CLINICAL EXAMINATION

By

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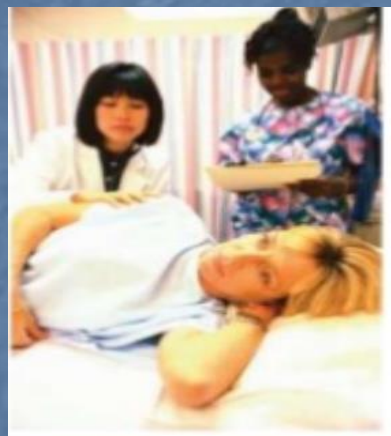
Three Sections

- Vital information.
- General examination .
- Systemic examination .




Vital Data

- Name Of The Institution :
- Name Of The Doctor:
- Ward No:
- Cot No :
- Case No :
- Date:
- Name Of The Patient :
- Age :
- Sex :
- Religion :
- Caste :
- Married Or Single :
- Children :
- Occupation :
- Income
- Address

General examination

- GE is the first step of physical examination and a key component of diagnosis .
- ***Inspection:*** is the major component of GE with palpation and auscultation .

❖ ***AIMS***

- Assess the patient general condition .
- Detect manifestation of internal diseases .

❖ ***3 Components***

- History taking clues are the **Symptoms .**
- Physical examination clues are the **Signs .**
- Investigations clues are the **Results .**

Instruments and Equipments

- Stethoscope
- Sphygmomanometer
- Thermometer
- Torch
- Wooden tongue depressor
- Measuring tape

Note

- *Exam begins the minute you see the patient*
- *Exam continue through out your patient interaction.*

General Assessment

Good Physical Examination Requires

- Cooperative patient.
- Good light.
- Quiet , warm room .
- Privacy & confidentially.
- Good exposure .
- Good position of DR and Patient.
- Presence of a chaperon. ?

General examination

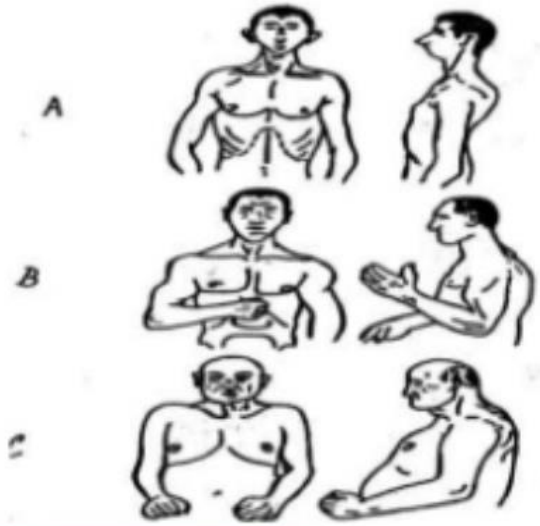
- General Appearance
- Hands and arms
- Skin
- Face
- Eyes
- Mouth
- Neck
- Oedema
- Lymph nodes
- Vital Signs
  - Temperature
  - Pulse
  - Respiration Rate
  - Blood Pressure

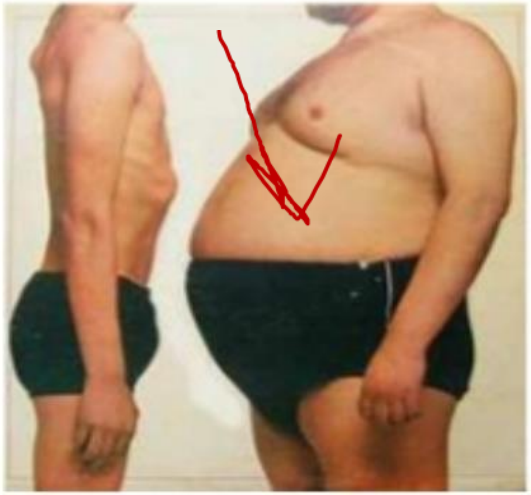
General Assessment

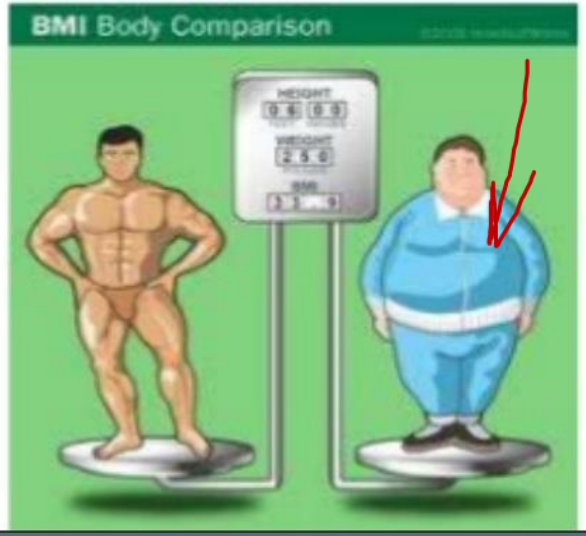
- Position , posture and Gait of patient .
- Mental status of the patient(level of consciousness), speech .
- Built , and Nutrition , BMI.
- Distress & facial expressions .
- Attitude standing waking, sitting, and lying down.
- Skin , MM.
- Breath odor and personal hygiene.
- Stand on the Rt. Side.

NB . ***After History taking one should have an idea about most likely Affected System , and Suspicions about Diagnosis .***

- Body Built







Body Mass Index (BMI)

It is calculated by the formula weight/ height^2 (Kg/m^2)

	BMI
Underweight	<18.5
Normal	18.5-24.9
Overweight	25-29.9
Obese	30-39.9
Morbidly obese	>40

The Body Mass Index

Weight Categories as per BMI Calculations

Normal
BMI 18.5 - 24.9

Overweight
BMI 25 - 29.9

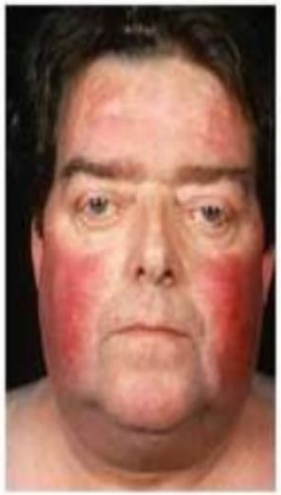
Obese
BMI 30 - 34.9

Severely Obese
BMI 35 - 39.9

Morbidly Obese
BMI ≥40

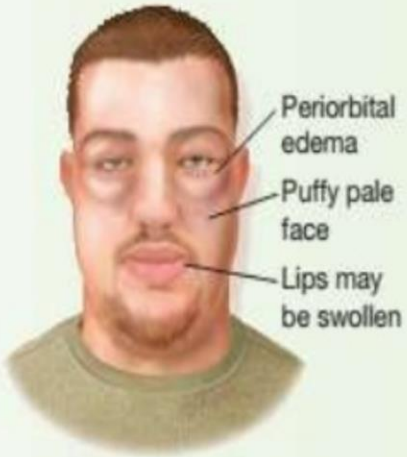
Facial feature/expression/ Mood/Attitude

FACIAL SWELLING



Cushing's Syndrome

The increased adrenal cortisol production of Cushing's syndrome produces a round or "moon" face with red cheeks. Excessive hair growth may be present in the mustache and sideburn areas and on the chin.



Nephrotic Syndrome

The face is edematous and often pale. Swelling usually appears first around the eyes and in the morning. The eyes may become slitlike when edema is severe.

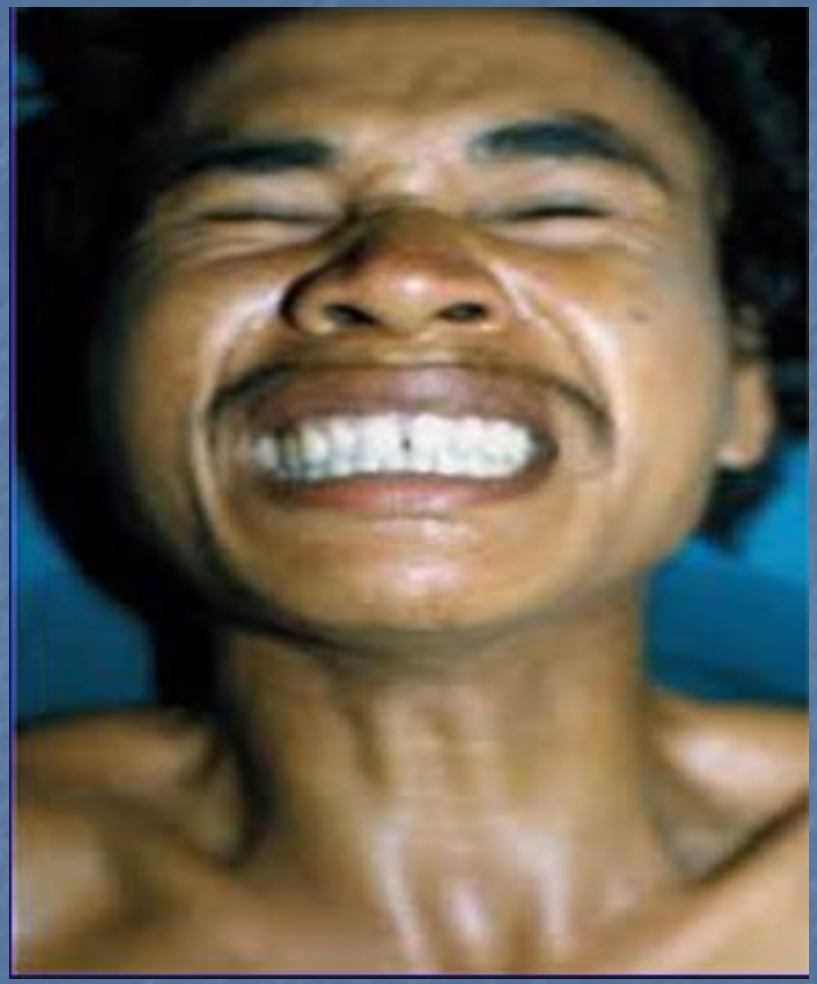
Myxedema

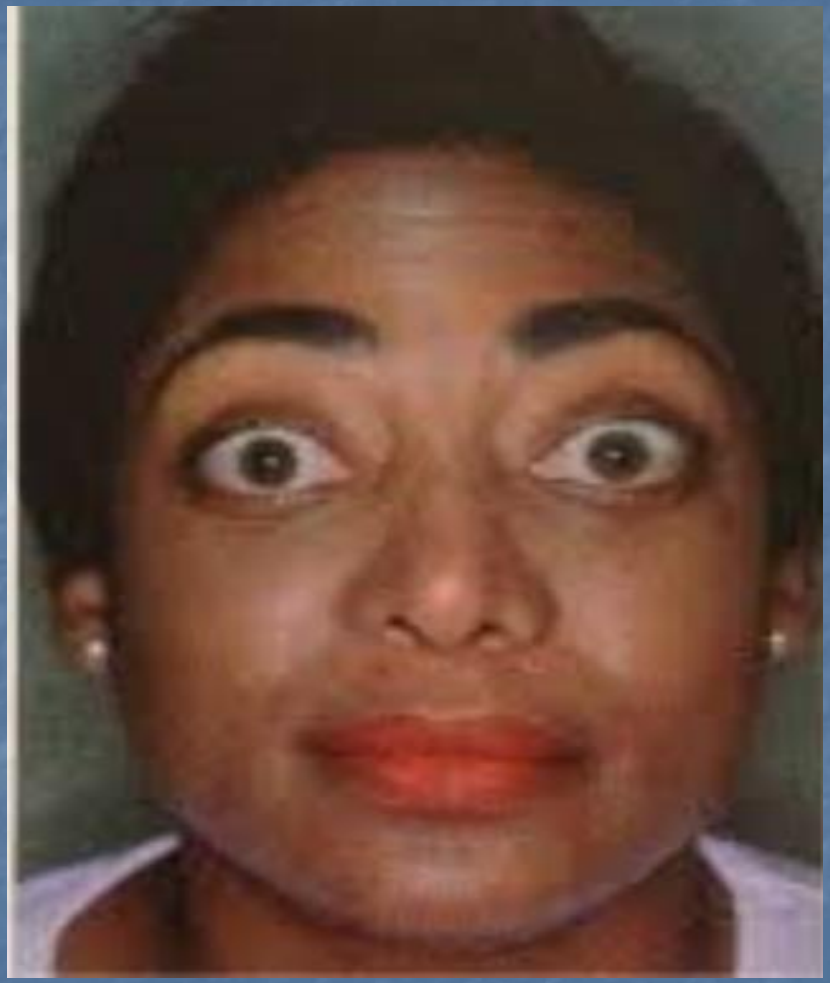
The patient with severe hypothyroidism (*myxedema*) has a dull, puffy facies. The edema, often pronounced around the eyes, does not pit with pressure. The hair and eyebrows are dry, coarse, and thinned. The skin is dry.

