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Health Sheet

PEDIATRIC CONCUSSIONS

Understanding Concussions and Their Effects

with Carl Heilman, MD

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ACCORDING TO THE CENTERS FOR DISEASE CONTROL an estimated **1.7 million people in the United States sustain a Traumatic Brain Injury (TBI) each year. About 75 percent of TBIs that occur annually are concussions or other forms of mild TBI. Almost half a million U.S. emergency room visits for TBI are made each year by children 0 to 14 years old.**

Carl Heilman, MD, Neurosurgeon-in-Chief at Tufts Medical Center and Floating Hospital for Children, answers some common questions about childhood concussions.

What is a concussion?

A concussion is an immediate and transient impairment of neural function such as alteration of consciousness, memory loss, impaired vision or dysequilibrium that occurs after head trauma. Concussions are brain injuries that are caused by a bump or jolt to the head that can range from being “mild” i.e., a brief change in mental status or consciousness to “severe” i.e., an extended period of unconsciousness or amnesia after the injury.

What are some of the common ways that children get concussions?

The most likely mechanism for suffering a concussion varies with age. In early childhood, the most common cause is fall from a height — such as being dropped, slipping off a changing table, falling off a bed or falling out of a carried car seat. Non-accidental head injury such as child abuse is another possible mechanism. As the infant begins walking and climbing, falls down stairs or out a window cause concussions. Later on, the child may get a concussion from a bicycle accident, a sports injury (football, hockey, skiing, snow-boarding, horseback riding) or a motor vehicle accident.

What are the signs or symptoms of a concussion that parents should be aware of?

After a head injury, parents should look for signs of a headache, nausea, vomiting, altered consciousness, memory loss, disequilibrium and/or severe fatigue. Other less apparent symptoms may include irritability, change in eating or sleeping patterns, change in the way the child plays or acts at school, loss of new skills and/or loss of balance.

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If my child suffers a head injury, how do I know if I should bring him or her to the emergency room?

A child should be brought to the emergency room after an injury if he/she has a loss of consciousness, post traumatic nausea/vomiting, altered consciousness or any other neurologic symptoms (slurred speech, seizures, agitation, decreased coordination or having one pupil larger than the other).

How is a concussion treated?

Children who have experienced a significant concussion are often evaluated with a CT scan. If there is no visible intracranial injury, then the patient is observed neurologically for evidence of deterioration. We then treat the patient symptomatically; for example, headaches can be treated with non-sedating medications and nausea/vomiting cases are treated with intravenous fluid and antiemetics. Parents and caretakers can help their child to heal by allowing him or her to rest, making sure the child avoids activities that could lead to a second concussion, only giving the child medicine that is approved by the doctor, and by sharing information of the concussion with others who interact with the child. If the child suffers a serious head injury, the doctor may require the child to be hospitalized, monitored and treated by specialists.

If my child suffers a concussion in a sporting event, how long should I keep my child from playing that sport again?

The child should remain out of sporting activities for two weeks or until all post-concussive

symptoms have completely resolved, whichever is longer. This also means that your child should not participate in physical education (PE) class or physical activity at recess during this period. It is always a good idea to check back in with your child's primary care physician before having him or her return to physical activity.

Are there any long term effects of concussions in children?

This depends on the severity of the concussion and whether the child has ever experienced a concussion in the past. It is important to protect your child from having repeated concussions because this may lead to long-term problems such as difficulty concentrating, headaches, memory lapses and impaired balance.

How can I help to prevent my child from sustaining a head injury?

Never leave a child unattended on a changing table, bed or other high object. When carrying a child in a car seat, be careful not to swing the car seat too vigorously. Make sure windows are closed and locked and/or screens are securely in place. Stair cases should be closed off or blocked from access to toddlers. Make sure your child wears proper head protection when playing contact sports, as well as other sports that could involve falls (skiing, skateboarding, etc.) and always make your child wear a seat belt. □



RESOURCES

<http://www.cdc.gov/concussion/index.html>

http://www.cdc.gov/concussion/pdf/TBI_factsheets_PARENTS-508-a.pdf