Guideline 9.1.4 – First Aid Management of Head Injury

Summary

To whom does this guideline apply?

This guideline applies to adults and children.

Who is the audience for this guideline?

This guideline is for use by bystanders, first aiders and first aid training providers.

Summary of Recommendations

The Australian and New Zealand Committee on Resuscitation (ANZCOR) makes the following recommendations for first aiders in managing those who have sustained a head injury [all Good Practice Statements]:

1. **Ensure safety:** Stop the activity immediately, remove the person from danger, and move them to a safe place.

- When moving the person, protect the spine by minimising movement as much as possible.
- Do not delay moving to safety if resources to restrict spinal motion are not available.

2. **Check responsiveness and breathing:** If unresponsive and not breathing normally, commence resuscitation if safe to do so (Refer to ANZCOR Guideline 8).

3. **Assess for neurological signs:** Look for any of the following, which may indicate significant head injury:

- Nausea or vomiting
- Headache

- Poor balance or abnormal gait (abnormal walking)
- Disturbed vision
- Weakness or poor coordination in limbs or slurred speech
- Confusion, decreased level of consciousness, or unusual behaviour
- Seizures or abnormal movements

4. **Remove from play/activity:** If a significant head injury is suspected, the person must not return to the activity until assessed by a health care professional.

5. **Ongoing observation:** If concerned about a possible significant head injury, maintain close monitoring until the person is handed over to a health care professional.

1.0 | Introduction

Head injury, including concussion, is a common and potentially serious outcome of trauma. It can occur through many mechanisms such as falls, assaults, motor vehicle crashes, sporting incidents, blast injuries, rapid acceleration–deceleration forces (e.g., whiplash)[1] and, less commonly, penetrating injuries.

Head injuries are often described as mild, moderate, or severe, but this classification is not required in first aid. Importantly, a person may sustain a significant head injury without losing consciousness or memory. For this reason, loss of consciousness or amnesia should never be relied upon as the sole measure of severity or as a guide to management.[2]

The initial first aid for a person with a head injury includes assessing and managing the airway and breathing, whilst restricting spinal motion until expert help arrives.

There is insufficient evidence to support or refute the use by first aiders of simplified concussionscoring systems such as the Sport Concussion Assessment Tool (SCAT), the Glasgow Coma Scale(GCS) or Alert, Voice, Pain, Unresponsive (AVPU) versus standard first aid without a scoring system[CoSTR 2015].[3,4]Because a concussion can have serious consequences if not recognised, any person who sustains a head injury, no matter how minor, should be advised to seek assessment by a health care professional or at a hospital.

2.0 | Recognition

Suspect a significant head injury in any person with a history of a blow to the head, or who has signs of injury to the head or face, such as bruises or bleeding, who is confused or has reduced consciousness. A person may have a significant head injury without external signs of injury to the

head or face. Life-threatening problems may not become apparent for several hours after the initial injury.

There are no validated concussion scoring tools suitable for first aid. However, studies consistently identify the following signs that may be seen indicating a significant head injury[5-9]:

- Loss of consciousness at any point following the injury
- Confusion, disorientation or drowsiness
- Poor memory
- Difficulty concentrating
- Emotional disturbance
- Visual disturbance
- Muscular weakness or poor co-ordination
- Slurred speech
- Dizziness, poor balance or gait
- Hearing problems or tinnitus (ringing/buzzing in ears)
- Headache, nausea or vomiting, neck pain, light sensitivity or noise sensitivity.

The following clinical signs are red flags that require immediate escalation of care:

- Loss of consciousness
- Seizures
- Worsening symptoms, particularly headache
- Repeated vomiting
- Neck Pain
- Evidence of a penetrating head injury

Several concussion assessment tools are available for use at the scene of injury, commonly in sport, such as the Standardised Assessment of Concussion, the Sport Concussion Assessment Tool

(SCAT)[6,10,11] or the Concussion Recognition Tool (CRT).[8] However, published studies highlight important limitations; some tests require pre-injury baseline scores, many must be administered by a health care professional, and performance can be affected by age, gender, and cultural background. For these reasons, this guideline does not recommend the use of these tools in the first aid setting.

3.0 | Management

- **Send for an ambulance** if there has been a loss of consciousness, altered consciousness or other red flag signs at any time.
- **Move to safety** - protect from spinal injury by minimising movement when handling the person, but do not delay moving them to a safe place if spinal support resources are not available.
- **All head injuries require assessment** – any person who has sustained a head injury, including a minor head injury, should be assessed by a health care professional before returning to sport, work, or other activity.
- **If unresponsive and not breathing normally** – commence resuscitation (Refer to ANZCOR Guideline 8)
- **Airway management** – ensure the airway is clear (Refer to ANZCOR Guideline 4)
- **Unconscious Person** - An unconscious person should be managed according to ANZCOR Guideline 3.
- **Spinal precautions** – Restrict spinal motion whilst maintaining a clear airway, but ensure the airway takes priority (Refer to ANZCOR Guideline 9.1.6).
- **Control Bleeding** - Apply direct pressure to any significant bleeding (Refer to ANZCOR Guideline 9.1.1).

