

Mild head injury and concussion

Patient and Family Education

This teaching sheet contains general information only. Talk with your child's doctor or a member of your child's healthcare team about specific care of your child.

Mild head injury

Head injuries may vary from mild (temporary confusion or passing out) to severe (coma for a longer period of time). They are caused by trauma, such as:

- A hard bump or blow on the head.
- A sudden harsh movement or jarring of the head.

All head injuries, including “mild” head injuries, should be taken seriously so that your child's brain can heal completely.

Concussion

A concussion is a type of head injury that most often cannot be found using imaging tests. Some concussions are mild, and most people have a full recovery. Others are severe. Early care and monitoring are important to prevent long-term complications.

Symptoms

Common symptoms of concussion can occur right away or a while after the injury. Symptoms may include one or more of these:

- Headache
- Nausea or vomiting
- Being really tired or drowsy
- Sensitivity to noise and light
- Numbness or tingling anywhere on the body
- Dizziness
- Loss of balance or trouble walking
- Being irritable or more fussy than usual
- Feel more emotional, like very sad or nervous
- Change in sleeping patterns
- Trouble seeing, such as double vision, seeing spots or not being able to see at all
- Trouble thinking clearly or having a hard time concentrating and remembering

In case of an urgent concern or emergency, call 911.

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The first 48 hours

- Watch closely for signs of problems during the first 48 hours after the injury. Follow the doctor's advice about recovering at home.
- Eat a healthy diet, and drink more clear fluids than normal. Even though your child may not feel like eating, offer small amounts of food and fluids every 3 to 4 hours and before bed. Not eating or drinking enough during this time may delay healing.
- Follow the Cognitive Rest instructions in the Treatment section on page 3.

When should I call the doctor?

Call your child's doctor if your child has any new symptoms that your doctor does not already know about, or if symptoms get worse, such as:

- Headaches that get worse
- Clear drainage from the nose or ear
- Scalp swelling that gets bigger
- A seizure
- Neck pain
- Is hard to wake up
- Vomits more than 2 times in 24 hours
- Acts differently than usual, such as if he does not play, acts fussy or seems confused
- Cannot think clearly or remember things
- Has weakness in the arms or legs or does not move them as usual
- Cannot recognize people or places
- Slurred speech
- Passes out

Also, call if you have any questions or concerns about how your child looks or feels.

What is the Concussion Program?

Children's has a Concussion Program made up of an entire team of specialists to help care for children with concussions. The team works with your child's doctor to create a treatment plan for your child. Talk with your child's regular doctor about your child's need for this program.

The Concussion Program Nurse can help you get an appointment and provide you with advice until your child is seen by the Concussion Team.

- The phone number for the Concussion Program Nurse is 404-785-KIDS (5437), option 3.
- The nurse is available during normal business hours from Monday to Friday.
- If you call after 3 p.m. or on weekends or holidays, leave a message and the nurse will call you back the next business day.
- The website for the Concussion Program is choa.org/concussion.

If you ever think your child needs help right away, call 911 or take your child to the emergency department.

Treatment

Follow-up with your child's primary care physician (PCP) for treatment advice and for school excuses, academic accommodations and return to play/PE/recess/sports instructions.

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Rest, both cognitive (for the brain) and physical (for the body), is the best treatment. This type of rest can be frustrating and seem long but is needed to help your child’s brain heal.

Most children with a concussion can rest and get better at home. **See the chart on pages 6 and 7 for more details about your child’s return to school and bookwork and sports and play.**

Some general guidelines for rest and treatment for your child include:

- Limit physical activities like active play, PE classes and sports. As your child gets better, he will slowly be able to do more.
- Keep surroundings calm and quiet.
- Be sure to keep your child’s doctor appointments, even if he is feeling better. Your doctor can track your child’s recovery and safe return to normal activities.
- Limit thinking activities like reading, schoolwork, electronic games, talking on the phone and watching TV. Limit screen time to no more than 2 hours a day. This includes TV, video games, computers and cell phones. Stop and rest any time that symptoms get worse.

Your child may do these things.	Do NOT let your child do these things.
• Read easy books.	• Read difficult books or do word puzzles.
• Rest in a quiet room without bright lights.	• Do things that need focus or a lot of thinking.
• Listen to music at a low volume.	• Play loud music.
• Do simple arts and crafts.	• Send or read text messages.
• Have short visits with 1 or 2 friends.	• Have too many visitors.
• Play easy card games and board games that do not need much focus, such as UNO or Go Fish.	• Play violent video games.
• Play non-violent video games that do not need physical activity.	• Play loud video games with action and flashing lights.
• Use the computer for a short time to check social medial sites, such as Facebook.	• Use a computer for more than 30 minutes at a time.
• Watch TV shows that do not need much focus, such as cartoons or comedies. Watching sports on TV with a small group is OK as long as it is not too noisy or too exciting.	• Watch TV shows with action, with loud noise or that need your child to focus.

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Medicines

Do not give your child any medicines that can make him sleepy, such as cold or strong pain medicines or medicine for itching, unless advised by your child's doctor.

