

Mild traumatic brain injury management



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■ Introduction

A mild traumatic brain injury (TBI), or concussion, occurs when a blow to the head or a hit to the body causes the brain to move back and forth in the skull.^[1] Closed and open head injuries can result in mild TBI.^[2] Typical causes include falls, motor vehicle accidents, and sports injuries.^[3] Other causes include gunshot wounds, punches or other blunt force to the head, violent shaking, other whiplash-associated injuries, and exposure to blast forces, such as those experienced during a war or in an explosion.^[2] ^[29]

At the time of injury, manifestations can include loss of consciousness, loss of memory, confusion, disorientation, focal neurologic deficits, and a reduced Glasgow Coma Scale score.^[3] Chemical changes in the brain and damaged brain cells can affect thinking, learning, sleeping, feeling, and other aspects of a patient's behavior.^[1] (See [Signs and symptoms of mild traumatic brain injury.](#))

SIGNS AND SYMPTOMS OF MILD TRAUMATIC BRAIN INJURY

Signs and symptoms of mild traumatic brain injury may appear immediately or may not appear until days after the injury. They can vary among patients and change over time. Signs and symptoms may include:

- anxiety
- balance problems
- difficulty concentrating or thinking clearly
- difficulty falling asleep
- dizziness
- fatigue
- grogginess or feeling sluggish
- headache
- irritability
- loss of consciousness immediately after the injury
- memory problems (short- or long-term)
- motor incoordination
- nausea (early)
- sadness or the feeling of being more emotional
- seizures
- sensitivity to light or sound
- sleeping more or less than usual
- vision problems
- vomiting (early).^[29]

In most cases of mild TBI, a patient's signs and symptoms steadily lessen over 2 weeks and typically resolve fully within 3 months. However, a small percentage of patients may continue to have signs and symptoms that persist or are permanent.^{[2][5]} The nurse is responsible for assessing and monitoring the patient for complications of a mild TBI and providing resources and education to assist with managing the condition.

♦ **Older adult alert:** Older adults may be more at risk for injury after a mild TBI because of physiologic changes related to aging. They're also more likely to take anticoagulants or have a preexisting coagulopathy, increasing the risk of hemorrhage.^[3] ♦

■ Equipment

- Facility-approved pain assessment tool
- Neurologic assessment supplies
- Vital signs monitoring equipment
- Optional: facility-approved mild TBI assessment tool, personal protective equipment, prescribed pain medication

■ Preparation of Equipment

Inspect all equipment and supplies. If a product is expired, is defective, or has compromised integrity, remove it from patient use, label it as expired or defective, and report the expiration or defect as directed by your facility.

■ Implementation

- Review the patient's medical record for a history of mild TBI. *Patients who've had more than one brain injury are at higher risk for more serious and longer-term problems.*^{[1][3]} Also review the severity of the injury, the associated injuries, and any anticoagulant use *because these factors increase the patient's risk of complications.*^[2]
- Gather and prepare the necessary equipment and supplies.
- Perform hand hygiene.^{[6][7][8][9][10][11]}
- Confirm the patient's identity using at least two patient identifiers.^[12]
- Provide privacy.^{[13][14][15][16]}
- Explain the procedure to the patient and family (if appropriate) according to their individual communication and learning needs *to increase their understanding, allay their fears, and enhance cooperation.*^[17]
- Obtain the patient's history *to identify other conditions that may complicate the patient's recovery.* Review the patient's current medications and drug and alcohol use. Note any psychiatric conditions and the events surrounding the injury. *Use of anticoagulants or alcohol may prolong recovery.*^[3] *Reviewing the events surrounding the injury can help determine whether amnesia is present.*^[2] Notify the practitioner about any concerns.
- Screen the patient for domestic violence or abuse as indicated and directed by your facility.^[3] (See the "[Suspected domestic abuse assessment](#)" or "[Suspected older adult abuse assessment](#)" procedure.) Notify the practitioner about any concerns.
- Raise the bed to waist level before providing care *to prevent caregiver back strain.*^[18]
- Perform hand hygiene.^{[6][7][8][9][10][11]}
- Put on personal protective equipment, as needed, *to comply with standard precautions.*^{[19][20][21]}

- Assess the patient's vital signs as ordered and indicated *to establish a baseline and monitor for changes that indicate complications*. Typically, vital signs are assessed hourly after an acute TBI. However, the optimal frequency of measurements hasn't been firmly established.^[3]
 - Screen for and assess the patient's pain using facility-defined criteria that are consistent with the patient's age, condition, and ability to understand.^[3] ^[22]
 - Treat the patient's pain, as needed and ordered, using nonpharmacologic, pharmacologic, or a combination of approaches. Base the treatment plan on evidence-based practices and the patient's clinical condition, past medical history, and pain management goals.^[22]
 - Perform a neurologic assessment and repeat it as ordered and indicated *to establish a baseline and monitor for changes that indicate complications*.^[3] (See the "[Neurologic assessment](#)" procedure.)
- ♦ **Older adult alert:** In older adults, hearing or vision deficits or baseline cognitive impairment may complicate neurologic assessments. Discuss the patient's preinjury cognitive function with family members or caregivers.^[4] ♦
- Notify the practitioner promptly if the patient's condition changes or if the patient develops signs or symptoms of complications. (See [Red flags after a mild traumatic brain injury](#).)



