**King Saud University**

**Collage of Nursing**

**Medical-surgical Nursing**

1. Obtain health history
2. Prepare Neurologic Examination Equipment :

* *Saftey pin*
* *Cotton*
* *Reflex hammer*
* *Flashlight*
* *Tongue blade*
* *Vision screener*
* *Coffee , sugar*
* *Tunning fork*

III-The Neurologic Examination has five sections:

1. Cerebral function( mental status, level of consciousness, pupil assessment)
2. Testing Cranial Nerves
3. Motor Examination ( muscle strength, gait and coordination)
4. Sensation Examination
5. Reflexes Examination
   1. **Cerebral function**
      1. **MENTAL STATUS EXAMINATION**

**Speech & language** (note quantity, rate, loudness, clarity and fluency of speech)

**Normal finding**: Client will speak *clearly* with out any difficulty**.**

**Abnormal finding:** Client will have aphasia, dysartheria (difficulty in forming words)

* **Orientation** (time, place, personal) Ask the cleint about his name, his family member name ,time during examiantion ,date day ,hospital Name ,duration of his illiness

**Normal finding:** Client *alert* and *oriented* to time ,place ,persons

**Abnormal finding:** Disorientation and does not recognnize family

* **Memory** (immediate recall, recent memory, remote memory)

*Immediate recall:*

\*Ask the client to repeat number ex: 2345.Spoken slowly \*Ask the client to repeat them backward.

*Recent memory:*

\*Ask the client to recall the recent event of the day. \*Ask the client to recall information given early in the interview.

*Remote memory:*

\*Ask the clients about his birthdays, school, and jobs

**Normal finding:** Client will repeat the number with out difficulty. Recent and remote memory intact

**Abnormal finding:** Client will have difficulty to repeat the number. Impaired memory

* **Attention** and **calculation:**

To test the client ability to concentrate or attention span.\*Ask client to count back ward from 10-0.\*Assess calculation ability such as addition, subtraction and multiplication.

**Normal finding:** Client count back word from 10-0.

**Abnormal finding:** Client will has difficult to count back word.

* + 1. **Level of consciousness**

The single most valuable indicator of neurological function is the individual's level of consciousness

* Alert. Follow commands and responds completely and appropriately to stimuli.
* Lethargic. The patient is sleepy or drowsy and will awaken and respond appropriately to command.
* Stupor.require vigorous stimulation for a response .
* Semi coma. The patient is not awake but will respond purposefully to deep pain.
* Coma. The patient is completely unresponsive.

**The Glasgow coma scale (GCS)**

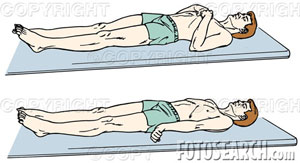
**I- EYE OPENING (Max score 4)**

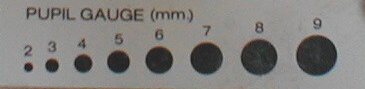
* Spontaneous eye opening. 4
* Eye opening in response to speech 3
* Eye opening in response to pain. 2
* No eye opening. 1

**II-ASSESS GRADES OF VERBAL RESPONSE** (Max score 5)

* Oriented . **5**
* Disorientation and confusion . 4
* Inappropriate speech . **3**
* Incomprehensible speech. **2**
* No verbal response. **1**

**III-ASSESS GRADES OF MOTOR RESPONSE** (Max score 6)

* Obeying command . **6**
* Localizing response to pain. **5**
* Withdrawal to pain . **4**
* Abnormal flexion of limbs (decorticate) 3
* Extension of limbs (deceberate) **2**
* No response (flaccid) **1**
* **Total score (15) points indicate the client alert**
* **A comatose client scores (7) or less.** ****
  + 1. **Pupil assessment:**



*-*Size of the pupils:

-Shape of pupils:

-Equality of pupils:

-Observe reaction to light:

**Abnormal finding:** Unilateral dilation and non reactive is sign of increased intracranial pressure

**2- Testing Cranial Nerves**

**THE OLFACTORY NERVES**

Test this with odorous things, one nostril at a time. As most physicians don't carry odorants, the screening exam usually omits the first cranial nerve.

**Common causes of cranial nerve I dysfunction include**:

* Frontal lobe mass or stroke
* Nasal problems (e.g. allergic or viral).