- **Compulsive supine position**

The patient lie down on the beck, with two legs bending.

Acute peritonitis

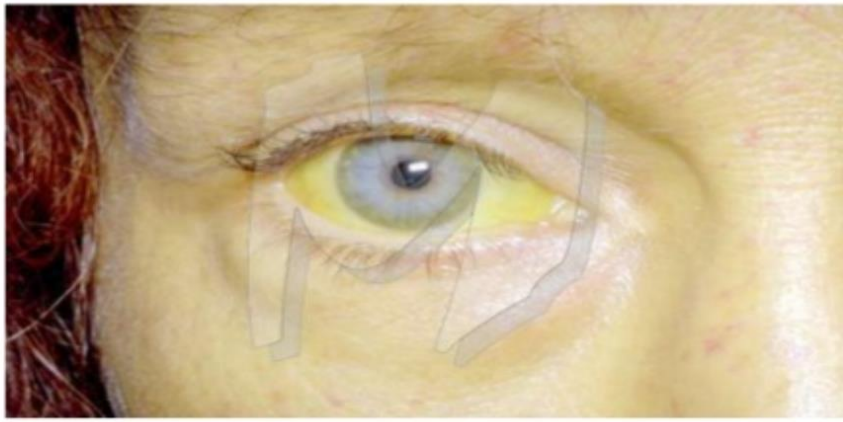


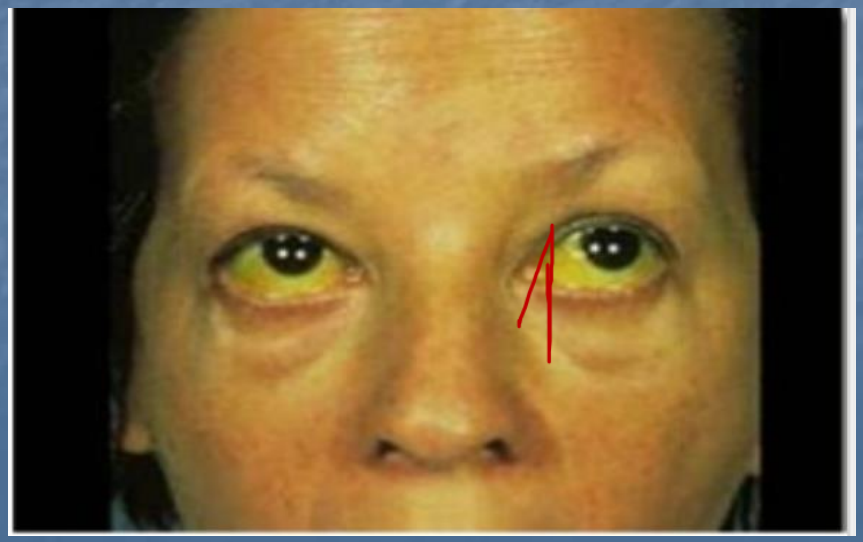


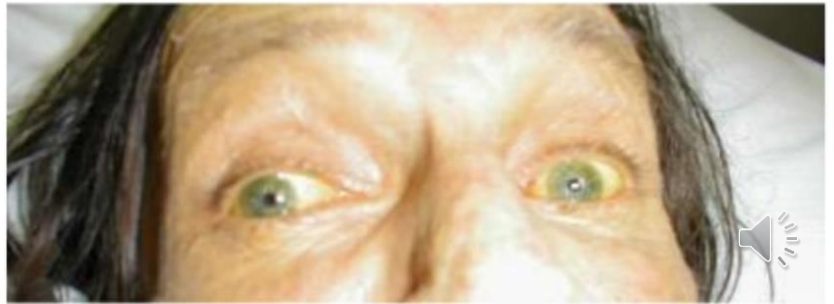
Risus sardonicus

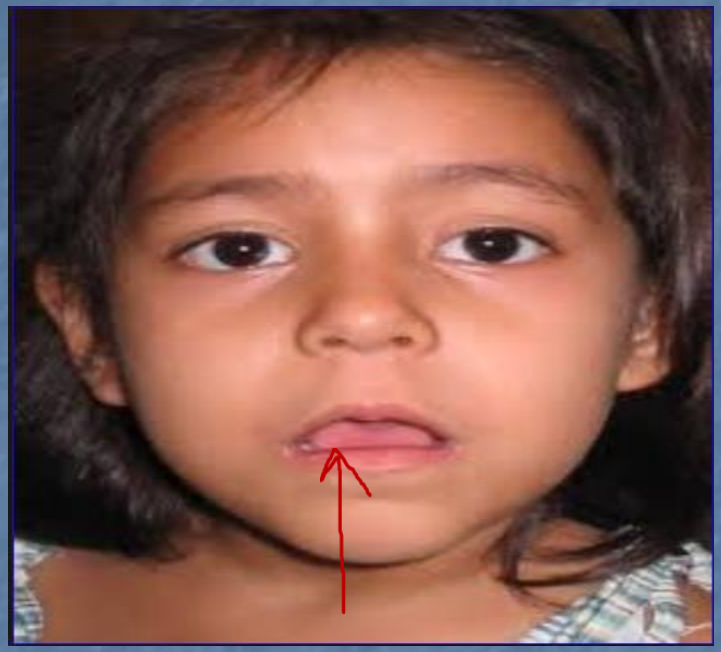
Hippocratic face

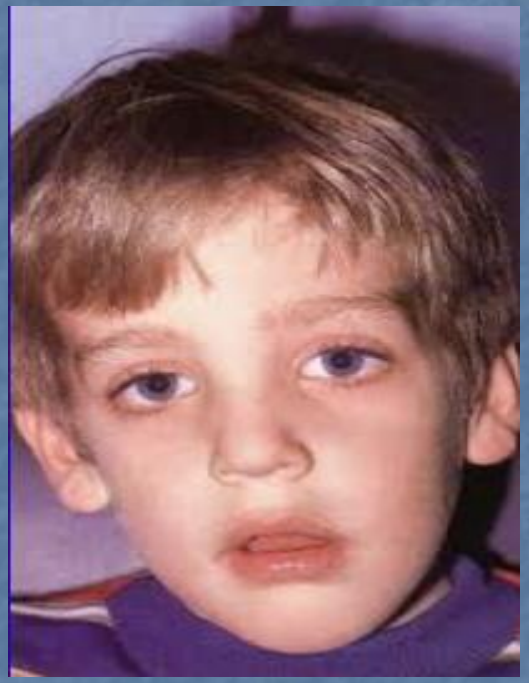
Jaundice











Adenoid faces

Vital signs

- ***Temperature :*** ***36.7 -37.2 º C.***

- ***Pulse :*** **60-80 min Rate , Rhythm,** ***Volume*** **Character , palpable vessel wall.**

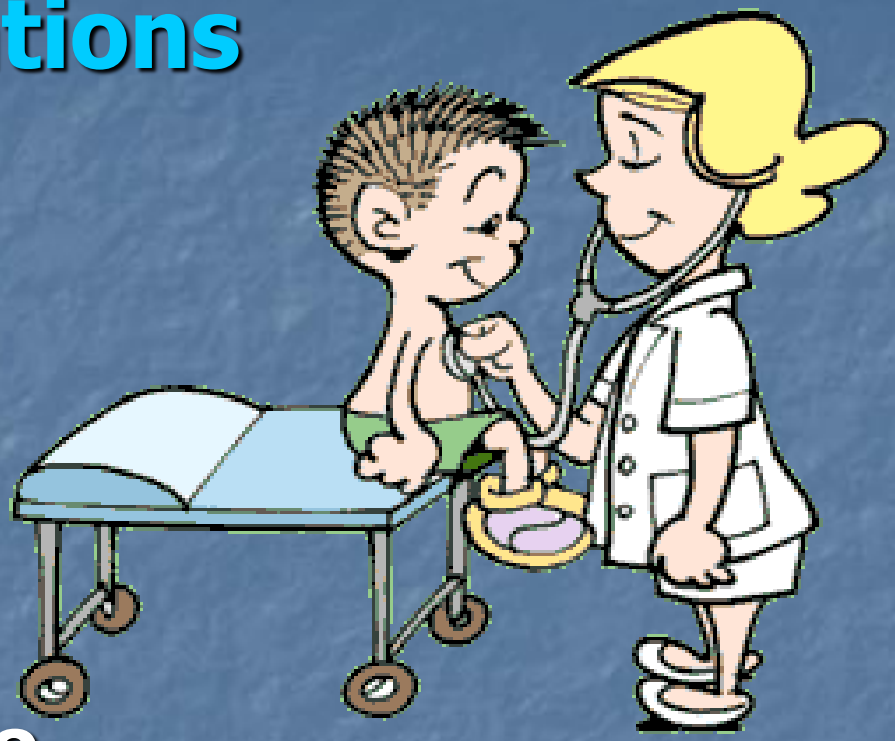
- ***Blood pressure :*** **110/70mmHg.**

- ***Respiratory rate :*** **12-20 Cycle /M.**

Scheme of local examination

- Inspection.
- Palpation.
- Percussion.
- Auscultation.
- ***NB. Complete Head to Toe GE should precedes LE.***

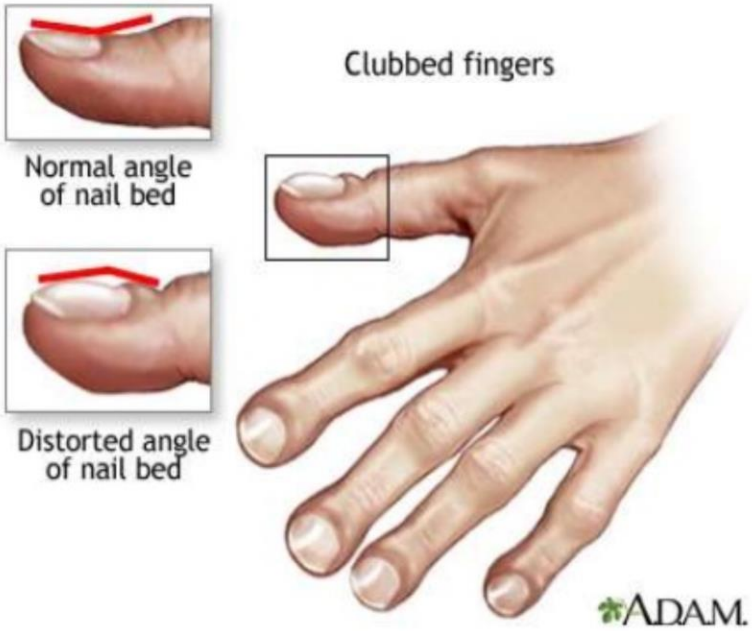
General Observations

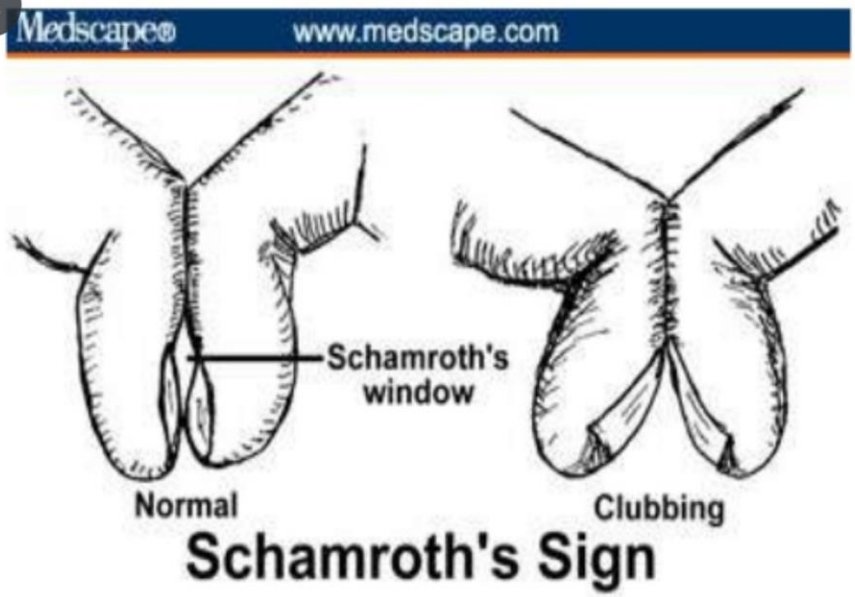


- Posture
- Mobility
- Weight
- Color of skin.
- Facial appearance.
- Body built.
- State of nutrition and hydration.

