



## RETURN TO LEARN

### What is a concussion?

A sports related concussion is a traumatic brain injury, caused by a direct blow to the head, neck, or body resulting in an impulsive force being transmitted to the brain that occurs in sports and exercise related activity. Symptoms and signs may present immediately or evolve over minutes to days. Sports related concussions commonly resolve within days but may be prolonged. **All concussions are potentially serious and may result in complications including prolonged brain damage and death if not recognized and managed properly.** Chemical changes and damage to brain cells may occur in a concussion, and it is important to understand that *a concussion affects the function of the brain, not the brain's structure.*

Tests such as MRIs and CT scans will **NOT** show a concussion. Concussions are diagnosed by a physician through a comprehensive exam which includes an understanding and observation of the student's signs and symptoms and administering a series of neuro-cognitive tests which indicate the level and quality of brain function at the time of the exam.

**On July 1, 2011 the Kansas Legislature's *School Sports Head Injury Prevention Act* went into effect. This law can be summarized as follows:**

- A school athlete may not participate in any sport competition or practice session until both the participating student and the student's parent/guardian has signed and returned to the school, a concussion and head injury information release form. This form is an annual requirement.
- If a school athlete suffers, or is suspected of having suffered, concussion or head injury during a sport competition or practice session, the student shall be immediately removed from the sport competition or practice.
- Any school athlete who has been removed from a sport competition or practice session shall not return to competition or practice until the athlete is evaluated by a health care provider and the health care provider provides such athlete a written clearance to return to play or practice.

*For the full language of the Kansas law and KSHSAA concussion management guidelines, click [HERE](#).*

**Based on a survey of over 1250 Kansas high school educators, did you know .....**

- 34% of Kansas high school teachers report seeing decreases in academic performance in students after a concussion.
- 45% of Kansas high school teachers report observing students return to the classroom with learning difficulty after a concussion.
- 42% of Kansas high school teachers who don't coach have received any type of concussion training from their district.
- 36% of Kansas high school teachers report that their school district has a Return to Learn plan in place for their students. Out of this 36%, 23% have been provided a copy of the plan.
- Less than 19% of Kansas high school teachers report that their school or district provides any type of training to review academic accommodations for concussed students.
- 35% of Kansas high school teachers who don't coach are aware of the KSHSAA concussion guidelines.
- 44% of Kansas high school teachers report that their school has a staff member assigned to authorize academic accommodations for students recovering from a concussion.



## RETURN TO LEARN

### **I'm a classroom teacher, why do I need to understand sports related concussions?**

Students may need adjustments to their academic workload for a short period of time while recovering from a concussion. Research has shown post-concussion students with difficulty in memory and vision issues are more likely to have school-related problems.

### **How does a concussion affect learning?**

Trying to meet all academic requirements too soon after sustaining a concussion may more than mildly exacerbate symptoms and delay recovery. A concussed brain is not working at a normal functional level. The brain must work harder and longer to process information which can adversely affect the student's academic achievement. Additionally, certain stimulus such as screen time on computers and tablets and projector/whiteboard viewing can increase symptoms and may need to be minimized or eliminated early in the recovery process. Any academic modifications should be coordinated jointly between the student's medical providers and school personnel.

### **What should we consider as our school develops a return to learn plan for students recovering from a concussion?**

#### **Create a team**

A school administrator, possibly the athletic director should take the lead in creating a Concussion Management Team in the school. Depending on the size of school and what personnel are available, this team may consist of the athletic director, teachers, school nurse, school counselor, athletic trainer, physician, coaches and obviously the concussed student and his/her parents.

The goal of the concussion management team is to create an organized and collaborative approach to help the student safely and comfortably reintegrate back into the classroom setting. Effective communication is the key as everyone involved in the student's education must be aware of the student's status at that moment and what school and classroom triggers need to be avoided. Ideally one person on the management team will serve as the point person, monitoring the student multiple times throughout the day and coordinating the flow of information between all other members of the team.

It is important that any communications and instructions from medical providers outside of the school setting are being shared with school personnel. The student's parents can play a key role in this process of keeping the lines of communication open between the student's physician and the school.

#### **Train the team**

School personnel who may be involved as members of the concussion management team need to be trained annually. Some items that should be part of the training are understanding the signs and symptoms of concussions, recognizing triggers that negatively impact students recovering from a concussion, understanding appropriate and effective accommodations, a review of everyone's role on the concussion management team and a review of the different phases of the return to learn progression.

At times student-athletes may try to hide a concussion from their teachers, coaches, parents, or athletic trainer. At other times they may not even realize they sustained a concussion. Therefore, it is important for everyone involved in the education of the student to know the signs and symptoms of a concussion.



## RETURN TO LEARN

<b>Symptoms may include one or more of the following:</b>	
<ul style="list-style-type: none"> <li>• Headaches/“Pressure in head”</li> <li>• Nausea or vomiting</li> <li>• Neck pain</li> <li>• Balance problems or dizziness</li> <li>• Blurred, double, or fuzzy vision</li> <li>• Sensitivity to light or noise</li> <li>• Feeling sluggish or slowed down</li> <li>• Feeling foggy or groggy</li> <li>• Drowsiness</li> </ul>	<ul style="list-style-type: none"> <li>• Change in sleep patterns</li> <li>• “Don’t feel right”</li> <li>• Unexplained nervousness, anxiety, irritability, sadness</li> <li>• Confusion</li> <li>• Concentration or memory problems (forgetting sport assignments)</li> <li>• Repeating the same question/comment</li> </ul>

