

Traumatic brain injury neurologic examination

see [Neurological examination](#).

1. Cranial nerv exam.

a) optic nerve function

- if conscious: serial quantitation of vision in each eye is important.

A Rosenbaum near vision card is ideal, otherwise use any printed material. If patient cannot see this, check if they can count fingers. Failing this, check for hand motion vision and lastly light perception. Children may develop transient cortical blindness lasting 1-2 days, usually after a blow to the back of the head

- if unconscious: check for a efferent pupillary defect, best demonstrated with swinging flashlight test. Indicates possible [optic nerve injury](#).

- funduscopic exam: check for papilledema, pre-retinal hemorrhages, retinal detachment, or retinal abnormalities suggestive of anterior optic nerve injury. If a detailed exam is required, pharmacologic dilatation with mydriatics (p.563) may be employed, however, this precludes pupillary exam for a variable period of time, and should be undertaken advisedly

b) pupil: size in ambient light; reaction to light (direct & consensual)

c) VII: check for peripheral VII palsy (facial asymmetry of unilateral upper and lower facial muscles)

d) VI: abducens palsy following trauma may occur as a result of ↑ ICP or with clival fractures

2. level of consciousness/mental status

a) Glasgow coma scale for quantitating level of consciousness in poorly responsive patient

b) check orientation in patient able to communicate

3. motor exam (assesses motor tracts from motor cortex through spinal cord)

a) if patient is cooperative: check motor strength in all 4 extremities

b) if uncooperative: check for appropriate movement of all 4 extremities to noxious stimulus

(differentiate voluntary movement from posturing or stereotypical spinal cord reflex). This also assesses sensation in an unresponsive patient

c) if any doubt about integrity of spinal cord: also check "resting" tone of anal sphincter on rectal exam, evaluate voluntary sphincter contraction if patient can cooperate, check anal wink with pinprick, and assess bulbocavernosus reflex

4. sensory exam

a) cooperative patient:

● check pinprick on trunk and in all 4 extremities, touch on major dermatomes (C4, C6, C7, C8, T4, T6, T10, L2, L4, L5, S1, sacrococcygeal)

● check posterior column function: joint position sense of LEs

From:
<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:
https://neurosurgerywiki.com/wiki/doku.php?id=traumatic_brain_injury_neurologic_examination

Last update: **2024/06/07 02:58**

