

# Patient Care Guide: Understanding Mild Head Injuries and Best Practices for Recovery

Five million individuals visit the Emergency Department (ED) each year with a head injury. Most (95%) are considered mild and are not life threatening. This guide provides answers to frequently asked questions and best practices for recovery.

## Frequently Asked Questions

### What is a mild traumatic brain injury?

A mild traumatic brain injury (mTBI) results from a bump, blow, jolt to the head. An mTBI is most often caused by a fall, motor vehicle accident, or a strike by or against an object. With any mTBI, it is important to take recovery seriously to minimize risk of re-injury or prolonged symptoms.

### Is a head CAT scan used to diagnose concussion?

No, a head CAT scan is used to determine if there is a brain bleed or other structural injury present. The damage that occurs with a concussion cannot be seen on a CAT scan. Emergency Department physicians can determine through patient history, imaging technology, and clinical judgment whether patients are at risk for a structural injury. If the patient is not at risk for a structural injury, the physician will assess for likelihood and severity of concussion.

### What happens to the brain with a concussion?

When the impact occurs, the brain shifts back and forth/side to side in the skull. This rapid movement can damage the brain's neurons to stretch and sometimes tear. The neuronal damage impacts the brain's ability to do its job and function properly. The injury impacts on the brain's ability to process information and can slow response times and thinking ability.

### What to expect following an Emergency Department visit?

It is important to follow up with a primary care physician or specialist, if referred, after the hospital visit to receive specific concussion assessment and recovery steps. Early intervention can be the key to a faster recovery. Many individuals experience a cognitive delay or "brain fog." This means that the brain takes longer to process information. This can impact thinking, reaction time, and completion of everyday tasks. It is important to understand that it may not be possible to return to pre-injury activities right away. As recovery progresses, the cognitive delay will reduce and brain function will return to normal for most individuals.

### When will symptoms go away?

Depending on the grade of concussion, symptoms and recovery times will be different for everyone. For those with mild concussions, symptoms typically resolve in a few days. Most people fully recover from a concussion within three weeks, but in some, symptoms can persist for months or longer, especially when not rapidly diagnosed. For those with moderate and severe concussions, recovery may take longer. Pay attention to worsening symptoms and seek medical attention if any of the emergency symptoms on page 2 occur.

### When is it appropriate to return to work/school/play?

Recovery times are different for everyone. Most people are able to recover within three weeks. It is important to take recovery seriously and pay attention to new or worsening symptoms. Overextending activity level increases recovery timelines and increases risk of re-injury. Primary care physicians/specialists determine the individual recovery needs and when pre-injury activities can resume.

#### Types of mTBI

**Structural injury:** A skull fracture/brain bleed

**Concussion:** a functional injury which can decrease communication between different regions of the brain

#### Concussion Severity

##### Mild

May result in headache, difficulty focusing, confusion, dizziness and nausea that are brief in duration

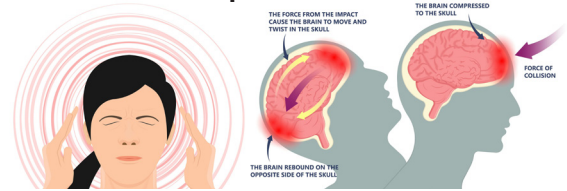
##### Moderate

Similar to a mild concussion, but symptoms last longer and may involve a brief loss of consciousness (less than five minutes)

##### Severe

Longer persistence of symptoms and may result in loss of consciousness for more than 5 minutes

#### Impact to Brain



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## Recovery Best Practices

Consult with a primary care physician or recommended specialist for detailed recovery steps and continued support. Best practices for early recovery are to gradually increase activity in a phased approach. Most people fully recover within a few weeks after the injury. *Recovery times are different for everyone, but early intervention can be the key to faster recovery.*

### Phase 1: Acute Injury

- Symptoms of injury are still present
- Recommended initial period of rest to minimize risk of second injury
- Eat healthy and stay hydrated

*Note: Current research has shown that following a concussion “cocooning” in a dark space for an extended period of time does not support a faster recovery. After the initial period of physical rest, gradually increasing activity level has been shown to improve recovery times.*

### Phase 2: Recovery

- Symptoms start to subside
- Gradually increase physical activity, walking is a great place to start
- If symptoms reappear with physical activity, stop and rest before resuming
- Avoid activities that may increase risk of another injury
- Take periodic rests as needed throughout the day

*Note: If symptoms worsen decrease activity and consult with a physician. If any of the symptoms noted above occur, seek immediate medical care.*

### Phase 3: Recovered

- Symptoms have subsided and do not recur with activity
- Return to activity level pre-injury as directed by a physician

*Note: If symptoms continue or they get worse after returning to regular activities a month or more from the injury, consult with a physician.*

### More Resources:

- [Brainline.org](http://Brainline.org)
- Concussion Legacy Foundation
- Brain Injury Association of America

**IMPORTANT: BrainScope is unable to give medical or legal advice. If you have medical concerns or questions, consult your doctor. If you are experiencing a medical emergency, call 911.**

BrainScope is committed to improving brain health by providing objective, decision support tools that enable better patient care. Learn more about BrainScope [www.brainscope.com](http://www.brainscope.com).

### Common Symptoms of Concussion

- Dizziness
- Headache
- Difficulty concentrating
- Irritability
- Disturbances in sleep
- Lack of energy

### Seek Immediate Care for Any of the Following

- Severe headache
- Nausea and vomiting
- Extreme drowsiness/difficulty staying awake
- Numbness/weakness in arms/legs
- Seizure
- Neck pain