<b>Signs observed by classmates, teachers, parents, and coaches include:</b>	
<ul style="list-style-type: none"> <li>• Actual or suspected loss of consciousness</li> <li>• Seizure</li> <li>• Tonic posturing</li> <li>• Ataxia (clumsy voluntary movements)</li> <li>• Poor balance</li> <li>• Appears dazed</li> <li>• Vacant facial expression</li> </ul>	<ul style="list-style-type: none"> <li>• Confusion</li> <li>• Memory difficulties</li> <li>• Answers questions slowly</li> <li>• Slurred speech</li> <li>• Shows behavior or personality changes</li> <li>• Can’t recall events prior to injury</li> <li>• Can’t recall events after injury</li> </ul>

### **Understanding accommodations**

Every student reacts differently to a concussion. To minimize academic and social disruptions, in most cases it is recommended students not be completely isolated, even for a short period of time. Rather students should continue to participate in activities of daily living that do not more than mildly exacerbate\* concussion symptoms. The key is to understand what triggers lead to an increase in the student’s concussions symptoms and to avoid or minimize those triggers. Communication is key between the members of the concussion management team to ensure everyone understands what triggers to avoid. Certain classes such as math that requires a lot of cognitive processing or classes that require a lot of reading may initially be hard for a concussed student to tolerate. Therefore, accommodations in these courses may differ from lesser cognitive courses. Other courses demonstrating more challenges are Science (e.g. Biology & Chemistry), English, Social Studies, and Foreign Language. Also, students attending higher levels of cognitive courses (e.g. Honors, AP) may experience longer recovery periods.

### **Education accommodations that may need to be considered during the student’s recovery:**

- Environmental adjustments: Modified attendance, frequent academic rest breaks, limited screen time.
- Physical adjustments: Avoid any activities with a risk of contact. Avoid classes with loud noises such as band or shop. Sunglasses and/or earplugs may be helpful in certain settings.
- Curriculum adjustments: Allowing extra time to complete assignments, providing pre-printed class notes.
- Testing adjustments: Delaying tests/quizzes or providing additional time to complete.

**Students suffering from long-term concussion symptoms can be considered for an IEP or 504 plan.**

*These are suggestions of accommodations to be considered by the concussion management team. Other accommodations may also be appropriate and not all of the accommodations listed may be necessary.*



## RETURN TO LEARN

Below is a progression that can be followed which gradually reintegrates the student to the classroom.

RETURN TO LEARN PROGRESSION (If Needed)	
Step	Activity
1	Daily activities that do not result in more than a mild exacerbation of symptoms*. E.g., reading while minimizing screen time. Start with 5-15 minutes at a time and increase as tolerated.
2	School activities such as homework, reading, or other cognitive activities outside the classroom.
3	Return to school part-time with a gradual introduction of schoolwork. May need to start with a partial day or take several breaks throughout the day.
4	Return to school full-time with a gradual progression in school activities until a full day can be tolerated.

Step #1 in concussion recovery is relative rest for the first 24-48 hours. During this time students may participate in activities of daily living and may perform light physical activity, such as walking, provided symptoms are not more than mildly exacerbated\* for only a brief (less than an hour) period of time. Reduced screen time is also recommended during the first day or two after injury. Students should be encouraged to return back to a normal routine as quickly as possible, tolerating a mild exacerbation\* of symptoms with mental activity.

**\*Mild exacerbation of symptoms:** No more than a 2 point increase on a 10 point scale.

**Not all students recovering from a concussion will need to go through all of these phases or require academic accommodations. In fact, many students recovering from a concussion will not need to miss any school at all. The phases above represent a general progression for a student with lingering concussion signs and symptoms, but who may still be able to handle some level of cognitive demand.**

Return to sport occurs in conjunction with return to learn and should take place under the guidance of a health care professional. No consideration should be given to returning to full sport activity until the student is fully integrated back into the classroom.



## REFERENCES

A school administrator's guide to academic concussion management. Accessed March 2019 at <https://www.nationwidechildrens.org/specialties/concussion-clinic/concussion-toolkit/a-school-administrators-guide-to-academic-concussion-management>.

An educator's guide to concussions in the classroom. Accessed March 2019 at <https://www.nationwidechildrens.org/specialties/concussion-clinic/concussion-toolkit/an-educators-guide-to-concussions-in-the-classroom>.

Bomgardner, R. K. (2019). High school faculty awareness of post-concussion return-to-learn policies. Unpublished manuscript.

Patricios JS, Schneider KJ, Dvorak J, Ahmed OH, Blauwet C, Cantu RC, Davis GA, Echemendia RJ, Makdissi M, McNamee M, Broglio S, Emery CA, Feddermann-Demont N, Fuller GW, Giza CC, Guskiewicz KM, Hainline B, Iverson GL, Kutcher JS, Leddy JJ, Maddocks D, Manley G, McCrea M, Purcell LK, Putukian M, Sato H, Tuominen MP, Turner M, Yeates KO, Herring SA, Meeuwisse W. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport-Amsterdam, October 2022. *Br J Sports Med.* 2023 Jun;57(11):695-711. doi: 10.1136/bjsports-2023-106898. PMID: 37316210.

Returning to school after a concussion: A fact sheet for school professionals. Accessed March 2019 at [https://www.cdc.gov/headsup/pdfs/schools/TBI\\_Returning\\_to\\_School-a.pdf](https://www.cdc.gov/headsup/pdfs/schools/TBI_Returning_to_School-a.pdf).