

Concussion Information for Parents/Patients

Overview of concussion

- A concussion is an injury that results from a blow to the head or body where the brain moves inside the skull. There often is no observed change on neuroimaging (e.g. CT or MRI).
- Common symptoms include headache, nausea, vomiting, dizziness, feeling foggy or mentally slow, irritability, fatigue, difficulty with sleep, confusion, trouble concentrating and a decrease in memory.
- Brief loss of consciousness may occur, but most individuals who suffer a concussion are never knocked unconscious.
- Often, the person “looks” fine, but the person may report not feeling well. This is due to changes in brain function that happen as a result of the injury but usually improve with time and a progressive return back to normal activity.
- Up to 30 percent of patients have symptoms lasting longer than 4 weeks.
- All 50 states, including Ohio, have enacted guidelines that state an athlete **MUST** be removed from play for any symptoms suggestive of a concussion. The athlete cannot return to play the same day. An athlete may not return to sports until he/she obtains written clearance from a qualified medical professional.

Quick facts

- Concussion symptoms are usually present right after a trauma but they may change over time and are sometimes not obvious until a day or two later.
- Headaches are the most common symptom of concussion, but lots of other symptoms may occur.
- We no longer “grade” concussions. There is now no such thing as a “mild-moderate-severe” or “Grade 1, 2 or 3” concussion. **A concussion is a concussion.** All head injuries are taken seriously and treatment is provided based on each individual's symptoms.
- Once a concussion occurs, a person may be more susceptible to the effects of head trauma and may suffer another concussion more easily than before.
- Depression and / or anxiety may present or worsen after concussion. If you experience any change in your mood or feel depressed and / or anxious please tell your doctor immediately.

If you have thoughts of hurting yourself or others, this is a medical emergency - please call 911 or proceed to the Emergency Room.

- A doctor may request specialized concussion rehabilitation and physical therapy if symptoms are going away as expected. Detailed memory and concentration testing may also be done to help monitor symptoms and assist in treatment planning.

Seek medical attention immediately if any of the following occur:

- Worsening headache
- Sudden change in vision
- Trouble with balance or walking
- Sudden increase in sleepiness or hard to wake up
- Inability to recognize people or places
- Repeated episodes of vomiting
- Unusual behavior or increasing confusion
- Any seizure activity – uncontrollable shaking of the arms and/or legs
- Thoughts of hurting yourself or others
- Numbness or weakness of arms and/or legs
- Slurred speech or trouble speaking

How is a concussion treated?

The way we treat concussions now is very different than treatment recommendations in the past. The focus is now on remaining active if possible and using a progressive return to normal activities while avoiding severe worsening of symptoms or repeated head trauma during the recovery process. We use modifications of physical activity, cognitive activity, and electronic media use but do not recommend strict rest/bed rest or “cocooning” in a dark room which can lead to slower recovery.

1. **If your symptoms go away** completely and you feel 100% recovered for 24 hours, call your doctor to obtain a final clearance.
2. **Avoid activity** that puts you at risk for hitting your head. Your balance and reaction time are likely affected from your concussion. Be extra careful.
3. **If you are a licensed driver**, we recommend no driving within the first 72 hours after the head injury. After that – consider avoiding driving until you feel you can focus appropriately, move your head side to side with no dizziness or neck pain, and have tolerable light sensitivity.
4. **Medications:** Follow your doctor’s recommendations. Tylenol (500 mg) by mouth every 4 hours as needed for headache is commonly recommended.
5. **Sunglasses and a hat** can be used for light sensitivity. Earplugs can be used for noise sensitivity.

6. Physical activity:

- Daily walking is encouraged even in the initial 48 hours after injury (if tolerated). A minimum of 15 minutes per day is recommended. Multiple sessions of 15 min per day is recommended if tolerated.
- Walk during gym class or sports practice, but avoid any situation where you could accidentally hit your head until cleared by your doctor.
- Take a walk if you come home from school and you feel tired.
- Increase exercise activity (e.g. jog intervals or light stationary biking) as long as activity does not cause more than a mild and brief increase in your symptoms (symptoms return to pre-exercise levels in < 1 hour). Your goal should be to exercise around 55% of your max HR. As symptoms improve, you can increase intensity up to 70% of your max HR as long as it does not cause more than a mild and brief increase in your symptoms.

7. Sleep:

- Sleep as much as you need in the first 48 hours after the head injury.
- Following the first 48 hours after the head injury, get on a good sleep schedule and go to bed earlier than usual if you are tired. Avoid taking a nap after the first 48 hours.
- Avoid sleep overs with friends, staying up late, or sleeping in excessively.
- If you have trouble falling asleep – consider an age appropriate dose of melatonin 1 hour before bed.
- Teach your body that your bed is for sleep only and avoid doing homework or other activity in bed.

8. School participation:

- Not all patients will require restriction from school but return to full day school within 3 days of the concussion if possible. You may start with a half day if needed.
- Take breaks of 15-20 minutes if your symptoms worsen. Rest in a quiet place and try to return to classes.
- Don’t fall behind on school work. Break your homework up into 30 minute sessions and take breaks.
- Avoid loud places such as the lunch room (eat in a quiet space with a friend) or music class.
- Avoid unrestricted activity such as gym / recess where you could accidentally hit your head.
- Partner up for screen use at school and consider printing work on paper to do as much as possible. If you have to use a screen - dim the brightness / increase font size and take breaks if symptoms worsen.

9. Electronics:

- Avoid video games and scrolling on social media, especially in the first days after the injury. Apps with a lot of swiping / scrolling up and down can make symptoms worse.
- Use your electronic devices to stay connected with friends through video chat (look away from screen) and occasional texting.
- If you stream videos, turn the screen away from you and listen to them.
- Listen to music, audiobooks, podcasts as much as you want.
- Consider downloading a meditation app and use this daily.
- When you have to use a computer – dim the brightness, increase font size, and take breaks as needed.

For additional evaluation by the UH Rainbow Babies & Children’s Hospital Sports Medicine team, please call **216-983-PLAY (7529)** or **216-983-HEAD (4323)**.