

Head, Neck and Breast examination

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HEAD

An anatomical illustration of the human head, showing the muscles of the face and neck. The illustration is detailed, showing the texture of the skin and the structure of the muscles. The head is shown in a three-quarter view, with the right side of the face more prominent. The eyes are looking forward, and the mouth is slightly open. The neck muscles are also visible, extending downwards from the base of the skull.

Techniques

Inspection

Palpation

Auscultation

Parts

- Skull & Face
- Eyes & Vision
- Ears and Hearing
- Nose and Sinuses
- Mouth and Oropharynx

SKULL AND FACE

Characteristics	Normal	Deviation from normal
Size, shape and symmetry	Rounded (normocephalic) Symmetrical Smooth skull contour.	Lack of symmetry Increased skull size
Nodules ,masses and depressions	Smooth uniform consistency Absence of nodules or masses	Sebaceous cysts Local deformities from trauma Masses and nodules

SKULL AND FACE

Characteristics	Normal	Deviation from normal
Facial features	Symmetric or slightly asymmetric facial features; palpebral fissures equal in size ;symmetric nasolabial folds.	Increased facial hair Thinning of eyebrows Asymmetric features; Exophthalmos; myxedema facies ; moon face
Eyes for edema and hollowness	No edema	Periorbital edema Sunken eyes

SKULL AND FACE

Characteristics	Normal	Deviation from normal
Symmetry of facial movements	Symmetric facial movements	Asymmetric facial movements Drooping of lower eyelid and mouth Involuntary facial movements

EYES AND VISION



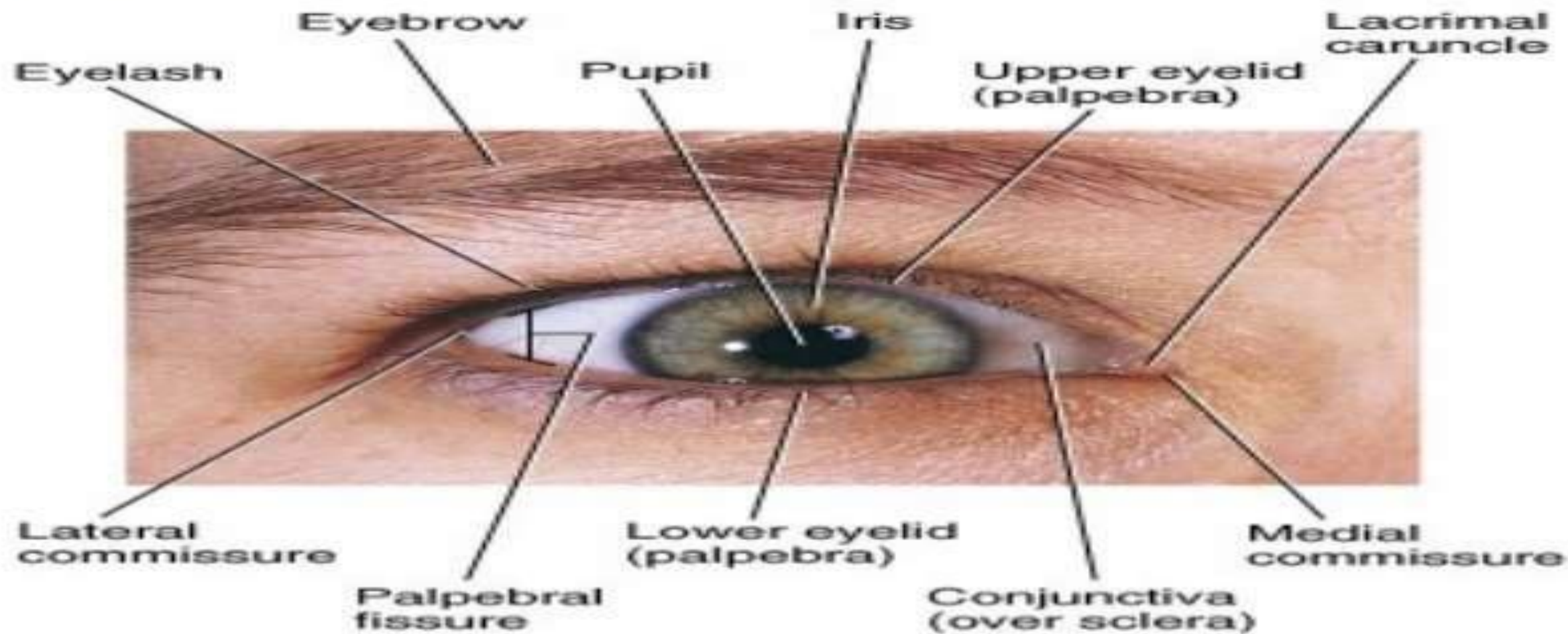
Assessment of eye includes,

- **External eye structures**
- **Visual fields**
- **Extra ocular muscle tests**
- **Visual acuity**

Equipments

- **Cotton tip applicator**
- **Gauze square**
- **Clean gloves**
- **Millimeter ruler**
- **Penlight**
- **Snellen's or E chart**
- **Opaque card**

External Anatomy of the Eye





Anterior view of the lacrimal apparatus



Eye brows

- **Hair distribution and alignment**
- **Symmetry**
- **Skin quality**
- **Movement**



Eye lashes

- **Evenness of distribution**
- **Direction of curl**



Eye lids

- **Surface characteristics**
- **Position in relation to the cornea**
- **Ability to blink and frequency of blinking**
- **Lesions/edema/stye/signs of infection**



Bulbar conjunctiva and palpebral conjunctiva

- Color
- Texture
- Presence of lesions



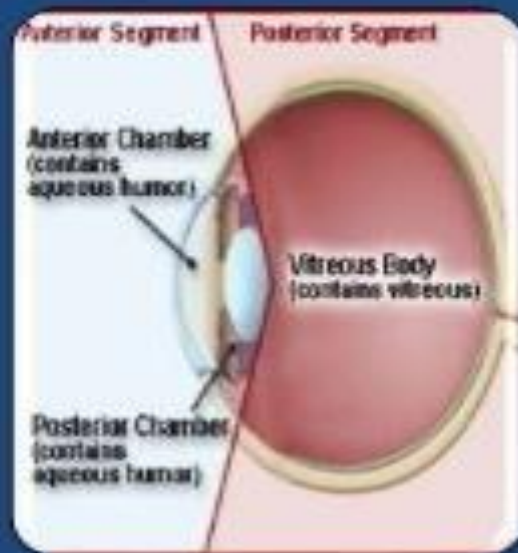
Lacrimal gland , lacrimal sac and nasolacrimal duct

- Edema
- Tenderness and Evidence of tearing



Cornea

- Clarity and texture
- Perform corneal sensitivity test



Anterior chamber

- **Transparency**
- **Depth**



Pupils

- **Color/shape/symmetry of size**
- **PERRLA (pupils are round and react to light and accommodation)**