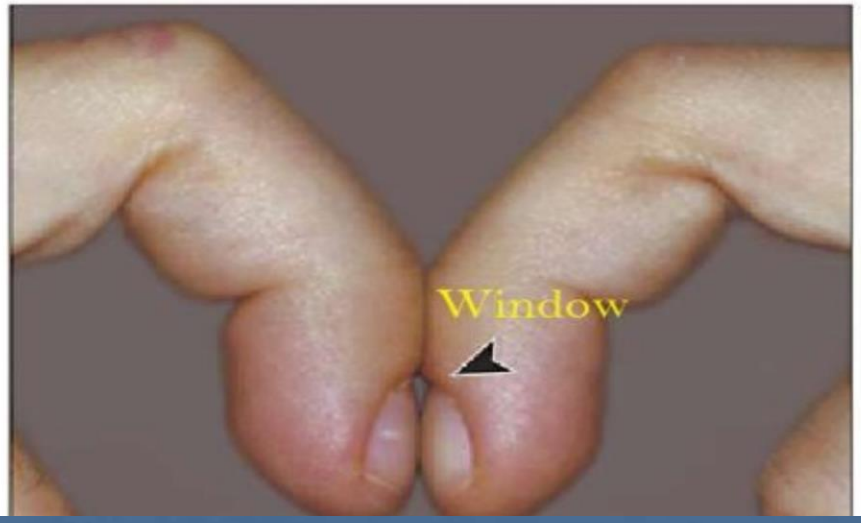
HOLD THE PATIENT ***HAND*** AND EXAMINE IT

- ***Pulse:*** Rate, Volume , Regularity.
- ***Nails:*** Colour , Shape , Clubbing.
- ***Temperature:***
- ***Moisture:***
- ***Color :*** Pallor, Reddish-Blue.
- ***Callosities :***

