

# Concussions

## What is a concussion?

**CONCUSSION DEFINITION** » Concussion is an IMMEDIATE and TRANSIENT (resolving fairly quickly) alteration in brain FUNCTION, including alteration in mental status and level of consciousness, resulting from mechanical force. ( –Am. Assoc. of Neurological Surgeons ) » Actual LOSS of consciousness (out cold, unresponsive) is no longer considered necessary to the definition. But, if present, the duration of unconsciousness should not exceed 30 minutes and is usually MUCH less.

Caused by : » Mechanisms › Direct head blow › Blow to other body regions › Blast waves › Shaking › Head rotation.

## What are concussion symptoms?

**Evident Early On Symptoms:** » Somatic › Headache › Visual disturbances › Nausea/vomiting › Dizziness › Impaired balance › Tinnitus » Cognitive › Confusion › Disorientation › Impaired judgment › Poor problem-solving › Retrograde amnesia › Anterograde amnesia

**Become Evident in Post- Concussion Stage:** » Emotional/Behavioral › Fatigue › Depression › Irritability › Sleep disturbances › Anxiety › Personality changes

## How do I know it's a concussion?

Concussions cannot be seen on x-ray or CT scans, they are diagnosed based on clinical assessment which is why it is so important to identify these symptoms early, on the sidelines and begin immediate treatment to prevent further complications.

**Identifying a concussion:** Check for symptoms above by having players answer simple questions about where they are, what they are doing, simple addition questions, etc. Questions should be appropriate for age group and should tell you how oriented they are. Next, conduct a motor exam, can they walk a straight line, are they off balance or dropping things? How is their depth perception? Can they touch their finger to their nose to your finger in a smooth motion? Is there any headache or nausea or vomiting? If any of these symptoms occur following a hard hit, tackle or fall then there is risk of a concussion as child should be removed from play immediately.

## How Do I Treat a Concussion?

» Brain rest, continued at home, with gradual return to activity. At least 1 week (7 days) of no contact or sports, or until symptoms have completely resolved. » Many concussion patients have an uneventful recovery within one month, but a significant minority still have symptoms three months out.

## **Why are concussions so dangerous?**

WHAT'S POST-CONCUSSION SYNDROME? » There is no universally accepted definition, but typically at least three of the same symptoms for a MINIMUM of one month following mTBI › Low tolerance for noise and light, headache, dizziness, fatigue, irritability, impaired memory, poor concentration, insomnia  
› Posttraumatic amnesia duration is a good predictor of post-concussion symptom severity

WHAT'S SECOND IMPACT SYNDROME? » A rare, but often fatal brain injury that occurs as the result of a second blow to the head minutes, days, or even weeks after a previous concussion event » Within seconds or minutes of a second impact, the patient collapses from massive cerebral edema that progresses to herniation in about half of cases » Caution patients and families about the importance of avoiding activities that put them at risk for a second injury in the hours, days, and weeks post concussion

CHRONIC TRAUMATIC ENCEPHALOPATHY (CTE) » A diffuse progressive, degenerative brain disease associated with repetitive brain blows including concussion and subconcussive blows to the head or to other body regions » CTE is not a condition trauma patients present with. Symptoms don't usually manifest until the fourth decade of life. » Warn patients and family members about the lifelong cumulative risk of recurrent brain injuries

### **PBYFL Concussion Protocol:**

Any suspected concussion requires removal from play immediately. Player must refrain from any type of practice or game until symptoms are completely resolved or for a minimum of 7 days. Concussion should be reported as an injury and requires a Doctors release note, both of which are to be sent to the PBYFL player safety officer, Jamie Carrillo, CCRN.