Visual fields



Visual fields

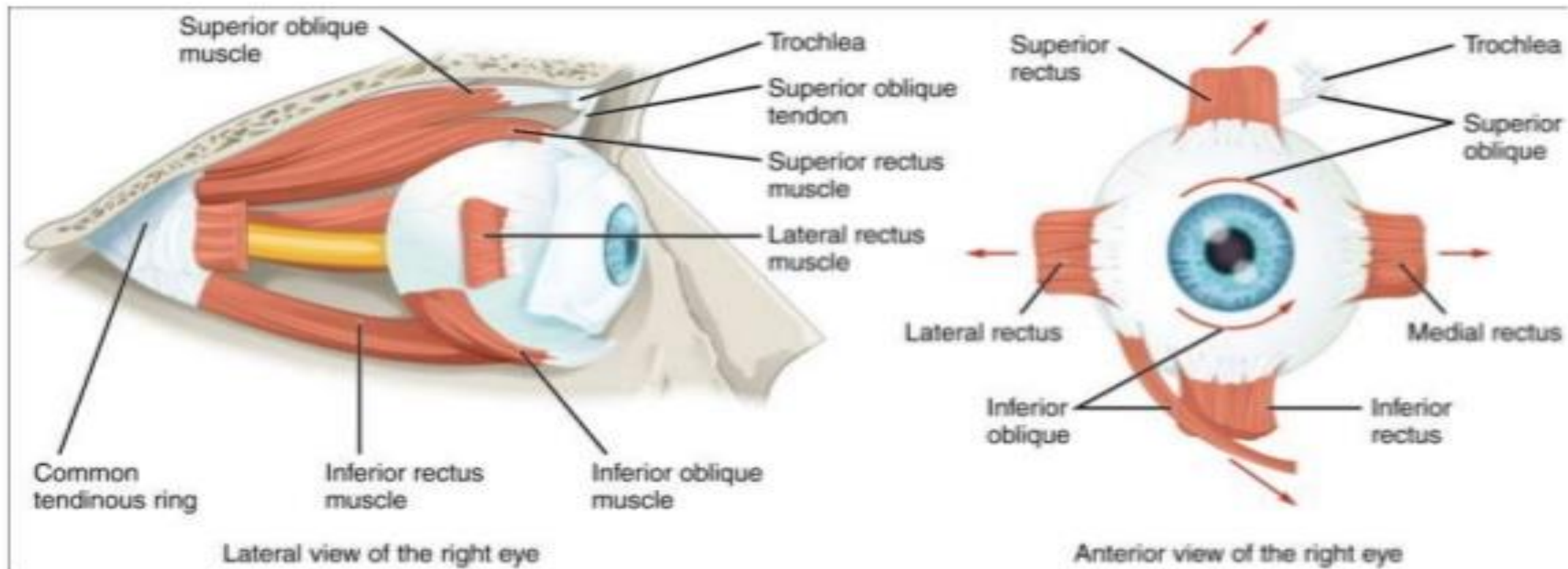
Normal

- When looking straight ahead, client can see objects in the periphery

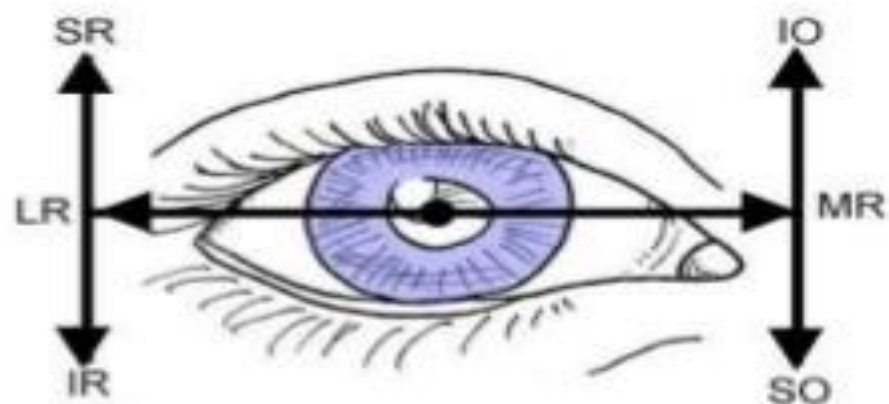
Deviation from normal

- Visual field smaller than the normal (possible *glaucoma*)
- One half vision in one or both eyes (possible nerve damage)

Extra ocular muscle tests

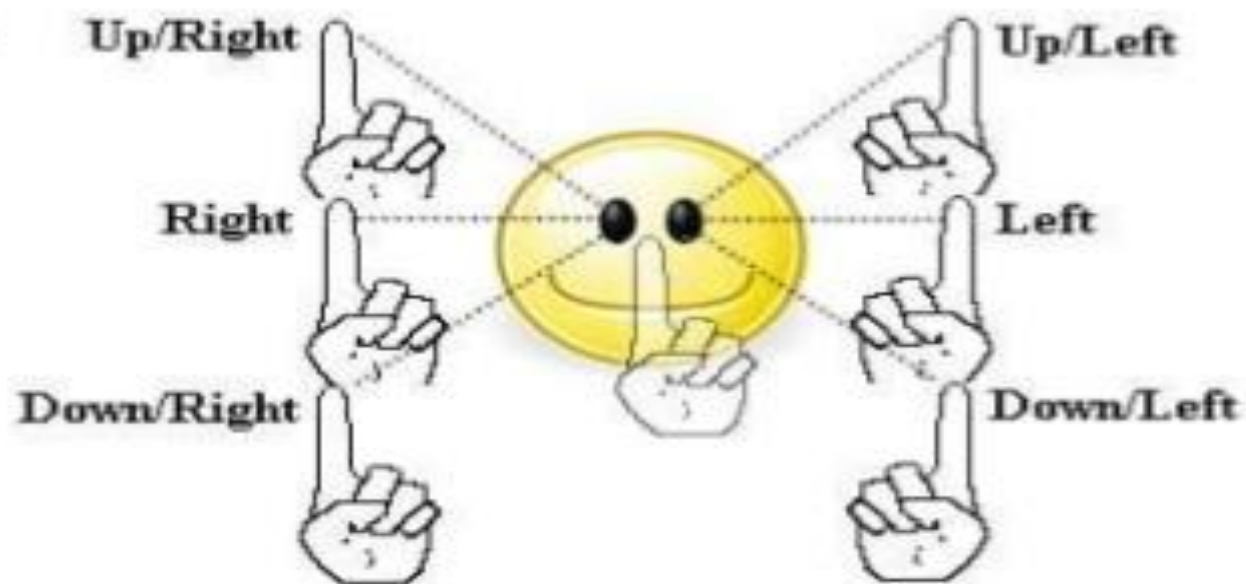


Extra ocular muscle tests



Anterior view of right eye - Clinical testing of eye muscles

Clinical Testing



Extra ocular muscle tests

Normal

- Both eyes coordinated ,move in unison ,with parallel alignment

Deviation from normal

- Eye movements not coordinated or parellel.
- **Strabismus (cross eye):** abnormal alignment of the eyes; the condition of having a squint.
- **Nystagmus** : rapid involuntary movements of the eyes.

Visual acuity

E	1	20/200
F P	2	20/100
T O Z	3	20/70
L P E D	4	20/50
P E C F D	5	20/40
E D F C Z P	6	20/30
F E L O P Z D	7	20/25
D E F P O T E C	8	20/20
L E F O D F C T	9	
F E P L T C E O	10	
F E C L O F T S	11	

Snellen's chart



Visual acuity

Normal

- **NEAR VISION:-**Able to read news print or a magazine
- **DISTANT VISIO:-** (Snellen's chart) 20/20 vision on Snellen's-type chart

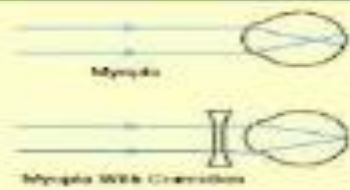
Deviation from normal

- **Difficulty reading newsprint unless due to aging process.**
- **Denominator of 40 or more on Snellen-type chart with corrective lenses.**

If the client is unable to see even the top line of the snellen type chart perform functional vision tests

- light perception
- Hand movements (H/F)
- Counting fingers(C/F)

Refractive errors



Myopia

- Nearsightedness



Hyperopia

- Farsightedness



Presbyopia

- Loss of elasticity of the lens and thus loss of ability to see close objects



Astigmatism

- An uneven curvature of the cornea that prevents horizontal and vertical rays from focusing on the retina

Inflammation



Conjunctivitis

- Inflammation of the bulbar and palpebral conjunctiva



Dacryocystitis

- Inflammation of the Lacrimal sac



Hordeolum (sty)

- Redness swelling and tenderness of the hair follicle and gland that empty at the edge of the eye lids



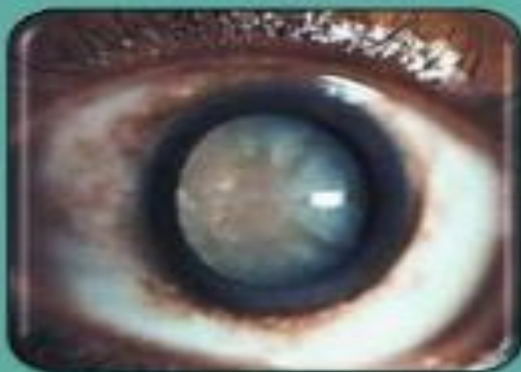
Iritis

- Inflammation of the iris



Contusions or hematomas

- “Black eyes” resulting from injury



Cataracts

- Opacity of lens and its capsule



Glaucoma

- A disturbance in the circulation of aqueous fluid which causes an increase in intra ocular pressure.