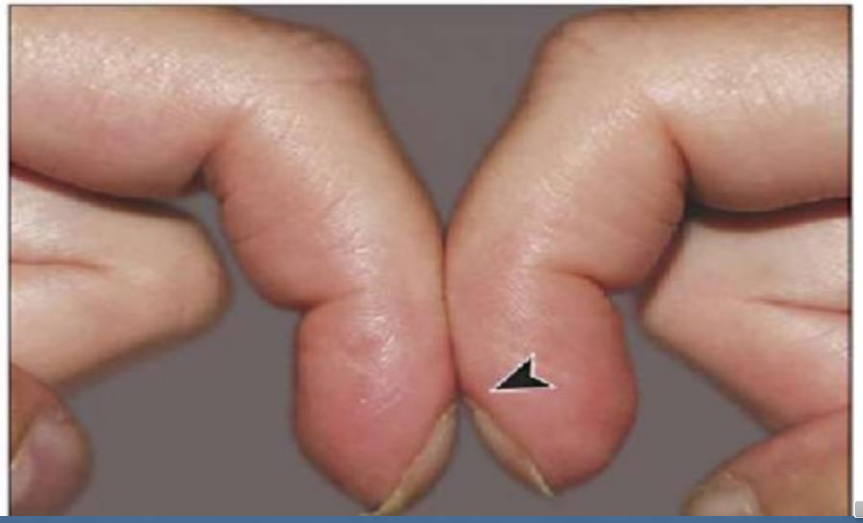




Normal

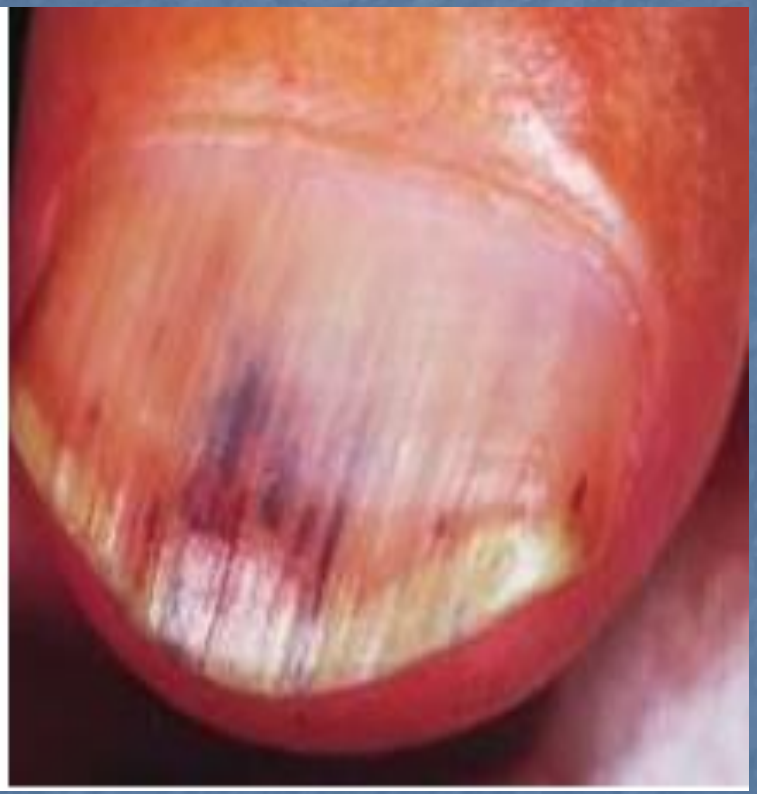


Clubbed

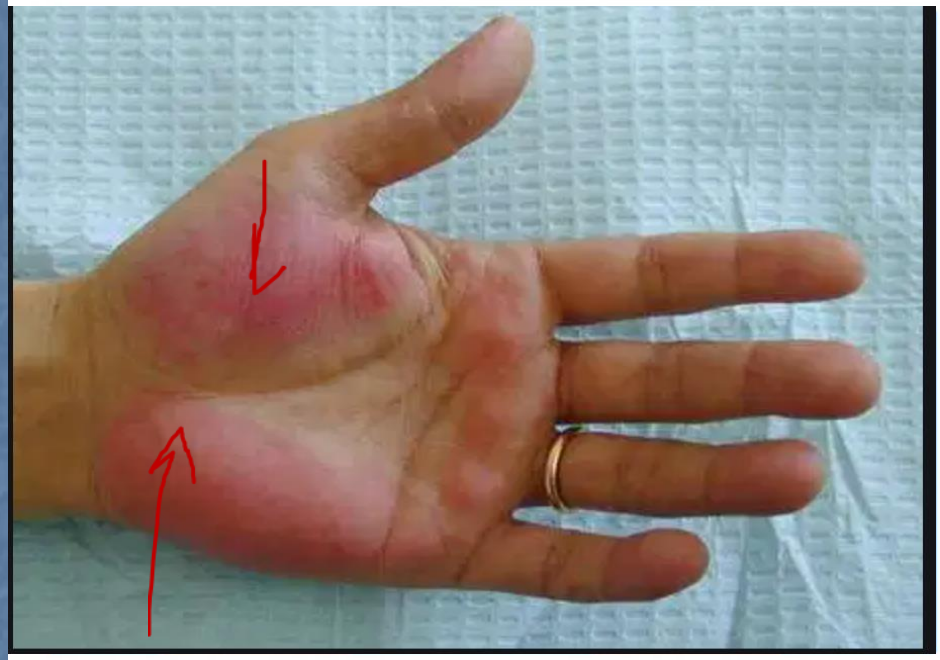



SCIENCEphotoLIBRARY

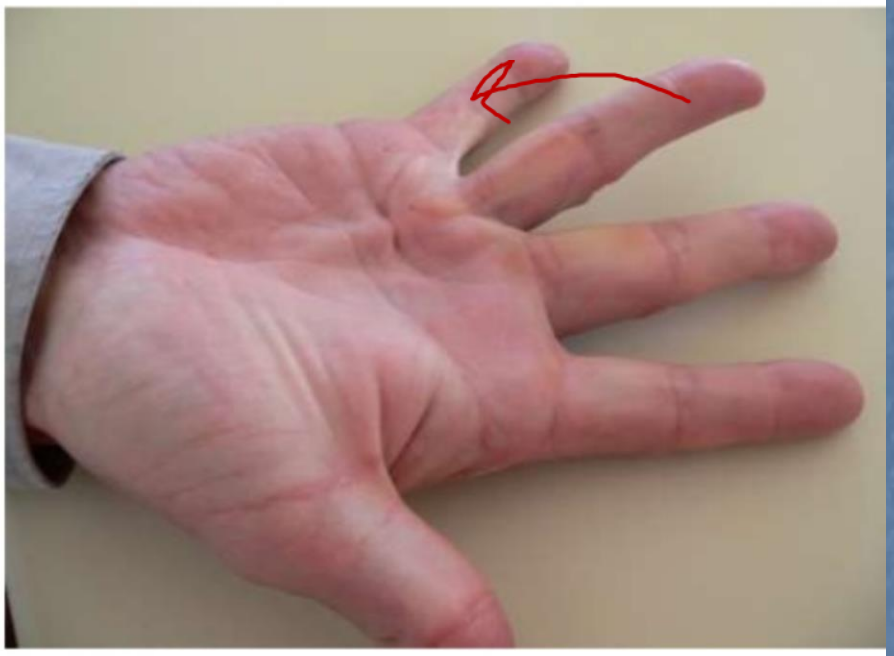
Splinter haemorrhages



HANDS

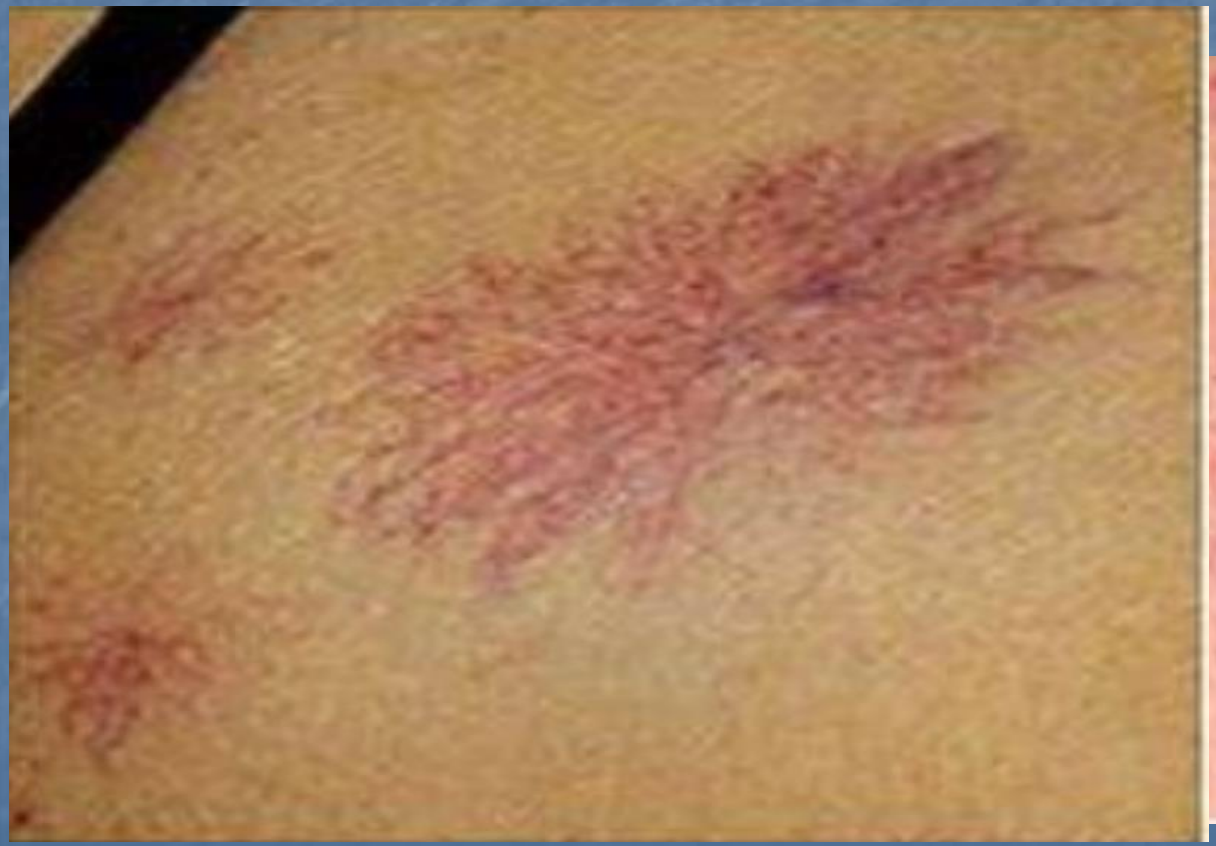


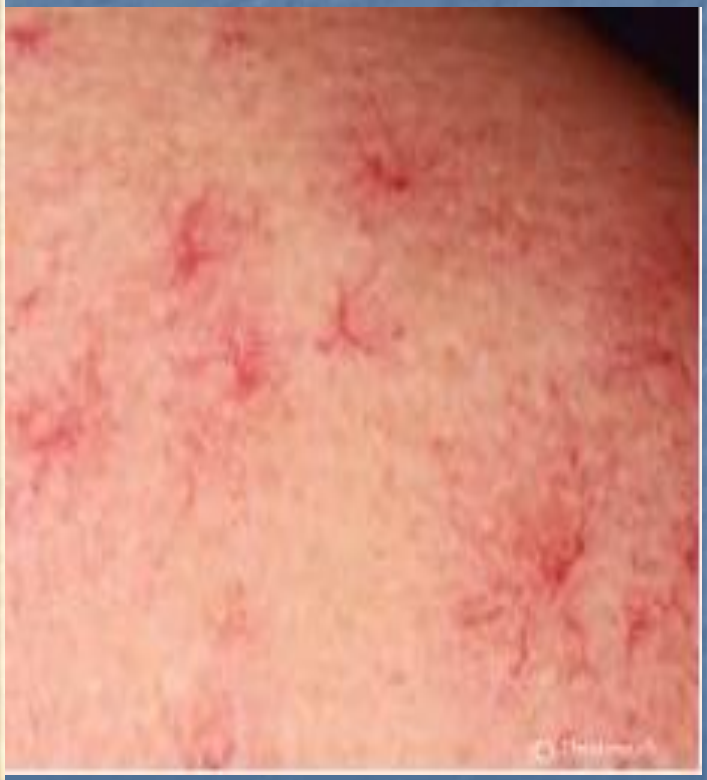
Palmar erythema



Dupuytren's contractures

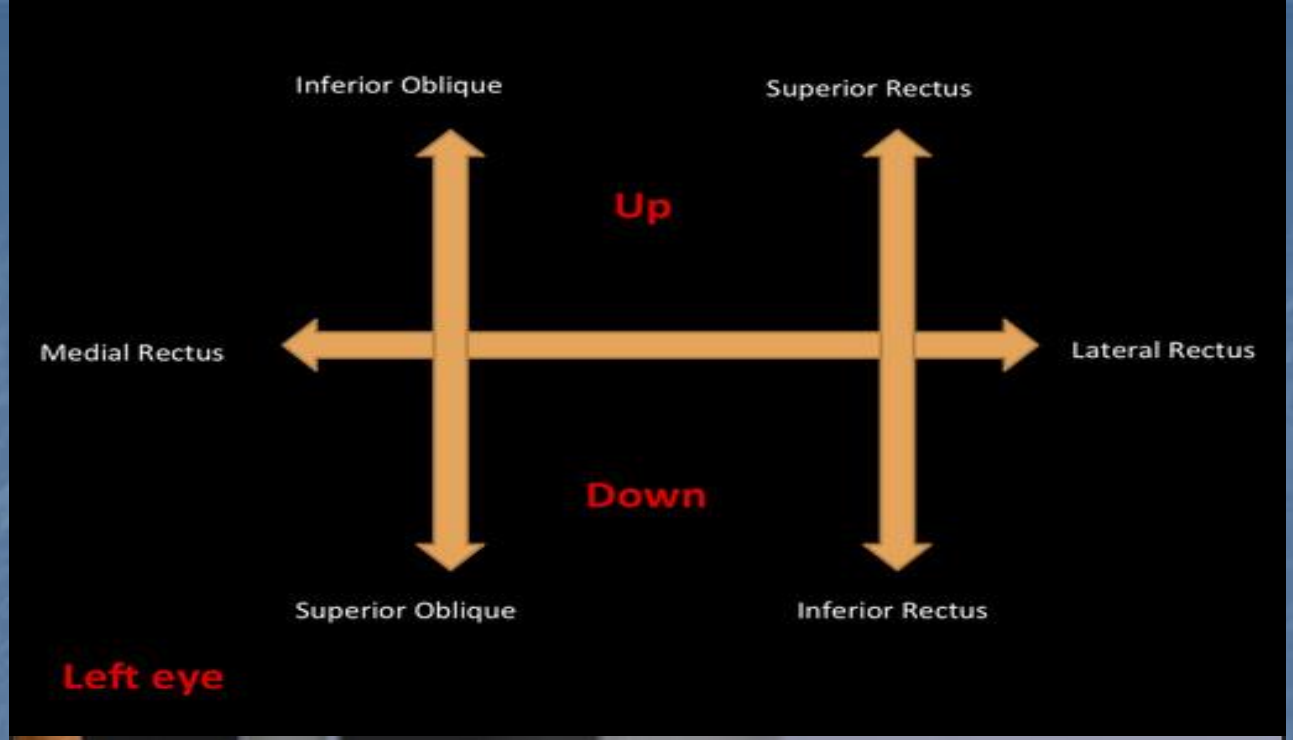
Spider Nevi



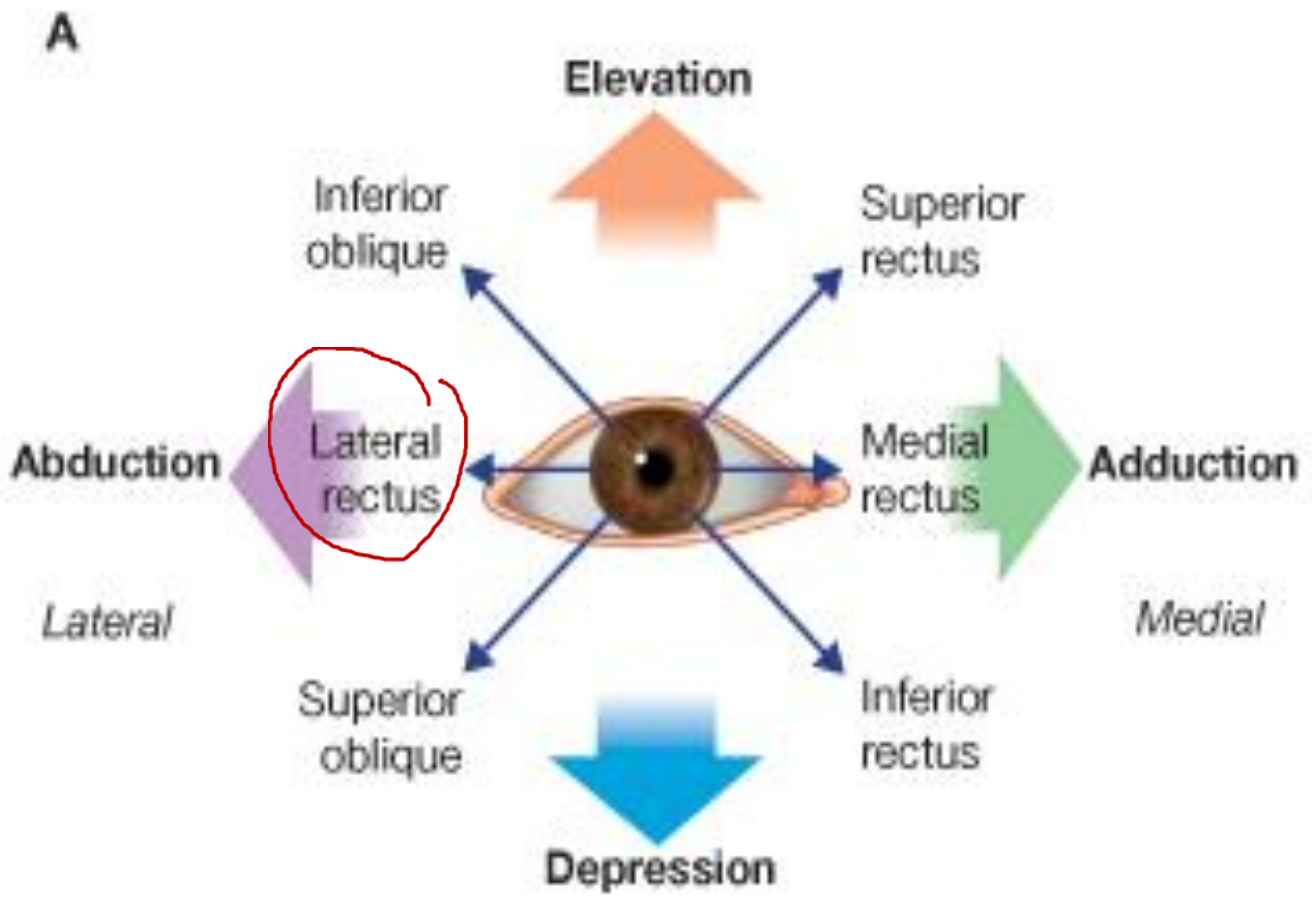


HEAD & NECK

- ***Eyes:*** Movement , Jaundice, Vision
- ***Ears & Nose:*** Specially, if H&N C/O
- ***Mouth & Oral cavity:*** Tonsils
- ***Neck :*** JV, Trachea, Thyroid , LN, Scars, Carotid pulse


Inferior Oblique
Superior Rectus
Up
Medial Rectus
Lateral Rectus
Down
Superior Oblique
Inferior Rectus
Left eye

Movement of of Eye Muscles



EXAMINE THE CRANIAL NERVES

- ***Olfactory S :*** Peppermint coffee …..
- ***OPHTHALMIC S:*** V acuity & V fields
- ***OCCULOMOTOR M:*** Eye lids ,eye movement accommodation, light reflex.
- ***TROCHLEAR M:*** Down & out look, Diplopia
- ***TRIGEMINAL:*** Sensory face & Tongue Motor M of Mastication.

EXAMINE THE CRANIAL NERVES cont…

- ***ABDUCENT* M:** Examine for lat. Rectus
- ***FACIAL:*** Examine Ms of Facial Expression
- ***AUDITORY* S:** Hearing ,Equilibrium
  GLOSSOPHARYNGEAL: Gag Reflex
- ***VAGUS:*** Examine soft palate
- ***SPINAL ACCESSORY:*** Shrug the shoulders
- ***HYPOGLOSSAL N:*** Examine the Tongue

Abducent N Injury

TROCHLEAR N Injury

Trochlear nerve lesion

Isolated trochlear nerve injury is rare.

Lesion results in **diplopia** & inability to rotate the eye infero-laterally due to paralysis of the superior oblique muscle of the same side.

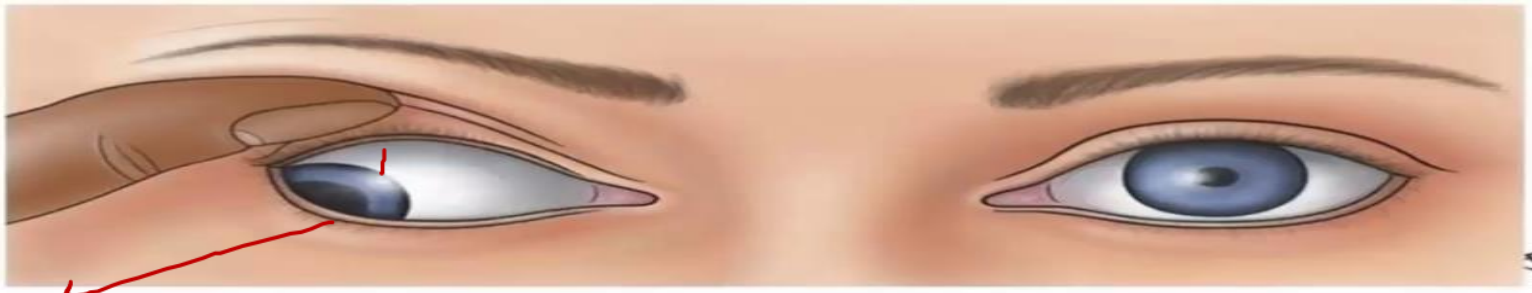
The **eye deviates; upward** and slightly **inward.**

Person has difficulty in walking downstairs

If you asking the patient to look downwards towards the opposite side of the lesion

Leads to diploplia.