COMPLICATIONS

RED FLAGS AFTER A MILD TRAUMATIC BRAIN INJURY

When caring for a patient who has had a mild traumatic brain injury, be alert for the following signs and symptoms, *which may indicate the need for intervention*.^[3] Notify the practitioner promptly if you detect:

- alterations in balance
- confusion
- decreasing level of consciousness
- worsening neurologic assessment findings
- disorientation
- irritability
- numbness or weakness in the extremities
- pupil abnormalities
- seizure
- speech disturbance or slurring
- vomiting
- vision changes
- worsening headache.

- Closely observe any time the patient gets up or walks *to detect changes in balance and ensure patient safety*.^[3] (See the "[Fall prevention](#)" procedure.)
- Complete a facility-approved mild TBI assessment tool (if used at your facility) *to monitor the patient's progress*. A single assessment tool for mild TBI isn't supported at this time. Alternatively, ask the patient about current symptoms, including fatigue and sleep disorders, *to establish a baseline for comparison*.^[3]
- Ensure adequate nutrition as ordered.^[4]

- Promote a calm environment by decreasing stimulation *to promote cognitive rest*. Cognitive rest involves abstaining from reading, texting, playing video games, and using a computer for 3 to 5 days or as ordered by the practitioner.^[2]
- Optimize sleep-wake cycles by adjusting the lighting and the patient's activity based on the time of day.^[2]
- Prepare the patient as necessary for any ordered diagnostic imaging studies.^[3]
- Teach the patient and family (if appropriate) about safety measures to prevent second-impact syndrome. *Second-impact syndrome occurs when the patient experiences another brain injury before the first one has healed. A second-impact injury can result in brain herniation, coma, and death.*^{[2] [23]}
- Reassess and respond to the patient's pain by evaluating the response to treatment and progress toward pain management goals. Assess for adverse reactions and risk factors for adverse events that may result from treatment.^[22]
- Return the bed to the lowest position *to prevent falls and maintain the patient's safety.*^[24]
- Discard used supplies in appropriate receptacles.^[20]
- Remove and discard your personal protective equipment, if worn.^[20]
- Perform hand hygiene.^{[6] [7] [8] [9] [10] [11]}
- Document the procedure.^{[25] [26] [27] [28]}

■ Special Considerations

- In the acute phase of any TBI, assess the patient's airway, breathing, and circulation as well as the need for cervical spine immobilization.^[2]
- Resources, such as concussion clinics, neurologists, neuropsychologists, rehabilitation specialists, and vocational rehabilitation specialists, are available in certain communities.^[3]

■ Patient Teaching

Teach the patient and family (if appropriate) about what signs and symptoms to expect and when they should resolve. Emphasize that recovery varies but that complete recovery from first-time mild TBI typically takes 2 weeks to 3 months.^[2] Teach the family what monitoring is necessary (usually for the first 24 hours) and when to notify the practitioner, call the emergency number for assistance, or visit an emergency department. Advise the patient to get plenty of sleep (at night) and rest during the day. Instruct the patient not to participate in physically or cognitively demanding activities or sports as recommended by the practitioner. Encourage the patient to avoid alcohol and caffeine and to eat a healthy diet. Explain when the patient can resume normal activities and work, and discuss what medications to take. Place limits on distractions and noise, and encourage the patient to focus on one task at a time. Urge the patient to avoid computers and video games.^[3] Teach the patient about the possibility of postconcussion syndrome. (See [Postconcussion syndrome](#).)



COMPLICATIONS

POSTCONCUSSION SYNDROME

Postconcussion syndrome can produce physical, emotional, and cognitive symptoms that may last for days to months. Persistent symptoms warrant expert referral.^[3]

Physical symptoms include headache, sleep disturbances, balance issues, dizziness, constant fatigue, nausea, and sensitivity to light or noise. These symptoms call for treatment with rest, a quiet and nonstimulating environment, regular routine (including sleep), light exercise (if appropriate), meditation, visualization, deep breathing, a healthy diet, avoidance of rapid position changes, and protection from light and sound.

Emotional symptoms include anxiety, irritability, depression, and mood swings. These symptoms require treatment with family support, exercise (as appropriate), a healthy diet, relaxation, a sleep routine, and stress management techniques.