EAR

Techniques

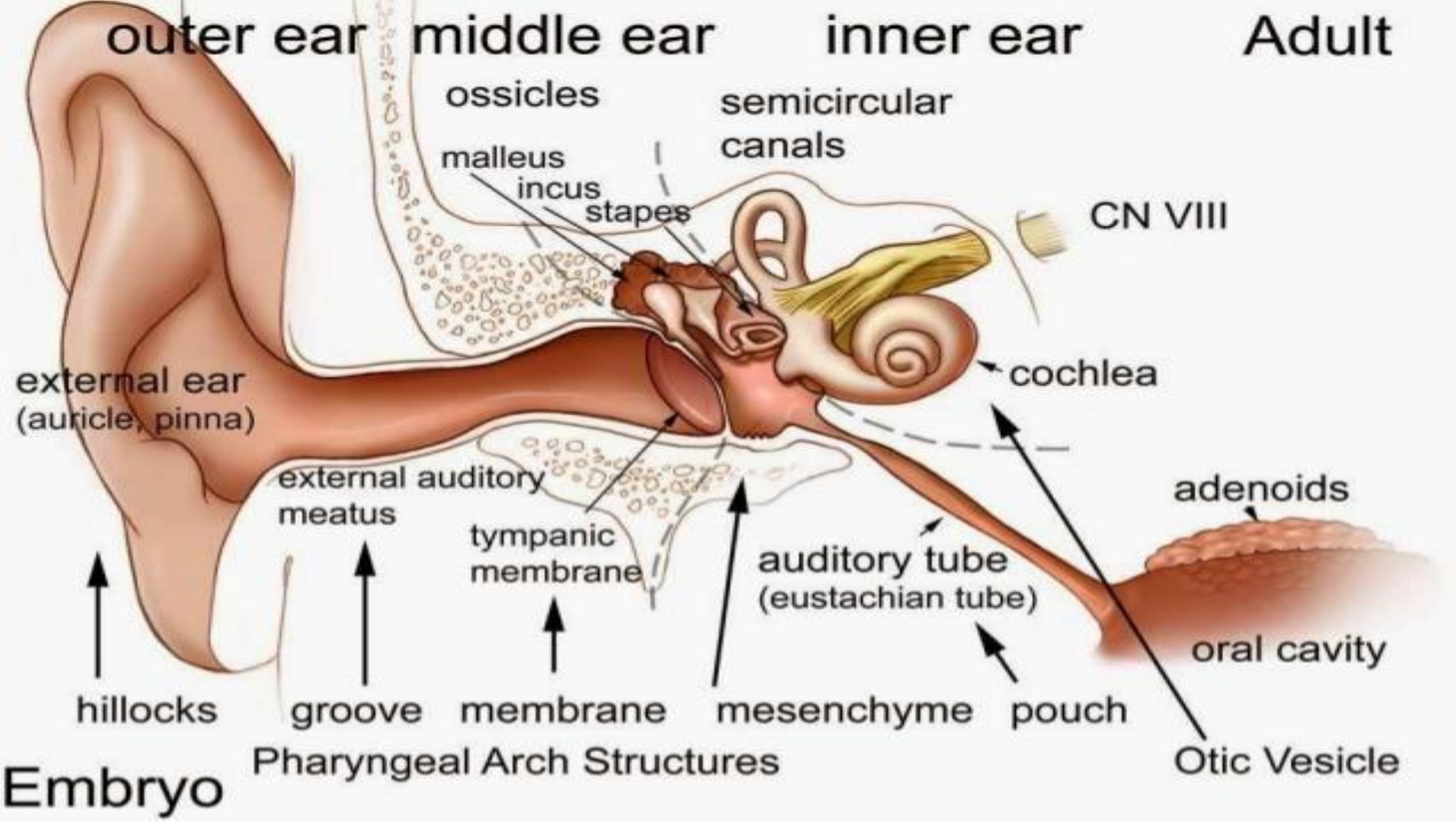
- Inspection
- Palpation

Assessment includes,

- Auricle
- External ear canal
- Tympanic membrane
- Hearing acuity

Equipment

Otoscope with several sizes of ear specula



Auricle (Inspection)

color

Normal

- Same as facial skin

Deviation

- Cyanosis
- Pallor
- Excessive redness

symmetry of size

Normal

- symmetrical

Deviation

- Asymmetry

Position

Normal

- Auricle aligned with outer canthus of eye about 10 degree from vertical

Deviation

- Low set ears
(*down syndrome*)

Auricle (Palpation)

- **Texture elasticity and areas of tenderness**



Normal

- Mobile firm and non tender
- Pinna recoils after it is folded

Deviation

- Lesions
- Flaky ,scaly skin
- Tenderness

External ear and tympanic membrane



Otoscope

Pars
flaccida

Lateral process
of malleus

Pars tensa

Cone of
light



EXTERNAL EAR AND TYMPANIC MEMBRANE

Characteristics	Normal	Deviation from normal
External ear canal	Distal third contains hair follicles and glands	Redness and discharge Scaling
Cerumen	Dry cerumen, grayish tan color ;sticky wet cerumen in various shades of brown	Excessive cerumen obstructing canal
Tympanic membrane (color, and gloss)	Pearly gray color, semitransparent	Pink to red ,some opacity ,yellow amber, White Blue or deep red Dull surface

Gross hearing acuity tests

- Assess clients response to normal voice tones
- Watch tick test
- Tuning fork tests
 - Weber's test
 - Rinne test



Weber's test

Normal

- Sound is heard in both ears or is localized at the centre of the head
(Weber negative)

Deviation

- Bone conductive hearing loss
- Sensory neural disturbances
(Weber positive)

Rinne test

Normal

- $AC > BC$
- Positive Rinne

Deviation

- $BC > AC$
- $BC = AC$
- Negative Rinne

NOSE AND SINUSES

Assessment includes,

- ❖ **Nose and nasal cavities**
- ❖ **Facial sinuses**

Techniques

- ❖ **Inspection**
- ❖ **Palpation**

Equipment

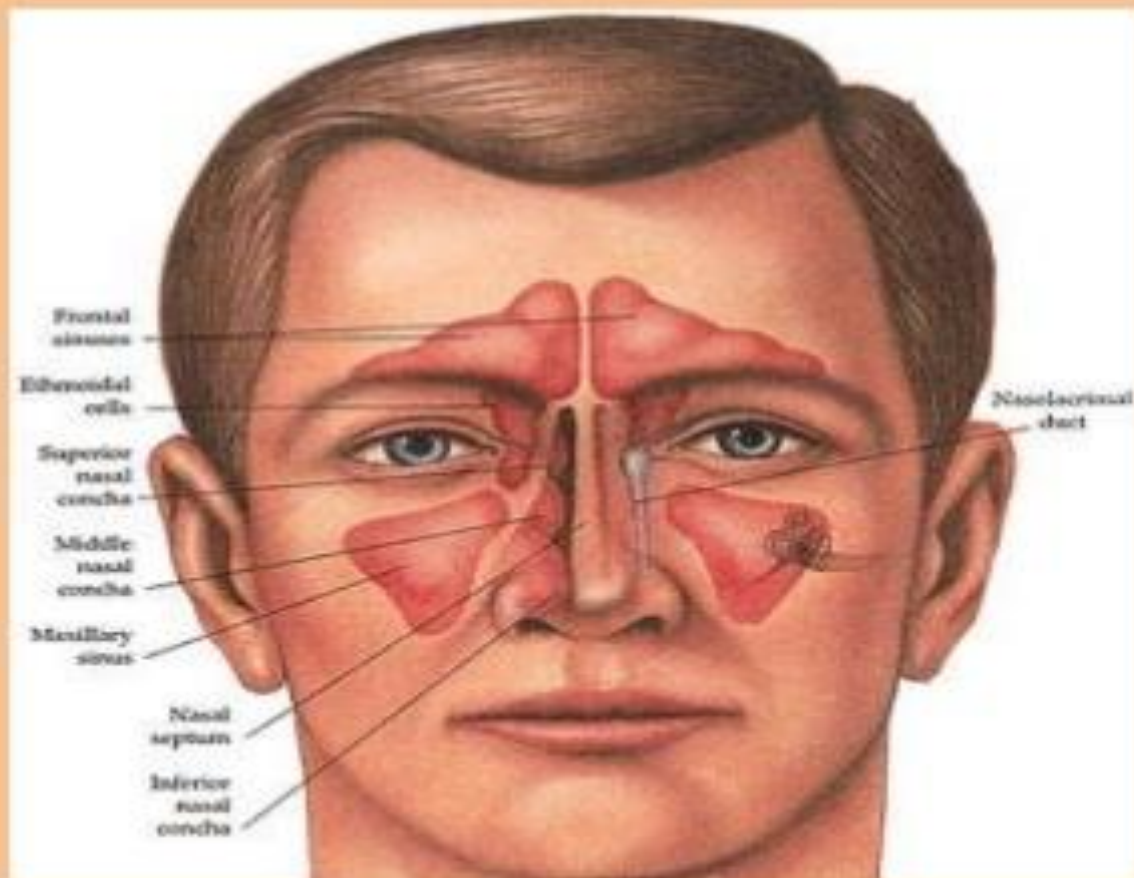
- **Nasal speculum**
- **Flashlight/penlight**