**CRANIAL NERVE II: THE OPTIC NERVE**

Test this with field of vision and visual acuity. To screen field of vision, test by confrontation (patient looks at your nose while you move fingers).

**Common causes of optic nerve abnormalities:**

* Eye disease or injury. Diabetic retinopathy and glaucoma are major causes.
* Occipital lobe mass or stroke. This causes loss of visual field in both eyes. Patients can lose ½ or ¼ of a visual field (hemianopioa)

**CRANIAL NERVE III, IV and VI: THE OCULOMOTOR, TROCHLEAR and ABDUCENS NERVES**

Test these three nerves with extraocular movements and pupil function (cranial nerve III). To detect subtle abnormalities, ask patient whether they have double vision (diplopia) during extraocular movements.

**Some common causes for cranial nerve palsies are**:

* Brainstem injury or compression (e.g. tumor, stroke, intracranial bleeding
* Diabetic neuropathy (can cause temporary palsies).
* **CRANIAL NERVE V: THE TRIGEMINAL NERVE**
* Screen this nerve with facial sensation (to light touch, e.g. q-tip) and strength of the masseter muscles.
* Common cause for CN V abnormality is stroke in the contralateral sensory cortex.
* **CRANIAL NERVE VII: THE FACIAL NERVE**
* Test this with facial movements: ask the patient to raise eyebrows, show teeth, smile, puff out cheeks, whistle.
* Injuries to facial strength central to the nucleus (in the cortex or corticospinal tracts) - often caused by a stroke - cause weakness of the lower face, with sparing of the forehead, due to cross-innervation of the forehead. We call this a central facial palsy.
* Injuries to the facial nerve itself (peripheral facial palsy) cause weakness of the entire side of the face, including the forehead. Common causes of peripheral facial palsy are Bell's palsy (idiopathic - cause is unknown) and Lyme disease (which may cause bilateral peripheral facial palsy).

**CRANIAL NERVE VIII: THE ACOUSTIC NERVE**

Test the acoustic nerve with hearing test (Weber and rinnes tests)

**Common causes of acoustic nerve abnormalities**:

* Sensorineural hearing loss due to age or noise exposure
* Tumors at cerebellopontine angle
* Acoustic neuroma
* Earwax or middle ear disease can cause temporary hearing loss.
* **CRANIAL NERVE IX and X: THE GLOSSOPHARINGEAL and VAGUS NERVES**
* Test this with the gag reflex - put tongue blade on the posterior third of patient's tongue and press down and ask client to say( aaah) and watching for uvula movement.
* **sensation of the tongue :**by wet cotton swabs in each of solution of sugar, lemon

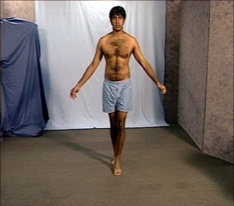
and ask patient to stick out the tongue touch each swab to the front of his tongue

\* Ask him to identify the taste

* **A common cause of CN IX and X abnormality** is a large stroke. The uvula retracts to the normal side
* **CRANIAL NERVE XI: THE ACCESSORY NERVE**
* Test this nerve by asking patient to shrug shoulders or turn head against resistance.
* **A common cause of CN XI abnormality** is neck injury.
* **CRANIAL NERVE XII: THE HYPOGLOSSAL NERVE**
* Test this nerve by asking patient to protrude tongue and move it from side to side.
* **CN XII function abnormalities** are often caused by stroke. The tongue points toward its weak side.

**3- Motor examination:**

**A-Assess bilateral muscle strength and muscle tone (see musculoskeletal module)**

***B- Posture and gait*: ** **** 

**\***Ask client to walk forward and then backward in a straight line, walk heel to toe, walk on toes then on heels, and hop in place on each foot .

**ABNORMAL GAITS**

* **Spastic hemiplegia**
* **Parkinsonian Gait**
* **Antalgic Gait**
* **Ataxic Gait**
* **SPASTIC HEMIPLEGIA**
* Foot is held inverted, leg too straight and swung out, arm flexed and held close to chest - a sign of old stroke or other cortical injury.
* **PARKINSONIAN GAIT**
* Shuffling gait, rapid small steps, little arm swing, turning "en bloc".
* **ANTALGIC GAIT**
* **Antalgic** (pain-avoiding) gait is not due to neurologic illness. In this gait, patient spends minimal time on the painful leg or side.
* **ATAXIC GAIT**
* **Ataxic gait:** wide-based, irregular gait, a sign of cerebellar disease.

