
Heads Up!

Take Steps to Protect Your Child Against Concussions

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March 19, 2017

Whether a child participates in organized sports, likes to ride a bike, or just plays with friends on the playground, parents should know how to recognize the signs of a concussion.

According to the Centers for Disease Control and Prevention, or CDC, a concussion “is a type of brain injury that changes the way the brain normally works.”

While they can be caused by a blow to the head, concussions also result from whiplash, “a blow to the body that causes the head and brain to move rapidly back and forth,” the CDC states on its website.

In fact, an article published in the October 2003 issue of *Neurosurgery*, the official journal of the Congress of Neurological Surgeons, states that 70 percent of youth sports concussions are made more severe by whiplash.

Concussion Task Force

Making parents and athletes aware of concussions and the dangers associated with them was the goal of the Connecticut Concussion Task Force, a group of medical providers that formed in August 2008 and disbanded in 2014. (It was later succeeded by another group, ConcussionCORPS.)

The task force helped convince the state legislature to pass Public Act 14–66 in 2014, which requires schools to train not just athletic team coaches, but also student athletes and their parents in understanding concussions, including their symptoms, proper treatment, and prevention.

Even though the law did not take effect until July 1, 2015, the Connecticut Interscholastic Athletic Conference, or CIAC, the not-for-profit organization that governs interscholastic sports in the state, chose to require all member schools to follow the state law during the 2014–15 school year.

More than 5,500 Students Affected

The state Department of Education tracked concussions among students in the 2014–15 school year.

According to the department’s School Health Service Survey, 139 school districts in the state reported a total of 5,551 diagnosed concussions among their students that year. The survey also reported that the median number of concussions per reporting district was 28, meaning half of the districts reported more and half less.

A 2014 report published by the Youth Sports Safety Alliance stated that an estimated 300,000 athletes age 19 or under who participate in sports suffer concussions each year.

Another study found that football causes more concussions in youth 19 and under than any other sport, but that other sports – including baseball, soccer and lacrosse – also pose a significant risk.

Not Just Athletes

Children don't have to play organized sports, however, to be at risk. A separate study found that, from 2001–13, 21,000 children age 14 and younger suffered playground–related traumatic brain injuries, including concussions.

The study found that 56 percent of those children were injured while playing on playground equipment, such as monkey bars, play gyms and swings.

Another national study, which reviewed emergency department records from 2001–12, found that the top three causes of brain injury/concussions in males up to age 19 were bicycling, football and basketball, while the top three in females were bicycling, the playground, and horseback riding.

The CDC, on its concussion education website www.cdc.gov/headsup, notes that playgrounds are “important places for children to have fun, explore, and grow,” and that “children learn through play and need opportunities to take risks, test their limits, and learn new skills through free play.” And yet, playgrounds can also put children at risk for concussion, it states.

How to Keep Them Safe

Parents who take their children to playgrounds should make sure the child is using equipment that is age appropriate; that there is soft material (such as wood chips, sand or mulch) on the ground, and that guardrails are in place to help prevent falls.

Children who bike or ride horses, meanwhile, should wear helmets, even though helmets do not make children “concussion–proof.” Parents should make sure the helmet fits snugly, with no gaps. Some bike helmets have removable padding or a universal fit ring that can be adjusted for a better fit.

Protecting athletes on the playing field or court is more difficult. At the least, studies have shown concussions are much more likely during actual games vs. practice, but doctors warn that even softer blows to the head, repeated over time, can eventually add up.

“The effects can be dramatic,” said Dr. Karen Laugel, medical director for HeadZone Concussion Care, a Shelton-based practice that provides full medical services to help manage the recovery from concussions and post-concussion syndrome and recently opened a satellite office at 117 Sharon Road in Waterbury.

“Our concerns are really repetitive head injuries,” said Laugel, who was a member of the Connecticut Concussion Task Force and now works with ConcussionCORPS. “For example, heading the ball in soccer is risky, especially for younger kids who may sustain more significant injuries or have impacts that could result in attention deficit disorder or cognition issues.”