NOSE

- Inspect for nose for any deviations in
 - ❖ Shape, size, color and flaring or discharge from the nares.
- Lightly palpate the external nose for
 - ❖ Tenderness, masses and displacement of bone and cartilage.
- Determine patency of both nasal cavities
- Inspect the nasal cavities using nasal speculum
 - ❖ Observe mucosa for redness , swelling, growths, and discharges.
- Inspect the nasal septum between the nasal chambers

SINUSES

- Palpate the maxillary and frontal sinuses for tenderness



MOUTH AND OROPHARYNX



Assessment include

- ✓ Lips and Buccal mucosa
- ✓ Teeth and Gums
- ✓ Tongue / floor of mouth
- ✓ Salivary glands
- ✓ Palates and uvula
- ✓ Oropharynx and tonsils

Techniques

- Inspection
- Palpation

Equipments

- Clean gloves
- Tongue depressor
- Gauze pads
- Penlight

Lips and buccal mucosa

- Inspect **outer lips** for
 - **Symmetry ,contour, color and texture, ability to purse lips**

Normal

- Uniform pink color & soft ,moist and smooth texture
- Symmetry of contour
- Able to purse lips

Deviation from normal

- Pallor ,cyanosis
- Blisters, swelling, scaling
- Inability to purse lips

Lips and buccal mucosa

- Inspect and palpate **inner lips and buccal mucosa** for
 - **Color , moisture, texture and presence of lesions**

Normal

- Uniform pink color & soft ,moist, smooth , glistening and elastic texture.

Deviation from normal

- Pallor; leukoplakia (white patches) , red, bleeding
- Excessive dryness
- Mucosal cysts ;irritation from dentures , abrasions, ulcerations ;nodules.

Teeth and gums

Normal

- 32 adult teeth
- Smooth, white, shiny tooth enamel
- Pink gums
- Moist firm texture to gums
- No retraction of gums



Deviation from normal

- Missing teeth ;ill fitting dentures
- Brown or black discoloration of the enamel (dental caries)
- Excessively red gums
- Spongy texture ; bleeding; tenderness
- Receding; atrophied gums ; swelling that partially covers the teeth

Tongue/ floor of the mouth

➤ Inspect the surface of the tongue for

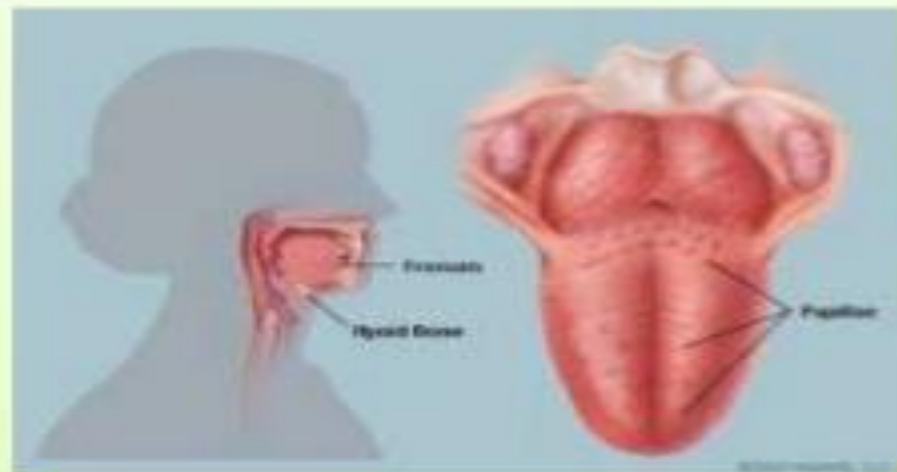
- **Position, color, and texture.**

Normal

- Central position
- Pink color
- Smooth, lateral margins ; or no lesions
- Raised papillae (taste buds)

Deviation from normal

- Deviated from centre
- Smooth red tongue
- Dry, furry tongue (fluid deficit) , white coating (yeast infection)
- Nodules , ulcerations, discolorations and areas of tenderness



Tongue/ floor of the mouth

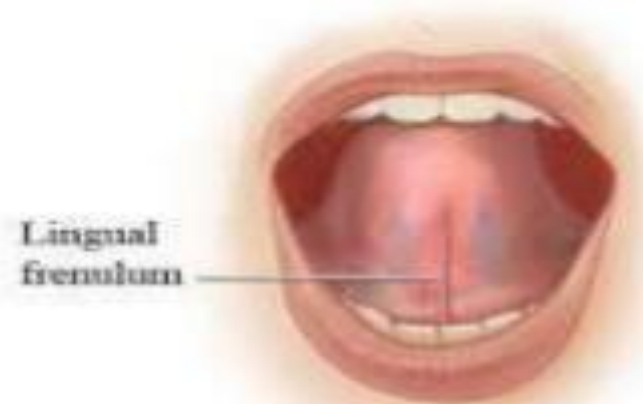
- Inspect the tongue movement
- Inspect the base of the tongue the mouth floor and frenulum
- Palpate the tongue and floor of the mouth

Normal

- Moves freely no tenderness
- Smooth tongue with prominent veins
- Smooth , no palpable nodules

Deviation from normal

- Swelling and ulceration
- Nodules



Salivary glands

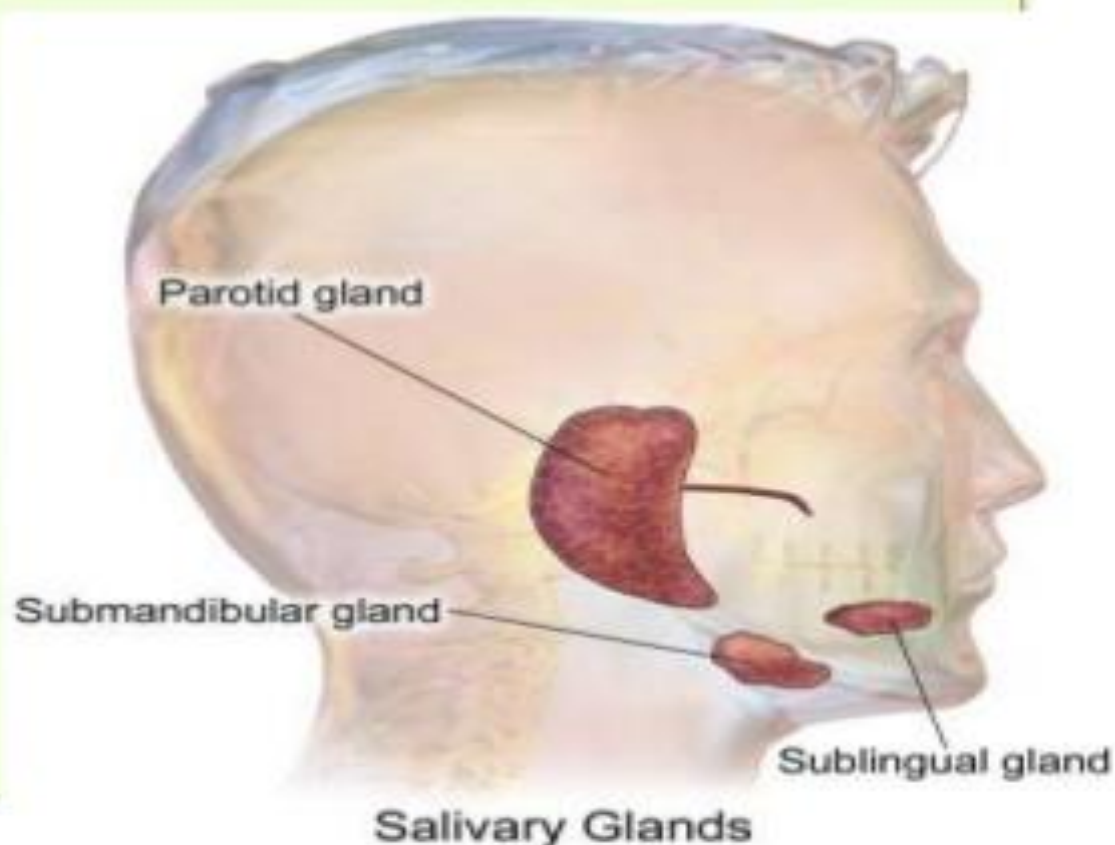
- Inspect salivary duct openings for
 - **swelling or redness**