**C-Test for COORDINATION**

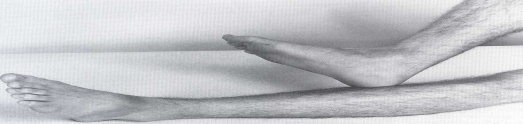
* **Finger to nose**
* **Heel to ankle**
* **Rapid alternating movements**
* **Fine motor**
* **Romberg's sign**

**FINGER to NOSE**

Patient touches nose, then examiner's finger, then goes back and forth rapidly. It's abnormal in cerebellar disease. Here is a patient with abnormal finger to nose testing (intention) due to cerebellar disease: 

**HEEL to Ankle**

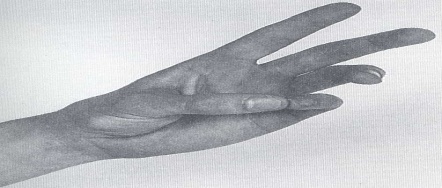
In supine position ask the patient to place the heel on the opposite knee and run it down the skin from the knee to the ankle. Abnormal jerky motion in cerebellar disease.



**RAPID ALTERNATING MOVEMENTS**

Ask patient to rapidly pronate and supinate hands. Abnormal (dysdiadochokinesia) in patients with cerebellar disease 

**FINE MOTOR**

Patient rapidly touches thumb to each finger of same hand. Abnormal with cortical lesions (tumor or stroke). 

**ROMBERG's SIGN**

Patient stands with feet together and closes eyes. Patient sways and can't hold position with eyes closed. This is abnormal in posterior column disease (with cerebellar disease, patient can't stand with feet together even with eyes open). Here is a patient with an abnormal Romberg test:

**4-SENSORY EXAMINATION**

* **(Pain)**

**\***Ask client to close eyes touch skin with safety pin, alternating blunt end and sharp

end of pin. Ask the patient with eyes closed to distinguish sharp from dull.

* **(Temperature)**

**\***Fill two test tubes with water, one hot, and one cold. Ask client to close eyes and touch client skin with test tube**.**

* **(Touch)**

Ask client to close eyes stroke cotton wisp over client's skin

* **(Proprioception):**

With eyes closed, patient distinguishes whether finger and toe are moved up or down. This tests posterior column function

**5-REFLEXES EXAMINATION**

**Light reflexes**:

**Corneal reflex :**

Hold client eye unexpectedly from side of the head or brush client cornea with cotton swap .

**Normal finding**: Eye blinking immediately

**Abnormal finding**: No blinking

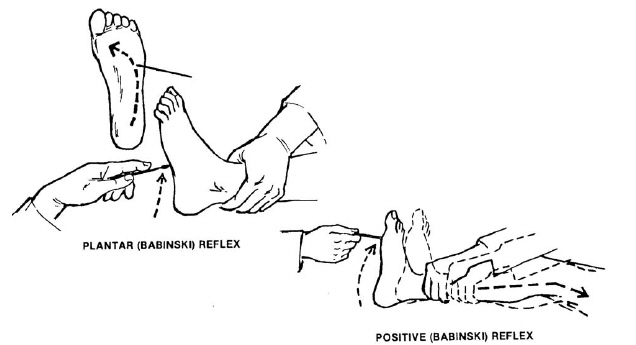
**Gag and swallow reflex :**

Open client mouth and touching the tip of tongue blade against his posterior pharynex and ask the patient to say "aah"

**Abnormal finding:** Absences of gag and swallow reflex are due to impaired cranial nerve IX& X

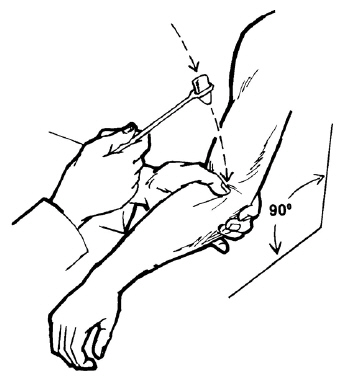
**BABINSKI's SIGN**

* Stroke the sole of the foot with the back of your reflex hammer (Babinski used a key), from lateral heel to lateral ball of foot, then medially to medial ball of foot.
* **Normal response**: great toe goes down(dorsiflexison)
* **Abnormal response**: great toe goes up, other toes fan up occur in paralyzed side in CVA and bilaterally spinal cord injury.

