YOUTH SPORTS**

TAKE THE FREE ONLINE CONCUSSION TRAINING for Coaches

CDC

A Fact Sheet for COACHES

To download the coaches fact sheet in Spanish, please visit [www.cdc.gov/ConcussionInYouthSports](http://www.cdc.gov/ConcussionInYouthSports). Please do not change the text or graphics on this fact sheet.

**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?**

A concussion is an injury that changes how the cells in the brain normally work. A concussion is caused by a blow to the head or body that causes the brain to move rapidly inside the skull. Examples include "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.

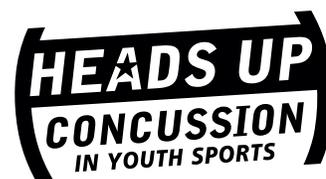
The potential for concussions is greatest in athletic environments where collisions are common. Concussions can occur, however, in **any** organized or unorganized sport or recreational activity. As many as 3.8 million sports- and recreation-related concussions occur in the United States each year.

**RECOGNIZING A POSSIBLE CONCUSSION**

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

- A forceful blow to the head or body that results in rapid movement of the head.
- Any change** in the athlete's behavior, thinking, or physical functioning. (See the signs and symptoms of concussion listed on the next page.)

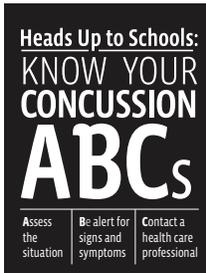
**It's better to miss one game than the whole season.**



## Resources

- Online training for youth sports coaches and parents
- Fact sheet for coaches
- Fact sheet for parents (in English and Spanish)
- Fact sheet for athletes (in English and Spanish)
- Clipboard and clipboard stickers with concussion signs and symptoms for coaches
- Magnet with concussion signs and symptoms for coaches and parents
- Poster with concussion signs and symptoms
- Quiz for coaches, athletes, and parents to test their concussion knowledge (in English and Spanish)
- Radio PSAs
- Podcasts
- e-Health cards
- Web buttons and banners

Visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion) to download or order all materials for free.



## Heads Up to Schools: Know Your Concussion ABCs

This effort aims to provide a wider range of school professionals with **Heads Up** materials. CDC conducted background research with school professionals to learn the following:

- ▶ How health issues are addressed in school settings
- ▶ Current knowledge of concussions
- ▶ Interest in educational materials
- ▶ Effective ways to reach this audience to help guide the development of the approach and materials

### Resources

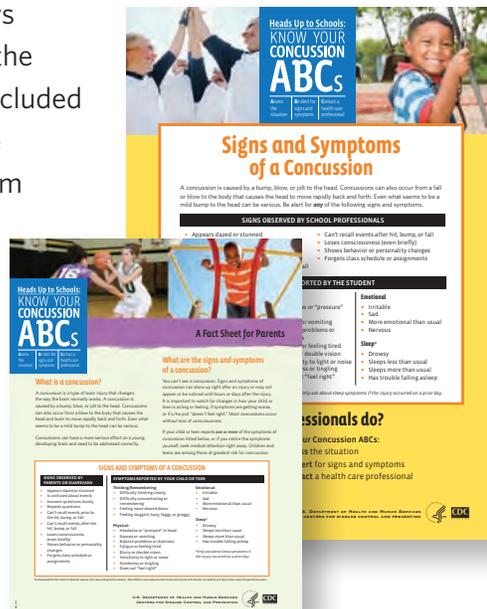
- Fact sheet for school nurses
- Fact sheet for teachers, counselors, and other school professionals
- Fact sheet for parents (in English and Spanish)
- Concussion signs and symptoms checklist
- Magnet with concussion signs and symptoms
- Poster with concussion signs and symptoms
- Poster for school nurses developed in partnership with the National Association of School Nurses
- Laminated card with concussion signs and symptoms

Visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion) to download or order all materials for free.

School nurses, counselors, teachers, and administrators at grade levels K-12 reviewed the materials. Their feedback guided CDC revisions. The revised materials were re-submitted for review before they were finalized.

To support the development, promotion, and dissemination of the materials, CDC engaged a range of organizations that address national education and school-health issues.