Normal

- Same as color of buccal mucosa and floor of the mouth

Deviation from normal

- Inflammation
(redness and swelling)

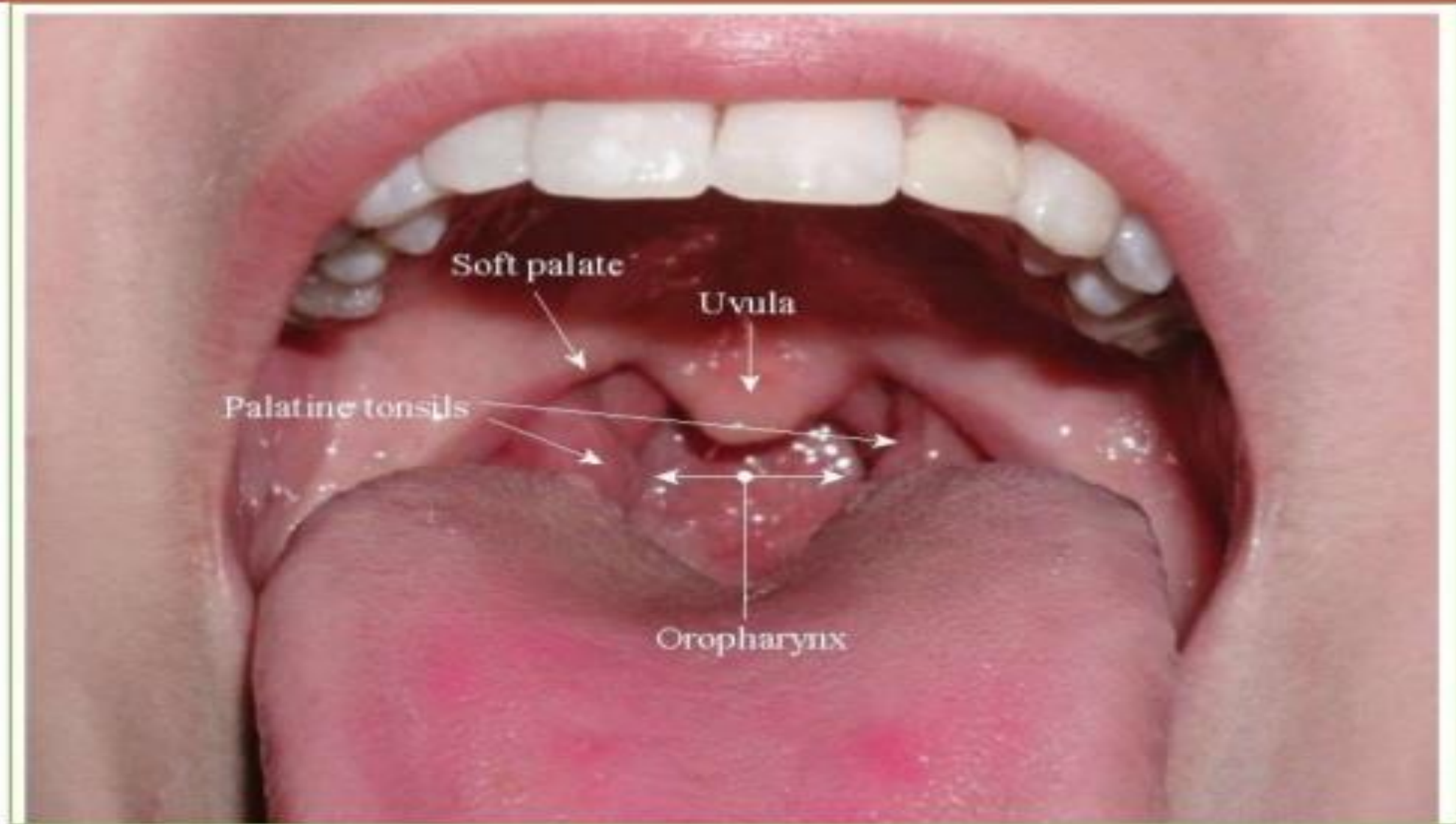


Palates and uvula

- Inspect the hard and soft palate for the
 - **Color , shape ,texture and presence of bony prominences**
- Inspect the uvula for
 - **Position and mobility**



Oropharynx and tonsils



Oropharynx and tonsils

- Inspect the **Oropharynx** for the
 - **Color and texture**
 - Normal** : Pink and smooth posterior wall.
 - Deviation from normal** : Reddened or edematous, presence of lesions.
- Inspect the **tonsils**
 - **Color, discharge, and size**
 - Normal** : Pink color and smooth texture, no discharge, normal size.
 - Deviation from normal** : Inflamed , presence of discharge, swollen.
- Elicit the **gag reflex**

