

CRANIAL NERVES

EXAMINATION

Perspective

As ENT problems are located in the head and neck, which is where the cranial nerves run, they frequently present to the clinician signs of cranial nerve dysfunction (palsies). What is more, the presence of a cranial nerve palsy has a particularly sinister and worrying significance. The importance of a good system of cranial nerve examination should therefore not be underestimated.

Technique

CN I. Olfactory:

Enquire about:

- Hyposmia / Anosmia / Cacosmia
- Onset (slow / sudden / fluctuating)
- Causative factors (trauma / upper airway infections / nasal surgery)

The most common test to confirm if a patient can smell, is to with their eyes closed put some coffee on their tongue. If a patient can smell, they will say they taste coffee. However, in anosmic patients, they only report a very bitter taste. Other classical odours can also be used such as vanilla, lavender, and lemon.

CN II. Optic:

Examine:

- Visual acuity
 - Snellen chart or handheld Snellen chart
- Visual fields
- Colour vision
- Pupillary reflexes
 - RAPD
- Accommodation

CN III, IV, VI:

Examine:

- Eye movements
 - Lateral Rectus CN6, Superior Oblique CN4, Rest CNIII
- Proptosis

CN V. Trigeminal: V1, V2, V3:

Examine:

- Facial sensation
- Corneal reflex
- Muscles of mastication (masseter)

CN VII. Facial:

Examine:

- Motor to muscles of facial expression (see facial palsy)
 - Differentiate upper from lower motor neuron disease
- Stapedius reflex
- Taste anterior two-thirds of tongue

CN VIII. Vestibulocochlear:

Examine:

- Hearing (cochlea)
- Balance (vestibular) - a HINTS exam is useful in differentiating between central and peripheral vertigo

CN IX. Glossopharyngeus & X. Vagus:

Examine:

- Sensation in oropharyngeal region or saying "AH" looking for asymmetries in the soft palate (CN IX)
- Afferent path of gag reflex (CN X)
- For Recurrent Laryngeal branches of X
 - Vocal cord closure (speech, cough, aspiration)
- (Gastric secretion)
- (Pulse etc)

CN XI: Accessory:

Examine:

- Check contraction of sternocleidomastoid's sternal head when patient turns head forcibly against resistance from your hand
- Check for trapezius function by elevating the shoulders
- Check for ability to abduct the arms above shoulder height

CN XII. Hypoglossal:

Examine:

- Tongue movement: straight; left; right
- Check for atrophy, fasciculation (with tongue inside oral cavity), and deviation