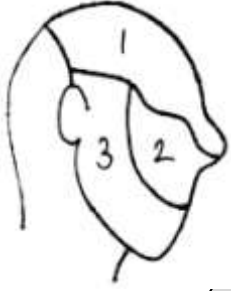


## Cranial Nerve Exam

<b>Introduction</b>	<ul style="list-style-type: none"> <li>- wash your hands</li> <li>- approach politely and introduce yourself</li> <li>- patient's name &amp; DOB</li> <li>- explain to patient what you are going to do &amp; obtain verbal consent</li> </ul>
<b>Inspection</b>	<ul style="list-style-type: none"> <li>- comment on patients general health &amp; surrounding apparatus/medications</li> <li>- scars, deformity, facial asymmetry, obvious ptosis, inequality of pupils, etc.</li> </ul>
<b>Olfactory (1)</b>	<ul style="list-style-type: none"> <li>- sense of smell (test in each nostril separately)</li> <li>- may have a cold, check nose for blockage</li> <li>- this is rarely performed in an OSCE exam</li> </ul>
<b>Optic (2)</b>	<p>there are a number of tests that need to be performed on the eyes:</p> <ol style="list-style-type: none"> <li>1. visual acuity: using snellen chart (perform with glasses if usually worn)</li> <li>2 &amp; 3 assess 2 &amp; 3 using the confrontation method =compare your vision with the patient's, positioning &amp; explanation are important, sit so you can test vision half way between you &amp; the patient</li> <li>2. visual inattention: both eyes open, "is my fingers moving on one or both sides simultaneously", test in upper &amp; lower quadrants, inattention =cannot see both sides move simultaneously, e.g. stroke</li> <li>3. visual field defects: patient covers eye not being tested, you cover your apposing eye, bring finger in diagonally from upper then lower quadrants &amp; L then R sides, "tell me when you can see my finger" (see 'Visual Field Defects' in appendix)</li> <li>4. direct &amp; consensual pupil light responses: ask patient to look into the distance &amp; bring torch in from the lateral side, firstly looking for a direct reflex (in the eye you are shining the torch into) then again looking for a consensual reflex (in the eye the torch is not being shone into), then repeat in other eye, an afferent papillary defect = no direct response but still a consensual one, efferent papillary defect = fixed &amp; dilated but other pupil responds consensually</li> <li>5. accommodation (both eyes at same time): focus on distant point then on examiners finger, eyes converge + pupils constrict</li> <li>6. ophthalmoscopy: examine each eye using the ophthalmoscope, see 'Ophthalmology' section for more details</li> </ol>
<b>Oculomotor (3) Trochlear (4) Abducens (6)</b>	<ul style="list-style-type: none"> <li>- eye movements, test both eyes at same time</li> <li>- "keep your head still &amp; follow my finger with your eyes", trace out an 'H' shape then 'I' shape down centre</li> <li>- look for nystagmus: ask patient to look to their extreme L and hold =&gt;slow drift to R then fast correction to L (=L horizontal nystagmus), repeat in other direction, NB. the nystagmus is the fast correction</li> <li>- ask about double vision</li> <li>- the oculomotor (3<sup>rd</sup> nerve) controls all eye muscles apart from superior oblique (supplied by 4<sup>th</sup> nerve, moves eye inwards + down) &amp; lateral rectus (6<sup>th</sup> nerve, moves eye outwards), mnemonic = O<sub>3</sub> SO<sub>4</sub> LR<sub>6</sub></li> <li>- oculomotor also supplies the muscles that open the eye lid &amp; constrict the pupil</li> <li>- NB. ↑ICP can =&gt;6<sup>th</sup> nerve palsy =&gt;eye cannot move down or outwards/laterally =&gt;double vision</li> </ul>

<p><b>Trigeminal (5)</b></p> 	<p>divisions:</p> <ol style="list-style-type: none"> <li>ophthalmic</li> <li>maxillary</li> <li>mandibular</li> </ol> <p>sensation:</p> <ul style="list-style-type: none"> <li>superficial trigeminal: close eyes &amp; touch each division with cotton wool</li> <li>deep trigeminal: close eyes &amp; touch each division with pin/neuro tip</li> <li>corneal reflex: approach from side, lightly touch the cornea with a damp cotton wool = both eyes blink (the sensory nerve for this reflex is the ophthalmic division of the trigeminal whilst the blink movement is via the facial nerve), NB/ you will probably not be asked to perform this in an exam situation</li> </ul> <p>motor:</p> <ul style="list-style-type: none"> <li>muscles of mastication: clench teeth &amp; feel the masseter muscle, "stop me from opening your mouth"</li> <li>jaw jerk reflex (brisk =UMN lesion), usually not be asked to perform in OSCE exam</li> </ul>
<p><b>Facial (7)</b></p>	<p>motor: muscles of facial expression, ask patient to screw up eyes, raise eyebrows, blow out cheeks, purse lips/whistle &amp; smile to show teeth</p> <p>sensation: taste for anterior 2/3 of tongue</p> <ul style="list-style-type: none"> <li>responsible for producing tears &amp; saliva</li> <li>bell's palsy = 7<sup>th</sup> nerve LMN palsy, effects muscles &amp; sensation supplied by the facial nerve, caused by inflammation of the nerve (can be due to herpes simplex virus), treat with steroids +/- antivirals</li> <li>NB. LMN lesion = all muscles affected on one side (ipsilateral), UMN lesion =ipsilateral except forehead because frontalis muscle has bilateral innervations (is innervated by both sides of the brain)</li> <li>neumonic to remember facial nerves (temporal, zygomatic, buccal, mandibular &amp; cranial): <u>Two Z B My Cats, I'll leave you to fill in the blanks!</u></li> </ul>
<p><b>Vestibulocochlear (8)</b></p>	<ul style="list-style-type: none"> <li>"repeat what I say", whisper into each ear in turn</li> <li>rinne's test = 256 or 512 Hz tuning fork placed on the mastoid process (assesses bone conduction) then next to ear (air conduction), ask "which is louder" (determines whether bone or air conduction is best, it should normally be air)</li> <li>weber's test = tuning fork placed on centre of forehead, "which side can you hear it loudest", normal =central</li> <li>examine tympanic membrane using an auroscope</li> <li>see 'ENT' section for more detail</li> </ul>
<p><b>Glossopharyngeal (9)</b> =sensory innervation for pharynx, tonsils &amp; post. 1/3 of tongue</p> <p><b>Vagus (10)</b> =motor innervation for pharynx &amp; larynx</p>	<ul style="list-style-type: none"> <li>say 'aah'</li> <li>inspect palate</li> <li>assess for difficulty swallowing (can ask them to drink some water)</li> <li>gag reflex (will not be tested in an OSCE exam)</li> <li>do they have a hoarse voice</li> </ul>
<p><b>Accessory (11)</b></p>	<ul style="list-style-type: none"> <li>inspect trapezius muscle from behind</li> <li>shrug shoulders, "stop me pushing your shoulders down"</li> <li>"turn your head against my hand", feel opposite sternomastoid as head turned</li> </ul>
<p><b>Hypoglossal (12)</b></p>	<ul style="list-style-type: none"> <li>stick out tongue</li> <li>LMN lesion = wasting &amp; tongue deviates to effected side</li> </ul>

Mnemonic to remember the cranial nerves: Oh Oh Oh To Touch And Feel V Girls V And H  
 Sorry I cannot publish all the mnemonic as it gets a bit graphic, use your imagination to fill in the gaps