If a student in your classroom is recovering from a concussion, you need quick, easily accessible information about how the injury can affect learning and social interactions. At Premier Health, we want to help you understand the signs and symptoms of a concussion so you can work with students to successfully reintegrate them into your classroom.

You are an important part of the student’s recovery care team. If you suspect a student is exhibiting signs or symptoms of a concussion, but may not be receiving care, we suggest you follow your school’s protocol for informing parents or guardians.

UNDERSTANDING CONCUSSIONS
A concussion, the most common kind of traumatic brain injury, can be caused by a blow to the head, a fall, or a hard hit to the body that causes the head to be jolted, or suddenly spun. The hit or fall causes a movement of the brain within the skull, changing the way the brain normally works. Concussions are sometimes called “mild” traumatic brain injuries because they aren’t usually life-threatening, but they should still be considered serious injuries as they do represent brain trauma.

It is important to encourage students to be honest about the symptoms they feel. Sometimes, young people with concussions can feel pressure to “tough it out” and get back to their normal routine as quickly as possible. But, the brain needs time to recover, and that recovery can be aided by recognizing the symptoms a student may be experiencing.

CONCUSSION SIGNS AND SYMPTOMS
There are a variety of signs and symptoms that typically accompany a concussion. These may not be noticeable right away, but could present themselves days, weeks, or even months after a head injury. Some of these, according to the American College of Sports Medicine, include:

- Anxiety
- Blurry vision
- Change in academic performance
- Changes in sleep pattern
- Concentration problems
- Confusion or lack of clarity
- Dizziness or balance problems
- Fatigue
- Headaches
- Irritability
- Loss of consciousness
- Memory loss
- Mood changes
- Nausea or vomiting
- Sensitivity to light and sound

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THE RECOVERY CARE TEAM
Once a student has been diagnosed with a concussion, it is important everyone involved in the student’s care is communicating through the recovery process. The recovery care team includes the student, parent and guardian, the student’s doctors, athletic trainer, school nurse, the school’s counselor, administrators, teachers, and coaches so that everyone will know the signs and symptoms to watch for after a concussion.

As the educator, your role on the team is to observe the student in the classroom and ensure that information about student’s behavior and academic performance while in your classroom are being communicated with the team.

POST-CONCUSSION TREATMENT
While most students recover quickly from a concussion, others have effects that last much longer. The severity of the concussion may affect the speed of recovery.

If the student is an athlete he or she may have had a pre-season baseline cognitive function test such as ImPACT, a follow-up test to assess the student’s current condition may be given to aid in the creation of an effective treatment plan. The post-concussion test can also be a helpful in determining if the student is ready to return to the learning environment. Once a concussed student returns to class, it is important to take the proper steps to help him or her continue through the recovery process which may include these care tips:
• Rest during the day
• Keep away from bright lights and loud sounds
• Do one thing at a time
• Don’t work on the computer, play video games, or text during the early parts of recovery
• Write down things that seem difficult to remember
• Avoid physically demanding activities, including recreational and contact sports
• Return to normal activities gradually when approved by a physician, and on a lighter schedule when possible

RETURN TO ACADEMICS
A concussion can affect a student’s return to the classroom, but you can take steps to help him or her ease back into the learning routine.

It may be beneficial for the student to start back to school slowly; for example, going for only half days at first, and taking multiple breaks during study sessions. Learning-related effects to watch for include:
• Being easily distracted
• Decreased ability to cope with stress
• Difficulty with multi-step problem solving
• Headaches and fatigue when doing schoolwork
• Much more time needed to complete assignments
• Problems retaining information
• Slow reading

If a student still seems to be struggling, there are some things you can do to help. Those include:
• Having someone else take notes during the lesson
• One-on-one tutoring
• Oral exams
• Use a reader to share the assignments out loud
• Providing copies of teacher notes
• Making an individualized education plan or 504B (sometimes necessary for prolonged or severe severe effects)

If the education team works together with the student’s parents to help monitor and ease effects, the student should be able to make a smooth transition back into the learning environment.

OHIO LAW ABOUT RETURNING TO SPORTS PLAY AFTER CONCUSSION
Before a student may return to playing a sport, Ohio law requires written permission from a physician or other licensed health care provider authorized to make that determination. The Ohio High School Athletic Association’s medical authorization to return to play form can be found at ohsaa.org/medicine/AuthorizationToReenter.pdf.

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We recommend that a student who has suffered a concussion have a physician’s note releasing him or her to participate in a physical education class. Returning to that activity too soon may cause the signs and symptoms of a concussion to increase or return and impair healing and recovery. The same guidelines used for return-to-play in a sport can be followed for return to full participation in a physical education class. The progression steps are:

- **STEP 1** No activity – complete physical and cognitive rest
- **STEP 2** Light aerobic exercise – walking, light stationary biking, no-resistance training; limited head movement; other activities at 30 to 40 percent of regular intensity and for less than 30 minutes
- **STEP 3** Sport specific exercise – stationary biking, jogging, running drills; non-impact head activities; other activities at 40 to 60 percent of regular intensity and for only 30 minutes
- **STEP 4** Non-contact training drills – more intense non-contact drills, plyometrics, running, springing; resistance training; other activities at 60 to 80 percent of regular intensity and for 60 to 120 minutes
- **STEP 5** Full contact – resume normal practice activities at a regular intensity level
- **STEP 6** Return to play – normal game and competition play

A student should continue through the steps in order, provided that no signs or symptoms recur during or after each activity. Each stage usually takes at least 24 hours, so unless there are additional effects or concerns, the student’s recovery should take about a week. If any signs or symptoms recur, the student should move back to the previous stage and try the next stage again after resting for 24 hours.

**ADDITIONAL INFORMATION**


Additional information is available on the following websites:
- **Zurich Guidelines** - bjsm.bmj.com/content/47/5/250.full
- **National Athletic Trainer Association** - nata.org
- **American College of Sports Medicine** - acsm.org
- **Centers for Disease Control and Prevention** - cdc.gov

**Premier Health**

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Miami Valley Hospital
**Miami Valley Hospital North**
**Miami Valley Hospital South**
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