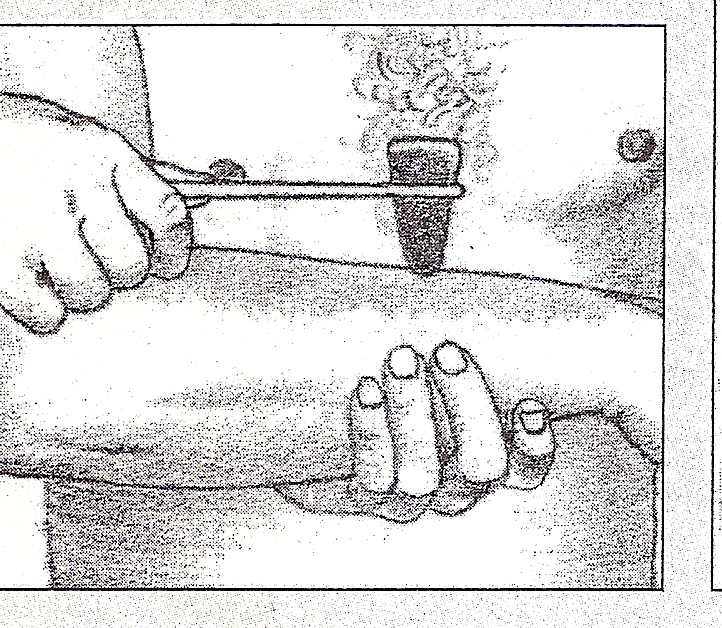
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**DEEP TENDON REFLEXS**

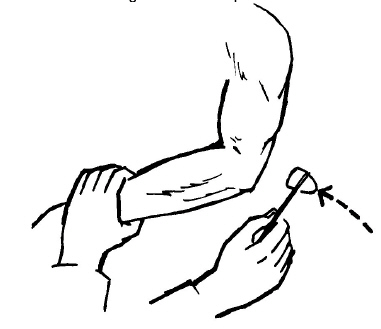
**Biceps** reflex tests. Place your thumb on biceps tendon and strike your thumb with the reflex hammer. **Normal reflex** is elbow flexion (bending (and contraction of biceps.

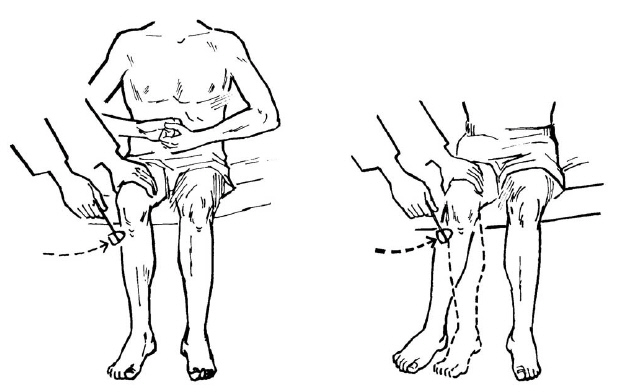


**Brachioradialis** reflex . Strike tendon with flat side of hammer.



**Triceps:** tests. Tap proximal to olecranon.



**knee Reflex:** 

**Achilles Reflexes** : .

**GRADING REFLEXES**

0= No response

1+= Slightly diminished

2+= Average or normal

3+= Increased but normal

4+= Hyperactive, or exaggerated

**Nursing health assessment documentation format**

**Nervous System**

**Instructions:** Circle or fill in the blanks with actual physical assessment findings. WNL=Within Normal Limits for age. Mark items which require additional documentation with an asterisk (\*) and document in the Nurse’s Notes sections of the Daily Nurses Record.