Further Reading

ANZCORGuideline2Managing anEmergency

ANZCOR Guideline 3 Recognition and First Aid Management of the Unconscious VictimANZCORGuideline 4Airway

ANZCORGuideline5Breathing

ANZCORGuideline8CardiopulmonaryResuscitation

ANZCOR Guideline 9.1.6 Management of Suspected Spinal Injury

Abbreviations

Abbreviation	Meaning/Phrase
ANZCOR	AustralianandNewZealandCommitteeon Resuscitation
AVPU	Alert, Voice, Pain, Unresponsive
CoSTR	International Consensus on Cardiopulmonary Resuscitation and Emergency Cardiovascular Care Science with Treatment Recommendations
CPR	Cardiopulmonaryresuscitation
CRT	Concussion Recognition Tool
GCS	Glasgow Coma Scale
SCAT	Sport Concussion Assessment Tool

References

1. Agarwal N, Thakar R, Than K. Concussion 2024 [Available from: https://www.aans.org/patients/conditions-treatments/concussion/. Accessed 30 Jun 25

2. The Royal Children's Hospital Melbourne. Head injury – general advice 2024 [Fact sheet]. Available from: https://www.rch.org.au/kidsinfo/fact_sheets/head_injury/.

3. Zideman D, Singletary E, De Buck E. Part 9: First aid: 2015 International Consensus on First Aid Science with Treatment Recommendations. Resuscitation. 2015;95:e225-61.

4. berry D, Zideman D, Oliver E, Singletary E. Simple Single Stage Concussion Scoring System in the First Aid Setting Scoping Review and Task Force Insights 2019 [cited 2025 2 Jul 25]. Available from: https://costr.ilcor.org/document/simple-single-stage-concussion-scoring-systems-in-the-first-aid-setting.

5. Halsted M, Walter K, K M. COUNCIL ON SPORTS MEDICINE AND FITNESS. Sport-Related Concussion in Children and Adolescents. Pediatrics. 2018;142(6):e20183074.

6. Committee on Sports-Related Concussions in Youth; Board on Children Y, and Families; Institute of Medicine; National Research Council, . Sports-Related Concussions in Youth: Improving the Science, Changing the Culture. Washington: National Academies Press (US); 2025 [Appendix to guideline on assessing Concussion]. Available from: www.ncbi.nlm.nih.gov/books/NBK185341/.

7. Patricios J, Schneider K, Dvorak J, Ahmed O, Blauwet C, Cantu R, et al. Consensus statement on concussion in sport: the 6th International Conference on Concussion in Sport-Amsterdam. Br J Sports Med. 2023;57(11):695-711.

8. Echemendia R, Ahmed O, Bailey C, Bruce J, Burma J, Davis G, et al. CRT6 Concussion recognition tool. Br J Sports Med. 2023;57(11):692-3.

9. Caccese J, Garcia G, Kontos A, Port N, Valerio K, Broglio S, et al. Test-Retest Reliability and Efficacy of Individual Symptoms in Concussion Management. Clin J Sport Med. 2023;33(1):52-60.

10. Schneider K, Patricios J, Meeuwisse W, Schneide G, Hayden K, Premji Z, et al. Amsterdam 2022 process: A summary of the methodology for the Amsterdam International Consensus on Concussion in Sport. Br J Sports Med. 2023;57(11):712-21.

11. Echemendia R, Burma J, Bruce J, Davis G, Giza C, KM G, et al. Acute evaluation of sport-related concussion and implications for the Sport Concussion Assessment Tool (SCAT6) for adults, adolescents and children: a systematic review. Br J Sports Med. 2023;57(11):722-35.

About this Guideline

Search date/s	By adolopment: ILCOR Systematic Review 2015, Scoping Review Dec 2019 Evidence Update last undertaken July 2025

Questions/PICOs:	**Population**: Adults and children with suspected head injury without loss of consciousness **Intervention**: does use of a simple single-stage concussion scoring system **Comparators**: compared with standard first aid assessment without a scoring system **Outcomes**: Likelihood of differentiating between minor head contusion and more serious concussion and time to recognition of the deteriorating patient were ranked as critical outcomes. Survival to 30 days with good neurological outcomes, the likelihood of poor neurological outcomes, and the need for advanced medical care were ranked as important outcomes. **Study Designs**: Randomized controlled trials (RCTs), controlled clinical trial, clinical trial, comparative study, non-randomized studies (non-randomized controlled trials, interrupted time series, controlled before-and-after studies, cohort studies, case-control, cross-sectional, epidemiologic), case series (n>5), survey and retrospective are eligible for inclusion. Unpublished studies (e.g., conference abstracts, trial protocols), editorials, commentary, case reports, and animals were excluded. No study design restrictions were applied for the grey literature search. **Timeframe**: The original search for the ILCOR 2015 CoSTR (Singletary 2015 S269; Zideman 2015 e229) was completed in January 2014. Search one was therefore limited from January 1, 2014 and completed on October 4, 2019. Search two was conducted on November 19, 2019 and was inclusive for all years. Search three was conducted on November 24, 2019 and was inclusive for all years. Search four was conducted on November 26, 2019 and inclusive for all years All literature searches were updated to December 6, 2019 for scoping review and July 2025 for Evidence Update.
Method:	Scoping search as above, based on systematic review 2015
Main Changes:	Guideline reviewed to align with latest CoSTR. No changes made.
Principal reviewers:	Finlay Macneil, Solange Costermans
Other Consultation:	Tracy Kidd, Fran Williamson
Worksheet:	N/A
Approved:	October 2025
Guidelines Superseded:	9.1.4 January 2016

Referencing this guideline

When citing the ANZCOR Guidelines we recommend:

ANZCOR, 2026, Guideline 9.1.4 – First Aid Management of Head Injury, accessed 29 September 2026, https://www.anzcor.org/home/first-aid/guideline-9-1-4-head-injury