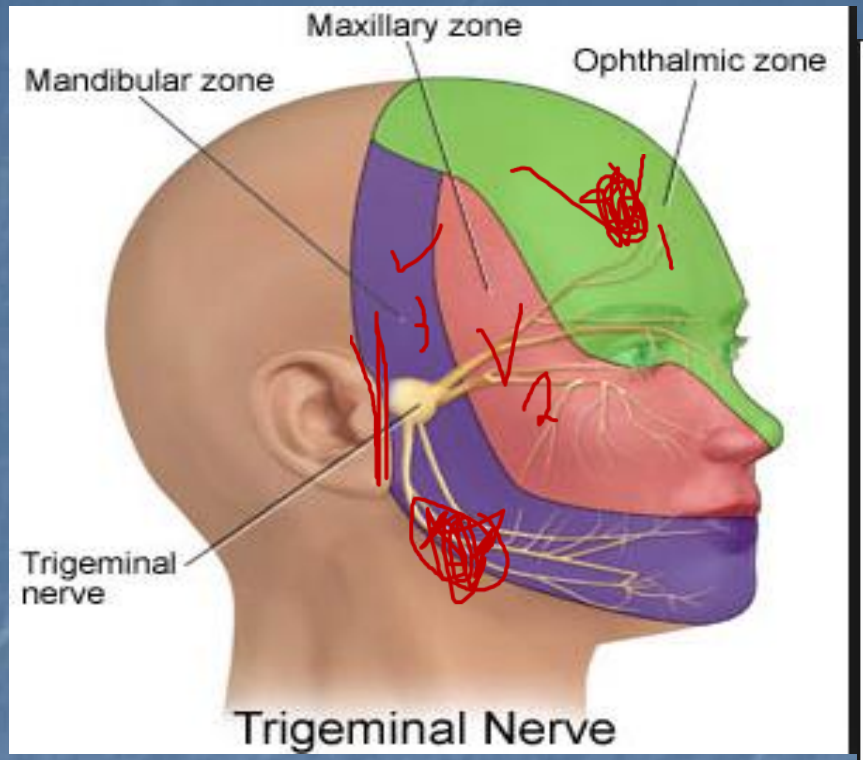
Oculomotor n Injury



Right eye: Downward and outward gaze, dilated pupil, eyelid manually elevated due to ptosis

Left: Normal

Trigeminal nerve injury



Cranial Nerve V- Trigeminal

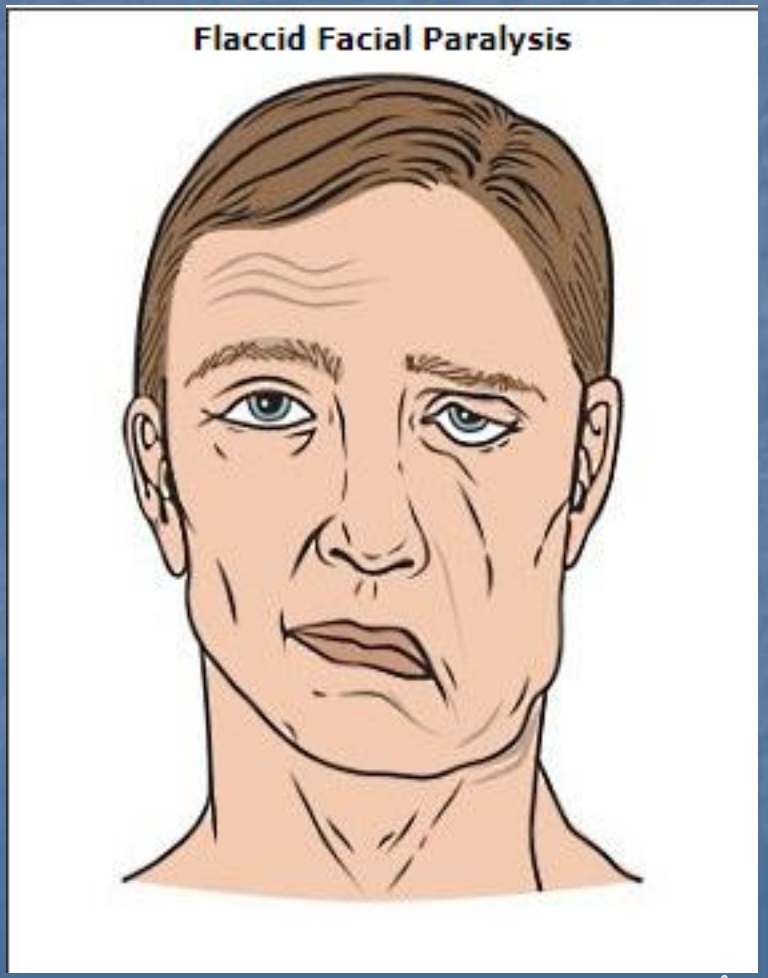
- Motor Function
  - Palpate temporal & masseter muscles as patient clenches teeth
    - Try to separate jaw by pushing down on chin

  Jaw strength equal bilaterally

- Sensory Function
  - Test light sensation with cotton ball over
    - Forehead (ophthalmic)
    - Cheeks (maxillary)
    - Chin (mandibular)

  Sensation intact and equal bilaterally

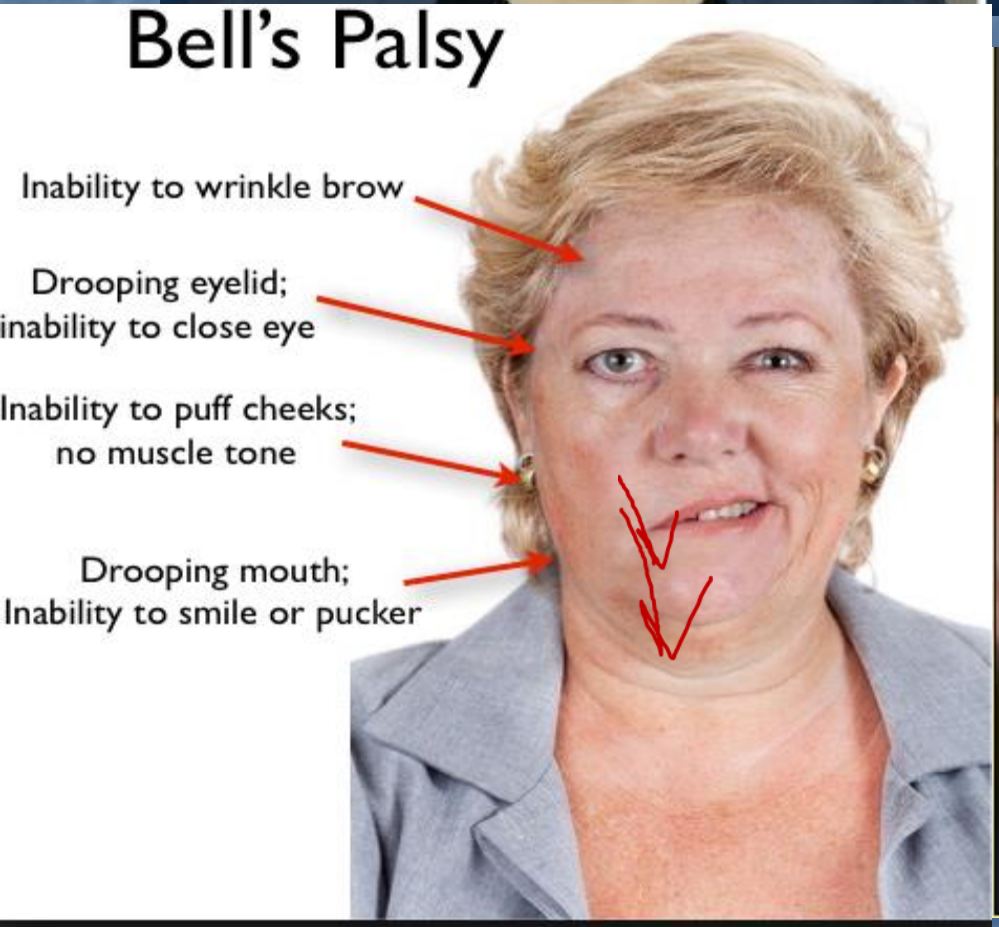
Fascial nerve injury

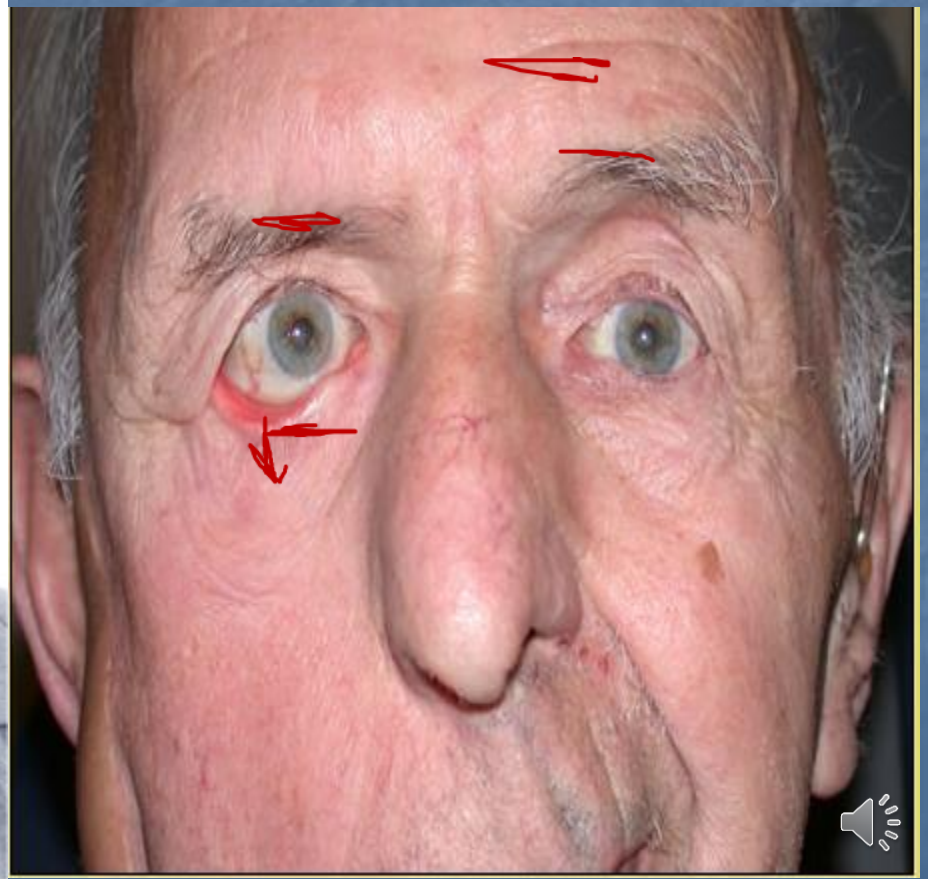



A


B

Bell's Palsy


Inability to wrinkle brow
Drooping eyelid; inability to close eye
Inability to puff cheeks; no muscle tone
Drooping mouth; Inability to smile or pucker

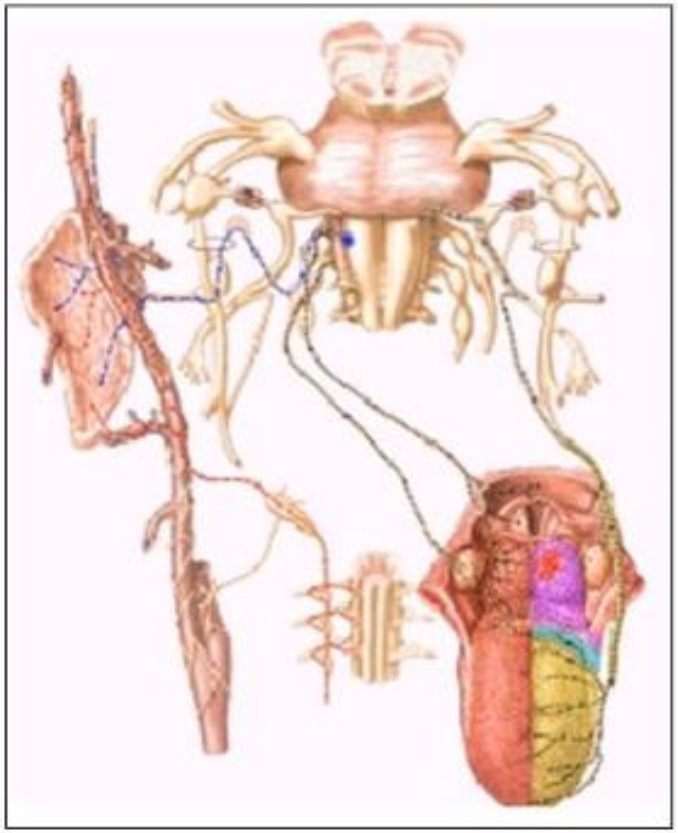


Facial Paralysis

UPPER MOTOR NEURON	LOWER MOTOR NEURON
Lesions is above the pons.	Lesions is in the pons or in the pathway from pons to its exit.
Patient can make furrows on looking upwards	Furrows are absent on looking upwards of the affected side of face.
Lower part of the face is involved on the opposite side of the lesion.	The whole face and forehead involved on the same side of the lesion.
Isolated involment of this type is rare.	Isolated involment of this type is common.
It is invariably associated with hemiplegia .	It may be associated with hemiplegia .

Glossopharyngeal nerve lesions

- **It produces:**
- Difficulty of swallowing;
- Impairment of taste sensation over the posterior one-third of the tongue ,palate and pharynx.
- Absent gag reflex.
- Dysfunction of the parotid gland.



