

Loyola Medicine

Concussion Diagnosis and Treatment



Concussion Overview

A concussion is a mild traumatic brain injury from a blow to the head or body, causing the brain to shake inside the skull. If a concussion is not recognized and treated properly, there is a risk of death or severe health problems, including depression, second-impact syndrome, cerebral edema (brain swelling) or post-concussive syndrome.

Did You Know?

- As many as 50 percent of concussions may go undiagnosed.
- A loss of consciousness is not required for a concussion to have occurred.
- Those who have sustained a concussion are at higher risk of having another.
- Sports injuries are the most common causes of concussions, as well as falls and bicycle and car accidents.
- Adolescents may hide their symptoms and require detailed questioning about how they are thinking and feeling.

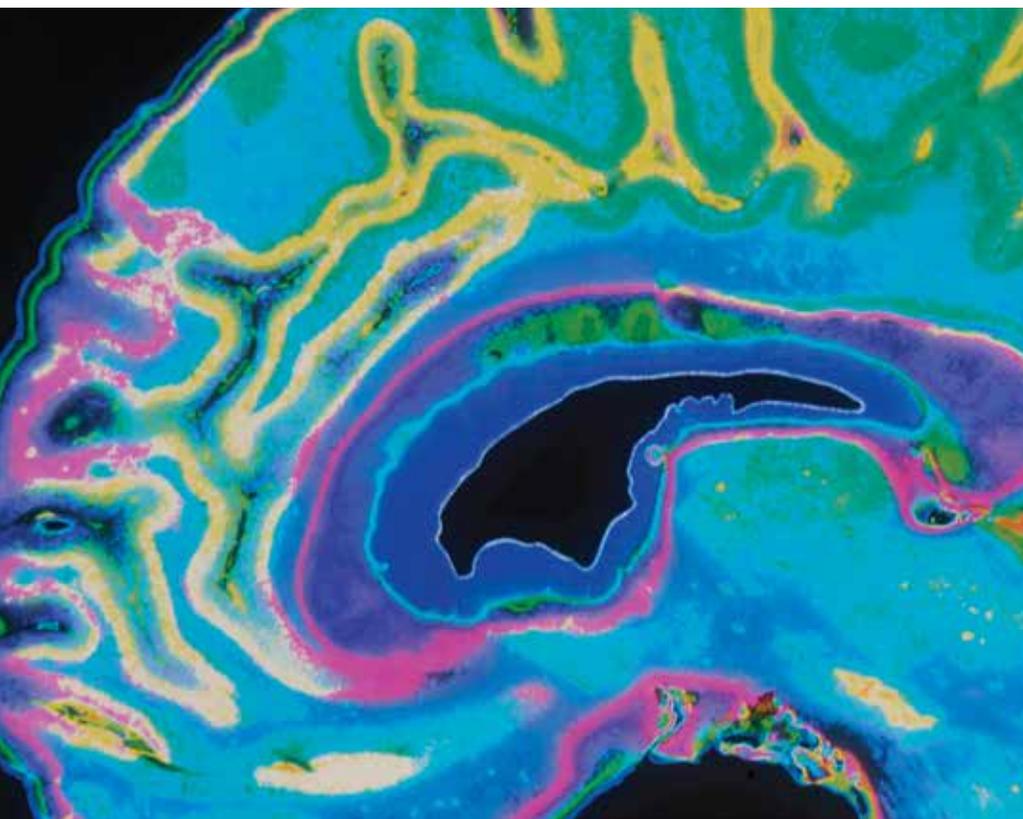
SIGNS AND SYMPTOMS

The symptoms of concussion may not appear immediately and may be subtle. Possible symptoms include:

- Changes in behavior
- Difficulty concentrating
- Dizziness
- Forgetfulness
- Headache
- Irritability
- Light sensitivity
- Loss of consciousness for a brief time
- Nausea and vomiting
- Restlessness
- Ringing in the ears (tinnitus)
- Seeing flashing lights
- Slurred speech (dysarthria)

More serious concussion symptoms include:

- Loss of consciousness for a longer period of time
- Muscle weakness on one or both sides
- Pupils of unequal size
- Respiratory distress
- Seizures
- Unusual eye movements



Take Immediate Action

It is important to seek immediate professional medical help if concussion is suspected. Do not return to play or any physical activity until you have been evaluated by a healthcare professional. If you are an athlete, you will need written medical clearance from a healthcare professional stating you are symptom-free before you can return to play.

