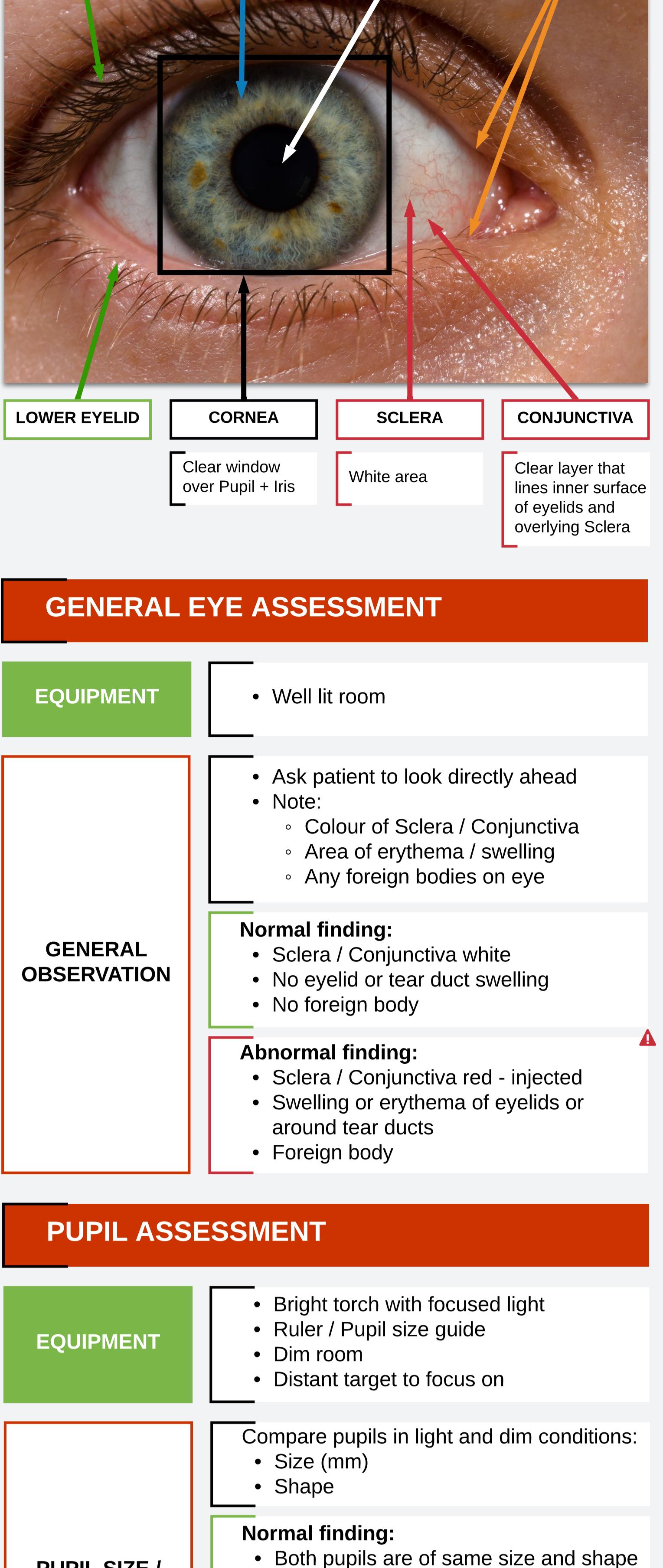


## EYE SURFACE ANATOMY



## GENERAL EYE ASSESSMENT

EQUIPMENT	<ul style="list-style-type: none"><li>Well lit room</li></ul>
GENERAL OBSERVATION	<ul style="list-style-type: none"><li>Ask patient to look directly ahead</li><li>Note:<ul style="list-style-type: none"><li>Colour of Sclera / Conjunctiva</li><li>Area of erythema / swelling</li><li>Any foreign bodies on eye</li></ul></li></ul>
	<p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Sclera / Conjunctiva white</li><li>No eyelid or tear duct swelling</li><li>No foreign body</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>Sclera / Conjunctiva red - injected</li><li>Swelling or erythema of eyelids or around tear ducts</li><li>Foreign body</li></ul>

