

# Thinking Changes After Brain Injury

Also called Major or Mild Neurocognitive Disorder Due to Traumatic Brain Injury

Trouble with focus, memory, and mood after a head injury. Recovery is often slow, but it is real and it keeps going.

## HOW COMMON

Nearly 3M US ER visits a year

## OFTEN STARTS

Right after the injury

## TREATABLE

Yes - most mild ones clear

## YOU ARE NOT ALONE

Millions of US adults

### What this is

- This means a blow or jolt to the head changed how your brain works, and the changes lasted past the first week.
- It is a physical injury, not weakness. You are not imagining it and you are not making too much of it.
- Most head injuries are mild, and most mild ones clear within **3 months** with the right kind of rest and return.
- Symptoms often show up worst at work or in a crowd, even when office testing looks fine. Both things are true.

### What it can look and feel like

- Thinking feels slow and effortful, like wading through fog, especially late in the day when you are tired.
- Doing two things at once falls apart, and words go missing right in the middle of a sentence.
- You may know exactly what to do and still not manage to do it. That gap is the injury, not laziness.
- Your temper is shorter, feelings swing faster, and small frustrations set off reactions that surprise you.
- Headache, dizziness, ringing in the ears, and trouble with bright light or loud noise are all common.
- Sleep breaks up, and daytime tiredness can be crushing even after a full night in your own bed.
- You may not fully see the changes yourself. Family often notices before you do, and that is part of the injury.

### What is happening in your brain and body

- The twisting force of the injury stretches and tears the long wires that connect one brain area to another.
- The front of the brain hits bony ridges inside the skull, which is why planning and temper take the biggest hit.
- A second wave of chemical damage unfolds over hours to days after the impact, on top of the first injury.
- Brain chemicals for alertness get thrown off, which is why some stimulant-type medicines help focus and energy.
- The injury can also affect hormone glands and breathing during sleep. Both are common, missed often, and fixable.

### What can make it more likely

- Falls, car crashes, sports, assaults, and blasts are the usual causes, and falls lead the list at both ends of life.
- How long you were confused or unable to form new memories afterward predicts recovery better than scans do.
- Earlier head injuries, past depression or anxiety, and repeated hits all tend to make recovery slower.
- Pain, poor sleep, alcohol, and heavy stress each drag thinking down and are worth treating on their own.

### What to expect

- Recovery is usually slow but real. Improvement can keep coming for **a year or more**, not just the first few weeks.
- Total rest backfires. Light activity within **24 to 48 hours**, then a gradual build-up, shortens recovery time.
- Expect bad days mixed in with good ones. A rough day after a busy week is normal, not a sign of new damage.
- Getting back to work or school in steps, with fewer hours at first, works better than an all-or-nothing return.

## What helps Treatment works. Most people get better.

### Talking therapies

- **Cognitive rehabilitation** teaches you to plan, check, and correct your own work. It has the strongest evidence.
- Clear education early after a mild injury cuts long-lasting symptoms more than any other single treatment.
- **Talk therapy** adapted with written summaries, repetition, and shorter sessions treats low mood and insomnia.
- For temper and impulsive behavior, changing what happens before the outburst beats adding another medicine.
- **Family therapy** covers changed roles, supervision needs, and recovery timelines, where most conflict starts.

### Medicines

- No medicine is approved for thinking after brain injury, so your team treats specific targets with as few pills as it can.
- **Amantadine** has the best evidence for speeding up functional recovery after a more serious injury.
- **Stimulants** such as methylphenidate can improve focus and processing speed. Your prescriber sets each dose.
- **Antidepressants** such as sertraline treat low mood after injury, started low because you may be more sensitive.
- Avoid calming medicines, sleep aids, and older allergy pills. They slow down a brain that is already slowed.

### Everyday things that help

- Start moving within a day or two, gently. Light walking beats a dark room, which makes recovery take longer.
- Lean hard on outside memory: phone alarms, written checklists, and one shared calendar for the whole household.
- Protect your sleep and get checked for sleep apnea. Fatigue is often what holds everything else back.
- Skip alcohol while you are healing, and ask about your risk of another injury before you return to sport.
- Dizziness and headaches often respond to balance, eye, and neck physical therapy. Ask for a referral.

### Get help right away if

- A worsening headache, repeated vomiting, seizures, or trouble waking up needs the emergency room now.
- If you think about ending your life, call or text **988** now, or go to the nearest emergency room.
- Get seen the same day for a new bump to the head, new weakness, or a sudden drop in alertness.

### Questions to ask your care team

- *How severe was my injury, and what does that mean for my recovery?*
- *What is my step-by-step plan for getting back to work or school?*
- *Should I be checked for sleep apnea or for hormone problems?*
- *Am I safe to drive right now, and when should we check that again?*

# Where this information comes from

American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.).

<https://doi.org/10.1176/appi.books.9780890425787>

Brain Injury Association of America. (n.d.). *About brain injury*. <https://www.biausa.org/brain-injury/about-brain-injury>

Centers for Disease Control and Prevention. (n.d.). *Traumatic brain injury and concussion*. <https://www.cdc.gov/traumatic-brain-injury/index.html>

MedlinePlus. (n.d.). *Traumatic brain injury*. U.S. National Library of Medicine. <https://medlineplus.gov/traumaticbraininjury.html>

National Institute of Neurological Disorders and Stroke. (n.d.). *Traumatic brain injury (TBI)*. U.S. Department of Health and Human Services. <https://www.ninds.nih.gov/health-information/disorders/traumatic-brain-injury-tbi>

U.S. Department of Veterans Affairs & U.S. Department of Defense. (2021). *VA/DoD clinical practice guideline for the management and rehabilitation of post-acute mild traumatic brain injury*. <https://www.healthquality.va.gov/guidelines/Rehab/mtbi/>

## NOTE

Sources are listed in APA 7th edition style. This handout is general health information, not medical advice, and it does not replace talking with your own doctor, therapist, or prescriber. Medicine choices and doses are decided with your prescriber. If you are in danger or thinking about hurting yourself, call or text 988 in the United States, or go to your nearest emergency room.