NECK



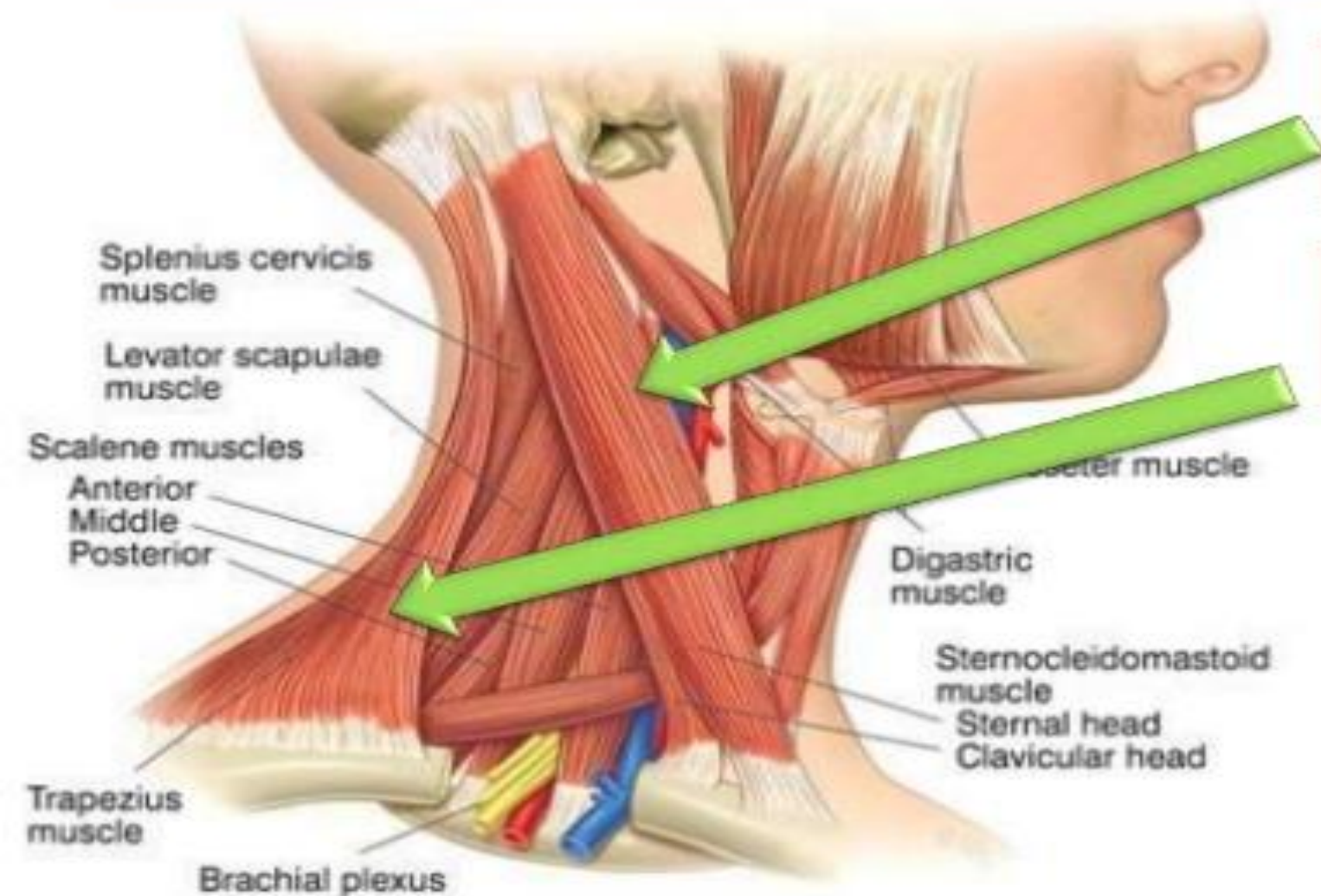
Assessment includes,

- **Neck muscles**
- **Lymph nodes**
- **Trachea**
- **Thyroid gland**
- **Carotid arteries and jugular veins**

Techniques

- ✓ **Inspection**
- ✓ **Palpation**
- ✓ **Auscultation**

Neck muscles



Sternocleidomastoid muscle

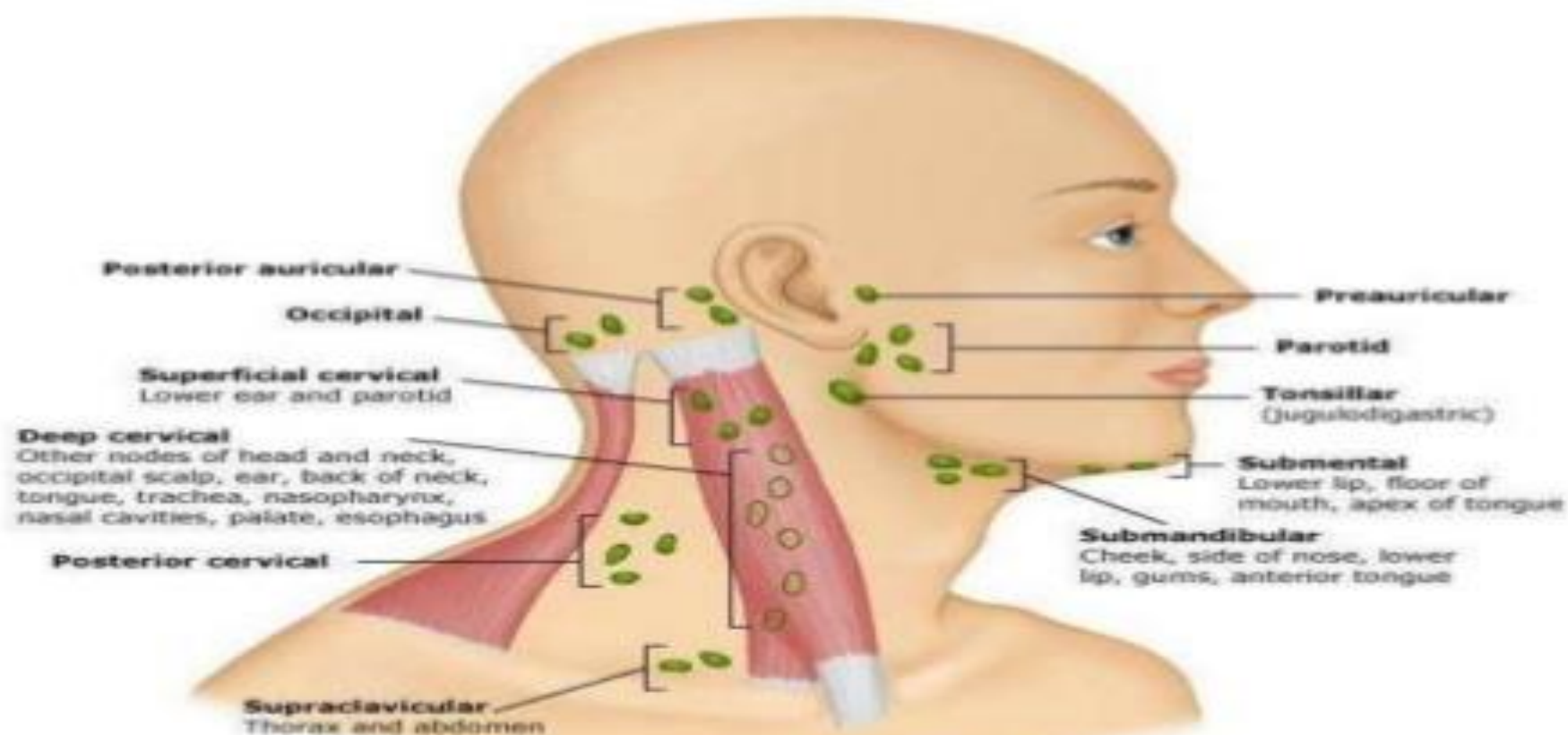
Trapezius muscle

Neck muscles

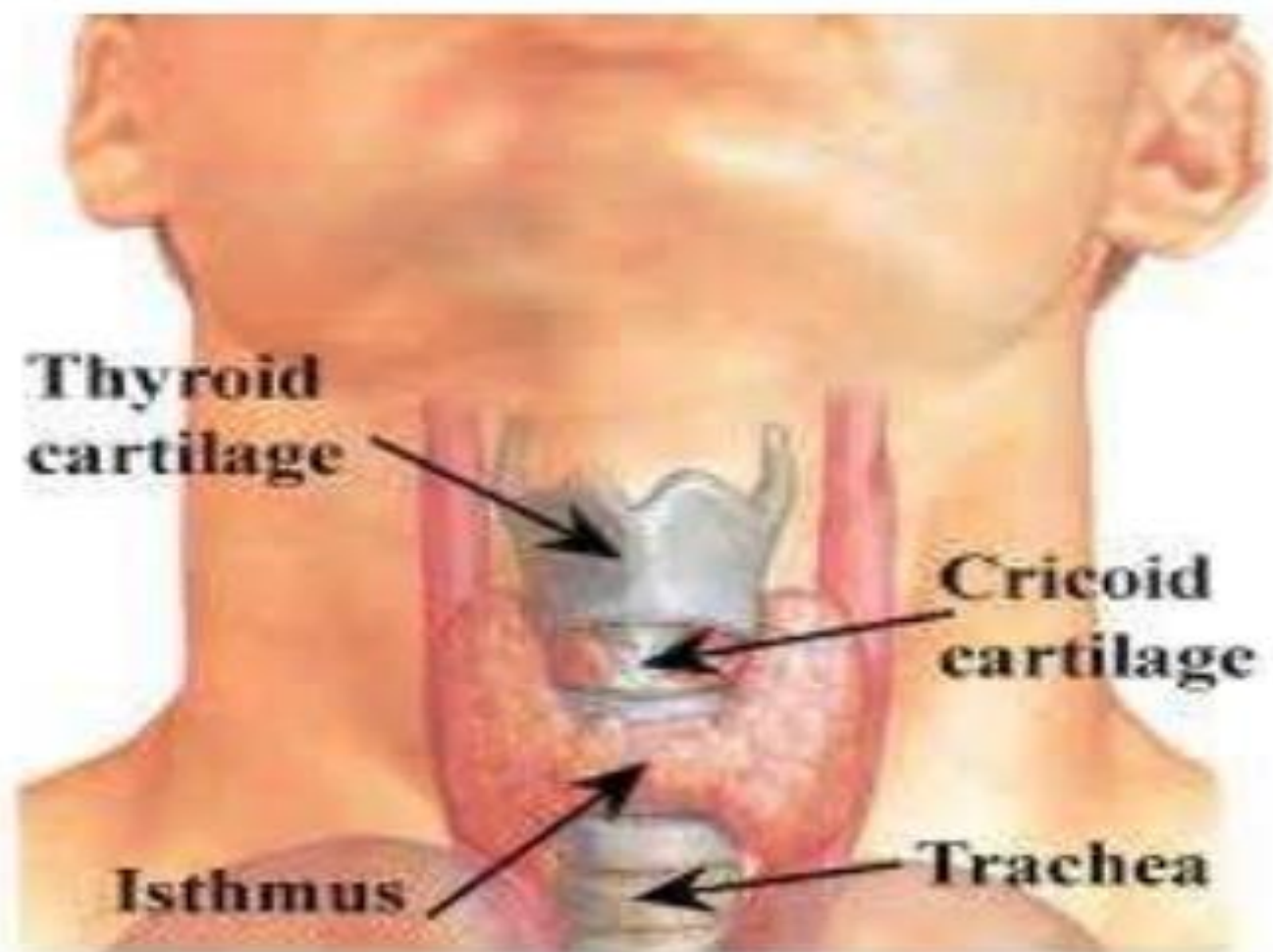
- Inspect the neck muscles
- Observe head movements
 - Move chin to the chest (*sternocleidomastoid*)
 - Move the head so that the ear is moved toward the shoulder on each side (*sternocleidomastoid*)
 - Turn the head to the right and to the left (*sternocleidomastoid*)
 - Move head back so that the chin points upward (*Trapezius*)
- Assess the muscle strength