U.S. Soccer Makes Changes

In fact, U.S. Soccer, which governs youth and adult soccer programs nationwide, adopted a rule in March 2016 prohibiting any soccer player 11 years old or younger from heading the ball, either in practice or in games. The rule was part of a number of concussion prevention guidelines put in place to resolve a concussion related class-action lawsuit (which sought only rule changes and no financial damages).

Laugel supports the rule changes, but says even older players should avoid heading the ball because of the potential long-term effects. “Even just two concussions — there have been some studies that show that children who have had two concussions will have problems with attention and concentration, and will see a drop in grade point average, even six months to a year later,” she said.

“It’s that whiplash movement, where the brain basically sloshes in the skull,” she continued. “They’ve actually measured how the force goes through the brain, and it’s like a bowl of Jell-O. It causes the neurons to twist and shear. ... All of the neurons in the brain get damaged. That can create problems with vision, balance, memory and attention.”

Less Contact, More Skill

Protecting children who play a contact sport, such as football, hockey or lacrosse, presents bigger challenges and will require changes in philosophies, Laugel said.

“It makes sense, with all of the evidence we are gathering, that we try to encourage sportsmanship and skills in our athletics, rather than just aggressive play,” she said. “To me, it doesn’t seem that hard. Playing soccer? Teach other ways to play than heading the ball. Playing hockey? Don’t check or hit another player from behind; instead, focus on skills like stick- and puckhandling.”

She added that trying to control what happens at the point of impact, such as teaching proper tackling techniques in football, doesn’t alter the potential cumulative effects.

“Honestly, having seen these kids for a number of years now, it’s an unrealistic goal,” she said. She

then repeated a quote from former NFL coach John Madden. “It’s like trying to choreograph a car accident.”

Education is Important

Laugel said the state law requiring education about concussions is important, especially for the athletes themselves.

“We need to be educating kids,” she said. “They need to know to report when something’s wrong. After that type of body jolt, they are going to notice things, like being headachy, or their vision is blurred, or they may not remember the play their coach just went over. They need to identify those symptoms and report them.

“So a big part of the education should be with the kids themselves,” she said. “If the kids are educated, they will also speak up about the symptoms too.”

CONCUSSION: What To Look For

According to the Centers for Disease Control and Prevention, if you think your child has a concussion, here’s what to look for. They may:

- Appear dazed or stunned.
- Be confused about events.
- Answer questions slowly, or repeat them.
- Be unable to recall events prior to the hit, bump or fall.
- Lose consciousness (even briefly).
- Show behavioral or personality changes.
- Forget class schedule or assignments.

If you child has a concussion, he or she may report or show the following symptoms:

Mental: Has difficulty thinking clearly, or difficulty concentrating or remembering; feeling slowed down, sluggish, hazy, foggy or groggy.

Physical: Headache or “pressure” in head; nausea or vomiting; balance problems or dizziness; fatigue; blurry or double vision; sensitivity to light or noise; numbness or tingling; does not “feel right.”

Emotional: Irritable; sad; more emotional than usual; nervous.

Sleep (only ask about sleep symptoms if the injury occurred on a prior day): Drowsy; sleeps less or

more than usual; has trouble falling asleep.

CONCUSSION: The Danger Signs

You can't see a concussion, and signs and symptoms may show up immediately or not until hours or even days after the injury. Be alert for symptoms that worsen over time, and take your child to the Emergency Department immediately if he or she has:

- A pupil in one eye that is larger than the other.
- Drowsiness or cannot be awakened.
- A headache that gets worse and doesn't 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 briefly).

CONCUSSION: Resources

To learn more about concussions, visit these websites:

- youthsportssafetyalliance.org
- concussioncorps.org
- concussioncentral.ciacsports.com
- head-zone.com
- cdc.gov/headsup/youthsports