- Give acetaminophen (Tylenol or less costly store brands) for pain if advised by your child's doctor. Follow the directions on the box carefully, or ask your child's doctor how much medicine to give.
 - Do not give your child more than 5 doses of acetaminophen in a 24-hour period.
 - Do not give acetaminophen to babies less than 3 months of age without a doctor's order.
- Your doctor may suggest that you do not use medicines that contain ibuprofen (Motrin, Advil or less costly store brands) or aspirin during the first 24 hours after a mild head injury or concussion.

Preventing head injuries

Avoid activities that put your child or teen at risk for another head injury soon after the first one. Examples include things like climbing toys, riding a bike or driving a car. Follow the guidelines below to help protect your child.

Babies

- Always make sure that your baby or child rides in an approved child safety seat or booster seat each time he travels in a vehicle.
- Never place your baby on a chair, table or other high place while he is in a car seat or baby carrier.
- Use the safety straps on changing tables, grocery carts and high chairs.
- Do not allow children to carry your baby.
- Do not use baby walkers that have wheels. These can tip over and cause harm. Use a baby activity center without wheels instead.

Toddlers

- Childproof your home to protect your child from falls.
- Secure large pieces of furniture, TVs and appliances to prevent them from tipping over on your child. Use anti-tip brackets, if needed.
- Lock windows and screens. Install safety bars that can keep your child from falling out of windows but can be removed in case of fire.
- Use safety gates at the top and bottom of stairs until your child can go up and down safely on his own. Keep stairs free of clutter.
- Make sure your toddler wears an approved bike helmet and sits in an approved seat when riding on a bike with you.

Children

- Watch your child closely on the playground. Make sure play equipment is in good working order. The playground surface should be made of at least 12 inch deep shredded rubber, mulch or fine sand. Avoid harder surfaces like asphalt, concrete, grass and soil.

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Older children and teens

- Make sure your child wears a seatbelt every time he rides in a vehicle. Children under 13 years of age are safer in the back seat.
- Make sure your child wears the correct helmet when he rides a bike, skateboards or takes part in other active sports.
- All-terrain vehicles (ATVs) should only be used by teens age 16 years and over. They need to wear a motorcycle style helmet and should never have passengers on the ATV with them.

Returning to school, play and sports

- **Review the details below for Return to Learn (page 6 to 7) and Return to Play and Sports Guidelines (page 7 to 8).**
- Allow at least 24 hours for each Stage of Healing. This means that it will take at least 7 days to return to full activity.
- To move from one state to the next, your child must be without symptoms or problems for 24 hours.
- If any symptoms return when moving to the next stage, the brain is not ready for that next stage. Return to the previous stage. Once your child has no symptoms again for 24 hours, he can try the activities in that stage again.
- Your child must return to normal schoolwork and studies before returning to game play. You must also have a doctor's OK for your child to return to sports and PE.
- Do not attempt any sports or activities until your child has no symptoms.
- Also, wait for your doctor to say that it is OK for your child to return to sports.
- Do **NOT** allow your child to go to practice just to watch.

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Return to Learn Guidelines

Stage of healing	Home activity	School activity	Physical activity
<p>Stage 1 – your child still has <u>many</u> symptoms and problems.</p>	<ul style="list-style-type: none"> • Complete rest in a quiet room. • Allow as much sleep as possible. • Limit things that require your child to think, focus, reason or remember. • Remove any electronics and computers from your child’s room. • Remove any activity planners and “to-do” lists from your child’s room. • Give your child plenty of fluids to drink. • Feed small, frequent meals during the day and at bedtime. • Give your child plenty of carbohydrates to eat, such as whole grain breads and cereals, pasta and rice. 	<ul style="list-style-type: none"> • Your child may not go to school. It is typical to rest for 24 to 48 hours and monitor if symptoms improve. 	<p>See Stage 1 in next chart.</p>
<p>Stage 2 – your child still has <u>some</u> symptoms and problems.</p>	<ul style="list-style-type: none"> • Stay in quiet rooms. • Allow for enough sleep (at least 8 hours). • Allow your child to use TV, video games, texting, tweeting and email for a short time – less than 2 hours a day. For example, he might have 20 minutes of brain work followed by a 1-hour brain break. • Help your child not to stress over missed schoolwork. • Continue with fluids, small frequent meals and carbohydrates, as in Stage 1. • As your child has less symptoms, begin adding homework in short sittings to avoid falling behind. 	<ul style="list-style-type: none"> • Your child may return to school for half days. • Attend core classes only, or have shortened class time. • Rest in nurse’s office between classes and as needed. • Your child may not take tests or quizzes. • Use pre-printed class notes. • Complete short homework assignments – work 20 minutes at a time with rest breaks in between. • Talk with the school nurse or teacher about Academic Accommodations from your doctor, and create a plan. • Avoid very loud noises (like music and those in cafeterias, at PE and at recess). 	<p>See Stages 2 and 3 in next chart.</p>
<p>Stage 3 – your child’s symptoms and problems have gone away.</p>	<ul style="list-style-type: none"> • Slowly return to watching TV, playing video games and texting. • Allow family interactions again. • Continue with fluids, small frequent meals and carbohydrates, as in Stage 1. 	<ul style="list-style-type: none"> • Your child may gradually return to a full day of classes. • He may need to schedule make-up work, tests and quizzes. • He may take 1 test or quiz a day with extra time, as needed, to complete. • Tell the school nurse or teacher if any symptoms or problems return. 	<p>See Stage 4 in next chart.</p>