Lymph nodes

- Palpate the entire lymph node for enlargement



Trachea



Trachea

Palpate the trachea for lateral deviation

- Normal :

Central placement in midline of neck

- Deviation from normal:

Deviation to one side
(*neck tumor, thyroid or lymph node enlargement*)

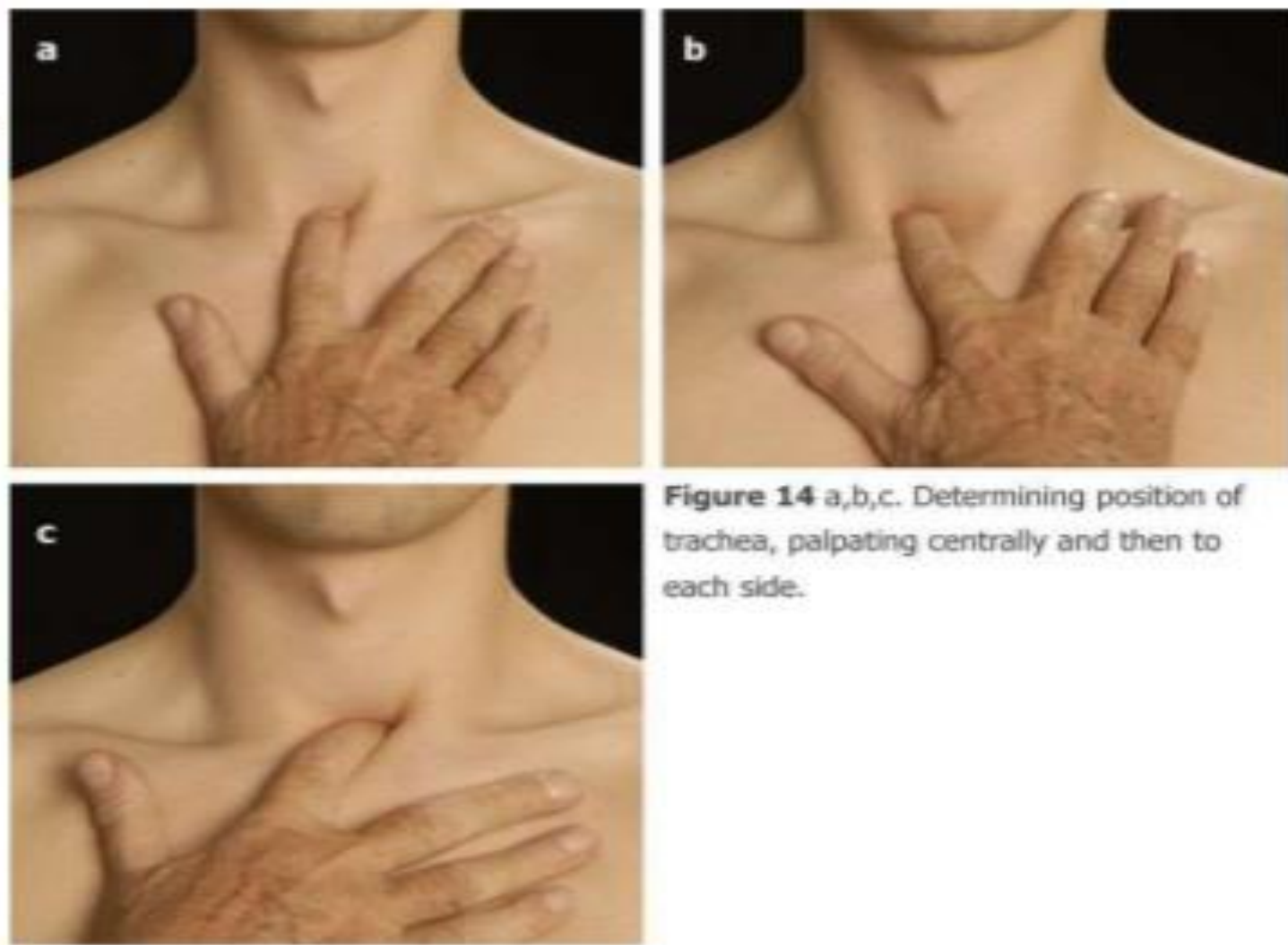


Figure 14 a,b,c. Determining position of trachea, palpating centrally and then to each side.

Thyroid gland

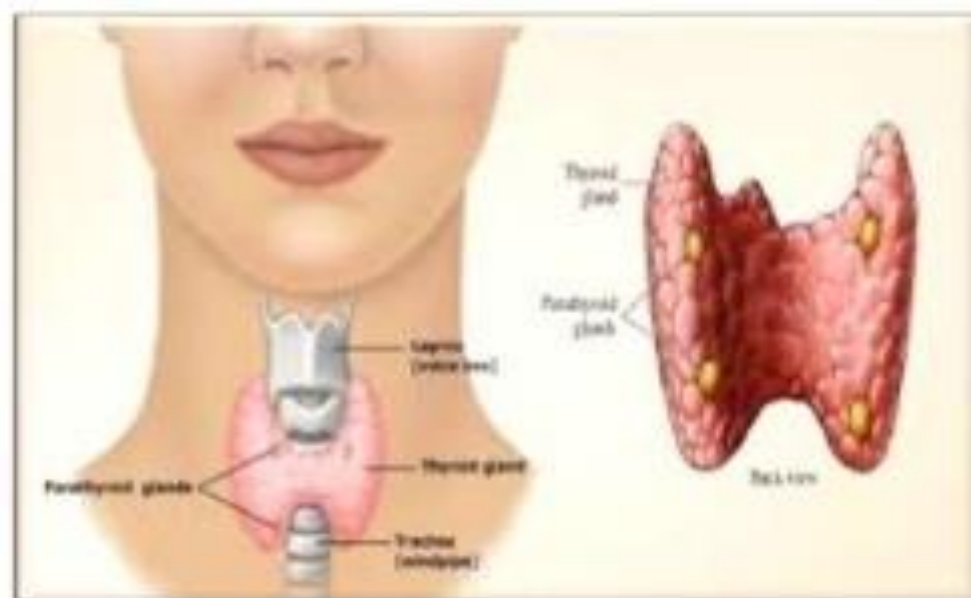
➤ Inspect the thyroid gland

■ Normal :

Not visible on inspection

■ Deviation from normal :

Local enlargement



Thyroid gland

➤ Palpate the thyroid gland for smoothness note any areas of enlargement, masses and nodules.