How is Concussion Diagnosed?

In order to evaluate your condition, your Loyola doctor will assess your symptoms, conduct a neurological exam and review your medical history.

If you're suspected of having a concussion, the multidisciplinary team at Loyola will use a number of screenings to make a diagnosis, including assessment tools that evaluate memory, concentration, thinking ability, pupil size, vision, strength and reflexes. Some imaging tests like a CT scan or MRI may be used. An electroencephalogram (EEG) is used if you are continuing to experience seizures.

How is Concussion Treated?

The most important treatment for a concussion is rest for your body and brain. It's important to give yourself time to get better and slowly return to your regular activities.

You should also:

- Limit mental exertion and visual activity at school or work
- Avoid physical activity unless cleared by your doctor
- Get consistent, quality sleep on a regular schedule once you have been evaluated by your doctor
- Stay hydrated
- Eat a healthy diet on a regular schedule
- Limit medication and supplements to those prescribed/recommended by your doctor
- Avoid sustained exposure to light, sound, motion (e.g., Smartphone)

Complications Post-concussion

For the brain to fully heal, it is important to follow the activity restrictions ordered by your Loyola doctor. An additional injury to the brain before the first injury can heal may lead to **second-impact syndrome**. This is a serious condition in which permanent brain damage or even death can occur.

Some patients experience continuing symptoms over a period of months, known as **post-concussive syndrome**. Loyola offers several treatment protocols for long-term concussion management — including a specialized exercise treadmill protocol for post-concussive symptoms, which allows us to monitor your symptoms while under exertion or stress. We also offer a vestibular rehabilitation program, in which our physical therapists tailor individualized exercise programs to reduce dizziness and improve balance and motion sensitivities.



Multidisciplinary Approach to Diagnose and Treat Sports Concussions

At Loyola Medicine, we understand that a team approach is the best way to treat concussions in adults, adolescents and child athletes. That's why we've assembled a nationally recognized group of specialists who can respond quickly when you are suspected of having a concussion. Loyola's experienced, integrated team includes specialists from:

- Sports medicine
- Neurology
- Neuropsychology
- Neurosurgery
- Physical therapy
- Primary care

Whether you have a recent or prolonged concussion, our multidisciplinary team will help guide your return to your sport or activity. We will also coordinate with your school to develop a customized plan to transition your return to your studies.

During your visit at the Loyola Concussion Clinic, you may see multiple healthcare providers, from sports medicine physicians to neuropsychologists and physical therapists, depending on your symptoms and their severity. Our providers will consult with each other to develop a comprehensive coordinated plan of care that is tailored to your individual needs. Loyola's unique approach to comprehensive care minimizes the need for multiple appointments and locations.

Our doctors are leaders in the Chicago area in concussion education programs, speaking with schools and community groups on the causes, symptoms and problems associated with concussion.

As of 2011, the Illinois High School Association (IHSA) and Illinois state law require that every sports-related head injury be evaluated by a qualified medical professional prior to returning to the game.

Call Loyola's Sports Injury Hotline at **708-216-4263** to make an appointment if you suspect concussion.

Loyola offers expert care and support for concussion at the following locations:

Loyola Center for Health at Oakbrook Terrace

1S224 and 1S260 Summit Ave.,
Oakbrook Terrace, IL 60181

Loyola Outpatient Center

2160 S. First Ave., Maywood, IL 60153

Loyola Center for Health at Elmhurst

300 N. York St., Elmhurst, IL 60126

Loyola Center for Health at River Forest

7617 W. North Ave., River Forest, IL 60305

Concussion specialists at Loyola:

Primary Care

Sports Medicine

Nathaniel Jones, MD

Haemi Choi, MD

James Winger, MD

Neuropsychologist

Brenda Swartz, PsyD

Neurology

Matthew McCoyd, MD

Pediatric Neurology

Eugene Schnitzler, MD

Athletic Trainers

Caitlin Driscoll

Kristi McCracken

Physical Therapists

Heidi Schmidt, PT, DPT

Gina Reedy, PT, DPT

Paul Bissler, PT, DPT

Seth Kress, PT, MPT



**LOYOLA
MEDICINE**

We also treat the human spirit.®

2160 S. First Ave. • Maywood, IL 60153
888-584-7888 • loyolamedicine.org