

# Second Impact Syndrome

Second Impact Syndrome (SIS) is a condition in which a second brain injury occurs shortly after a previous concussion - before the first has fully healed. The condition causes quick and severe brain swelling that

may lead to **severe brain injury or death.**

SIS can occur after a mild concussion and may happen days or weeks after the first concussion. Both concussions might normally be considered mild, but the combined impact leads to catastrophic consequences.

## Young athletes are at the highest risk.

Sports, such as hockey, football, boxing, and skiing carry the highest risks. While young athletes are at the highest risk, any player that returns to play too soon after a concussion is at risk.

The risks are so high that many states in the U.S. are passing laws requiring coaches and players to take concussion education and undergo assessment in the following sports: **Football, Soccer, Field Hockey, Cheerleading, Volleyball, Wrestling, Basketball, Lacrosse, Baseball, and Softball.**

This risk makes the importance of remaining out of play until any level of concussion has healed even more important. SIS can even occur during the same game for athletes if the player is not taken out of play at the first sign of a concussion.

### Symptoms will appear immediately.

Common symptoms include:

- Dilated pupils
- No eye movement
- Loss of consciousness
- Respiratory failure
- Death



Saskatchewan  
Brain Injury  
Association

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# CONCUSSION...

## Is a Brain Injury

A concussion (or mild brain injury) occurs every **4 minutes** in Canada!

There are approximately **6,000 concussions** in Saskatchewan each year!

Studies show that sustaining one concussion can make a person as much as 4 times more likely to suffer a second hit. With multiple concussions the player needs less of a hit to sustain an injury, and more time to recover. Successive concussions cannot only result in Second Impact Syndrome, but multiple concussions over time are shown to cause deteriorating cognitive function.

Researchers have developed a back to play system, with the average return to play time being between 7 and 10 days.

In play, coaches and players should use the Sports Concussion Assessment Tool (SCAT2) to determine if a player should be pulled out of the game, and also to assess the severity of the injury – this can also be a guide for return to play timelines.

For more check out: <http://bit.ly/qP2lxi>

If any symptoms of a concussion are present, the player should be immediately removed from play, regardless of objections. The player should then be carefully monitored and assessed by a medical health professional, as some concussion symptoms are not immediately obvious.

For return to play the following progression should be used:

- Complete rest until all symptoms are gone
- Light aerobic exercise
- Light, sport-specific exercise
- Non-contact drills in team practice
- Full contact drills, with permission from a physician
- Return to competition