GAG REFLEX

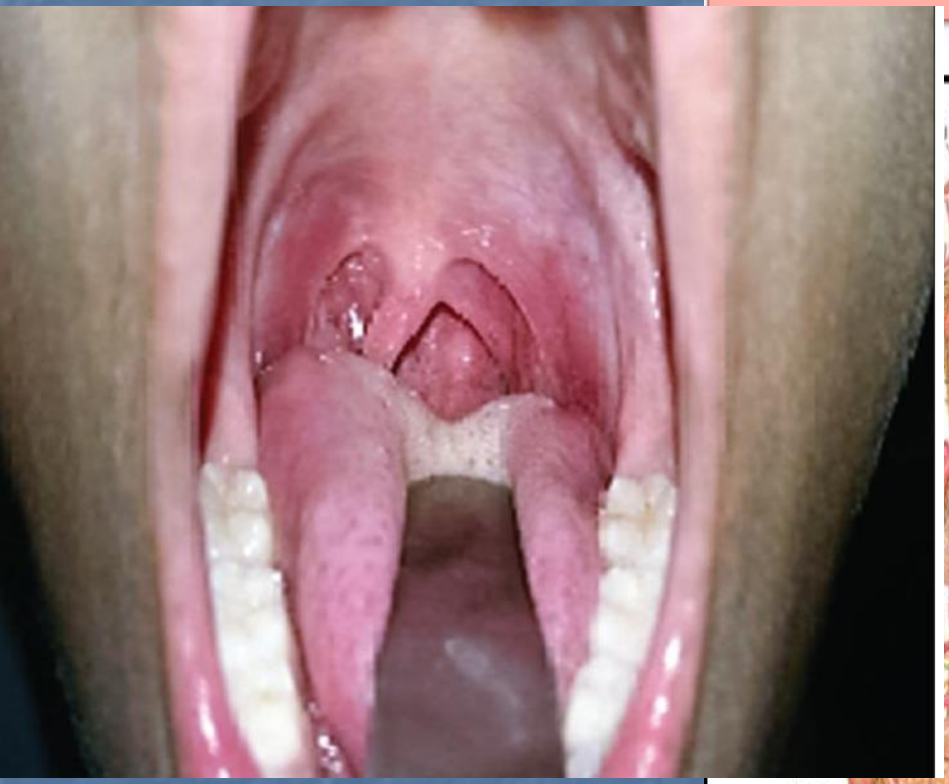
The Gag Reflex

- It is defined as the involuntary contraction of the muscles of the soft palate or pharynx that results in retching.
- It may lead to actual vomiting and is accompanied by excessive lacrimation, salivation and sweating.
- It is a healthy defense mechanism and functions to prevent the entry of foreign bodies into the larynx or pharynx.

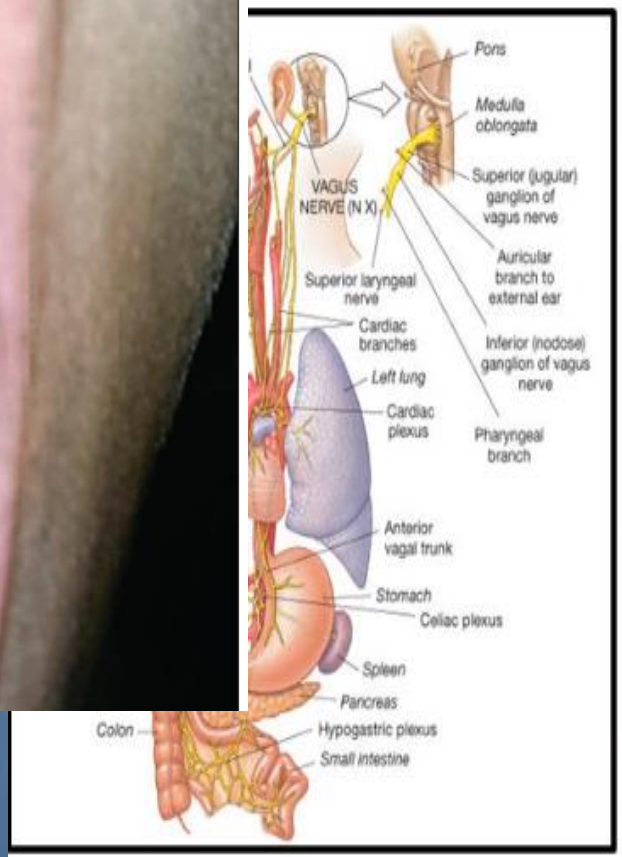
ON

OFF

Vagus nerve injury

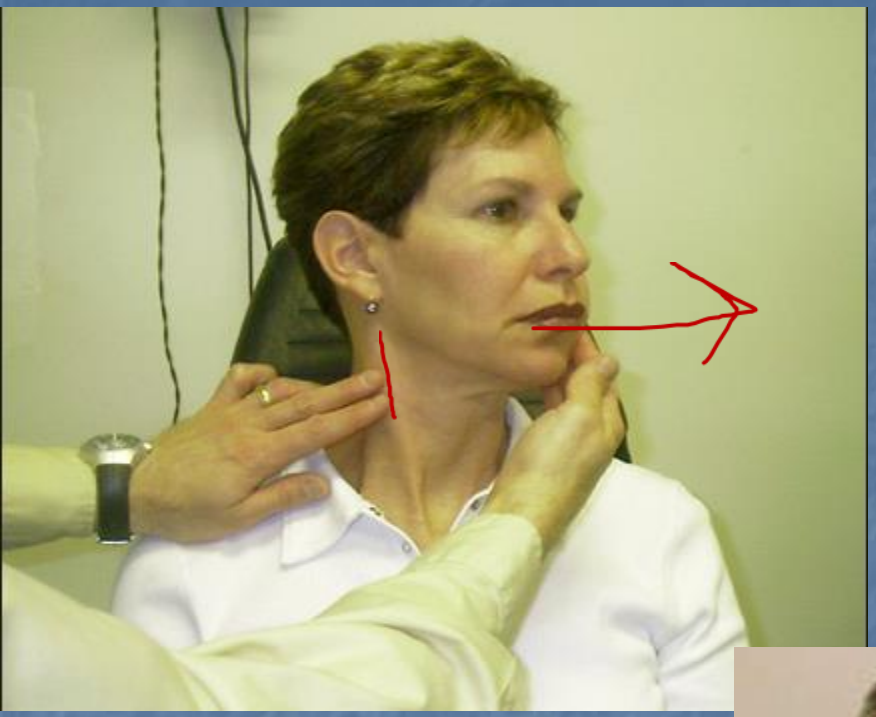


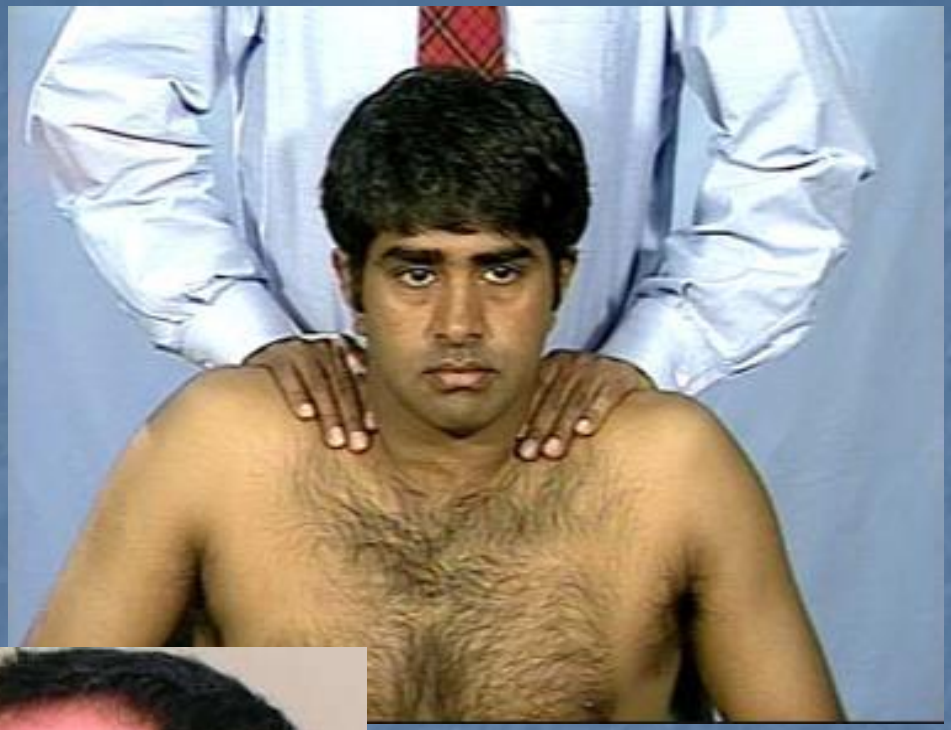
Vagus nerve Lesions



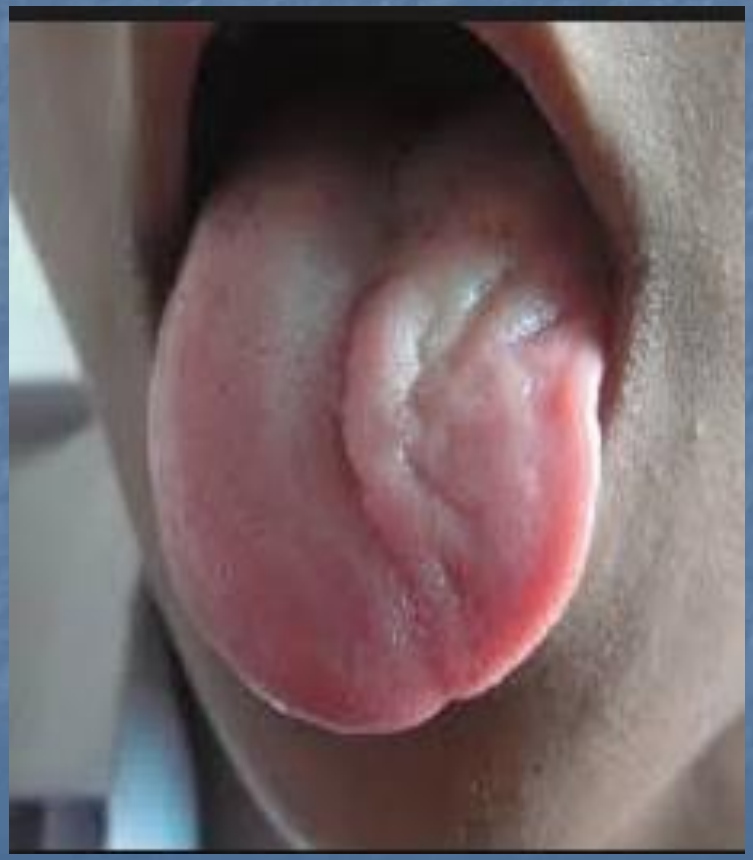
- Vagus nerve lesions produce palatal and pharyngeal and laryngeal paralysis;
- Abnormalities of esophageal motility, gastric acid secretion, gallbladder emptying, and heart rate; and other autonomic dysfunction.

