

What is a Concussion?

A concussion is a mild traumatic brain injury that happens when a sudden blow to the head or body causes the brain to bang back and forth inside the head. This motion injures the brain and leads to a temporary disruption of brain function. Symptoms and signs may happen immediately or take minutes or hours to occur. With a concussion, brain scans like CTs and MRIs look normal.

What happens to the brain during a concussion?

- Demand for energy goes up, and energy supply goes down
- Stretching of nerves
- Swelling, blood flow changes, and waste build-up

How do we diagnose concussion?

There is no single test to diagnose a concussion. The doctor collects the details of the patient's medical history and injury. The doctor does a physical exam and certain tests, such as:

- **Clinical history:** To check the symptoms and details of the injury including loss of consciousness and memory
- **Neurological exam:** To check strength, sensation, eye movements, balance, and coordination
- **Cognitive tests:** To check memory, concentration, and problem-solving skills
- **Imaging tests:** CT or MRI scans to check for bleeding or swelling
- **Baseline tests:** Cognitive tests done before an injury (often used in sports) to compare to brain function after an injury

What are the symptoms?

Physical

- Headaches
- Pressure in the head
- Neck pain
- Nausea or vomiting
- Blurred vision
- Dizziness
- Problems with balance
- Sensitive to light or noise
- Trouble Sleeping
- Fatigue

Behavioral

- Irritability
- Sadness
- Nervous or anxious
- Emotional

Cognitive

- Feeling slow, "in a fog" or "not right"
- Hard to concentrate or remember things
- Confusion

How long does it take to get well?

People can recover within 2 to 4 weeks, but sometimes it can take 3 months or longer. The brain is very sensitive to injury while it is recovering from a concussion.

What can make getting well take longer?

Having any of the following before the injury:

- Headaches
- Anxiety, depression, ADHD, or PTSD
- Chronic pain
- Difficulty sleeping
- Dizziness
- A prior head injury

How do doctors treat concussions?

The doctor will make a treatment plan just for you

Headaches

- Lifestyle changes
 - *Sleep*: Get enough sleep and have a regular sleep schedule
 - *Exercise*: Move your body daily
 - *Eat*: Eat healthy meals, drink enough water, and limit caffeine and alcohol
 - *Diary*: Keep track of your symptoms to identify things that make you feel worse
 - *Stress*: Reduce stress and anxiety
- Supplements like magnesium and riboflavin
- Daily and as-needed medicines
- Injections as needed
- FL-41 lenses to ease light sensitivity
- LOOP earplugs to reduce sound sensitivity

Neck pain

Hot packs, massages, topical gels, medicine to relax muscles, injections, physical therapy, dry needling

Dizziness

Vestibular therapy, medicine, drinking enough water, standing up slowly

Vision changes

Vision therapy, testing and treatment by an eye doctor

Thinking changes

Cognitive therapy, brain function (neuropsychological) testing

Mood changes

Mental or behavioral therapy

(A good place to find a therapist online is PsychologyToday.com)

Sleep

- Establish a regular sleep-wake cycle, create a space that helps you sleep, manage stress, and try to relax with soothing music or meditation
- If problems persist, you can try melatonin two hours before you go to bed

Rest and Exercise

- Get some rest and reduce screen time for the first 48 hours. You can still do your day-to-day activities
- After 48 hours, you can slowly start to do light physical activity such as walking, using a stationary bike, lifting light weights, or resistance training
- The one thing that can hurt your brain is hitting your head again! You should avoid high-risk activities

Returning to Sports, School, or Work

- Follow your doctor's guidance
- You might need a reduced workload or more breaks
- Avoid activities with a high risk of a head injury

If you have any questions, please call our office at (212) 746-3113