Introduction to clinical medicine all checklists + collected dr. Nada notes for the

(Assessment,OSCE)

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GENERAL EXAMINATION CHICK LIST

Hello ☺

This is the default Check list downloaded from the moodle, We asked Dr Abdulaziz batati to review it with us and give the exact answer for each question to make sure we get full marks in OSCE exam, all writings in blue color is the answer. Good luck.

- **Introduce yourself and greet the patient at every new station**
- **Take permission before each examination**
- **Wash and sanitize your hands and ensure privacy**
- **Don't forget the position and exposure for each examination**
- **Always end your examination by thanking the patient**

IN EMERGENCY

- in emergency cases —> ask only quick and direct questions to get the diagnosis
- Most important step in emergency is general examination/assessment

General examination/assessment:
Is the general/external appearance of the patient

First step (نظره عامه):

- is the patient looking well
- The patient's position
- Is he bleeding
- Cyanosis-jaundice
- Respiratory distress…..

second step (ناخذ حاجات تفصيليه اكثر):

- Is the patient sweating
- Does he have scars/burns
- Is he connected to monitor / IV line / catheter…

Signs of respiratory distress:

- using of accessory muscles
- Tachypnea
- Tachycardia
- Hypoxia
- Lip breathing
- Cyanosis (sometimes)

PHYSICAL EXAMINATION
General statement of the overall state of health

بعد النظره العامه ابدا اشوف ال vital signs

Vital Signs

- **BLOOD PRESSURE RECORDING**

  Tool: sphygmomanometer, normal (120/80)

- **TEMPERTURE**

  Tool: thermometer, normal (36.5-37.5)

- **PULSE** Using 3 fingers Measure The pulse from one artery (radial is commonest) for 1 minute Not accurate للاختصار
  Radial pulse for one minute, normal (60-90)
  - نحسب ١٥ ثانيه ونضرب في ٤
  - نحسب ٣٠ ثانيه ونضرب في ٢

- **RESPIRATION** بدون مالمريض يحس عشان مايتوتر ويتغير تنفسه
  Respiratory rate (chest movement) per minute, normal (14-20)
  - **Oxygen saturation by oximeter**

- **WEIGHT AND HIGH (BMI)** $\frac{\text{weight (kg)}}{(\text{Height (m)})^2}$
  Normal (18.5-24.9)

Synchronization:
used in heart auscultation and pulse examination to know the difference between upper and lower limbs, and between the two upper limbs
- radio radial
- Radio femoral

Eye and mouth

- **Oral cavity pigmentation and ulcers**
  Ask the patient to open his mouth For personal hygiene
  Your comment:
  No abnormal odor
  Normal hygiene
  No dehydration
  No ulcers

- **Central cyanosis in the tongue**
  Ask the patient to protrude his tongue
  Your comment:
  No central cyanosis
  Normal mouth mucosa
  Normal mouth salivation
  No discoloration in mucosa

- **Eye inspection (fat deposit)**

  No xenophthalmias

- **Jaundice in the sclera (looking downward)**
  Tell the patient to look down while holding his upper eyelid
  Your comment:
  No abnormal discoloration

- **Pallor in the conjunctiva (looking upward)**
  Tell the patient to look up while holding his lower eyelid
  Your comment:
  No pallor.

(Face):
- sweating
- Jaundice
- Hair loss
- Wond
- Bleeding
- Tremor or twitching in the eye

Eyes:
- pallor
- Jaundice

central cyanosis
- blue discolouration in tongue and mouth mucosa

oral cavity

Ears and nose
- Ears discharge
- Nasal discharge
- Nasal septum deviation

Either i do it myself or i show it to the patient and tell them to follow me

- pre auricular
- Post auricular
- Submandibular
- Submental
- Occipital
- Anterior cervical
- Posterior cervical

