

OPTIMAL HEALTH UNIVERSITY™

Presented by Katie Gravesen, DC

Preventing Concussions in Children's Sports

Did you know that withstanding any head injury — even a seemingly minor one — makes children susceptible to a concussion? Each year, thousands of youngsters suffer concussions, which often remain undiagnosed. The good news is that following a few simple guidelines suggested by Dr. Gravesen can dramatically cut your child's odds of enduring a concussion.



Concussions 101

The brain is a soft organ cushioned by spinal fluid and encased in the skull. Normally, the spinal fluid keeps the brain from banging into the skull. However, in the case of a concussion, the brain “hits” the skull, resulting in a temporary loss of brain function.

Dr. Gravesen teaches patients that, while concussions range in severity from mild to severe, all temporarily interfere with brain activity. Concussions may affect memory, judgment, reflexes, speech, balance and coordination.

More Common Than Thought

Sports-related concussions are common injuries in children and adolescents. In fact, pediatric concussions are more common than most adults realize. One reason is that research shows that young athletes often fail to report concussive symptoms (*Pediatrics* 2009;123:114-23). In other cases, symptoms are misdiagnosed or dismissed.

Symptoms of concussions, such as headaches or forgetfulness, are often attributed to other circumstances. Young athletes, their coaches, teachers, parents and care providers may also lack education about the signs of concussion. Consequently, it's common for children to be unaware that they've suffered a concussion, even one that's severe.

In one analysis of a cohort of 12- to 17-year-old football players, four out of five didn't realize they had suffered a concussion (*Br J Sports Med* 2008;42:110-5).

It's important to note that concussions don't always involve a loss of consciousness. Most youths who endure concussions never black out. For instance, in a four-year study of 755 children aged 5 to 18 with concussions, only half experienced a loss of consciousness (*Br J Sports Med* 2008;42:664-9).

It's also vital to be aware that signs or symptoms of concussions often fail to appear until days — or even weeks — following a head trauma.

Preventing Concussions

What causes concussions? And what can you do to prevent them? Read on to find out.

Proper Balance and Posture

Research shows that a fall is to blame for more than half of the concussions sustained during organized sports (*Br J Sports Med* 2006;40:163-8). A tendency to fall may result from lack of coordination and poor posture, which may be linked to a spinal dysfunction.

Chiropractors, such as Dr. Gravesen, correct a common malady in the spine known as **vertebral subluxation**. Vertebral subluxation is a condition associated with limited range of motion and spinal dysfunction. Dr. Gravesen eliminates vertebral subluxations through precise, gentle maneuvers called **chiropractic adjustments**.

Signs and Symptoms of Concussion

- Feeling confused, dazed or stunned
- Memory loss
- Difficulty concentrating
- Lack of coordination
- Slow replies to questions
- Loss of consciousness
- Behavior or personality changes
- Headache
- Nausea
- Balance problems or dizziness
- Double or fuzzy vision
- Sensitivity to light or noise
- Sluggishness
- Feeling foggy or groggy



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Keeping regularly scheduled chiropractic appointments for your youngster will help him or her maintain proper range of motion, balance and reduce risks for accidental falls.

Protective Equipment

Consistent use of adequate protective equipment is essential for preventing concussion. Any type of protective wear, such as helmets, shin guards and eye and mouth guards, needs to fit properly and be well-maintained.

Safe Footwear

Wearing proper shoes that provide ankle and arch support significantly decreases chances of accidental trips and spills. Shoes should be appropriate for your youngster's particular sport.

Helmets

Protective headgear is vital for *any* activity that may result in a head injury, such as bicycling, motorcycling, skiing, snowboarding, horseback riding, skateboarding or skating. Helmets need to be durable, designed for the particular sport and fit comfortably and snugly.

One study of football players aged 12 to 17 years found that athletes who wore helmets were half as likely to suffer a concussion as those who played without a helmet (*Br J Sports Med* 2008;42:110-5).

Another large-scale study analyzed bicycle-related head injuries among 49,758 patients. Children under 15 years of age had the highest incidence rate of a concussion injury. The nine-year analysis, performed in Sweden, showed a 46 percent drop in pediatric concussions as helmet use increased (*Health Promot Int* 2007;22:191-7).

Sportsmanship

A four-year study of approximately 600 children who had withstood concussions found that the odds of suffering a concussion are six times greater during organized sports, compared with casual physical activity (*Br J*

Sports Med 2006;40:163-8). One reason for this disparity is that during game time, kids are more likely to take risks and play harder. Urge your child to practice good sportsmanship, follow the rules of the sport and abide by safety guidelines.

Re-thinking Body Checking

Body checking is a technique in ice hockey in which players collide with or "body check" opponents to separate them from the puck. Body checking in children's ice hockey is a controversial subject.

Research shows that body checking is associated with a markedly elevated risk of concussion. In an attempt to reduce injuries, the American Academy of Pediatrics (AAP) discourages body checking in children age 15 and younger. However, some leagues sanction it in young players, and the Canadian Hockey Association allows it in children as young as 12.

One report compared hospital records for adolescent ice hockey players in two regions of Canada: (1) where checking is allowed and (2) where it's banned. Of the 4,736 injuries, the majority — 59.6 percent — occurred in areas where checking was allowed.

The study also found that learning to body check at a young age doesn't protect children against checking-related injuries as they get older (*Pediatrics* 2006;117:e143-7).

Important Steps if Your Child Has or Might Have a Concussion

After the immediate medical care, there are a few key steps you should take if your child suffers a head trauma.

Get a Chiropractic Evaluation

If your child suffers a head trauma, schedule an appointment with the doctor immediately to be evaluated for a concussion and vertebral subluxation. Head trauma frequently instigates spinal misalignment and dysfunction,



which may increase the risk of concussion-related problems.

Take a Timeout

Athletes who return to sports too soon while the brain is still healing from a concussion have a greater risk of having a second concussion. Second or later concussions can be serious and cause permanent brain damage. Concussions take time to heal. Don't let your youngster return to physical activity until his or her doctor says it's alright.

Keep Others Informed

Individuals who suffer concussions are at elevated risk of enduring subsequent concussions. If your child has experienced a concussion, talk to the doctor about what specific sports activities you may need to restrict or modify.

Also, be sure to let his or her coaches and teachers know. Being aware of the concussion will allow caretakers to keep youngsters from activities that could result in another concussion.

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