

# SPORTS CONCUSSION

UNDERSTANDING SPORTS INJURIES AND CONDITIONS

SPORTS  
MEDICINE CENTER

TEXAS  
SCOTTISH RITE HOSPITAL  
FOR CHILDREN

## WHAT IS A CONCUSSION?

A concussion is a brain injury that disrupts normal brain function. It is usually caused by a sudden blow to the head or body that causes the brain to shake, damaging cells and creating chemical changes in the brain. An athlete does not have to be knocked out or have memory loss to have suffered a concussion. In fact, most athletes who suffer a sports-related concussion do not lose consciousness.

### IT'S SERIOUS:

- A concussion is a **brain injury**.
- When in doubt, **sit them out!** And keep them out!
- Returning to play before complete recovery puts the athlete at **risk of a more serious injury**.

## RECOGNIZING A CONCUSSION

### SIGNS OBSERVED BY OTHERS

The athlete may:

- Appear dazed or stunned.
- Be confused.
- Forget plays.
- Be unsure of game, score or opponent.
- Exhibit unsteadiness.
- Move clumsily.
- Answer questions slowly.
- Lose consciousness.
- Have memory loss.
- Be more sleepy or tired than usual.
- Seem sad, nervous or anxious.
- Be irritable, easily frustrated or upset.
- Have problems with academic performance.

### SYMPTOMS REPORTED BY THE ATHLETE

The athlete may complain of:

- Headaches.
- Concentration or memory problems.
- Nausea.
- Balance problems or dizziness.
- Double or blurred vision.
- Feelings of being “in a fog” or slowed down.
- Sensitivity to light or noise.
- Confusion.
- Just “not feeling right” or “feeling down.”

### RED FLAGS

If you notice the following, seek immediate medical attention:

- Worsening headache.
- Increasing confusion.
- Extreme sleepiness or trouble waking up.
- Vomiting more than once.
- Seizures.
- Trouble walking or talking.
- Weak or numb arms or legs.
- Any other sudden change in thinking or behavior.

**STOP**

Any athlete who shows signs or symptoms of a concussion should be removed from play immediately. The athlete should not be allowed to return to any activity until evaluated by a health care professional with experience and training in diagnosis and management of concussions.

The Texas Scottish Rite Hospital for Children (TSRHC) Sports Medicine Center is a comprehensive practice specializing in the treatment of sports-related conditions and injuries in young and growing athletes. The center offers a complete team of operative and non-operative physicians, nurse practitioners, nurses, physical therapists, medical assistants and athletic trainers – all working closely together to provide the best care for each patient.

The TSRHC Sports Medicine Center is a division of Texas Scottish Rite Hospital for Children.

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## DO WE REALLY HAVE TO SIT THEM OUT?

Yes! When an athlete is recovering from a concussion, the brain is functioning abnormally. Therefore, if an athlete sustains a second concussion before fully recovering from the first, the brain is unable to respond appropriately. This can lead to long-term consequences, and possibly even death (this is known as Second Impact Syndrome).

## WHEN IS IT SAFE TO RETURN TO PLAY?

Before returning to sports, an athlete who has suffered a concussion should be evaluated by his or her primary care provider or another medical professional who has experience in managing concussions. Returning to play before complete recovery puts the athlete at risk of a more serious injury. Once an athlete has no symptoms during everyday activities and school, a return-to-play protocol can be started under the guidance of a physician or certified athletic trainer.

## WHAT IS A BASELINE TEST?

A baseline neurocognitive test (i.e., ImPACT testing) is a computerized test that measures an athlete's ability to perform certain tasks to assess brain function such as memory and reaction time. This information can then be used for comparison in the event of a concussion. The test gives doctors access to information that can help develop the best plan of care for the athlete. Pre-season baseline testing is recommended for athletes participating in contact and collision sports. Many schools offer baseline testing, or you can call to schedule a baseline test at the TSRHC Sports Medicine Center.

## REDUCING THE RISK

### FOLLOW THE RULES

Coaches and parents should emphasize the importance of obeying the rules of the sport and discourage dirty and ill-intentioned play.

### STRENGTHEN NECK AND SHOULDER MUSCLES TO BETTER ABSORB A HIT

If the muscles surrounding the neck and shoulders are strong, they are better able to absorb shock and slow the movement of the head upon impact, which may reduce the risk of a concussion. Athletes should consult a strength coach or athletic trainer for exercises to improve neck and shoulder strength.

### PLAY SMART

Coaches should help players learn that playing hard does not mean sacrificing their health. Help players identify smart ways to make plays that protect the head.