

# ***ASAA Guide to Concussions in Sports***

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## **Concussion Facts**

- A concussion is a traumatic injury to the brain which results in a temporary disruption of normal brain function.
- A concussion occurs when the brain is violently rocked back and forth or twisted inside the skull as a result of a direct or indirect force.
- Concussion symptoms may last from a few days to many months.
- Concussions can cause symptoms which interfere with school, work, and social life.
- An athlete should not return to sports when still having symptoms from a concussion as they are at risk for prolonging symptoms and at risk for sustaining additional, more serious, brain injury.
- Concussion symptoms may appear immediately or develop over the next several days or weeks. The symptoms may be subtle and are often difficult to recognize.

## **Signs and symptoms of a concussion**

- Appears dazed or stunned, moves clumsily
- Confusion, can't recall events
- Answers questions slowly
- Lost consciousness
- Headache
- Nausea
- Balance problems or dizziness
- Double or fuzzy vision
- Sensitivity to light or noise
- Behavior or personality changes
- Concentration, memory problems

## **Suspected Concussion**

If a student is suspected of having a concussion, they must be immediately removed from play, be it a game or practice. Alaska Statute requires that (1) a student who is suspected of having sustained a concussion during a practice or game shall be immediately removed from the practice or game and (2) a student who has been removed from participation in a practice or game for a suspicion of a concussion may not return to participation in practice or game play until the student has been evaluated and cleared for participation in writing by a qualified person who verifies they are trained, in the evaluation and management of concussions.<sup>1</sup>

Continuing to participate in physical activity after a concussion can lead to worsening concussion symptoms, increased risk for further injury, and even death. Parents, coaches, and officials are not expected to be able to "diagnose" a concussion, as that is the job of a medical professional. However, they must be aware of the signs and symptoms of a concussion and if they suspect a concussion, then the student must stop playing.

## **When in doubt, sit them out!**

All students who sustain a concussion need to be evaluated and cleared for participation by an athletic trainer or qualified person who verifies that they are currently trained in the evaluation and management of concussion. Contact the student's health care provider, explain what has happened and follow their instructions. If the student is vomiting, has a severe headache, is having difficulty staying awake or answering simple questions they should be taken to the emergency department.

## **Return to play**

After it is determined that a student has suffered a concussion, they may not return to play or participate until they have completed the ASAA Return to Play Protocol. Concerns over students returning to play too quickly have led state lawmakers, in Alaska to pass laws stating that no player shall return to play following a suspicion of concussion until they are cleared by an appropriate health care professional. The law also mandates that coaches receive education on recognizing the signs and symptoms of concussion.

When it has been determined that a student has sustained a concussion they must successfully complete the ASAA Return to Play protocol (RTP). There is a minimum of 24 hours between steps in the Protocol. Some athletes complete one step each day. An individual athlete may be guided through the Protocol more slowly if they are at risk for prolonged concussion or additional brain injury. If symptoms recur during exercise, then exercise is ended and begins the next day at the preceding day's level.

## **ASAA Concussion Return to Play Protocol**

**SYMPTOMATIC STAGE:** Physical and Cognitive Rest, then Incremental cognitive work, without provoking symptoms. **If no symptoms, for 24 hours then:**

- Day 1 15 min light aerobic activity no resistance training.
- Day 2 30 min light-moderate aerobic activity, no resistance training. Start PE Class
- Day 3 30 min moderate-heavy aerobic activity, no resistance training.
- Day 4 30 min heavy aerobic activity, 15 min resistance training
- Day 5 Return to Practice, non-contact limited participation
- Day 6 Return to full-contact practice
- Day 7 Medically eligible for competition when completes RTP protocol and is cleared by qualified person

For complete protocol see ASAA forms, Healthcare Provider Release Concussion Return to Play

**Note:** If symptoms recur at any step, the athlete should cease activity and be re-evaluated by their health care provider.

### **COMPLETION OF RETURN TO PLAY PROTOCOL**

When the Return to Play Protocol has been successfully completed, the student will be examined by the responsible healthcare provider. Additional tests may be appropriate. The provider will sign a medical clearance to resume competition. Completing the Return to Play Protocol and medical examination does not mean that the brain has fully recovered from concussion or that there is not risk in returning to

competition. Participation in athletics is accompanied by risk of injury, permanent disability, and death. Having recently sustained a concussion, a student is at increased risk for another head injury.

## **Concussion and schoolwork**

Following a concussion, many students have difficulty with cognitive work: thinking, focusing attention, calculating, attending school, doing homework, taking tests. These problems may last from days to months and often involve difficulties with short and long-term memory, concentration, and organization.