**Pt. Identification data**

Name-------------- Age----- Sex----- occupation ----------- Marital status----------

Tel/Address---------------------- Known Allergies---------------------------------

**General Survey**

Physical appearance \_ WNL, abnormality----------------- Body structure \_WNL, abnormality---------------

Mobility \_WNL, abnormality------------------------ Behavior \_ WNL, abnormality------------------------

**Present nervous system history**

**Chief complaint: P------------------------------------------------- P --------------------------------------------------**

**Q------------------------------------------------ R------------------------------------------- R---------------------------**

**S------------------------------------------------ T------------------------------------------- T----------------------------**

**T------------------------------------------------ Associated symptoms ---------------------------------**

**Medication -------------------------------------------------------------------------------------------------**

**-------------------------------------------------------------------------------------------------------------------**

**Past nervous system history-------------------------------------------------------------------------------**

**-------------------------------------------------------------------------------------------------------------------**

**-------------------------------------------------------------------------------------------------------------------**

**Family nervous system history----------------------------------------------------------------------------**

**--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------**

**2. Central nervous system review:**

SPEECH : LOC: PUPILS: Suck/swallow

WNL Alert PEARL WNL

Incoherent Oriented Pinpoint R/L Weak

Hysterical Confused Dilated R/L Uncoordinated

Slurred Agitated Midposition R/L Absent

Crying lethargic Fixed R/L

No response Arousable

WNL Unconscious

**3. Cranial nerves:**

Olfactory CN I: Identified odours unable to identified odours

Optic CN II: vision field with in normal limit vision field out of normal limit

CN III, IV, VI: lower edge of lids meets bottom edge of irises inability to complete eye open

Extra ocular movement eye move smoothly un equal muscle strength

CNVI: cornel reflex: eye tear, pt blinks, absence of cornel reflex

Facial sensation present sensation bilaterally absent of facial sensation

Facial CN VII: symmetrical facial movement a symmetrical facial movement

Sensation of tongue patient correctly identified solution patient cannot taste

Hyperglossal CNXII: tongue move smoothly difficult tongue movement

Sensory function:

Pain & temperature ability to distinguish between sharp &dull sensation hot &cold alternation in pain or temperature sensation

Touch ability to identify light touch bilaterally difficult to identify touch

Positioning ability to identify position inability to identify position

Motor function: patient will perform test smoothly uncoordinated movement tremors

Fasciculation

Reflex: *biceps* presentabsent , *triceps* presentabsent,

*Brachioradialis* presentabsent *, patellar*presentabsent

*Achilles s*presentabsent , *Babinski* presentabsent

NURSES NOTES: -----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

NR. Name/Signature----------------

King Saud University Application of Health Assessment *student name-----*

Collage of Nursing NURS 225 ID No: ------------

NURSING DEPT. Performance checklist *Date --------------------*

**Nervous System**

**The student nurse should be able to:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Performance check list Activities | Competent | | Not competent | | Comment |
|  | Trial 1 | Trial 2 | Trial 1 | Trial 2 |  |
| **Mental and emotional status:** |  |  |  |  |  |
| Observe manner of client speech |  |  |  |  |  |
| Assess client level of consciousness |  |  |  |  |  |
| Ask question about person, place and time  If client's initial answers were inappropriate. |  |  |  |  |  |
| Test ability to follow commands if client disoriented. |  |  |  |  |  |
| Assessed response to pain when appropriate. |  |  |  |  |  |
| **Language Function :** |  |  |  |  |  |
| Assess ability to client to understand  spoken words and to express self |  |  |  |  |  |
| **Intellectual function:** |  |  |  |  |  |
| Assess client immediate recall |  |  |  |  |  |
| Assess client recent memory |  |  |  |  |  |
| Assess client past memory |  |  |  |  |  |
| Assess client knowledge of illness or hospitalization. |  |  |  |  |  |
| Test client ability to explain meaning of stated proverb |  |  |  |  |  |
| Ask client to identify similarities or association  Between simple terms or concepts. |  |  |  |  |  |
| **Cranial nerve function:** |  |  |  |  |  |
| Correctly assess function of each of twelve  cranial nerves |  |  |  |  |  |
| **Sensory function :** |  |  |  |  |  |
| Test sensory function with client eye closed |  |  |  |  |  |
| Assess client sensory response to pain, temperature, light touch, vibration, position, two point discrimination. |  |  |  |  |  |
| Measured sensation by applying stimuli in random ,unpredictable order |  |  |  |  |  |
| Compare sensation in symmetric body parts |  |  |  |  |  |
| Ask client to say when particular stimulus perceived |  |  |  |  |  |
| **Motor function :** |  |  |  |  |  |
| Assess gait stance, and tone. |  |  |  |  |  |
| Assess client ability to perform rapid, repeat movement of upper extremity. |  |  |  |  |  |
| Assess client's ability to perform motor. |  |  |  |  |  |
| Assess client upper extremity coordination |  |  |  |  |  |
| Measure client ability to perform rapid ,repeated movement of lower extremities |  |  |  |  |  |
| Ask client to close eyes, stand on one foot, than the other reflex |  |  |  |  |  |
| **Reflexes:** |  |  |  |  |  |
| Assess deep tendon reflexes correctly and grad according to scale. |  |  |  |  |  |
| Record assessment findings in nurse notes |  |  |  |  |  |