Lymph nodes

- **Inspection the neck anteriorly**

  Ask the patient to swallow

  Your comment: no visible swelling or masses

- **Palpate from the back of the patient**

- **All cervical groups. Your landmark is sternomastoid**

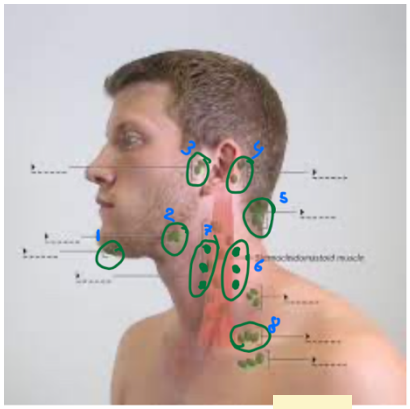
  Name the groups when palpating

1. Submental
2. Submandibular
3. Pre auricular
4. Post auricular
5. Occipital
6. Anterior cervical
7. posterior cervical
8. Supraclavicular

Ask the patient to turn his head to the left or right and palpate anterior and posterior to SCM muscle

Your comment: No palpable masses

You have to name it while palpating



Hyperthyroidism
Hypothyroidism

Thyroid gland

4 main steps
- inspection
- Palpation
- Percussion
- Auscultation

- **Position of the patient** sitting
- **Inspection** (ask patient to swallow)

Your comment: no scars no tattoos no discoloration no dilated veins no visible masses.
Ask him to protrude his tongue to eliminate any thyroglossal cysts. Next, stand next to the patient (lateral to him) to check for exophthalmos, then stand in front of the patient and do the lid lag test by telling the patient to follow your finger up to down.
Your comment will be there is no exophthalmos no lid lag no lid retraction.
Check for tremors by asking the patient to stretch her arms and placing a paper on top of the patient's hands, **your comment:** no peripheral tremor.
Check for sweating of the hands. **Your comment:** no hand sweating and the patient isn't fatigue. And clubbing

- **Palpation:**

Check if the trachea is centered using the three finger method then **comment:** "the trachea is centered"

Palpation from the back

Stand behind the patient and put both of your hands on his thyroid gland palpate one lobe in a circular motion then the other lobe then the isthmus, then tell the patient to swallow.
Your comment will be there are no palpable masses.

- **Percussion over the manubrium**

place three fingers on the manubrium sterni then percuss on the three fingers. **Say** there's no abnormal dullness
(He might ask, how to check for retrosternal goiter extension or masses? You percuss the manubrium sterni)

- **Auscultation of bruit**

By the bell
tell the patient to hold his breathe and auscultate with the bell of the stethoscope, tell the patient to exhale after finishing the first lobe, then tell him to hold his breath again to auscultate the other lobe. Then auscultate the isthmus. Then auscultate bilateral to the trachea on both sides. **Your comment is** there's no bruit.

After finishing the thyroid examination, don't forget to tell the patient to expose their legs. **Your comment:** no pretibial myxedema
Finish your thyroid examination by examining the lymph nodes.

Examine any patient with suspected thyroid problems
- introduce yourself
- Take permission
- Explain what you're gonna do
- Ensure privacy
- Start by taking the **vital signs**

Blood pressure/pulse/temperature are all affected
- **hands**

1- check for any osler's node/splinter haemorrhage dryness/sweating/clubbing
2- tremors ask the patient to stretch both hands
3- collapsing pulse
- **face**

1- no sign for hair loss/twitching/cyanosis/respiratory distress
2- ask the patient to open his mouth to look for jaundice
- **Eyes**

1- general appearance (if there's any tremor or swelling or dryness)
2- pallor/jaundice
3- check for eye signs of thyroid disease like exophthalmos stand in the side of the patient and observe if the eye ball is protruded outside and compare rt to the lt
led lag by inspection, stand in front and ask the patient to follow your hand movement up and down
dryness of the eye (in the conjunctiva)
- **Neck**