Cognitive symptoms include attention issues, concentration problems, and alterations in memory and are treated using digitalized reminders, calendars, notes, aerobic exercise (if appropriate), sleep, and rest.

Also educate the patient about preventing another mild TBI because of the cumulative effects of repeated injuries and the risk of second-impact syndrome.^{[2][3]}

■ Complications

Complications associated with mild TBI may include:

- hypopituitarism
- increased risk (with repeated TBIs) of several conditions
 - alterations in personality or behavior
 - binge drinking
 - impaired social functioning
 - neurodegenerative disorders (dementia, chronic traumatic encephalopathy, Parkinson disease)
 - posttraumatic stress disorder
 - sexual dysfunction
 - suicidal ideation
- intracranial hemorrhage
- postconcussion syndrome
- chronic traumatic encephalopathy (repeated injuries)
- second-impact syndrome
- seizure
- skull fracture.^{[2][3][5][23]}

■ Documentation

Documentation associated with mild TBI includes:

- history
 - current medications
 - drug and alcohol use
 - psychiatric conditions
 - events surrounding the injury
- domestic violence screening (if you performed one)
- vital signs
- neurologic assessment findings
- pain assessment scores
 - interventions performed for pain
 - response to those interventions
- changes in condition
- practitioner communication
- interventions performed to promote cognitive rest and sleep
- diagnostic tests performed
- safety precautions implemented

- teaching provided to the patient and family (if applicable)
 - understanding of that teaching
 - follow-up teaching needed.

■ References

([Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions](#))

1. Centers for Disease Control and Prevention. (2025). *About mild TBI & concussion*. Retrieved October 2025 from <https://www.cdc.gov/traumatic-brain-injury/about/>
2. Vacca, V. M., Jr. (2018). Managing mild TBI in adults. *Nursing*, 48(8), 30–37. Retrieved October 2025 from <https://doi.org/10.1097/01.nurse.0000541383.21610.5a>
3. American Association of Neuroscience Nurses (AANN) & Association of Rehabilitation Nurses (ARN). (2011, revised 2014). *Care of the patient with mild traumatic brain injury: AANN and ARN clinical practice guideline series*. Retrieved October 2025 from https://rehabnurse.org/uploads/about/AANN14_MildTBI.pdf
4. American College of Surgeons. (2024). *Best practice guidelines: The management of traumatic brain injury*. Retrieved October 2025 from <https://www.facs.org/media/vgfgjpfk/best-practices-guidelines-traumatic-brain-injury.pdf>
5. Evans, R. W., & Whitlow, C. T. (2024). Acute mild traumatic brain injury (concussion) in adults. In: *UpToDate*, Aminoff, M. J., & Moreira, M. E. (Eds.). [UpToDate Full Text](#)
6. Accreditation Commission for Health Care. (2025). Standard 07.02.05. *Accreditation requirements for acute care hospitals*. (Level VII)
7. Centers for Disease Control and Prevention. (2002). Guideline for hand hygiene in health-care settings: Recommendations of the Healthcare Infection Control Practices Advisory Committee and the HICPAC/SHEA/APIC/IDSA Hand Hygiene Task Force. *MMWR Recommendations and Reports*, 51(RR-16), 1–45. Retrieved October 2025 from <https://www.cdc.gov/mmwr/pdf/rr/rr5116.pdf> (Level VII)
8. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Infection prevention and control and antibiotic stewardship programs. 42 C.F.R. § 482.42.
9. DNV GL-Healthcare USA, Inc. (2024). IC.1.SR.3f. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
10. The Joint Commission. (2025). Standard NPSG.07.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
11. World Health Organization (WHO). (2009). *WHO guidelines on hand hygiene in health care: First global patient safety challenge, clean care is safer care*. Retrieved October 2025 from https://iris.who.int/bitstream/handle/10665/44102/9789241597906_eng.pdf (Level VII)
12. The Joint Commission. (2025). Standard NPSG.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
13. Accreditation Commission for Health Care. (2025). Standard 15.01.07. *Accreditation requirements for acute care hospitals*. (Level VII)
14. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Patient's rights. 42 C.F.R. § 482.13(c)(1).
15. DNV GL-Healthcare USA, Inc. (2024). PR.2.SR.5. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)
16. The Joint Commission. (2025). Standard RI.01.01.01. *Comprehensive accreditation manual for hospitals*. (Level VII)
17. The Joint Commission. (2025). Standard PC.02.01.21. *Comprehensive accreditation manual for hospitals*. (Level VII)
18. Waters, T. R., et al. (2009). *Safe patient handling training for schools of nursing*. Retrieved October 2025 from <https://www.cdc.gov/niosh/docs/2009-127/pdfs/2009-127.pdf> (Level VII)