Some suggestions for ways to use these resources in the school environment are included on CDC's Web site. These suggestions are drawn from formative research with the array of target audiences who elaborated on ways they would want to use various materials.



## Heads Up to Clinicians

These resources provide clinical information for health care professionals in primary and emergency care settings. Appropriate diagnosis, management, referral, and education are critical to helping children and teens with a concussion achieve optimal recovery and reduce or avoid significant aftereffects.

First launched in 2003, the **Heads Up: Brain Injury in Your Practice** initiative was updated to include recent research and information, and re-released in June 2007. The materials provide assessment and management tools, as well as information that can assist health care professionals working in the primary care setting with improving a patient's health outcomes through early diagnosis, management, and appropriate referral.

In addition, through the **Heads Up to Clinicians** initiative, CDC partnered with the American College of Emergency Physicians to develop adult mild TBI clinical diagnosis guidelines, as well



## Resources

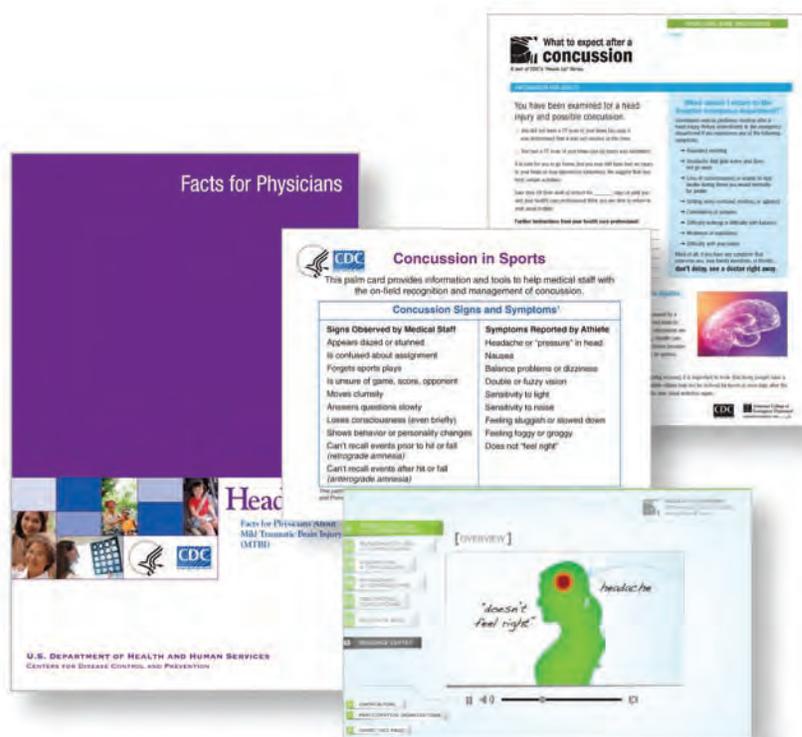
*For the health care professional:*

- Online training for health care professionals on concussion in sports among kids and teens
- Clinical practice guideline on diagnosing mild TBI among adults in the emergency care setting
- Facts for Physicians Booklet
- Acute Concussion Evaluation (ACE) Form
- ACE Care Plan
- Concussion in Sports Palm Card

*For the health care professional to provide to patients:*

- **Heads Up:** Preventing Concussion Fact Sheet
- **Heads Up:** What to Expect After a Concussion Fact Sheet and Wallet Card
- Podcasts
- Facts about concussion and where to get help booklet

Visit [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion) to download or order all materials for free.



setting. Next steps include working with a multidisciplinary group of experts to develop and disseminate guidance to health care professionals on pediatric mild TBI.

Most recently, with the support from the National Football League and CDC Foundation, CDC created an online training to provide health care professionals with an overview of what they need to know about concussion among young athletes. Available at no cost, this online course called, **Heads Up to Clinicians: Addressing Concussion in Sports among Kids and Teens**, was completed in collaboration with an expert work group and 13 leading medical organizations and includes a continuing education opportunity.

