

What is a Concussion?

A concussion, or Traumatic Brain Injury (TBI), is a blow or jolt to the head that can temporarily or permanently impair someone's physical abilities and change how someone thinks, acts, and learns.

A concussion is a type of TBI that can also be referred to as a "closed head injury".

How can a concussion affect you?

Changes in Emotional Being

- Higher irritability
- Argumentative
- Withdrawn
- Lack of energy
- More defiant
- Inappropriate behavior
- Inappropriate emotional reactions
- Emotional ups & downs
- Easily annoyed

Physical Symptoms

- Reduced/impaired concentration
- Light and noise sensitivity
- Fatigue, sluggishness
- Nausea
- Blurred vision
- Dizziness

Changes in Performance

- Reduced/impaired concentration
- Slower processing speed
- Lapses in short-term memory
- Slower to learn new concepts
- Shorter attention span
- Difficulty organizing
- Difficulty completing assignments and studying for tests

What you should know?

To help you keep track of your recovery progress, we have made the Step Up To Recovery guide. Each stage of recovery corresponds with each colored zone.



General information about you and your concussion

1. **Your Recovery Team includes:** you, your family, teachers, school nurse, healthcare provider and your friends. Make sure to include them in the recovery process so they can be a strong support system for you. Please keep in mind that depression or anxiety may play a major role in prolonging your symptoms, thus it is very important to receive support from your Recovery Team.
2. Remember that some symptoms associated with a concussion may benefit from physical therapy. If you experience problems with balance/dizziness, difficulty reading or using screens, or whiplash, it may be beneficial for you to work with physical therapy or manual therapists soon after your injury.
3. Sleep and rest are VERY important! If you are having trouble sleeping please let us know.
4. Make sure everyone understands that your injury may be invisible, but is very serious. A concussion needs to be treated as carefully as any other injury and it is important to follow your healthcare provider's recommendations.
5. Be aware of how you are feeling and, as you recover, don't continue an activity if it worsens your symptoms. Remember, your long-term goal is very important: to protect your brain!

So you've had a concussion and you're in the **red zone**...

What now?

Do:

- REST! The most important thing you can do is get good sleep.
- Limit screen-time, socializing and reading and stop if symptoms worsen.
- Have your parents call your school to designate a contact person who can help you keep up with schoolwork.

Don't:

- Attend school.
- Ignore any symptoms.
- Engage in physical activity or sports.

Remember! Call your healthcare provider or go to the ER if any of these symptoms develop:

- Headaches that worsen
- Seizures
- Neck pain
- Drowsiness and inability to be awakened
- Repeated vomiting
- Slurred speech
- Weakness or numbness in arms or legs
- Unusual behavior change
- Increasing irritability
- Loss of consciousness
- Inability to recognize people or places
- Increasing confusion



Next Steps

The office will contact you regarding your recovery.

So you've had a concussion and you're in the **orange zone**...

What now?

Do:

- **Rest.** Be sure to get good sleep.
- Limit use of screens and reading and stop if symptoms worsen.
- Try to attend school, even if you have mild concussion symptoms. Consider wearing sunglasses or using ear-plugs to help with light and sound sensitivity.
- Keep in touch with your school contact person so they can help you keep up with schoolwork.
- Get light exercise, such as walking, yoga, and stationary biking, as long as your symptoms don't worsen.



Don't:

- Attend more than a 1/2 day of school
- Take any notes or tests.
- Ride the bus or spend time in the cafeteria.
- Participate in sports, band, chorus, or physical education.

Good to know:

The temporary changes in your life that result from a head injury increase your risk for developing depression or anxiety. If you are feeling over-whelmed by this, PLEASE tell your parents or contact our office. **Other things to look out for are:**

1. **Post-Concussion-Syndrome:** A disorder that may occur after a head injury. Symptoms include dizziness, fatigue, and headache well after the initial injury.
2. **Second-Impact-Syndrome:** A rare but catastrophic occurrence that may lead to severe debilitation or even death. It involves a second injury to the brain before the first injury has fully healed. It can be prevented by immediate removal from play following a blow to the head and strict adherence to your recovery plan.

Next Steps

The office will contact you regarding your recovery.

So you've had a concussion and you're in the **yellow zone**...

What now?