19. Accreditation Commission for Health Care. (2025). Standard 07.02.04. *Accreditation requirements for acute care hospitals*. (Level VII)

20. Occupational Safety and Health Administration. (2019). *Bloodborne pathogens, standard number 1910.1030*. Retrieved October 2025 from <https://www.osha.gov/laws-regs/regulations/standardnumber/1910/1910.1030> (Level VII)

21. Siegel, J. D., et al. (2007, revised 2024). *2007 guideline for isolation precautions: Preventing transmission of infectious agents in healthcare settings*. Retrieved October 2025 from <https://www.cdc.gov/infection-control/media/pdfs/Guideline-Isolation-H.pdf> (Level VII)

22. The Joint Commission. (2025). Standard PC.01.02.07. *Comprehensive accreditation manual for hospitals*. (Level VII)

23. Evans, R. W., & Furman, J. M. (2024). Sequelae of mild traumatic brain injury. In: *UpToDate*, Aminoff, M. J., & DeKosky, S. T. (Eds.). [UpToDate Full Text](#)

24. Ganz, D. A., et al. (2013). *Preventing falls in hospitals: A toolkit for improving quality of care* (AHRQ publication no. 13-0015-EF). Agency for Healthcare Research and Quality. Retrieved October 2025 from <https://www.ahrq.gov/sites/default/files/publications/files/fallpxtoolkit.pdf> (Level VII)

25. Accreditation Commission for Health Care. (2025). Standard 10.00.03. *Accreditation requirements for acute care hospitals* (Level VII)

26. Centers for Medicare and Medicaid Services. (2024). Condition of participation: Medical record services. 42 C.F.R. § 482.24(b).

27. DNV GL-Healthcare USA, Inc. (2024). MR.2.SR.1. *NIAHO® accreditation requirements, interpretive guidelines and surveyor guidance – revision 24*. (Level VII)

28. The Joint Commission. (2025). Standard RC.01.03.01. *Comprehensive accreditation manual for hospitals*. (Level VII)

29. Silverberg, N. D., et al. (2023). The American Congress of Rehabilitation Medicine diagnostic criteria for mild traumatic brain injury. *Archives of Physical Medicine and Rehabilitation*, 104(8), 1343–1355. Retrieved October 2025 from <https://doi.org/10.1016/j.apmr.2023.03.036> (Level VII)

■ **Additional References**

• Centers for Disease Control and Prevention. (2024). *About repeated head impacts*. Retrieved October 2025 from <https://www.cdc.gov/traumatic-brain-injury/about/repeated-head-impacts.html>

• Living Concussion Guidelines™. (n.d.). *Living concussion guidelines: Guideline for concussion & prolonged symptoms for adults 18 years of age or older*. Retrieved October 2025 from <https://concussionsontario.org/>

• Lumba-Brown, A., et al. (2020). Concussion guidelines step 2: Evidence for subtype classification. *Neurosurgery*, 86(1), 2–13. Retrieved October 2025 from <https://doi.org/10.1093/neuros/nyz332> (Level VII)

• van Gils, A., et al. (2020). Management of mild traumatic brain injury. *Practical Neurology*, 20(3), 213–221. Retrieved October 2025 from <http://dx.doi.org/10.1136/practneurol-2018-002087>

• West, S. K., et al. (2020). Analysis of mild traumatic brain injury outpatient follow-up. *Journal of Trauma Nursing*, 27(4), 225–233. Retrieved October 2025 from <https://doi.org/10.1097/jtn.0000000000000518> (Level IV)

Rating System for the Hierarchy of Evidence for Intervention/Treatment Questions

The following leveling system is adapted from *Evidence-Based practice in nursing & healthcare: A guide to best practice*, Fifth edition, by Bernadette Mazurek Melnyk and Ellen Fineout-Overholt (2023).

Level I	Evidence from a systematic review or meta-analysis of all relevant randomized controlled trials (RCTs)
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Level II	Evidence from well-designed single RCTs (experimental)
Level III	Evidence from well-designed nonrandomized controlled trials (quasi-experimental), systematic reviews of a complete body of evidence, and intervention studies using mixed methods
Level IV	Evidence from well-designed case-control and cohort studies (observational)
Level V	Evidence from systematic reviews of qualitative and descriptive studies
Level VI	Evidence from single descriptive and qualitative studies, evidence-based practice implementation, and quality improvement projects
Level VII	Evidence from expert opinion, expert committee reports, and literature reviews

Data from Gyatt, G., & Rennie D. (2002). Users' guides to the medical literature. American Medical Association; Harris, R. P., et al. (2001). Current methods of the U.S. Preventative Services Task Force: A review of the process. American Journal of Preventative Medicine, 20, 21-35.