*Next steps include working with a multidisciplinary group of experts to develop and disseminate guidance to health care professionals on pediatric mild TBI.*

## Partnership and Promotion

External organizations were critical to the development of the **Heads Up** initiatives. Their insight in the initial planning phases—and feedback as materials were developed—helped ensure that educational objectives, content, and formats were appropriate to the audiences the initiatives were designed to reach. They also played a crucial role in promoting and disseminating materials to intended audiences.

The sheer number of these partners—from national professional medical organizations to national athletic and education associations—offers some sense of the degree of support and insight these partners have brought, and continue to bring, to CDC’s **Heads Up** efforts. A list of current participating organizations is included in this report. This list of organizations is continually growing as new organizations become involved in CDC’s ongoing **Heads Up** efforts.

Some activities by **Heads Up** partners include the following:

- ▶ Launching state/city-wide **Heads Up** campaigns through professional teams, health departments, and/or community organizations
- ▶ Using the content to develop policies and guidelines for schools, leagues, and states
- ▶ Conducting online trainings and videos
- ▶ Establishing coaching clinics or developing training programs for school and health care professionals
- ▶ Including messaging in press materials and press conferences
- ▶ Highlighting materials at conferences, as well as including materials in conference bags, agendas, and presentations
- ▶ Airing radio and TV public service announcements (PSAs)
- ▶ Reaching out through social media
- ▶ Hosting webinars and community events
- ▶ Mailing print materials to members, schools, leagues, and communities
- ▶ Incorporating messaging into handbooks and guidelines
- ▶ Co-branding materials for outreach to coaches, parents, and school and health care professionals
- ▶ Hosting Web pages



- ▶ Sending mass emails
- ▶ Including content in magazines and newsletters
- ▶ Posting information on Web sites or at schools
- ▶ Including ***Heads Up*** in presentations at professional meetings and events

To support and supplement the efforts of its many partners, CDC has developed a number of promotional items and



**National Football League (NFL).** CDC has worked with the NFL on several different efforts related to the concussion-in-sports initiatives, including the development of a national television PSA that aired on CBS, FOX, NBC, ESPN, and the NFL Network, and also ran on the Times Square jumbotron in New York City. The PSA describes the importance of recognizing a concussion and taking time to recover, and warns against returning to play too soon. It also directs viewers to CDC's ***Heads Up*** Web site and concussion resources for more information. The NFL also provided funding to the CDC Foundation to develop an online training on concussion in sports for health care professionals, which was released in fall 2011.



**National Collegiate Athletic Association (NCAA).** CDC and the NCAA teamed up to create a PSA and other concussion education resources, including a video for student athletes, posters for every NCAA sport—men's and women's, fact sheets for student athletes and coaches, and concussion management plans for medical staff. The tag line for materials read: "When in Doubt. Check It Out." NCAA distributed resources to every NCAA member campus and also led adoption of updated concussion management guidelines for college athletes.

resources—such as a videos, water bottles, t-shirts, bracelets, temporary tattoos, and dry-erase boards—that carry the **Heads Up** messages. CDC has also co-branded materials with national sports organizations (such as USA Football, USA Hockey, USA Baseball) to create sports-specific resources.

Other promotional activities that CDC has implemented to spread **Heads Up** messaging range from issuing press releases to YouTube videos. Media-outreach strategies and tactics have included:

- ▶ Distributing a national press release
- ▶ Creating template press releases and announcements for use by partners
- ▶ “Pitching” the story to media contacts via calls, emails, and faxes
- ▶ Running radio media tours
- ▶ Developing matte articles (in English and Spanish) and distributing them to newspapers, news wire services
- ▶ Publishing a study, which shows that most sports- and recreation-related TBIs (which include concussions) occur among youth and teens, in CDC’s *Morbidity and Mortality Weekly Report* (MMWR)
- ▶ Using social media to promote the initiatives, including CDC’s **Heads Up** Facebook page ([www.facebook.com/cdcheadsup](http://www.facebook.com/cdcheadsup)) and Twitter accounts (@CDCHeadsUp)
- ▶ Conducting a digital media campaign that engaged bloggers to write about concussion, placed banner spots in mobile applications, and earned online publisher coverage



# Impact

The collective effort between CDC and **Heads Up** partners has resulted in an expansive reach of materials and messages:

- ▶ **60+ million** media impressions through print media and TV PSAs
- ▶ More than **4 million** print resources distributed
- ▶ **300,000+** coaches completing online trainings
- ▶ **200%** increase in CDC's concussion and TBI webpage views
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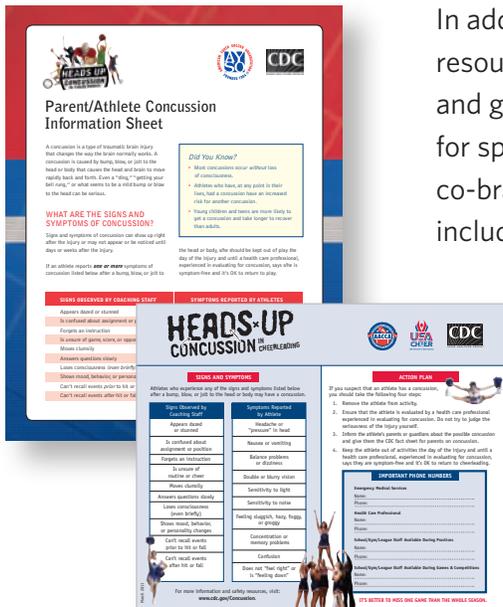


Online training for coaches has been a highly successful, important element of the sports-related **Heads Up** initiatives. At the close of 2011 more than 300,000 coaches had completed an online-training program for high school, youth sports, or football coaches. CDC developed the trainings in partnership with the National Federation of State High School Associations as well as a training video for coaches with USA Football.



CDC has created an assortment of sports-specific resources (from videos and fact sheets, to content for handbooks and guidelines), in partnership with the national governing bodies for sports ranging from field hockey to volleyball.





In addition, CDC has created an assortment of sports-specific resources (from videos and fact sheets, to content for handbooks and guidelines), in partnership with the national governing bodies for sports ranging from field hockey to volleyball. Additional co-branded resources were created with multiple organizations, including Pop Warner Little Scholars, Safe Kids Worldwide, National Alliance for Youth Sports, National Council of Youth Sports, Sports Legacy Institute, Massachusetts Department of Public Health, and the Baltimore Ravens, among others. Safe Kids Worldwide also used the materials to create and evaluate a pilot education program for athletic trainers.

# Materials Evaluation

## Heads Up: Concussion in High School Sports

In March 2010, CDC published an evaluation study of the **Heads Up: Concussion in High School Sports** initiative in the *Journal of School Health*. This evaluation study demonstrated positive changes in high school coaches' knowledge, attitudes, behavior, and skills related to concussion prevention and management.<sup>4</sup>

- ▶ Half of coaches polled reported viewing concussions more seriously after using the tool kit

4 Sarmiento K, Mitchko J, Klein C, Wong S. Evaluation of the Centers for Disease Control and Prevention's concussion initiative for high school coaches: "Heads Up: Concussion in High School Sports". *Journal of School Health* March 2010;80(3): 112-118.

- ▶ 68% reported using the tool kit to educate others about concussions, including other coaches, athletes, and their parents
- ▶ 38% reported making changes in how they dealt with concussions, including placing more emphasis on training techniques and safety equipment that minimize the risk of concussion

### *Heads Up: Concussion in Youth Sports*

An evaluation study conducted by Michigan State University and the National Alliance for Youth Sports on the **Heads Up** youth sports initiative found that after using the initiative's materials, coaches stated the following:<sup>5</sup>

- ▶ 67% of coaches reported being able to more easily identify athletes who may have a concussion
- ▶ 68% reported viewing concussions more seriously
- ▶ 72% reported that they had educated others about preventing and managing concussions, including athletes, parents, and other coaches



<sup>5</sup> Covassin T, Elbin RJ, Sarmiento K. Educating coaches about concussion in sports: evaluation of the CDC's "Heads Up: Concussion in Youth Sports" initiative. In press.

