

# Concussion: What You Need To Know In the Secondary School Setting

## WHAT IS A CONCUSSION?

A concussion is a type of traumatic brain injury, or TBI, caused by a bump, blow, or jolt to the head that can change the way your brain normally works. Concussions can also occur from a fall or a blow to the body that causes the head and brain to move quickly back and forth. Health care professionals may describe a concussion as a “mild” brain injury because concussions are usually not life-threatening. Even so, their effects can be serious.

## WHY IS RECOGNIZING A CONCUSSION SO IMPORTANT?

The immediate recognition of a concussion is critical as repeated concussions pose a very real threat. There is evidence that athletes who suffer a second concussion before the symptoms of the first have healed are much more likely to lose consciousness, have more severe and longer lasting symptoms, and may be susceptible to a phenomenon called Second Impact Syndrome, or SIS. Though rare, SIS is characterized by rapid swelling of the brain. Most instances are fatal, and those who live through SIS are often severely disabled. The first concussion does not need to be severe in order for SIS to occur and even a minor second blow can spark the onset of SIS

## CONCUSSION SYMPTOMS

Most athletes who experience concussion will exhibit any one or more of a variety of symptoms. A loss of consciousness is NOT always present. Headache is the most common symptom, but it is important to know that not all athletes experience concussion in the same way. Symptoms of a concussion may not be evident until several minutes, hours or a day later. The severity of the symptoms will also vary along with their duration. The following are a list of possible common symptoms by general categories:

### Signs and Symptoms

#### PHYSICAL

- |   |   |  |   |
|---|---|--|---|
| <input type="checkbox"/> Headache         | <input type="checkbox"/> Nausea           | <input type="checkbox"/> Dizziness                         | <input type="checkbox"/> “Don’t feel right”   |
| <input type="checkbox"/> Pressure in head | <input type="checkbox"/> Vomiting         | <input type="checkbox"/> Visual problems or blurred vision | <input type="checkbox"/> Sensitivity to light |
| <input type="checkbox"/> Neck pain        | <input type="checkbox"/> Balance problems | <input type="checkbox"/> Fatigue                           | <input type="checkbox"/> Sensitivity to noise |

#### COGNITIVE

- Confusion
- Feeling “slowed down”
- Feeling “In a fog”
- Difficulty concentrating
- Difficulty remembering

#### EMOTIONAL

- Irritability
- Sadness
- More emotional
- Nervousness or anxious

#### SLEEP

- Drowsiness
- Sleeping more than usual
- Sleeping less than usual
- Trouble falling asleep

## SUMMARIZED CONCUSSION MANAGEMENT PLAN

1. Mandatory Parent/Athlete Educational Meeting with Consent/Acknowledgement form
2. Recommended Baseline Testing (ImPACT or C3 Logix)
3. Concussion Training for Athletic Trainers and Coaches
4. Removal from Play Strategy (Coaches & non-medical staff)\*
5. Removal from Play Strategy (Athletic Trainer on site)\*  
\*An athlete will not return to play the same day a Concussion is *suspected!*  
Monitor > Evaluate > Communicate > Rest > Follow-up
6. Return to Learn Strategy (Getting back to school full time)
7. Return to Sport Strategy (Working with the AT on returning to full sport participation)



St. Luke's Concussion Clinic: 381-2665

For additional information, please visit:

[www.stlukesonline.org/concussion](http://www.stlukesonline.org/concussion)

**An initial period of 24-48 hours of both relative physical and cognitive rest is recommended before beginning the Return-to-Learn and Return-to-Sport Strategies.**

**Graduated Return-to-Learn Strategy**

*\*The Return to Learn strategy is an individualized process. The graph below is a general example and may not apply to every student.*

	<b>Mental Activity</b>	<b>Activity at Each Step</b>	<b>Goal of Each Step</b>
1	Daily activities that do not increase the athlete's symptoms	Typical activities that the athlete does during the day as long as they do not increase symptoms (e.g. reading, texting, screen time). Start with 5-15 minutes at a time and gradually build up.	Gradual return to typical activities
2	School activities	Homework, reading or other cognitive activities outside of the classroom.	Increase tolerance to cognitive work
3	Return to school part-time	Gradual introduction of schoolwork. May need to start with a partial school day or with increased breaks during the day.	Increase academic activities
4	Return to school full-time	Gradually progress school activities until a full day can be tolerated.	Return to full academic activities and catch up on missed work.

If the athlete continues to have symptoms with mental activity, some other accommodations that can help with return to school may include:

- Starting school later, only going for half days, or going only to certain classes
- More time to finish assignments/tests
- Quiet room to finish assignments/tests
- Not going to noisy areas like the cafeteria, assembly halls, sporting events, music class, shop class, etc.
- Taking lots of breaks during class, homework, tests
- No more than one exam/day
- Shorter assignments
- Repetitions/memory cues
- Use of a student helper/tutor
- Reassurance from teachers that the child will be supported while getting better

Source: SCAT 5  
Davis, GA, et al. Br J Sports Med 2017; 0:1-8. Doi 10.1136/bjsports-2017-097506SCAT5

**GRADUATED RETURN TO SPORT STRATEGY (RTS)**

Athletes with a concussion should not return to play the same day. Return to sport strategies begin with return to learn (successfully tolerating school) and then a multistep process gradually returning the athlete to normal activities over a period of several days. There is a minimum 24 hour period between each step.

**Limited Activity > Light aerobic exercise > Sport specific exercise > Non-contact practice > Full Contact Practice**

If all steps are completed with no return in signs or symptoms then the athlete is safe to return to competition. If at any time the athlete's signs or symptoms reoccur they must go back to the previous asymptomatic level and reattempt progression after a further 24 hour period of rest and symptoms have resolved. **Athletes must be evaluated prior to starting the return to learn/return to sport processes by a licensed healthcare professional that has advanced training in concussion management.**



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