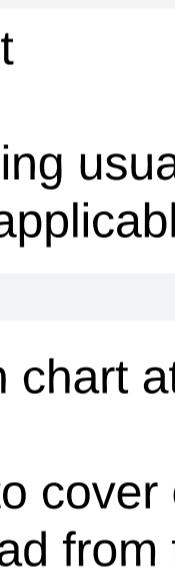
## PUPIL ASSESSMENT

EQUIPMENT	<ul style="list-style-type: none"><li>Bright torch with focused light</li><li>Ruler / Pupil size guide</li><li>Dim room</li><li>Distant target to focus on</li></ul>
PUPIL SIZE / SHAPE	<p>Compare pupils in light and dim conditions:</p> <ul style="list-style-type: none"><li>Size (mm)</li><li>Shape</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Both pupils are of same size and shape in both light and dim conditions</li><li>Difference in pupil size &lt; 2mm</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>Difference in size (&gt; 2mm) or shape between pupils in light, dim or both conditions</li></ul>
PUPILLARY RESPONSE	<p>Assess in dim conditions:</p> <ul style="list-style-type: none"><li>Patient to fix on a distant target</li><li>Shine light in right eye and note pupil reaction in right eye and left eye</li><li><b>Direct response:</b><ul style="list-style-type: none"><li>Pupil reaction in right eye</li></ul></li><li><b>Consensual response:</b><ul style="list-style-type: none"><li>Pupil reaction in left eye</li></ul></li><li>Repeat test shining light in left eye</li><li>Note degree and speed of reaction in both eyes</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Both pupils constrict equally when light is shone in either eye</li><li>Symmetrical direct and consensual responses</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>One or both pupils do not constrict or pupil reaction is sluggish when light is shone in either eye</li><li>Asymmetrical direct and consensual responses</li></ul>
RELATIVE AFFERENT PUPILLARY DEFECT (RAPD)	<p>Assess in dim conditions:</p> <ul style="list-style-type: none"><li>Patient to fix on a distant target</li><li>Shine light in right eye for 4 seconds and note direct and consensual responses</li><li>Swing light to left eye, hold for 4 seconds and note pupil reaction</li><li>Swing back to repeat on right side</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Pupils remain same size in both eyes when light is moved between them</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>Slow sustained dilatation of pupil when light moved to affected eye</li></ul>

## VISUAL ACUITY

EQUIPMENT	<ul style="list-style-type: none"><li>Snellen chart</li><li>Well lit room</li><li>Patient wearing usual prescription glasses (as applicable)</li></ul>
SNELLEN CHART	<ul style="list-style-type: none"><li>Hold Snellen chart at recommended distance</li><li>Ask patient to cover one eye</li><li>Patient to read from top of chart to lowest line able to clearly read</li><li>Note visual acuity of lowest line read correctly i.e. 6/18</li><li>Repeat with other eye</li></ul>
FINGER COUNTING	If patient unable to read any line on Snellen chart: <ul style="list-style-type: none"><li>Ask patient to cover one eye</li><li>Hold up number of fingers</li><li>Ask patient to count fingers</li><li>Repeat with other eye</li></ul>
HAND MOVEMENTS	If patient unable to count fingers: <ul style="list-style-type: none"><li>Ask patient to cover one eye</li><li>Move one of your hands</li><li>Ask patient if they can see hand movement</li><li>Repeat with other eye</li></ul>
LIGHT PERCEPTION	If patient unable to detect hand movements: <ul style="list-style-type: none"><li>Ask patient to cover one eye</li><li>Shine a light on and off towards patient</li><li>Ask patient if they can detect difference between light on and off</li><li>Repeat with other eye</li></ul>

## EYE POSITION AND MOVEMENTS

EQUIPMENT	<ul style="list-style-type: none"><li>Well lit room</li><li>Patient wearing usual prescription glasses (as applicable)</li></ul>
EYELID POSITION	<ul style="list-style-type: none"><li>Ask patient to look directly ahead</li><li>Note eyelid position</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>No ptosis</li><li>Equal / Symmetrical eyelid position</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>Ptosis</li><li>Unequal / Asymmetrical eyelid position</li></ul>
EYE POSITION	<ul style="list-style-type: none"><li>Ask patient to look directly ahead</li><li>Note eye position</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Eyes in center, facing forwards</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>One or both eyes pointing away from center</li><li>See below regarding specific palsies</li></ul>
EYE MOVEMENT	<ul style="list-style-type: none"><li>Patient to wear glasses</li><li>Ask patient to fix vision on your finger tip held 30cm directly in front of them</li><li>Ask and note if patient has double vision in this position</li><li>Move your finger in a 9 point pattern: </li><li>Ask patient to keep head still and follow your finger tip with their eyes only</li><li>Ask and note if patient has double vision in any position</li><li>Monitor movements of each eye throughout and note any limitations</li></ul> <p><b>Normal finding:</b></p> <ul style="list-style-type: none"><li>Patient able to follow finger tip throughout 9 point pattern of movement with no double vision or limitation of movement in either eye</li></ul> <p><b>Abnormal finding:</b></p> <ul style="list-style-type: none"><li>Double vision in starting position or during '9 point pattern of movement'</li><li>Limitation of movement in any direction</li><li>See below regarding specific palsies</li></ul>

## COMMON CRANIAL NERVE PALSYES

CRANIAL NERVE	ABNORMAL FINDINGS AFFECTED EYE
III Nerve palsy	<ul style="list-style-type: none"><li><b>Position:</b> 'Down and out'</li><li><b>Diplopia:</b> Elevation and adduction</li><li><b>Movement limitation:</b> Adduction / Elevation</li><li><b>Other:</b> Ptosis / Dilated pupil</li></ul>
IV Nerve palsy	<ul style="list-style-type: none"><li><b>Position:</b> Head tilted to affected side</li><li><b>Diplopia:</b> Downward gaze in adducted position</li><li><b>Movement limitation:</b> Depression in adducted position</li></ul>
VI Nerve palsy	<ul style="list-style-type: none"><li><b>Position:</b> Pointing inwards</li><li><b>Diplopia:</b> lateral gaze (towards affected eye)</li><li><b>Movement limitation:</b> Abduction</li></ul>