## *Heads Up to Schools: Know Your Concussion ABCs*

Pre- and post-surveys with 140 nurses were conducted by Children's National Medical Center for the **Heads Up to Schools** initiative, before and after a half-day educational workshop for school professionals in Maryland. The following findings were collected:

- ▶ 100% of nurses reported greater knowledge of the definition of concussion
- ▶ 100% reported greater knowledge of signs and symptoms of a concussion
- ▶ 100% reported greater knowledge of the danger signs of a concussion
- ▶ 99.3% reported greater knowledge of academic strategies
- ▶ A significant increase in confidence rating of nurses' ability to recognize and respond to concussions



# Tracy's True Story...

## *Keeping Quiet Can Keep You Out of the Game*

Her eyes focused on reaching for the rebound, Tracy didn't see the other player before she collided with her and hit her head. "I went to school the next day after the game, but I felt really sick." The feelings of nausea, dizziness, and blurred vision were all too familiar. As a seventh grader she had a concussion and felt the same way.

When a key game came up two days later, Tracy felt dizzy and nauseous and thought that she had a concussion. "The coach told me to tell the athletic trainer. I didn't want to tell the athletic trainer 'cause he would sit me out of the game. So I kept quiet, but I shouldn't have played." As a starter for her high school basketball team, Tracy played hard to win the game, but after the game she passed out in the locker room.

"They took me to the hospital and told me I had a concussion, which I knew, but I didn't know that my life was about to change." Tracy continued to feel nauseous and have headaches, balance problems, and difficulty concentrating and reading. "We had to put sheets on the windows to block out the light, and I couldn't watch TV because the lights and noise would make me feel sick. My mom also had to help me walk 'cause my vision was blurry and I felt so dizzy all of the time. But the hardest part was not being able to go to school and missing most of my junior and senior years of high school."

Symptoms from the concussion forced Tracy to stay at home. She visited the doctor every month and had to learn how to walk again because of her problems with balance. Three years after the injury, Tracy is beginning to feel better, but she still struggles with symptoms from the concussion. "I am 19 years old, but I am living the life a teenager shouldn't be living."

Tracy wants other teens to know that "A concussion is a serious injury. If you think you have a concussion, don't hide it; report it. Take time to recover. It's better to miss one game than the whole season."

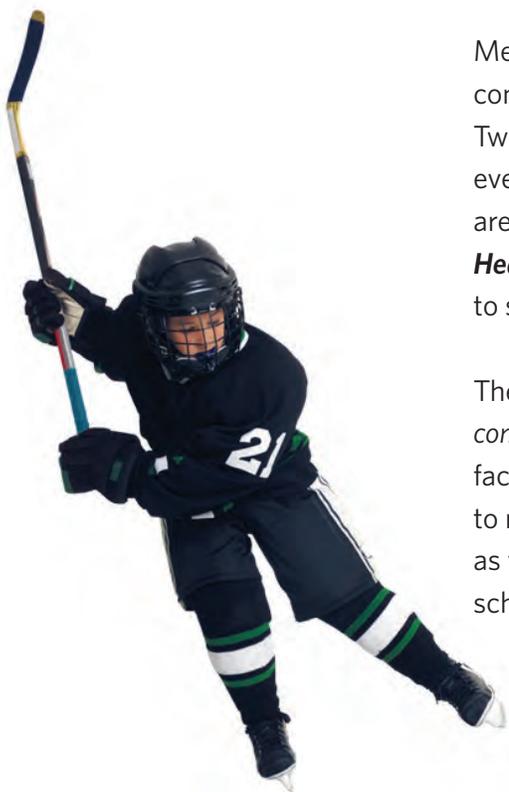
# How to Become Involved

The examples of activities highlighted throughout this report are some of the many ways in which individuals, as well as organizations, can become involved in building awareness and knowledge of **Heads Up** messages. It takes the voice and reach of many—organizations, parents, clinicians, coaches, teachers, caregivers, and survivors—to continue the success of **Heads Up**.

Health care providers can encourage colleagues to visit the CDC Web site for clinically relevant information and participate in continuing-education activities. Parents can become informed about how concussion-related issues are being addressed in their children’s schools and organized sports activities and—if adequate plans and procedures are lacking—promote enhanced efforts.