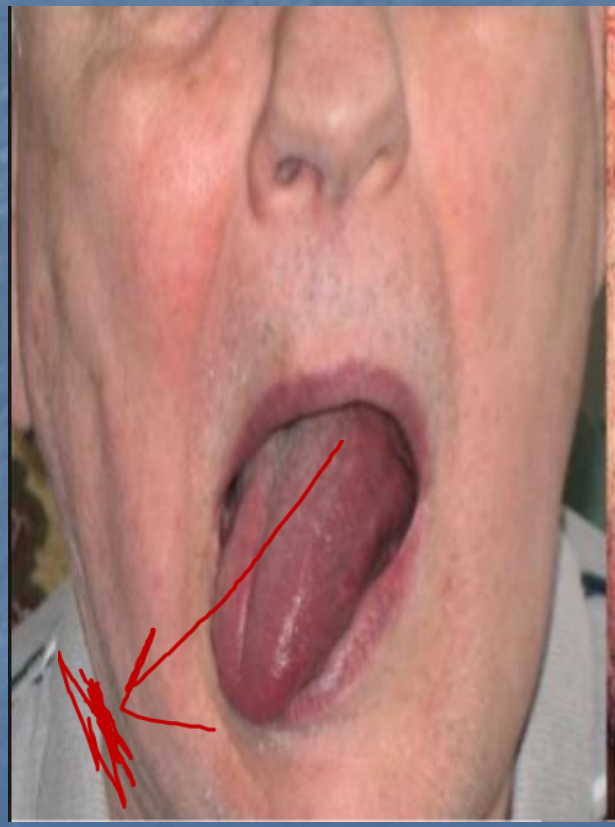
SPINAL ACCESSORY N Injury

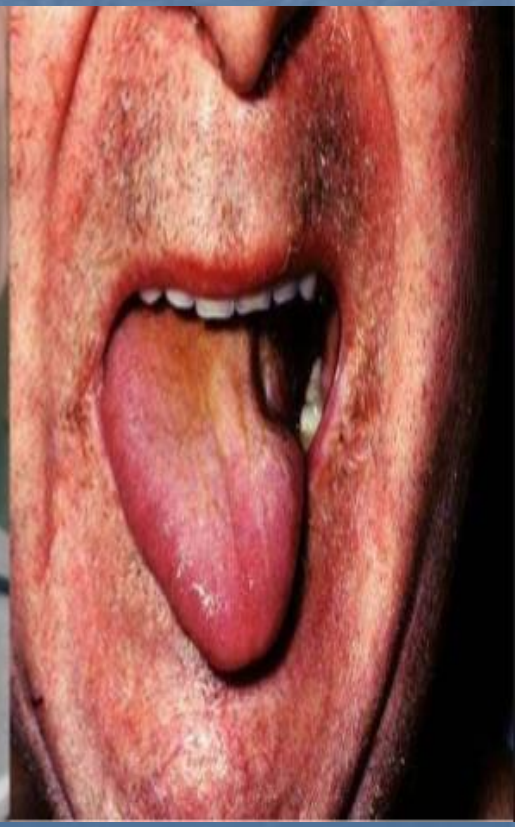




HYPOGLOSSAL N Injury



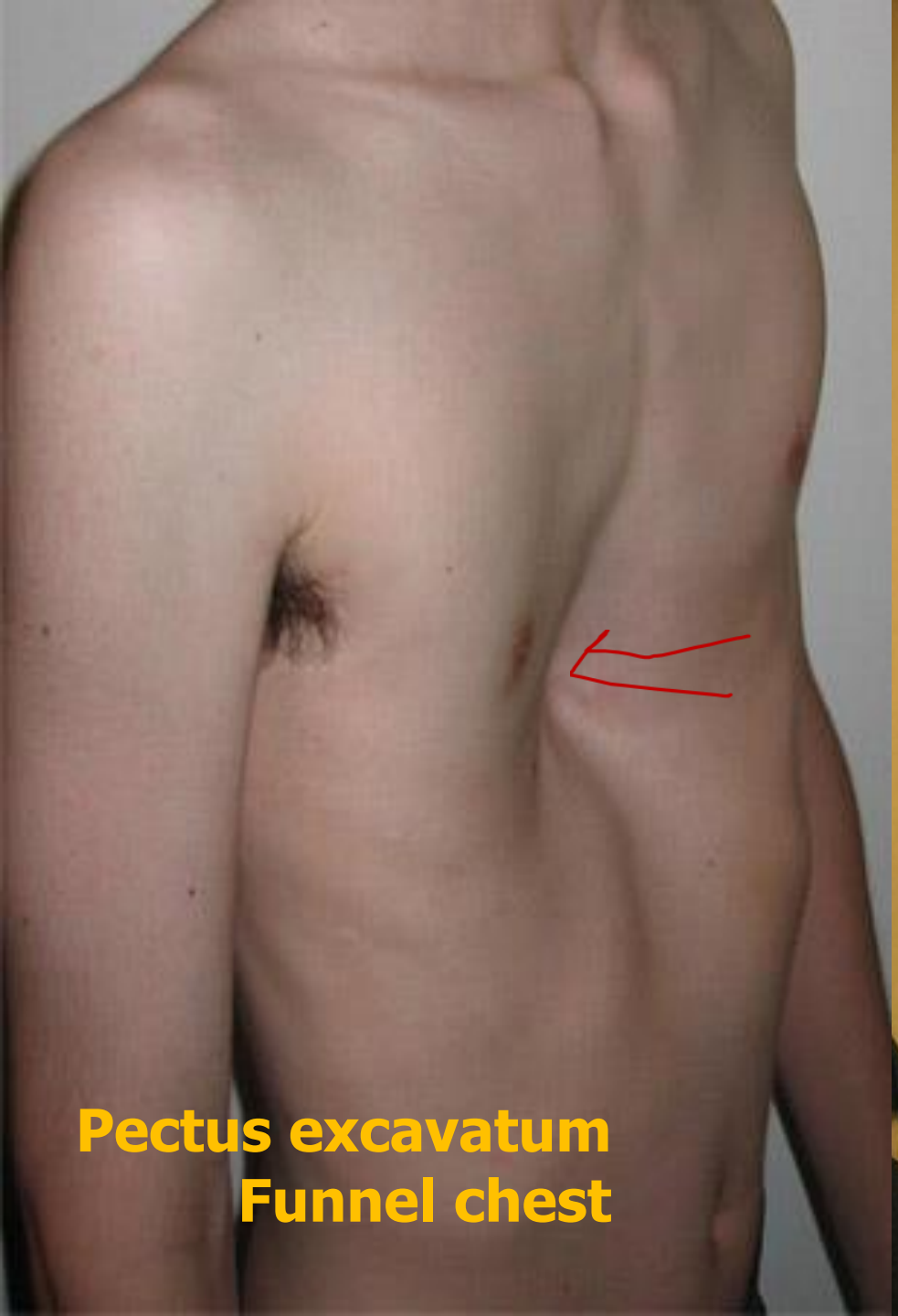




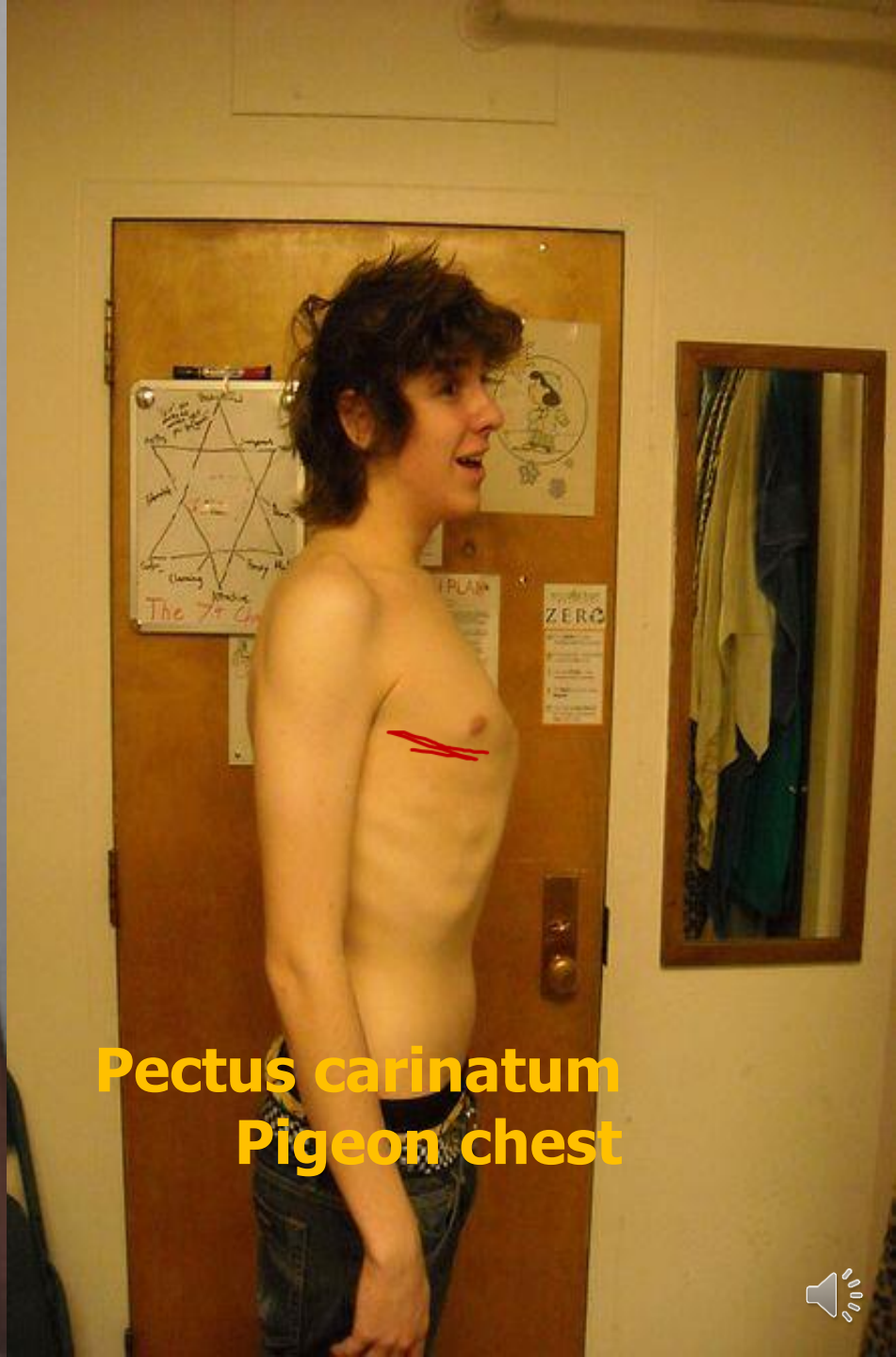
EXAMINE THE CHEST WALL AND LUNGS

INSPECTION

- Colour of patient
- Resp. Rate.
- Count resp. Rate & rhythm.
- Duration of insp. & exp.
- Chest wall abnormalities
  - Pectus excavatum
  - Pectus carinatum



Pectus excavatum
Funnel chest



Pectus carinatum
Pigeon chest

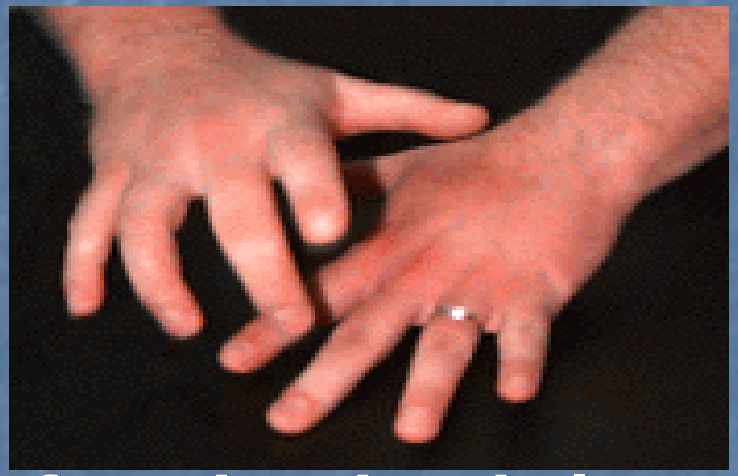
EXAMINE THE CHEST WALL AND LUNGS cont....

PALPATION

- Trachea
- Chest movement
- Apex beat
- Tactile vocal fremitus
- Axillae

EXAMINE THE CHEST WALL AND LUNGS cont…

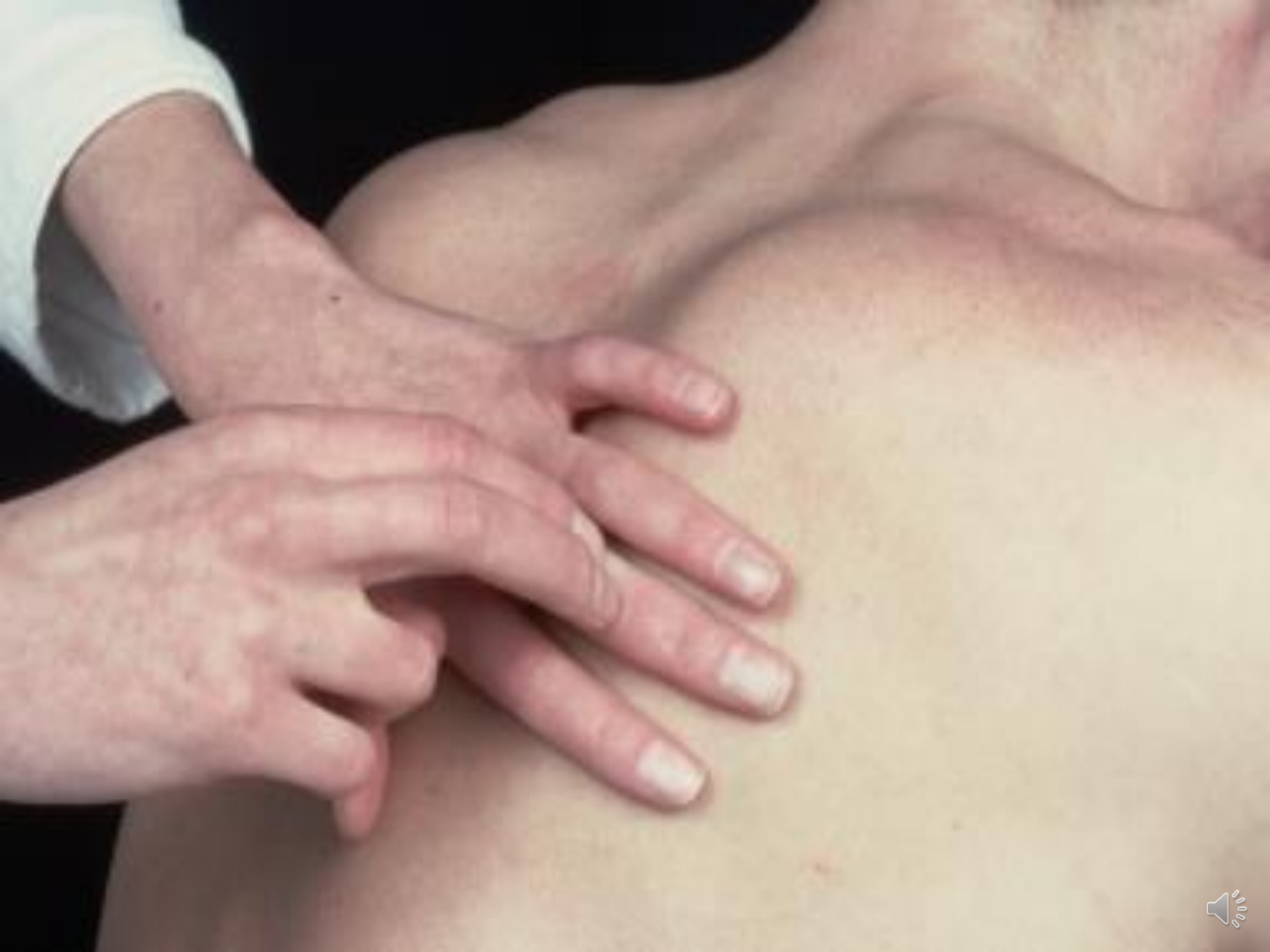
PERCUSSION



- Whole lung
- Normally ***Resonant***
- Percuss clavicle directly

Technique

- Hyperextend the middle finger of one hand and place the distal interphalangeal joint firmly against the patient's chest.
- With the end (not the pad) of the opposite middle finger, use a quick flick of the wrist to strike first finger.
- Categorize what you hear as normal, dull, or hyperresonant.