➤ **Posterior approach**

➤ **Anterior approach**

■ **Normal** :

Lobes may not be palpated

■ **Deviation from normal**:

Solitary nodules



Thyroid gland

- If enlargement of the gland is suspected, auscultate over the thyroid area for bruit (*a soft rushing sound created by turbulent blood flow*)



Breast

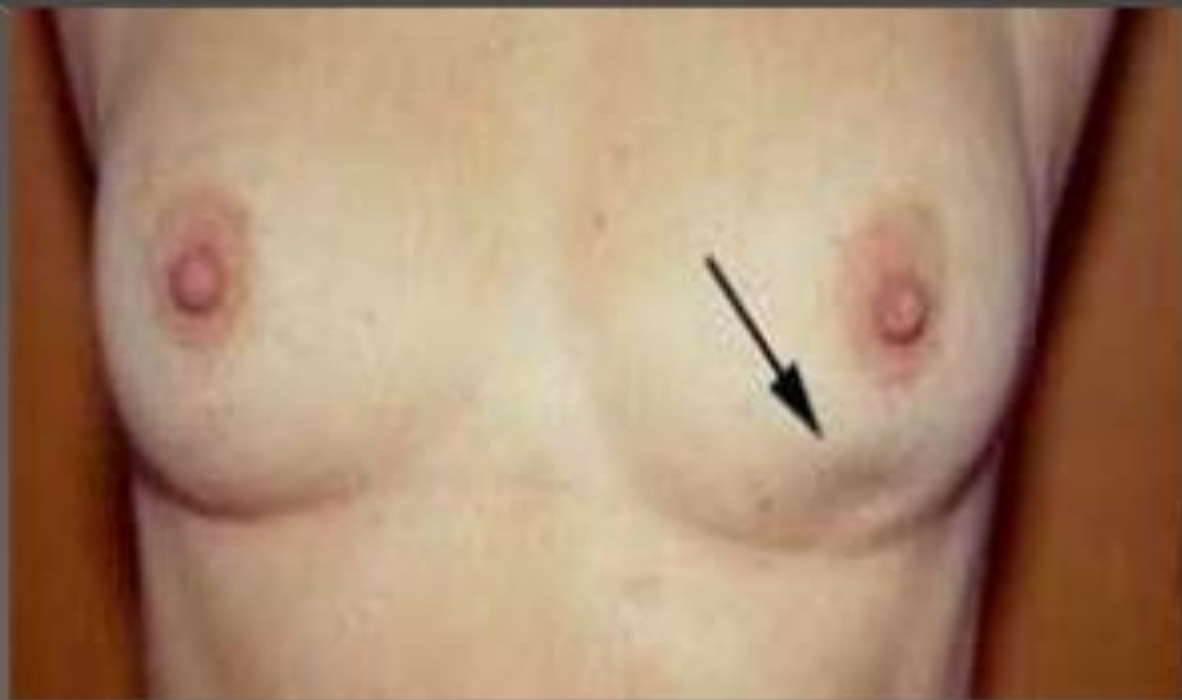
- INSPECTION - of breast and nipples
- EXAMINATION (palpation) - of breast, nipples & local lymph nodes
- GENERAL EXAMINATION - for disseminated disease
 1. Abdomen (hepatomegaly, ascites etc) ›
 2. Spine (pain, fracture, restriction of movement)
 3. Lung (breathlessness, effusion)
 4. CNS (headache, ataxia, paresis, paraesthesia)

- Previous lump?
- Pain?
- Nipple discharge?
- If female - Change in size related to menstrual cycle?
- If female - Last period?
- If female - Drugs? (e.g HRT, OCP)
- If female - Pregnancies? (details?)
- Family History?

- The breast should be inspected with the patient seated in the following positions:
 1. Hands pressing on the top of the head
 2. Arms raised in the air
 3. Arms at the side
 4. Hands pressing on the hips:
 - A. “Can you press your hands on top of your head, raise your arms in the air and hold them up then slowly bring them down.
 - B. Now can press your hands as hard as you can on your hips”

- Size and shape
- Contour
- Coloration
- Venous pattern
- Skin dimpling
- Peau d'orange – due to lymphatic obstruction
- Tethering – due to any underlying mass (ie a sebaceous cyst which is attached to the skin at the punctum)
- Nipple inversion or excoriation (Paget's disease of the nipple)
- Scars - lumpectomies – small scars from lipoma, sebaceous cyst or benign lesion of the breast. Wide local excision scars – Bigger scar than lumpectomy. Mastectomies – Diagonal scar.
- Signs of inflammation - Mastitis







Technique

- SIT THE PATIENT AT 45°
- Ask the patient to place their hands behind the head (examine both breasts but start with the 'normal one')
- Retract the breast with the left hand and palpate with the right.
- Feel with the palmar surface of the fingers i.e. with the hand flat

- Ask the patient to point to the lump then palpate away from the lump
 1. Circumferentially in quadrants
 2. Medially across the pectoralis major
 3. Axillary tail and into the axilla
 4. In the infra-mammary fold (just under breast)
- Identify any masses noting location, size, consistency, tenderness, skin dimpling and mobility
- Use the face of a clock to describe location, ie 10'clock or upper/lower outer/inner quadrants

Lumps

- FIBRO-ADENOMA – A well defined, discrete and very mobile lump with a smooth or lobulated surface and a firm consistency.
- CYST – a well-circumscribed, often mobile lump with a consistency dependent on the tension of the contained fluid
- BREAST CA – a hard, craggy, irregularly shaped lump; it may be attached to the skin or deep structures › (50% 'upper outer quadrant', 15% 'upper inner quadrant', 11% 'lower outer quadrant', 6% 'lower inner quadrant', 18% nipple)

Nipple examination

- Ask the patient “Can you express any discharge from the nipple?” If yes – then ask them to demonstrate this.
- If discharge is present – test for blood, cytology and take a swab for culture and sensitivity
- Check for discharge by pressing the areola in different areas to enable the duct from which it emanates to be identified (hence the segment involved)
- If the nipple is retracted, press gently on each side to see if it will evert.
- Nipple inversion can be a sign of malignancy or a benign condition (eg plasma cell mastitis, duct ectasia)
- Palpate the breast deep to the nipple noting if a lump can be felt

Lymph nodes examination

- Examine the axilla, supra-clavicular and infra-clavicular fossa and cervical region for adenopathy noting node size and mobility
- Palpate the left axilla with the right hand and the right axilla with the left hand
- Support the weight of the patients arm so the axillary muscles are relaxed.
- Hold the fingers of the examining hand in a curve and press high into the apex of the axilla against the chest wall. (Ask patient to rest their right arm on your right forearm)

Walls

- APICAL › (ARCH OF THE ARMPIT)
- LATERAL WALL › (UNDER THE ARM – BODY OF THE HUMERUS)
- POSTERIOR WALL › (SUBSCAPULAR/LATISSIMUS DORSI)
- MEDIAL WALL › (SERRATUS ANTERIOR)
- ANTERIOR WALL › (PECTORALIS MAJOR)

Assessment

- Full history
- Refer to one stop breast clinic for a triple assessment

**The triple assessment includes a full history and examination, mammography or radiographic imaging (US) and fine needle aspiration under USS guidance.”

**USS <35, Mammogram >35

**Core biopsy

**CT scan for metastasis (TNM staging)

- Benign :

1. Fibroadenoma < 30 y.o.
2. Fibrocystic change > 30 y.o. (response to cyclical hormone changes; +/- mastodynia; decrease caffeine, NSAIDs, vit E, Danazol)
3. Intraductal papilloma (bloody D/C)
4. Mastitis/ Abscess (lactating women, *S. aureus*, FNAB +/- incision and drainage à r/o inflammatory cancer)
5. Mondor's disease – thrombophlebitis of breast veins
6. Galactocele
7. Lipoma
8. Cystosarcoma phyllodes – mesenchymal tumor of lobular tissue
9. Fat necrosis
10. Capsular contracture (implants) ›

Malignant

1. DCIS (histologically most aggressive is Comedo), carcinoma develops in same breast– Invasive ductal carcinoma
2. LCIS, risk of developing cancer in either breast
3. Paget's – infiltrating ductal carcinoma with nipple involvement
4. Inflammatory carcinoma – rapid growth, pain, red, warm, edema, metastasizes early, invades the subdermal lymphatics, need a skin biopsy b/c subdermal, rarely curable (chemoTx)

Malignancy Risk Factors

**Major, moderate or minor

1. Major: BRACA 1 & BRACA 2 gene, Immediate family history, Breast Ca in the other breast
2. Moderate: Long exposure to oestrogen - Early menarche, late menopause, use of HRT, use of pill, nulliparity
3. Minor: Slender (higher risk) smoking, drinking ie unhealthy lifestyle