Members of Facebook can post “likes” for some of the concussion-related CDC Web sites, or send Tweets directing Twitter followers to those Web sites. There are ways that everyone can get involved. In the Resources section (page 33) are additional ideas on how to get started. Please visit the CDC **Heads Up** Facebook page at [www.facebook.com/cdcheadsup](http://www.facebook.com/cdcheadsup) to share your stories and activities.

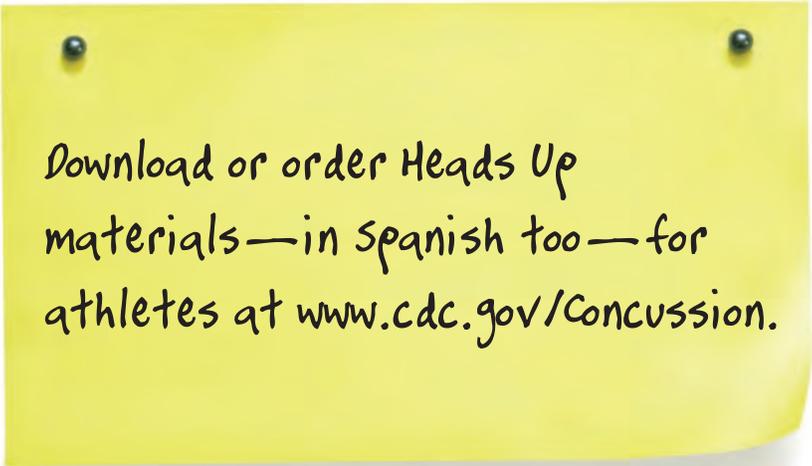
There are multiple ways to use CDC’s **Heads Up** series *communitywide* to protect young athletes from concussion. In fact, many individuals and groups are using **Heads Up** resources to meet their state’s requirements, and/or fulfill policy objectives, as well as to support individual coaches and parents, leagues, schools, organizations, departments, and others.



Following are some ideas on how to get started, ranging from small activities to larger-scale efforts to engage coaches, parents, and athletes, and even policy-makers. You can also refer to the “**Heads Up** Game Plan” available at [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

## Get Started

- ▶ Send out **Heads Up** materials to leagues and schools in your area.
- ▶ Distribute concussion resources at community events, trainings for coaches and health care professionals, and sports and recreation areas.
- ▶ Include **Heads Up** resources in youth league, summer camp, and school sports registration packets, including CDC’s concussion parent/athlete information sheet.
- ▶ Hang **Heads Up** posters at sports and recreation facilities in your community and at schools.
- ▶ Post **Heads Up** buttons and banners on your Web site linking to CDC’s **Heads Up** online trainings for coaches, and online training for health care professionals, as well as to other free resources.
- ▶ Connect with CDC **Heads Up** on Facebook at [www.facebook.com/cdcheadsup](http://www.facebook.com/cdcheadsup), and post the **Heads Up** Facebook widget to connect directly from your Web site. Send educational messages on concussion safety through other social-media channels.



Download or order Heads Up materials—in Spanish too—for athletes at [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).



Partner with local online, print, radio, and TV journalists and producers to air a *Heads Up* PSA on concussion.

- ▶ Learn about your state, league, or sports governing body's laws or policies on concussion and use **Heads Up** materials to help support implementation of these policies.
- ▶ Include concussion education messages—and links to resources—in your team, school, and community newsletter/eNewsletter and other publications.

### **Build Momentum**

- ▶ Work with CDC to create a **Heads Up** campaign in your community.
- ▶ Partner with schools and colleges, professional teams, and youth leagues to host educational trainings on concussion for school and health care professionals, parents, coaches, and athletes.
- ▶ Create a **Heads Up** game night and distribute free concussion resources to attendees.
- ▶ Host a **Heads Up** logo-design contest or a short video contest to give kids and teens the opportunity to educate other young athletes about this issue. Winners could be displayed/aired at the **Heads Up** game night.

### **Reach the Media**

- ▶ Partner with local online, print, radio, and TV journalists and producers (especially sports reporters and anchors) to air a **Heads Up** PSA on concussion. You can also work with them to create customized educational PSAs.
- ▶ Establish and educate media contacts, and work with them to include concussion prevention and safety tips in community media outlets and at media events.



