

PATIENT AND FAMILY INFORMATION SHEET

Concussion

What is a concussion?

- A concussion is a type of head injury that is often caused by blunt injury to the head or a quick movement of the head.
- Children with concussions may lose consciousness briefly (get 'knocked out'). Other children will just feel 'dazed,' 'out of it,' or 'dinged.' It is important to note that some children will not lose consciousness and may still have a concussion.
- Signs of a concussion may show up right away or later (many hours after the injury).

How do I know if my child has a concussion?

- A concussion is diagnosed based on the story of what happened, how the injury occurred, events after the injury, and physical and neurological findings.
- A CT and/or MRI may be obtained but usually are not needed and in a concussion are often normal.
- Concussions may be mild to severe and symptoms may be obvious or subtle.



What are the signs of a concussion?

Signs can be broken down into physical, cognitive (thinking), and/or behavioral changes.

Physical changes:

- Headache (most common sign)
- Loss of consciousness (getting 'knocked out')
- Seizures/convulsions
- Pupils that are not the same size
- Slurred speech
- Nausea and/or vomiting
- Sensitivity to light or noise
- Dizziness/lightheadedness
- Weakness/numbness in arms and legs
- Balance problems
- Vision changes (double, blurry, or fuzzy)
- Sleeping problems (falling asleep, staying asleep, or increased sleepiness)
- Appetite changes
- Ringing in the ears

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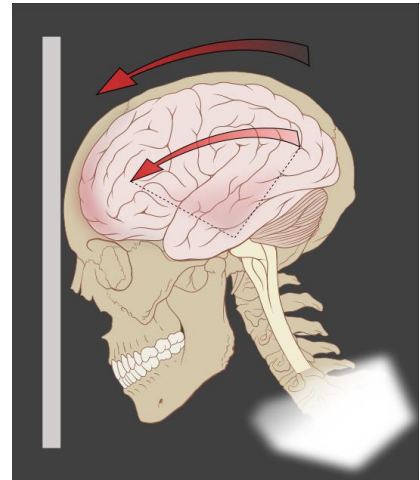
What are the signs of a concussion (continued)?

Cognitive (thinking) changes:

- Trouble focusing or paying attention
- Looking dazed or 'in a fog'
- Trouble with learning or memory
- Lower classroom performance
- Confusion
- Slower thinking, acting, reading, and/or speaking
- Easily distracted
- Lack of organization
- Losing track in the middle of a task

Emotional/Behavioral changes:

- Shows signs of irritability, sadness or moodiness, anxious, or overly emotional responses
- Decreased motivation
- Gets upset or frustrated more easily
- More impulsive or reckless
- Slow to react
- Withdrawn
- Change in school grade performance
- Restlessness
- Not interested in favorite toys



By Patrick J. Lynch, medical illustrator - Modified version of Image:Skull and brain normal human.svg by Patrick J. Lynch, medical illustrator, CC BY 2.5, <https://commons.wikimedia.org/w/index.php?curid=3489276>

How is a concussion treated?

The care for concussions is usually treating the symptoms, rest, and education to you and your child as well as other people important in your child's life (teachers, coaches, or employers). This means your healthcare provider may suggest having your child rest and slowly return to activities to prevent a second injury.

Symptom management:

- Talk to your health care provider about medicines your child may take for headaches. These may include
 - Acetaminophen (Tylenol®)
 - Avoid NSAIDs (such as ibuprofen or aspirin) due to possible risk for bleeding

Cognitive Rest (avoid or restrict):

- Watching TV
- Playing video games
- Reading
- Texting
- Listening to music especially with ear buds
- Being exposed to bright lights and/or loud noises
- Interacting with many friends or other visitors
- Returning to school (shorter school days may be helpful)

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How is a concussion treated (continued)?

Physical Rest (avoid or limit):

- Taking part in physical activities such as gym class, recess, sports
- Taking part in wheel activity (biking, rollerblading, skateboarding)
- Weight training
- Driving or using heavy machinery
- Returning to work



When can we go home?

- Some children may be treated at the hospital and sent home the same day.
- For some types of concussions, your child will need to stay overnight in the hospital.
- Children with severe head injuries such as skull fractures or bleeding in the head may need to be hospitalized for longer periods of time.

What will happen after we get home?

- After your child returns home, physical and mental rest should continue.
- Follow up with a healthcare provider knowledgeable about concussion care.
- Many children's hospitals have teams that deal with the special needs of a child after a concussion.
- Neurocognitive testing may be suggested (for example, ImPACT™ testing). Talk about this with your health care provider.
- A plan should be given to you for when your child may return to school and play.
- If signs of a concussion return during this time, you should have your child return to physical and mental rest and call your healthcare provider right away.
- Limit any activity that could lead to a second concussion.
- Follow all activity warnings. A second concussion (second impact syndrome) in the early stages of healing could be very dangerous.

What can my child do at home?

- You or another adult should watch your child for the next couple of days as problems after a concussion may appear later.
- It is very important to avoid activities that could cause another head injury.
 - e.g. contact sports, bike riding, tree climbing, or skateboarding.
- Your child can get a second head injury while recovering from a concussion. This is called second impact syndrome and is rare but very serious, potentially deadly.
- Sports teams should follow specific guidelines for returning to play. Check with your child's coach or trainer.
- We suggest that your child return to activities slowly and only after all symptoms have gone away.
 - Your child's specialist or primary care provider should give you a return plan which is specific to your child.
- Children should follow up with medical providers for more guidance on returning to daily activities, including school and athletic activities.
- Medical clearance is often required before working with your child's coach or trainer and if symptoms are not improving.



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General Concussion Education:

- Children should avoid activities that makes signs of a concussion worse.
- Most children get better from concussions in 7 to 10 days. Some children may experience signs of a concussion for weeks to months. Rarely, some signs of a concussion may never resolve.
- Most states have *Return to Play* guidelines that give healthcare providers and coaches a specific set of instructions on when children/players can return to physical activities.

How can we avoid another concussion?

Prevention of repeated concussion is extremely important. Research has shown that multiple concussions can cause changes to the brain that can be life-long. Follow these safety tips:

- Make sure your child wears a well fitting helmet during any wheeled activity or sport.
- Teach your child about the signs of a concussion. Stress that they must know when to come out of a game after an injury.
- Always wear the proper seat belt or car seat anytime the car is moving.
- Avoid distracted driving.
 - e.g. talking on cell, texting, reading messages, eating/drinking
- Never drive under the influence of alcohol or drugs.

What things do I need to watch out for at home?

If you see any of these signs, call 911 or return to the Emergency Department:

- Trouble breathing
- Headaches that worsen
- Seizures/convulsions
- Trouble waking up (more than usual) or you can't wake your child from sleep
- Repeated vomiting
- Slurred speech or not speaking clearly
- Not recognizing a familiar person, place, or thing
- Increased confusion and/or irritability and/or 'acting differently'
- Weakness and/or numbness of arms/legs, difficulty walking, or becomes clumsy
- Neck pain or stiff neck
- Behaving differently than normal
- Any loss of consciousness

Your child will need to follow up with the surgeon, trauma team, pediatrician or a concussion specialist.

You will receive instructions for follow up when your child goes home.

Please don't hesitate to call our office if you have any problems or concerns.

Surgical provider: _____

Office Number: _____

After hours number, if applicable: _____

Thank you for allowing us to care for your child.