MADISON NEUROLOGY · NEUROLOGY SYMPTOM GUIDE

Neurological symptoms after head, neck, or back trauma

Structured history, interpretation & clinical review

Symptom 94 of 94
Clinical educational workbook
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Not for clinical use. This guide cannot diagnose, triage, or exclude an emergency. Seek emergency care for severe, sudden, or worsening symptoms.

Contents

Scope and safe use 3

Section 1: Input form 4

- 1A. Immediate safety screen 4
- 1B. Timeline 4
- 1C. Discriminating features 5
- 1D. Associated findings 5
- 1E. Clinical context 5

Section 2: Interpreting the input form 7

Section 3: Clinical review 9

Selected references 11

> **Document purpose**
> A structured educational history and diagnostic-reasoning workbook. Treatment is outside its scope.

Scope and safe use

Neurological symptoms after head, neck, or back trauma are localized by immediate deficits, delayed course, spinal pain, vascular warnings, consciousness, sphincter function, and anticoagulant risk.

Not for clinical use.
This educational workbook does not diagnose, triage, estimate probability, replace examination, or exclude an emergency. If a safety-screen answer is Yes or uncertain, follow the stated action rather than continuing routine interpretation.

How to complete the workbook

- Record the current episode and the person’s usual baseline; use a witness account for events with impaired awareness.
- Check one option per question unless a clinician documents a different combination. “Not sure” is unresolved information, not a negative answer.
- Complete the safety screen before all other sections. Record exact onset or last-known-well time for sudden deficits.
- Use Section 2 only after the form is complete. More than one pattern may be relevant; urgency takes precedence.
- Use Section 3 to plan focused examination and clinician-selected investigations. No test is automatic or universally required.

Specific escalation rule

New severe headache, new focal weakness or numbness, new speech/language difficulty, reduced consciousness, a prolonged seizure, severe breathing or swallowing difficulty, sudden visual loss, or rapidly progressive weakness requires emergency assessment. Call 911 in the United States.

Section 1: Input form

Checkbox history for Neurological symptoms after head, neck, or back trauma

1A. Immediate safety screen

Is there worsening headache, repeated vomiting, seizure, weakness, slurred speech, unusual behavior, or one pupil larger than the other?

☐ No ☐ Yes ☐ Not sure

If Yes: Call emergency services now or go to an emergency department immediately.

Is the person increasingly drowsy, confused, or difficult to awaken?

☐ No ☐ Yes ☐ Not sure

If Yes: Call emergency services now and do not leave the person alone.

Is there severe neck pain, suspected spinal injury, new limb weakness, or loss of bladder or bowel control?

☐ No ☐ Yes ☐ Not sure

If Yes: Seek emergency assessment now and minimize unnecessary spinal movement.

Does the person use anticoagulants, have a bleeding disorder, or have a high-risk injury mechanism?

☐ No ☐ Yes ☐ Not sure

If Yes: Arrange emergency assessment even if early symptoms seem mild.

> **Stop rule:** Any Yes answer triggers the action printed under that question. Any Not sure answer requires prompt in-person clarification; do not treat it as No.

1B. Timeline

How did the symptom begin?

☐ Suddenly, over seconds or minutes ☐ Over hours to days ☐ Gradually over weeks or months ☐ Longstanding or since childhood ☐ Not sure

Use the first occurrence for recurrent episodes; use the current episode for a changing symptom.

What is the overall course?

☐ One persistent episode ☐ Separate recurrent episodes ☐ Steadily worsening ☐ Fluctuating or variable ☐ Currently resolved

Has this exact pattern been assessed before?

☐ Definitely new ☐ The same pattern occurred before ☐ Present and stable for a long time ☐ Not sure

1C. Discriminating features

Which region and symptom pattern is involved?

☐ Headache, confusion, visual, or cognitive symptoms ☐ Neck pain with head, face, or limb symptoms ☐ Back pain with leg, saddle, or sphincter symptoms ☐ Focal limb weakness, numbness, or pain

When did neurological symptoms begin?

☐ Immediately at injury ☐ Hours to days later ☐ Weeks later ☐ Not sure

Is there new weakness, numbness, gait difficulty, speech change, or loss of consciousness?

☐ Yes ☐ No ☐ Present but fully resolved ☐ Not sure

Is there anticoagulant use, bleeding disorder, osteoporosis, high-energy mechanism, or a new severe headache/neck pain?

☐ Yes ☐ No ☐ Not sure

1D. Associated findings

Are there other neurological symptoms—weakness, numbness, speech change, double vision, swallowing difficulty, or severe imbalance?

☐ Yes ☐ No ☐ Not sure

Are there systemic clues—fever, weight loss, cancer, infection risk, pregnancy/postpartum status, or a new medication?

☐ Yes ☐ No ☐ Not sure

How much does this affect daily activity?

☐ Noticeable but activities continue ☐ Some activities are limited ☐ Cannot perform usual activities ☐ Not sure

1E. Clinical context

Who is being assessed?

☐ Adult or adolescent ☐ Child under 12 ☐ Adult aged 65 or older

Could a medicine, substance, withdrawal, or recent dose change be relevant?

☐ No plausible contributor ☐ Yes or possibly ☐ Not reviewed

Include sedatives, dopamine-blocking drugs, stimulants, decongestants, anticholinergics, alcohol, and non-prescribed substances when relevant.

Is there a relevant neurological, muscular, metabolic, cardiovascular, autoimmune, or sleep disorder?

☐ No known relevant condition ☐ Yes ☐ Not sure

What prior information is available?