1- inspection: start in front of the patient in the same level, patient is in sitting position and upper trunk is exposed
Scars/tattoos /hair disturbiotion/dilated veins/mass/ bleeding /skin changes.
Ask the patient to swallow and observe the neck movement
Ask the patient to protrude the tongue and observe the neck —> if there's any mass in the midline, its a thyroglossal cyst.
2- palpation (thyroid and lymph nodes)
From behind
Put your hands on both lobes and ask him to swallow
Fix one and palpate the other one and do it again with the other one
Palpate the isthmus
Palpate the lymph nodes (الطريقه مذكوره فوق)
3- percussion to roll out retrosternal extension
Percuss over the manbrium sterni
Use three fingers
Resonant —> no extension
4-auscultation to hear bruit sound in graves
Put the stethoscope on the thyroid lobe
Ask the patient to take a deep breath and hold it then release
- **lower limb edema**

Neck Swelling

- Thyroid
- Lymph nodes

- Greeting the patient / self-introduction — Take vital signs
- Explain to the patient and ask for permission

- Patient's privacy
- Pull curtain and look for a nurse (bring chaperone)
- Positioning and adequate exposure

} Just mention

- Inspection:
- Location. just mention.
- Single or multiple
- Size and shape
- Skin changes , discharges or sinus
- Moving with swallowing
- Move with tongue protrusions
- Neck veins
- Inspect oral cavity and eyes.

} In case of presence of a mass

- Palpation:

1- Stand in front of the patient:
   - Swelling tender or non-tender
   - Tracheal position

2- Stand behind the patient:
   - Determine temperature, number, consistency, And movement with swallowing and attachment
   - Pulsation and fluctuation
   - Transillumination.

3- Palpation of carotid pulse
   Massage one side at a time.

4- Palpation of lymph nodes

} In case of presence of a mass

- Percussion: Over manubrium of the sternum

- Auscultation: over the swelling
- Ask the patient to hold his breath

- Hygiene
- Nails (clubbing)
- Fine Tremor
- Flapping tremor
- Peripheral cyanosis
- Sweating
- Dryness
- Collapsing pulse

Water hammer pulse/collapsing pulse:
- appears in hyper vascular state (thyrotoxixosis-cardio vascular diseases)

Hands

Hands diagnose 15 to 20 diseases!!

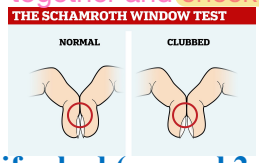
- **Inspection of the hands**

  Your comment:
  No tar staining
  No Osler nodes
  No Janeway lesions

- **Nails changes (clubbing, leukonychia, koilonychias)**

  Your comment:
  No splinter hemorrhages
  No koilonychia
  No leukonychia
  No clubbing
  Normal color
  Do capillary refill time test if asked (normal 2 seconds)

Ask the patient to stick two fingers together and check for the angle



- Normal: angle is present
- Clubbed: no angle

- **Peripheral cyanosis**

  Your comment: no peripheral cyanosis

- **Flapping tremors**

  Ask the patient to stretch his arms, and extend his palms
  Your comment: no flapping tremor

Capillary refill time

Flapping tremor

Lower limb edema

In the end of general examination

- **Press over boney prominence for 20 to 30 seconds**
- **Medial malleolus**
- **Tibial shin**
- **Sacrum for patient on bed for long time**

  - **You have to compare with the other leg**
  - **If the patient is bed ridden, where do you check for edema? Sacrum of the patient**

- chest examination و neck examination كلنا بنعمل
- Focus on chest percussion (really important)

Respiratory system CHECKLIST

Notes by: khadija marar, shaden alsenidi
Good luck <3

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Ask patient to hug himself only in posterior
- percussion
- Auscultation

Respiratory system

Abnormal Shape of the chest could be barrel chest,pigeon chest and pectus excavatum
Hyper resonance of chest percussion indicates:pneumothorax or COPD
Dilated veins on the chest indicates:SVC obstruction
Stony dullness found in pleural effusion
What is tracheal tug? Abnormal downward movement of the trachea
Where does the lung end? The anterior border extends from sternoclavicular joint to 6th costal cartilage. ????
Lung cancer causes abnormal hair distribution and gynecomastia due to high estrogen
Where does the middle lobe start and what is the land mark?
Inferior scapular angle correspond to which vertebrae?

