



Neurological Examination

Examination of Cranial Nerves

OBJECTIVE: To conduct a complete Examination of Cranial Nerves as a part of Neurological Examination.

MATERIALS: Well illuminated examination room, examination table, tendon hammer, scent stimuli, Snellen chart/near vision card, ophthalmoscope, penlight, tuning fork, pins and needles, a piece of cotton wool.

D: Appropriately done PD: Partially done ND: Not done/Incorrectly done

STEP/TASK	D	PD	ND
Preparation			
1. Introduce yourself to the patient.			
2. Confirm patient's ID.			
3. Explain the procedure and reassure the patient.			
4. Get patient's consent.			
5. Wash hands.			
6. Prepare the necessary materials.			
7. Show the patient each object and allow him/her to touch them prior to beginning the exam to reduce any fear of being hurt during the examination.			
8. Position the patient in a sitting position.			
Examination			
The olfactory nerve (CN I):			
9. <ul style="list-style-type: none"> • Ask the patient if she/he has noticed a change in his sense of smell or taste. <i>(If yes, perform an olfactory examination: test each nostril separately)</i> <i>(Ask the patient to close his/her eyes and block one nostril.)</i> <i>(Take one of the scent stimuli and ask patient to sniff and describe the scent.)</i> 			
The optic nerve (CN II): (examine each eye separately)			
10. <ul style="list-style-type: none"> • Test visual acuity on a Snellen chart or using a near vision card <i>(or a page in a book)</i>. • Test the visual fields by confrontation. • Examine the retina and optic nerve by direct fundoscopy. 			
The oculomotor, trochlear, and abducens nerves (CN III, IV, and VI):			
11. Inspect the eyes: <ul style="list-style-type: none"> • Look for the size, shape, equality and regularity of the pupils. • Look for a visible ptosis (Horner's syndrome) or squint. • Test the direct and consensual pupillary light reflexes. • Test accommodation by asking patient to look into the distance and then focus his/her eyes on an object <i>(finger or pen)</i> brought to a point about 30 cm in front of the nose. 			
12. Examine eye movements: <ul style="list-style-type: none"> • Ask the patient to keep his/her head still and to follow your finger with his/her eyes and to tell you if he sees double at any point <i>(move your fingers laterally-left to right- and vertically - up and down-)</i>. • Look for nystagmus at the extremes of gaze. 			
➔ <i>Continues on the next page</i>			

STEP/TASK	D	PD	ND
Examination			
The trigeminal nerve (CN V):			
<p>13. Sensory Part (<i>Ask patient to close his/her eyes</i>).</p> <ul style="list-style-type: none"> • Test light touch, pain and temperature senses in the three branches of the trigeminal nerve. Compare both sides. • Test the corneal reflex (<i>Inform patient that this is likely to cause some discomfort</i>). <p>Motor Part</p> <p>Test the muscles of mastication by asking the patient to:</p> <ul style="list-style-type: none"> • Clench his/her teeth (<i>palpate his temporal and masseter muscles bilaterally</i>). • Open and close his/her mouth against resistance (<i>place your fist under his chin</i>). (<i>Inform patient that you would hold his/her chin and test the jaw jerk</i>). • Ask the patient to let his mouth fall open slightly. • Place your index finger on his/her chin and hold chin with your middle finger • Gently tap on your index finger with a tendon hammer and observe jaw jerk. 			
The facial nerve (CN VII):			
<p>14. • Look for facial asymmetry. (<i>Note that the nasolabial folds and the angle of the mouth are especially indicative of facial asymmetry</i>).</p> <p>Sensory Part</p> <ul style="list-style-type: none"> • Test the anterior two-thirds of the tongue for taste sensation by applying either/or salty, bitter sour, sweet solutions on the tongue. <p>Motor Part</p> <p>Test the muscles of facial expression by asking the patient to:</p> <ul style="list-style-type: none"> • Lift his/her eyebrows as far as they will go. • Close his/her eyes as tightly as possible. (<i>Try to open them.</i>) • Blowout his/her cheeks. • Purse his/her lips or whistle. • Show his/her teeth. 			
The acoustic nerve (CN VIII): (<i>remove patient's hearing devices</i>)			
<p>15. • Test hearing sensitivity in each ear by occluding one ear and rubbing your thumb and fingers together in front of the other.</p> <ul style="list-style-type: none"> • Apply Rinne and Weber tests and examine the ears by auscultation. 			
The glossopharyngeal nerve (CN IX):			
<p>16. • Test the gag reflex by touching the tonsillar fossae on both sides. (<i>Inform patient that this is likely to cause some discomfort</i>).</p>			
The vagus nerve (CN X):			
<p>17. Ask the patient to phonate (say aaah~) and look for deviation of the uvula with a pen light.</p>			
The hypoglossal nerve (CN XII):			
<p>18. Aided by a pen light, inspect the tongue for wasting and fasciculation. Ask the patient to stick out his tongue and to wiggle it from side to side.</p>			
The accessory nerve (CN XI):			
<p>19. Look for wasting of the sternocleidomastoid and trapezius muscles. Ask the patient to:</p> <ul style="list-style-type: none"> • Shrug his shoulders against resistance. • Turn his/her head to either side against resistance. 			
After the examination			
20. Ensure that the patient is comfortable.			
21. Make explanations to the patient, answer his/her questions and discuss management plan.			
22. Dispose of sharps and waste material according to infection control standards.			
23. Wash hands.			
24. Document the procedure.			