Partner with schools and colleges, professional teams, and youth leagues to host educational trainings on concussion for school and health care professionals, parents, coaches, and athletes.

# Cole's True Story...

## *Coach Saves Wrestler's Life by Knowing Concussion Signs and Symptoms*

"I went to the emergency room and was told not to return to wrestling for at least a month. I ignored the doctor and returned to wrestling after *one week*," said Cole. "During practice, one of the coaches noticed a problem, and pulled me out. My neurologist believes this action by my coach saved my life."

When Cole's mother picked him up from practice, she noticed something was wrong and immediately took him to the emergency department. The doctor diagnosed Cole with a concussion and instructed him to rest and to not return to wrestling for about a month.

Despite this advice, Cole snuck out to practice after a week. He did not tell his family that he was going there, or the coach that he wasn't supposed to be there. Fortunately, his coach knew all about concussion.

"My high school encourages coaches to take CDC's online concussion training and has concussion-awareness posters in many locker rooms," said Cole. "I am so grateful for these posters and trainings!"

CDC's free online training for coaches helped his coach recognize that Cole was acting clumsy and appeared stunned. Cole was answering questions slowly and seemed to be having trouble with his memory. Cole's coach had learned that these were signs of concussion.

Although most athletes with a concussion recover quickly and fully, some—like Cole—may have longer-term challenges that are both cognitive (thinking and learning activities) and physical, especially if they return to play too soon.

"This was certainly one of the worse decisions I have made. It's been several months and I'm still recovering. But I will probably never be able to wrestle again just because I wanted to get back to practice," said Cole.

It isn't easy to keep a talented and ambitious athlete like Cole on the sidelines, especially when he wants to get back into play. And sometimes people believe that it shows strength and courage to play when you're injured. Not only is that belief wrong, it can put a young athlete at risk for serious injury.

# Resources

This report has described some of the resources that have been developed for the **Heads Up** children and teen initiatives—many of them in partnership with other organizations. Those materials are available on the CDC’s concussion Web site at [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).

This site also includes materials and products that can help an array of stakeholders promote **Heads Up** initiatives and messages. Some of those items include:

- ▶ Print materials
- ▶ Free online-training programs
- ▶ Videos
- ▶ Facebook and other social media links
- ▶ TV and Radio PSAs
- ▶ YouTube videos
- ▶ Podcasts
- ▶ Sports-specific information
- ▶ CDC/NFL resources
- ▶ CDC/NCAA resources
- ▶ PowerPoint slides
- ▶ Data and statistics
- ▶ Stories from real athletes
- ▶ Matte articles for placement in newspapers, journals, and other print media
- ▶ Web banners and other promotional materials

## **Heads Up educational resources (available at no cost) align with components in many concussion in sports laws and policies, including:**

- **Online course for youth coaches and parents.** In less than 30 minutes coaches and parents can learn about identifying a suspected concussion and how to respond. After completing the training and quiz, coaches and parents can print out a certificate, making it easy to show their league or school they are ready for the season. (CDC also partnered with the National Federation of State High School Associations on an online training for high school coaches.)
- **Online course for health care professionals** (with support from the NFL and CDC Foundation) on concussion in sports diagnosis and return-to-school and -play management. This one-hour course provides an overview of what health care professionals need to know about concussion in sports and includes a no-cost continuing education opportunity through the American College of Sports Medicine.
- **Parent/Athlete information sheet with signature lines** that can be ordered or downloaded and distributed during registration or before the first practice.

**All are available at [www.cdc.gov/Concussion](http://www.cdc.gov/Concussion).**

# Ongoing Efforts and Future Plans

CDC is continuing to disseminate materials in response to requests, and to develop new channels and partnerships to promote their availability. Listed below are some coming efforts:

- ▶ Launch of the **Heads Up to Parents** initiative, including the development of videos and other electronic resources for parents, through support from the National Operating Committee on Standards for Athletic Equipment through the CDC Foundation.
- ▶ Gather the latest research and convene a group of experts to develop clinical guidance on identification and management of pediatric mild TBI for health care professionals.
- ▶ Development of a video for young athletes, as well as TV public service announcements with professional athletes.







[www.cdc.gov/Concussion](http://www.cdc.gov/Concussion)