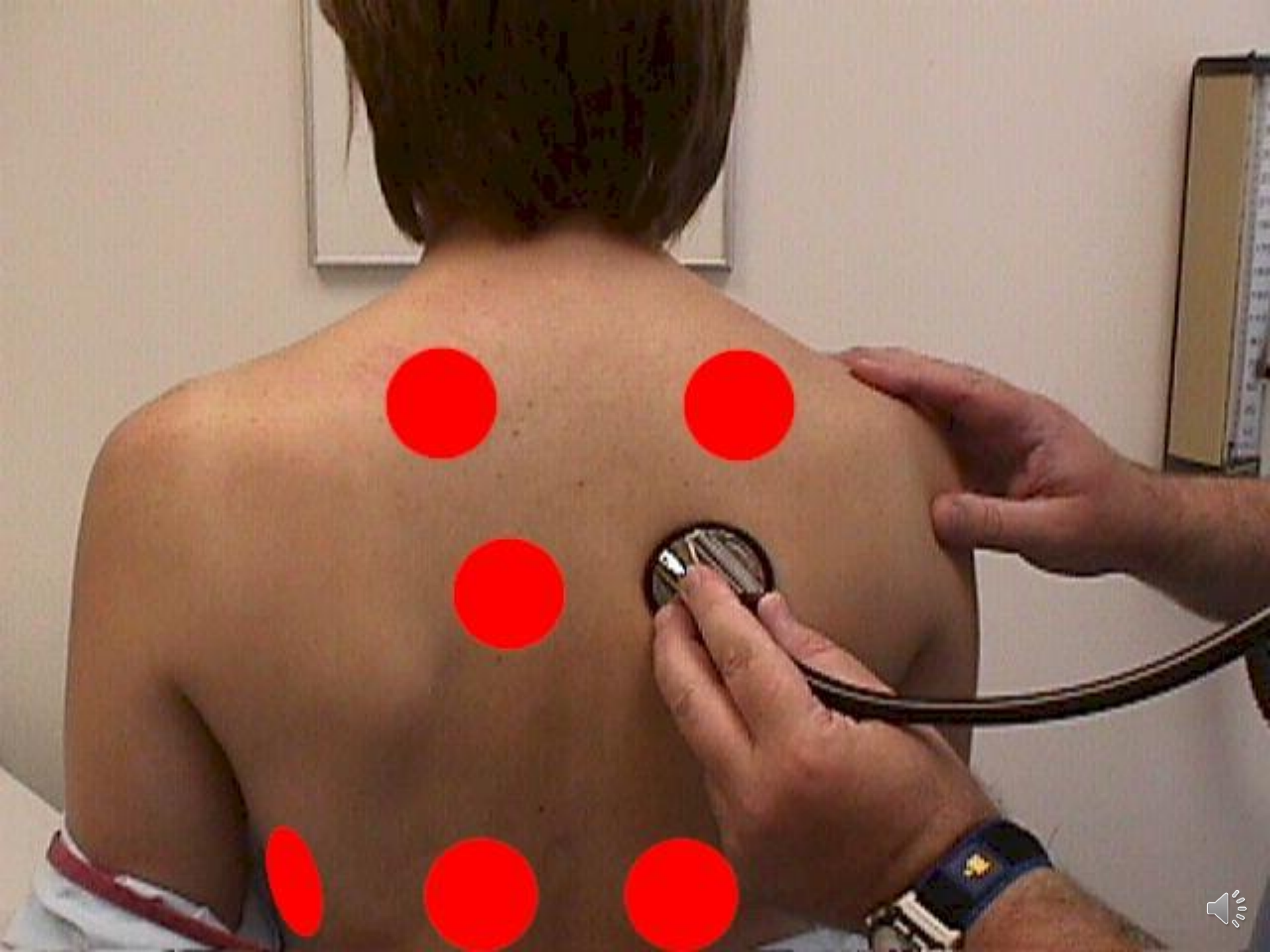


EXAMINE THE CHEST WALL AND LUNGS cont…..

AUSCULTATION

Use the Diaphragm of the stethoscope to auscultate breath sounds.

- **Normal sounds Un equal, no gap , vesicular**
- **Bronchial breathing equal , gap**
- **Wheezes (Ronchi)**
- **Crepitations Coarse, fine**
- **Pleural rub**



EXAMINE THE HEART AND CIRCULATION

PULSE

- Rate
- Rhythm
- Volume
- Nature of the artery

EXAMINE THE HEART AND CIRCULATION cont…

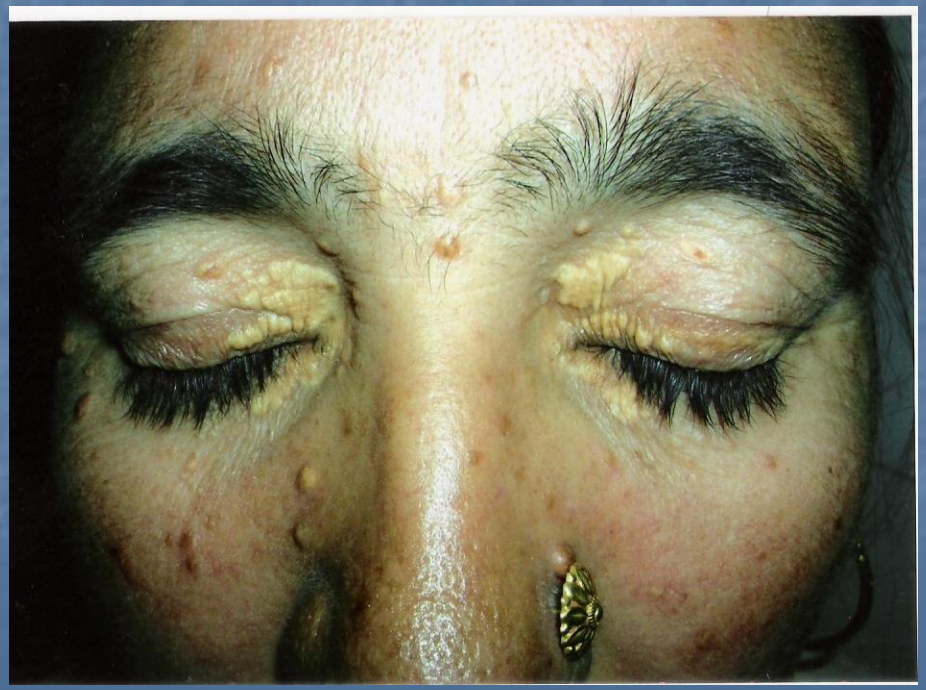
Measure BP

- Sphygmomanometer & cuff
- ? Both arms

EXAMINE THE HEAD & NECK cont…

Inspect head & neck again

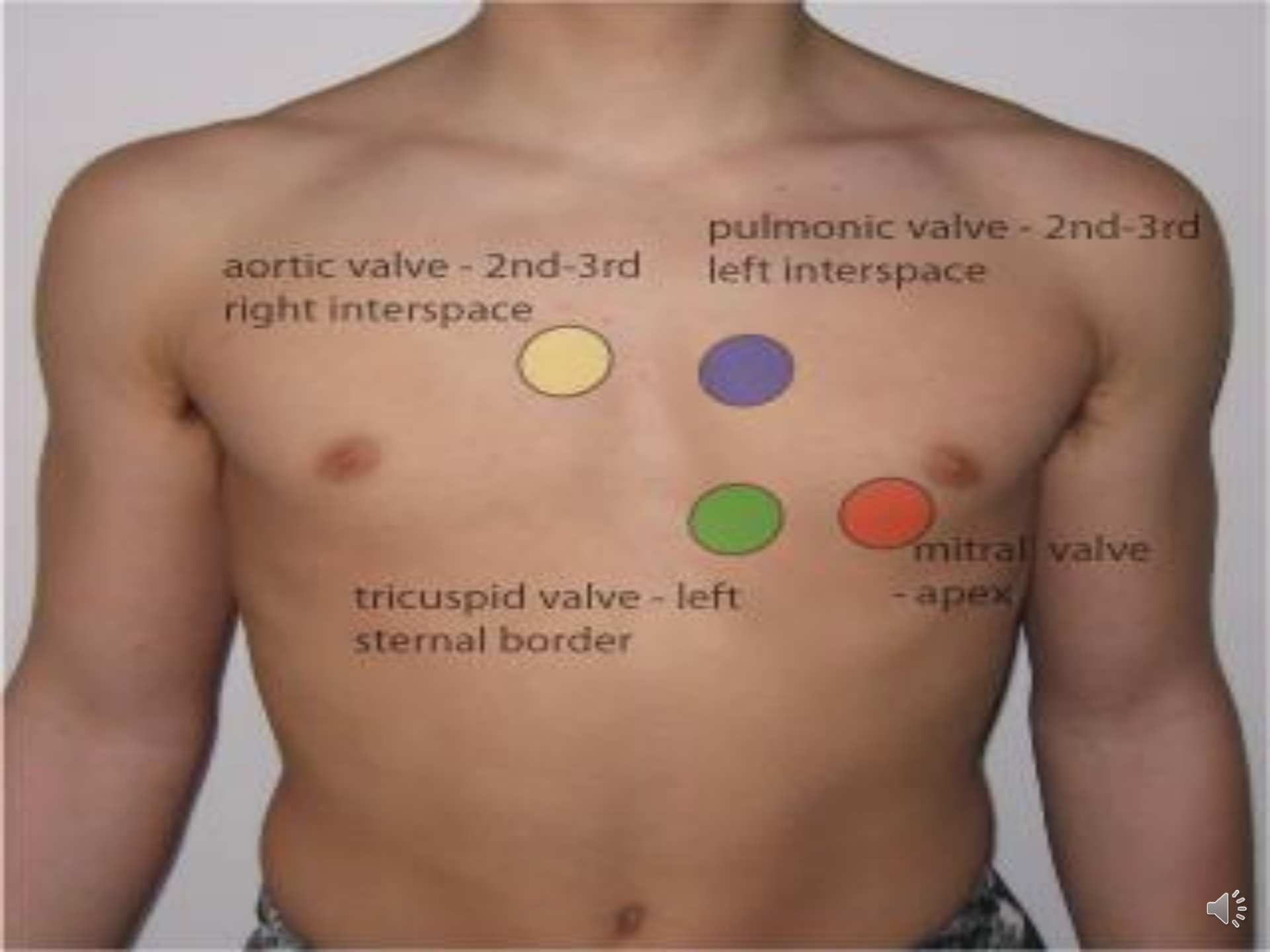
- Cyanosis
- Xanthoma
- Neck arteries
- Trachea



EXAMINE THE HEART AND CICULATION cont…

EXAMINE THE HEART

- Inspection
- Palpation — Apex beat, thrill
- Percussion
- Auscultation — (lub - dub) Murmurs


aortic valve - 2nd-3rd
right interspace
pulmonic valve - 2nd-3rd
left interspace
tricuspid valve - left
sternal border
mitral valve
- apex

EXAMINE THE ABDOMEN

- Inspection
- Palpation Superficial & deep
- Percussion
- Auscultation

Don't forget to

1. Do PR exam. & exam. of the back
2. Palpate Supra clavicular LN
3. Hernial orifices & external genitalia
4. Femoral pulses

EXAMINE THE LIMBS

- Musculoskeletal system
- Arteries & veins & LNs
- Peripheral nerves
- Motor nerve function
- Sensory nerve function
- Reflex function

EXAMINE THE LIMBS cont...

Motor nerve function

Grades of Ms. Strength

0. Complete paralysis
1. Barely perceptible contraction
2. Cannot work against gravity
3. Work against gravity
4. Weakness
5. Normal

EXAMINE THE LIMBS cont...

Sensory nerve function

- Light touch
- Deep touch & pressure sensation
- Pain
- Temperature
- Vibration sense
- Position sense

EXAMINE THE LIMBS cont...

Reflex function (stretch reflexes)

Tests integrity of spinal segments

- Clonus UMNL
- Planter reflex L5 , S1
- Abdominal reflexes T8 , 9 10 ,11 & 12
- Cremasteric reflex L1


"It's not what is
poured into a
student that counts
but what is planted."
~ Linda Conway

Thank You