*Instructor’s signature*

|  |
| --- |
|  |

**Performance checklist of neurological system**

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **l. Olfactory** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Client both eyes and one naris are closed |  |  |  |  |
|  | Place a strong smelling item under  each nostril individually and ask the person  to identify it |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ll. Optic** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Visual acuity (Distance/Central Vision  + Near vision) |  |  |  |  |
|  | Examine the Optic Fundi by using the Ophthalmoscope |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **lll. Oculomotor  lV. Trochlear  Vl. Abducens** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Test Extraocular Movements |  |  |  |  |
|  | Test direct and consensual pupillary  reaction to light |  |  |  |  |
|  | Accommodation |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **V. Trigeminal** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Palpate temporal and masseter  muscles while patient clenches teeth |  |  |  |  |
|  | Ask client to closed his eyes and test  forehead, each cheek, and jaw on each  side for sharp or dull (use a cotton swab)  sensation. Direct the client to say ‘now’  every time the cotton is felt |  |  |  |  |
|  | With the individual's eyes open and  looking upward, the practitioner takes  a strand of cotton, approaches the cornea  from the side, and touches it with the  cotton. This should initiate a blink  response. |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Vll. Facial** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Ask the client to close both eyes  and keep them closed. Try to open  them by retracting the upper and  lower lids simultaneously and  bilaterally. |  |  |  |  |
|  | Ask patient to raise eyebrows, show teeth,  grimace, smile, puff both cheeks (Assess  face for asymmetry, abnormal movements) |  |  |  |  |
|  | Use the sweet, salty, sour and bitter items  to test taste (Between each solution the  mouth needs to be rinsed with water) |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Vlll. Acoustic** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Weber Test |  |  |  |  |
|  | Rinne test (to compares air and bone  Conduction) |  |  |  |  |
|  | Romberg test |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **lX.**  **Glossopharyngeal X. Vagus** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Ask the client to open the mouth,  depress the client’s tongue with the tongue  blade, ask the client to say ”ah” Usually, the  soft palate raises and the uvula remains in  the midline |  |  |  |  |
|  | Observe the individual swallowing |  |  |  |  |
|  | Test gag reflex |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Xl.**  **Spinal Accessory** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Test the Trapezius muscle (have the client  shrug the shoulders while you resist with  your hands) |  |  |  |  |
|  | Ask the client to try to touch the  right ear to the right shoulder without  raising the shoulder. Repeat with the left  shoulder |  |  |  |  |

**Testing cranial nerves**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Xll.**  **Hypoglossal** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Ask patient to protrude tongue and move  it side to side. |  |  |  |  |

**Testing Motor function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Testing Motor**  **Function** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Observation of gait and balance |  |  |  |  |
|  | 1. Administration of the Romberg test |  |  |  |  |
|  | 1. Administration of the finger-to-nose test |  |  |  |  |
|  | 1. Observation of rapid alternating action movements |  |  |  |  |

**Testing Motor function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Observation of gait**  **and balance** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Ask the client to walk across the room  and return |  |  |  |  |

**Testing Motor function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Administration of**  **the Romberg test** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Ask the patient to remain still and close  their eyes (for about 20 seconds). |  |  |  |  |

**Testing Motor function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Administration of the finger-to-nose test** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | -Ask the client to extend both arms from the  sides of the body -ask the client to keep booth eyes open -ask the client to touch the tip of the nose with  right index finger, and then return the right arm  to an extended position. -ask the client to touch the tip of the nose with  left index finger, and then return the left arm to  an extended position. -Repeat the procedure several times. -Ask the client to close both eyes and repeat the  alternating movements |  |  |  |  |

