

Concussion

What is a concussion?

- A **concussion**, also known as a **mild traumatic brain injury (mTBI)**, is a type of injury when a force causes the brain to move within the skull. This brain movement disrupts normal brain function, causing symptoms. This brain injury is typically caused by a direct hit to the head, but it can also occur from an impact to the body that transfers the force to the head.
- People will usually notice symptoms of a concussion immediately after the injury, but sometimes it may be several hours before symptoms show up. While it's rare for symptoms to appear more than 24 hours after the impact, it's important to watch for any changes in functioning, because some changes may be signs of a more serious brain injury.
- Although a concussion is not life-threatening, it is still a serious injury that requires testing and management by healthcare professionals specializing in concussion care. Early and appropriate treatment improves the chances for a safe recovery.

How do you diagnose a concussion?

- It's important to note that losing consciousness (passing out) is not a requirement for a concussion diagnosis. In fact, only about 1 in 10 people who have a concussion pass out.
- Diagnosing a concussion involves reviewing your medical history and doing a special physical exam focused on concussion symptoms. Currently, there are no blood tests or imaging techniques (such as X-rays, CT scans, or MRIs) that can clearly diagnose a concussion, as this type of injury typically does not show up on these tests.

- In most cases, no imaging tests are necessary. However, your doctor may recommend imaging studies to rule out more serious issues, such as brain bleeds or skull fractures. This approach ensures we identify any possible complications (medical issues), so you can have effective treatment and a better recovery.

What are the signs and symptoms of concussion?

If you have a concussion, you may experience some of these symptoms:

Physical symptoms: <ul style="list-style-type: none"> • Headache • Nausea or vomiting • Blurry or double vision • Dizziness or trouble with your sense of balance • Being sensitive to light or noise 	Mental symptoms: <ul style="list-style-type: none"> • Confusion • Trouble concentrating • Trouble with your memory • Feeling mentally foggy or slowed down
Emotional symptoms: <ul style="list-style-type: none"> • Crying or laughing without a clear reason • Feeling sad or down • Feeling less interest in activities you usually enjoy • New feelings of irritation or moodiness • Feeling nervous or anxious 	Sleep symptoms: <ul style="list-style-type: none"> • Trouble with falling asleep or staying asleep • Sleeping more or less than usual • Drowsiness (feeling sleepy)

If you have a concussion, other people in your life (a parent, teacher, coach, etc.) may notice that you have some of these symptoms:

- Trouble at school, or grades going down
- Being more forgetful

- Getting sleepy during the day
- New feelings or irritability, or other mood or behavior changes
- Confusion during normal conversations (you can't seem to think as clearly or quickly as you normally do)
- Movements are more clumsy or off-balance

When should I go to the emergency room (ER)?

Go or ask someone to take you to the ER if you get hit and you experience any of these symptoms:

- Loss of consciousness (passing out) for more than 1 minute
- An increasing sense of confusion
- Feeling like you're not able to stay awake
- Vomiting over and over
- Having a seizure or convulsion
- Severe or worsening headache
- Severe neck pain
- Weakness, tingling, or burning feeling in your arms or legs
- Double vision or loss of vision that isn't going away
- Feeling increasingly restless, upset, or angry

What do I do after I'm diagnosed with a concussion?

- Successfully managing your concussion requires a broad team of professionals, which may include doctors, neuropsychologists, physical therapists, athletic trainers, and psychotherapists.
- Each person will have their own treatment plan, focusing on helping you get back to your normal activities in a safe way. It's important to have a healthcare provider experienced in concussion care guiding this process, who can get you the access you need to necessary resources and support services.

- The Michigan NeuroSport Clinic at the University of Michigan can provide expert diagnosis and management of concussions. To schedule an appointment, please call (734) 930-7400.

Activity and exercise guidelines after a concussion

- In the first 1-2 days after a concussion, rest is extremely important for recovery.
- As your symptoms start to improve, you can slowly introduce light physical activity, such as walking or riding a stationary bike. Research suggests that regular exercise may help speed up your recovery even while you're still experiencing symptoms, as long as the activity doesn't make your symptoms much worse or increase your risk for another concussion.
- It's important to find a good balance between too much and too little activity. That's why you should progress slowly, under the guidance of your concussion specialist.
- Be aware that mental or physical stress, bright lights, loud noises, or busy and crowded spaces can make your symptoms worse.
- Avoid activities that make your symptoms much worse (for example, they increase your symptoms by more than 2 points on a 10-point scale).
- To support your recovery, make sure to get good sleep (aim for 8-10 hours per night), eat a balanced diet, and stay hydrated by drinking 60-80 ounces (or about half a gallon) of water daily.

Screen time guidelines after a concussion

- Depending on your symptoms, you may need to limit your screen time (how long you're looking at TV, phone, and computer screens) after a concussion. Using electronic devices and social media is usually okay, as long as it doesn't make your symptoms significantly worse.

- If your screen use is causing symptoms, we recommend shortening your screen time sessions. Start with a length of time that does not cause symptoms, and take regular rest breaks in between sessions. This can help you stay connected to people and media you love while supporting your recovery.

Going back to school after having a concussion

- Tell the school office and your teachers about the concussion to make sure they are aware of your situation.
- Depending on how bad your symptoms are, you may or may not need to take time off from school.
- If you need to take a break from school, we recommend a slow and flexible return to school afterward, based on how well you can handle the workload. You may need accommodations (special arrangements to help you complete assignments and tests). These may include more time to complete assignments or tests, or changes to your learning environment. Your doctor may give you a note with details about accommodations they recommend.

Going back to playing sports after having a concussion

Before you fully go back to sports activities, you must complete a Return-to-Play protocol.

- The purpose of the protocol is to slowly increase the demands on your brain in a controlled way, so we can see whether you're ready to return to your sport. This protocol has multiple steps, and you'll need to complete each one without having symptoms before you advance to the next step and eventually to being cleared to start playing sports again.
- It's important that you complete the entire Return-to-Play protocol under the guidance of a healthcare professional who specializes in concussion care.

What can I expect for long-term effects and recovery after a concussion?

- Everyone's recovery time from a concussion is different, as it's based on many factors. With appropriate care, your symptoms should eventually go away, leading to a full recovery. For both children and adults, a typical recovery period is up to 30 days after the injury.
- If your concussion is not managed properly, it may cause delays in your recovery and how long until you're able to return to school, work, or sports.
- There are many factors that may cause someone to have a longer-than-expected recovery. It's important to talk with a healthcare provider who can identify and address these issues to help improve your recovery.

How do I get treatment for concussion?

The Michigan NeuroSport Clinic is a University of Michigan program that specializes in the diagnosis and management of concussions. To schedule an appointment, please call (734) 930-7400.

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