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Stage of healing	Home activity	School activity	Physical activity
Stage 4 – your child seems back to normal.	<ul style="list-style-type: none"> Your child may have near normal home and social interactions. 	<ul style="list-style-type: none"> Your child may begin to complete past assignments and become caught up. Complete past work that is required to be made up. 	See Stages 5 and 6 in next chart.
Stage 5 – your child may return to full activities.	<ul style="list-style-type: none"> Your child may return to normal home and school interactions with 5 days of no symptoms. 	<ul style="list-style-type: none"> Your child may return to normal school function without the need for extra accommodations or restrictions. 	See Stage 7 in next chart.

Return to Play and Sports Guidelines

Stage of healing	Activity allowed	Examples of sports	Examples of other activities	Goal
1	<ul style="list-style-type: none"> No activity Complete cognitive and physical rest 	<ul style="list-style-type: none"> Complete physical rest 	<ul style="list-style-type: none"> Quiet time with rest Avoid groups, videos, reading, computers, video games, cell phones and noisy places 	<ul style="list-style-type: none"> Brain rest and healing BE FREE OF SYMPTOMS
2	<ul style="list-style-type: none"> Light aerobic activity 	<ul style="list-style-type: none"> 10 to 15 minutes of walking or stationary bike Light sweat on the brow Slight increase in breathing rate 	<ul style="list-style-type: none"> Walk in park or neighborhood Avoid group activities 	<ul style="list-style-type: none"> Increase heart rate to 30 to 40% at most
3	<ul style="list-style-type: none"> Moderate aerobic activity Light resistance training 	<ul style="list-style-type: none"> 20 to 30 minutes of jogging or stationary bike Arm curls, shoulder raises or leg lifts with weights that can be comfortably lifted 1 set of 10 repetitions for each activity 	<ul style="list-style-type: none"> Supervised play Low risk activities, such as dribbling a ball, playing catch, changing directions, jumping, side-to-side slides, chasing a ball or catching a ball on the run 	<ul style="list-style-type: none"> Increase heart rate to 40 to 60% at most Add resistance Use eyes to track objects
4	<ul style="list-style-type: none"> Intense aerobic activity Moderate resistance training Sport-specific exercise 	<ul style="list-style-type: none"> 40 to 60 minutes of running or stationary bike Same resistance exercises with weight for 3 sets of 10 reps Pre-competition warm-up, such as passing a soccer ball, throwing a football or doing ladder drills 	<ul style="list-style-type: none"> Supervised play Moderate risk activities, such as balance and agility drills No head contact activities Can sweat and breathe heavy 	<ul style="list-style-type: none"> Increase heart rate to 60 to 80% at most Increase resistance Mimic the sport

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Stage of healing	Activity allowed	Examples of sports	Examples of other activities	Goal
5	<ul style="list-style-type: none"> Controlled-contact training drills 	<ul style="list-style-type: none"> 60 to 90 minutes of time on the field, court or mat for specific drills Take part in normal practice session Contact that is normally part of the sport – only use items that “do not hit back” such as a sled in football Recheck for symptoms or problems often 	<ul style="list-style-type: none"> Free play Run and jump, as able Full return to PE Recheck for symptoms or problems often 	<ul style="list-style-type: none"> Mimic the sport or free play without the risk of head injury
6	<ul style="list-style-type: none"> Full-contact practice 	<ul style="list-style-type: none"> After OK from the doctor, may take part in normal training activities 	<ul style="list-style-type: none"> With parent or adult supervision, may take part in normal activities 	<ul style="list-style-type: none"> Build confidence Assess skills
7	<ul style="list-style-type: none"> Return to play 	<ul style="list-style-type: none"> Normal game play 	<ul style="list-style-type: none"> Normal playtime and activities 	<ul style="list-style-type: none"> No restrictions

Where can I get more information?

You can get more information on mild head injury and concussion at any of these websites:

- [American Academy of Neurology](#)
- [American Academy of Pediatrics](#)
- [American College of Sports Medicine](#)
- [Centers for Disease Control and Prevention](#)

Children’s Healthcare of Atlanta has not reviewed all of the sites listed as resources and does not make any representations regarding their content or accuracy. Children’s Healthcare of Atlanta does not recommend or endorse any particular products, services or the content or use of any third party websites, or make any determination that such products, services or websites are necessary or appropriate for you or for the use in rendering care to patients. Children’s Healthcare of Atlanta is not responsible for the content of any of the above-referenced sites or any sites linked to these Sites. Use of the links provided on this or other sites is at your sole risk.

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