**Testing Motor function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Observation of rapid alternating action movements** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | -Ask the client to sit with the hands  placed palms down on the thighs. -Ask the client to return the hands  palms up. -Ask the client to return the hands to  a palms-down position. -Ask the client to alternate the  movements at a faster pace. |  |  |  |  |

**Testing Sensory function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Observation of light**  **touch identification** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | -Use wisp of cotton to touch the skin  lightly on both sides simultaneously.  -Test several areas on both the upper  and lower extremities.  -Ask the patient to tell you if there is  difference from side to side or other  "strange" sensations. |  |  |  |  |

**Testing Sensory function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Pain Sharp, dull**  **determination** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | -Ask the client to say “sharp” or “dull”  when something sharp or dull is felt on  the skin. -Touch the client using random locations. |  |  |  |  |

**Testing Sensory function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Hot and cold** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Fill two test tubes with water, one hot, and one cold.  \*Ask client to close eyes and touch client skin with test tube. |  |  |  |  |

**Testing Sensory function**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Proprioception:** | with eyes closed, patient  distinguishes whether finger  and toe are moved up or down. This | done | **poor** | **Not**  **done** | **marks** |
|  |  |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Test Reflexes** |  | **done** | **poor** | **Not**  **done** | **Marks** |
|  | 1. Biceps |  |  |  |  |
|  | 1. Triceps |  |  |  |  |
|  | 1. Brachioradialsis |  |  |  |  |
|  | 1. Patellar (knee) |  |  |  |  |
|  | 1. Achilles |  |  |  |  |
|  | 1. Plantar (Babinski). |  |  |  |  |
|  | 7- Gag reflex |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **biceps tendon**  **reflexes** |  | **done** | **poor** | **Not**  **done** | **Marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Hold hummer loosely |  |  |  |  |
|  | 1. Locate biceps tendon |  |  |  |  |
|  | 1. Strike the tendon |  |  |  |  |
|  | 1. contraction of the biceps muscle   and slight flexion of the forearm |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **triceps tendon**  **reflexes** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Hold hummer loosely |  |  |  |  |
|  | 1. Locate triceps tendon |  |  |  |  |
|  | 1. Strike the tendon |  |  |  |  |
|  | 1. contraction of the triceps muscle   with extension of the lower arm |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **brachioradialis**  **tendon reflexe** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Hold hummer loosely |  |  |  |  |
|  | 1. Locate brachioradialis tendon |  |  |  |  |
|  | 1. Strike the tendon |  |  |  |  |
|  | 1. flexion and supination of the   forearm |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **patellar (knee)**  **tendon**  **reflexes** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Hold hummer loosely |  |  |  |  |
|  | 1. Locate knee tendon |  |  |  |  |
|  | 1. Strike the tendon |  |  |  |  |
|  | 1. contraction of the quadriceps   muscle and extension of the knee |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Achilles tendon**  **reflexes** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Hold hummer loosely |  |  |  |  |
|  | 1. Locate ankle tendon |  |  |  |  |
|  | 1. Strike the tendon |  |  |  |  |
|  | 1. plantar flexion at the ankle |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Plantar (Babinski).** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | 1. Encourage patient to relax |  |  |  |  |
|  | 1. Stroke the lateral aspect of the sole of each foot with the end of a reflex hammer or   key |  |  |  |  |
|  | 1. planter flexion of the foot |  |  |  |  |
|  | 1. Grade the response   0/+1/+2/+3/+4 |  |  |  |  |

**Test Reflexes**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gag reflex** |  | **done** | **poor** | **Not**  **done** | **marks** |
|  | Open client mouth and touching the  tip of tongue blade against his posterior  pharynex and ask the patient to say "aah |  |  |  |  |

**Quick Test**

I**- Complete the following statement:**

1. ----------------------------- leg extended, feet extended with plantar flexion, arm internally rotated and flexed on chest
2. ------------------------------ Arm stiffly extended and hands turned outward and flexed legs extended with plantar flexion
3. The single most valuable indicator of neurological function is the individual's ----------------
4. GCS test includes ------------------, -------------------------, ---------------------
5. Positive Babinski sign is indicated in **--------------------------------**
6. Absent of gag reflex and swallowing reflex occurred due to impaired **----------------------------**