



Minor Head Injury: A Guide for Essential Imaging

Recommendation: “CT head scans are not recommended in adults and children who have suffered minor head injuries unless positive for a head injury clinical decision rule”¹

The BC Patient Safety & Quality Council has put together these Essential Imaging Conversation Guides for Care Providers to support and guide conversations with patients, based on the *BC Guidelines for Appropriate Imaging*.¹

CT of the head exposes patients to radiation and have associated cancer risks. The Canadian CT Head Rule and PECARN Rule (for children) can help balance the potential benefits of identifying a treatable brain injury with the risks associated with radiation exposure.² Here are some messages to inform and guide your conversations with patients requesting CT scans for minor head injuries.¹

Provide Information

If imaging is not indicated, inform patients that:

- While an injury to the head can be scary—a concussion affects how your brain works and results in an altered mental state—most people recover within a few weeks.¹
- Canadian Radiology guidelines recommend certain rules to follow to help us decide when medical imaging is appropriate. In order to decide whether to complete a head CT or not, clinicians apply rules to guide decision making:
 - Adults age 16 years and older: Canadian CT Head Rule (age 16+).¹
 - Children: PECARN Rule.
- Suggest that the patient read the *Conversation Guide for Patients – Minor Head Injury*.
- A CT scan of a patient’s head may be needed if a health care provider notes:¹
- GCS score is worse two hours after injury
- Suspected open or depressed skull fracture
- Any sign of basal skull fracture
- Vomiting ≥2 episodes
- Age ≥65 years
- Medium risk (for brain injury on CT)
- Amnesia > 30 minutes preceding impact
- Dangerous mechanism of injury (e.g., pedestrian struck by motor vehicle, occupant ejected from motor vehicle, fall from height > three feet or five stairs)

The Canadian CT Head Rule can be applied to patients with a “minor” head injury. In this context, “minor” means a head injury with GCS 13-15 AND with one of:

- A witnessed loss of consciousness (LOC), or
- Amnesia from the head injury event, or
- Witnessed disorientation.

When in doubt, consult with radiology in your local community or through the RACE Line: [raceconnect.ca](https://www.raceconnect.ca)

Start the Conversation!

Learn more and find additional clinical resources at [BCPSCQ.ca/imaging](https://www.bcpscqc.ca/imaging).



¹BC Guidelines. Appropriate Imaging for Common Situations in Primary and Emergency Care. 2020. Diagnostic Imaging. Available from: <https://www2.gov.bc.ca/gov/content/health/practitioner-professional-resources/bc-guidelines/diagnostics-imaging>

²Choosing Wisely Canada. CT scans for adults with head injuries. When you need one and when you don't. [Internet pamphlet]. Toronto Canada; 2017. [cited 2020 March 10]. Available from: <https://choosingwiselycanada.org/wp-content/uploads/2017/06/CTs-for-adults-with-head-injuries-EN.pdf>