Students should begin with a period of rest, in which they avoid cognitive work. As concussion symptoms diminish and they feel able, they can begin trials of cognitive work, e.g. reading, texting, computer, TV, videos, school. The introduction of cognitive work should be in short increments which increase progressively in length, so long as symptoms do not recur or worsen with the work. For example, start with 30 minutes of computer time, and, if symptoms do not worsen, try one hour later in the day. If several hours of cognitive work are well tolerated at home, try attending a half day of school. When a full day of school is tolerated add homework.

Academic accommodations may be necessary for students attempting to attend school when they still have concussion symptoms. In many cases it is best to lessen the athlete's class load early on after the injury. This may include staying home from school for a few days, followed by a lightened schedule for a few days, or perhaps a longer period of time, if needed. Decreasing the stress on the brain early on after a concussion may lessen symptoms and shorten the recovery time. If cognitive work at any time provokes or exacerbates symptoms, then the work should be discontinued and there should be cognitive rest until the symptoms subside. The student can attempt to advance cognitive work again on the day following resolution of the increased symptoms.

## **Importance of complete recovery from a concussion**

Students who are not fully recovered from an initial concussion are significantly vulnerable for recurrent, cumulative, and even catastrophic consequences of a second concussive injury. The risk of such difficulties is diminished if the student is allowed time to recover from the concussion and return to play decisions are carefully made. No student should return to physical activity when symptoms of concussion are present.

The best treatment for a concussion is rest. There are no medications that can speed the recovery from a concussion. Exposure to loud noises, bright lights, computers, video games, television and phones (including text messaging) all may worsen the symptoms of a concussion. Allow the student to rest as much as possible in the days following a concussion. As the symptoms lessen, allow increased access to computers, video games, etc., but the access must be lessened if symptoms worsen.

## **Other Information**

1. The symptoms of a concussion will usually go away within two weeks of the initial injury. However, in some cases, symptoms may last for several weeks, or even months. Symptoms such as headache, memory problems, poor concentration, and mood changes can interfere with school, work, and

social interactions. The potential for such long-term symptoms and disability underscores the need for careful management of all concussions.

2. There is no “magic number” of concussions that determine when a student should give up playing contact or collision sports. The circumstances surrounding each individual injury, such as mechanism of injury and length of symptoms following the concussion, are very important and must be considered when assessing a student’s risk for further and potentially more serious concussions. The decision to “retire” from sports can only be reached following a thorough review of the students’ concussion history, coupled with a thorough and frank discussion between a healthcare provider.
3. The issue of “chronic encephalopathy” in some former NFL and NHL players has received much media attention. Very little is known about what may be causing dramatic abnormalities in their brains. These players had long professional careers after playing in high school and college. In most cases, they played more than 20 years and suffered multiple concussions in addition to thousands of other blows to their heads. Alcohol, steroid, and other drug use may also have contributed to the brain changes. The average high school athlete does not accumulate nearly the number of potentially injurious blows to the brain as a professional player. But we know that the teenage brain is much more vulnerable to injury and to more severe injury than the older brain. And the fact that we know very little about the long-term effects of concussions in young athletes is further reason to very carefully manage each and every concussion.

## What to do

- Learn to recognize the “Signs and Symptoms” of concussions.
- Teach students to speak up if they suspect that they or a teammate has a concussion.
- Monitor sports equipment for safety, fit, and maintenance.
- Monitor any decrease in grades or changes in behavior that could indicate concussion.
- Report concussions to appropriate school staff. This will help in monitoring and protecting injured students.

If you have any further questions regarding ASAA policies and procedures for managing concussions in students please visit the Alaska School Activities Association website  
<http://asaa.org>

For more information on concussions go to  
<http://asaa.org/resources/sports-medicine/bylaws-and-policies/>

<sup>1</sup> As interpreted by ASAA, “Qualified person” means either:

1. A health care provider licensed in Alaska, or exempt from licensure under Alaska law (AS 08.64.370(1), (2), or (4)), or
2. a person acting at the direction and under the supervision of a physician licensed in Alaska, or exempt from licensure.

As interpreted by ASAA, “Trained” means that the provider

1. Has completed the online CDC Concussion Course for Clinicians in the last two years (<http://www.preventingconcussions.org>) AND
2. At least one of the following:
  - a. completed 2 hours of CE or CME in Sports Concussion Management in the last 2 years
  - b. completed a 1 year Sports Medicine Fellowship
  - c. has a Certificate of Added Qualifications in Sports Medicine
  - d. Residency in Neurology or Neurosurgery.