Do:

- Attend full days of school.
- REST. Be sure to get good sleep.
- Limit use of screens and reading and stop if symptoms worsen.
- Keep in touch with your school contact person so they can help you keep up with schoolwork.
- Increase your involvement in band and chorus, social activities, and sports (see page "Returning to Play").

Don't:

- Play any contact sports or participate in any activity that puts you at risk for another head injury.
- Push yourself with schoolwork. Once you start doing your homework again you can try to start taking tests again.



Just so you know:

If problems with balance, dizziness, difficulty with reading or looking at a screen, or neck pain are not improving, it may be helpful to see a physical therapist or manual therapist. **Please let your healthcare provider know.**

Next Steps

The office will contact you regarding your recovery.

So you've had a concussion and you're in the **green zone**...

What now?

Do:

- Attend full days of school.
- REST. Be sure to get good sleep.
- Limit use of screens and reading and stop if symptoms worsen.
- Keep in touch with your school contact person so they can help you keep up with schoolwork.
- Increase your involvement in band and chorus, social activities, and sports (see page "Returning to Play").

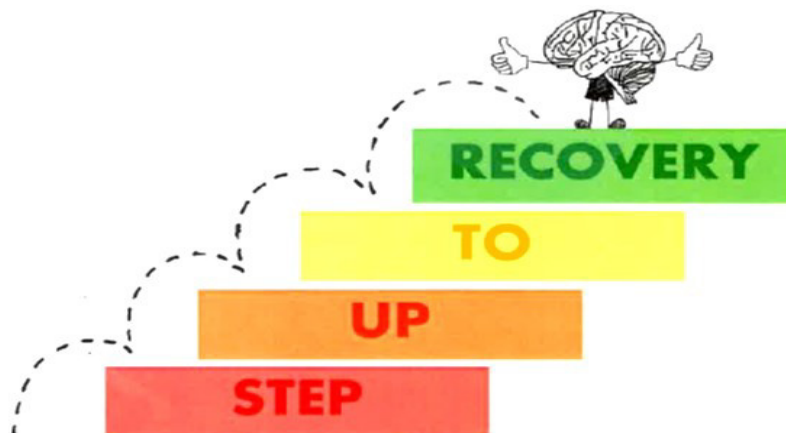


One more thing...

To help with managing a potential future concussion, there are some additional tests that can be performed. The ImPact Test is computer-ized and gives healthcare providers additional information about how the brain is functioning. Though it cannot diagnose concussions, this test can be helpful with deciding when to return to activities.

It can be performed at InterMed if not available through your school or sports team.

You made it to the green zone!



Returning to play

Now that your symptoms have greatly improved and you are back to school full-time, you may begin to gradually return to sports. We want you to do this slowly so that if your symptoms return we can adjust the plan. It is best that someone (parents, athletic trainer, physical therapist or coach) help you through this.

DIRECTIONS: Go through the stages in order, doing **ONLY** one stage per day. If you complete Stage 2 and feel no symptoms, you may move on to Stage 3 the **NEXT** day, and so on. You will need to be cleared by your healthcare provider prior to participating in contact activities.

If you develop symptoms, you need to **STOP** activity and rest for a day. You must have another 24-hours of symp-tom-free rest before you return to the progression. At that point, go back to the last stage that was symptom-free and begin again from there.

Stage	Appropriate Exercise	Example	Goal
No exercise	REST! Return to academics		Recovery
Light aerobic exercise	Yes: walking, swimming, biking No: resistance training or sports	Ride your bike for 20-30 minutes. You should be working hard enough to breathe faster, but not so hard that you are unable to carry on a conversation.	Increase heart rate
Sport-specific exercise	Yes: sprinting, skating, cutting drills. No: body contact or head impact.	Have your coach set up some cones. Sprint back and forth or in zig-zags. Run down the basketball court and jump through a layup motion. Do these types of drills for about 20-40 minutes.	Add movement
Non-contact drills	Yes: passing, shooting, dodging, etc. Start resistance training	Dribble the soccer ball in and out of cones, then pass or shoot. 30-40 minutes of drills like this. Only do drills where you are not at risk of running into other people or objects.	Exercise, coordination, cognitive drills
STOP! Talk to your healthcare provider before any contact activity!			
Full-contact practice	Full-contact practice	Participate fully in practice. Full length and full-contact.	Restore confidence and assess functional skills
Playing during games	Playing full-contact practice and games		Return to full sports participation