☐ A previous examination or investigation ☐ Prior records but no clear explanation ☐ No useful prior assessment ☐ Not sure

Additional history and documentation

Record exact dates/times, witness details, relevant medication doses and changes, prior investigation reports, and the person’s baseline function.

Section 2: Interpreting the input form

Answer combinations generate a differential and an assessment pathway—not a diagnosis.

> **Precedence:** Emergency safety answers override every pattern below. Otherwise, the highest-urgency fully matched pattern takes precedence. If entries are incomplete, contradictory, or match no pattern, use the unresolved-information pathway.

Pattern 1: Immediate post-traumatic neurological deficit

Is there new weakness, numbness, gait difficulty, speech change, or loss of consciousness? Yes
When did neurological symptoms begin? Immediately at injury

Emergency warning pattern — Now

Immediate neurological deficit after trauma requires emergency assessment.

Differential to review:

- Traumatic intracranial, spinal-cord, or cauda-equina injury

Action: Call 911 or go to the nearest emergency department now. Do not drive yourself.

Pattern 2: Delayed vascular or intracranial warning

When did neurological symptoms begin? Hours to days later
Is there anticoagulant use, bleeding disorder, osteoporosis, high-energy mechanism, or a new severe headache/neck pain? Yes

Emergency warning pattern — Now

Delayed symptoms with high-risk context or severe head/neck pain require emergency vascular/intracranial assessment.

Differential to review:

- Traumatic intracranial, spinal-cord, or cauda-equina injury
- Carotid or vertebral arterial dissection

Action: Call 911 or go to the nearest emergency department now. Do not drive yourself.

Pattern 3: Spinal or sphincter pattern

Which region and symptom pattern is involved? Back pain with leg, saddle, or sphincter symptoms
Is there new weakness, numbness, gait difficulty, speech change, or loss of consciousness? Yes / Present but fully resolved

Emergency warning pattern — Now

Back trauma with leg, saddle, gait, or sphincter symptoms requires emergency spinal assessment.

Differential to review:

- Traumatic intracranial, spinal-cord, or cauda-equina injury

Action: Call 911 or go to the nearest emergency department now. Do not drive yourself.

Pattern 4: Focal limb nerve/root pattern

Which region and symptom pattern is involved? Focal limb weakness, numbness, or pain
Is there new weakness, numbness, gait difficulty, speech change, or loss of consciousness? Yes

Urgent assessment pattern — Same day

Persistent focal limb deficit after injury needs urgent root, plexus, nerve, and structural assessment.

Differential to review:

- Nerve-root, plexus, peripheral-nerve, or musculoskeletal injury

Action: Arrange same-day medical assessment. If symptoms are rapidly worsening or severe, call 911.

Unresolved-information pathway: The entries need structured in-person characterization.

Emergency warning pattern — Now

Do not guess missing answers or convert uncertainty into reassurance. Document what is unknown, perform an in-person examination, clarify the timeline with a witness or records when available, and reassess if any new feature appears.

Action: Call 911 or go to the nearest emergency department now. Do not drive yourself.

Section 3: Clinical review

Diagnostic modules and focused investigation logic

The examination comes before a test list. Select investigations only after localization, urgency, comorbidity, pregnancy status, renal function, anticoagulation, and prior results have been considered.

3.1 Traumatic intracranial, spinal-cord, or cauda-equina injury

Discriminating features: Immediate or delayed deficit, reduced consciousness, severe spinal pain, saddle symptoms, or sphincter dysfunction.

Logical investigations: Emergency trauma and neurological assessment with appropriate brain/spine imaging and spinal precautions when indicated.

3.2 Carotid or vertebral arterial dissection

Discriminating features: New severe neck/head pain after trauma with Horner features, transient visual loss, or posterior/anterior circulation symptoms.

Logical investigations: Emergency cerebrovascular assessment and vascular imaging.

3.3 Nerve-root, plexus, peripheral-nerve, or musculoskeletal injury

Discriminating features: Focal limb symptoms mapped to root, plexus, nerve, or local musculoskeletal injury.

Logical investigations: Focused trauma and neurological examination with targeted imaging/electrodiagnostics at the appropriate time.

3.4 Post-traumatic headache, vestibular, cognitive, or functional syndrome

Discriminating features: Persistent or delayed headache, dizziness, cognitive, sleep, or mood symptoms after dangerous injury is excluded.

Logical investigations: Structured post-traumatic neurological assessment with symptom-specific examination and follow-up.

Reassessment and documentation

- If the symptom pattern changes, repeat the safety screen and timeline rather than carrying forward an earlier interpretation.
- If a test is unrevealing but the deficit persists or progresses, revisit localization and seek specialist review; a normal result does not automatically end assessment.
- If symptoms resolve, document duration, completeness of recovery, recurrence, and any residual deficit. Resolved sudden focal symptoms can still require urgent vascular assessment.
- If the history and examination conflict, obtain collateral information and in-person review rather than forcing a single diagnostic label.

Selected references

Sources provide background standards and do not replace local emergency pathways or current specialist guidance. Accessed October 2026.

1. Centers for Disease Control and Prevention. (2025). *Symptoms of Mild TBI and Concussion*. https://www.cdc.gov/traumatic-brain-injury/signs-symptoms/index.html

2. National Institute for Health and Care Excellence. (2023). *Head injury: assessment and early management (NG232)*. https://www.nice.org.uk/guidance/ng232

Madison Neurology LLC — Neurology Symptom Guide
Neurological symptoms after head, neck, or back trauma
Educational reference only. Not for clinical use. Treatment is outside the scope of this workbook.