- introduce yourself
- Take permission
- Assure privacy
- Do a general assessment before inspection

In General assessment look for
- clubbing
- Peripheral/central cyanosis
- Respiratory distress (patient can't lay supine using accessory muscles, lip breathing, tachypnea, tachycardia)
- Pallor

Tachycardia/tachypnea Measured with vital signs
- **respiratory rate** (observe chest movement for 1 min)
- **Pulse rate** (palpate radial artery by three fingers)
- **Oxygen saturation** (bypulse oximeter)

Chest and Lungs

1- INSPECTION: in sitting position

If the patient was already laying down let them be :D

Different in each system

Exposure: upper trunk

- **Shape and deformity. Scars. Tattooing.** Hair distribution
- **Chest movement.** no Resp rate
- **Trachea.** In palpation
- **Respiratory distress**

inspect the chest anteriorly then posteriorly and don't forget the sides.

Inspect laterally for
- history of trauma
- History of chest tube insertion

Tell the patient to take a deep breath. Say normal breathing with equal chest movement, no use of accessory muscles, no devices are attached to the patient. No chest muscle deformities, no scars, no tattoos, no discoloration and normal hair distribution. The trachea doesn't look deviated.

The patient doesn't look Cachexic

2- Palpation: front and back (patient hug himself when examined from back)

- **Trachea**

Check the tracheal position by the three-finger method, **comment:** the trachea is centered.

- **Cardiac apex**

Can be done now or in CVS examination

2. Apex of the heart

We go from the middle clavicle to the 5th intercostal space and palpate there

Your comment: normal apex heart beat.

Start counting from the sternal angle at the 2nd intercostal space and then count down till you reach 5th intercostal space

- **Chest expansion**

We do it for the 3 lobes upper, middle and lower it will expand up to 5 cm

We do it from the front and the back

Chest expansion test (upper, middle, lower) **anterior and posterior. Comment:** equal bilateral chest expansion.

Ask patient to breath and compare

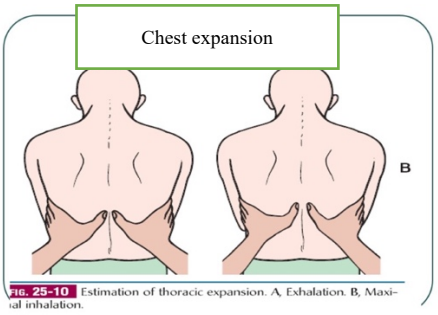


FIG. 25-10 Estimation of thoracic expansion. A, Exhalation. B, Maximal inhalation.

- **Tactile fremitus**

Place your palm on the patient's chest on six areas (upper, middle ,lower) **anterior and posterior.** ask him to say "*ninety nine*" **Your comment:** normal chest vibration.

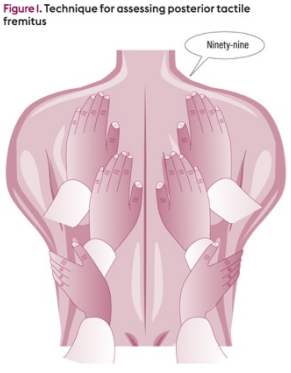


Figure I. Technique for assessing posterior tactile fremitus

Tell the patient to hug himself when doing the posterior.

- also palpate the bones for any tenderness

3 – PERCUSSION: from one side to the other

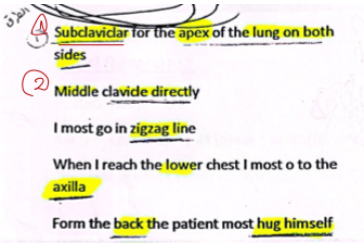
- **Anterior: start supraclavicular area, compare with other side and then direct percussion over the clavicles and finally down over the intercostal space side to side (zig zag) including the two axilla.**

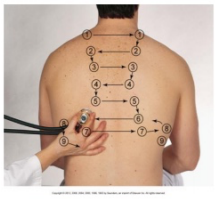
- **Posterior from the apex to the base side to side**
  - Paravertebral
  - Zig zag

  Tell the patient to hug himself when doing the posterior.

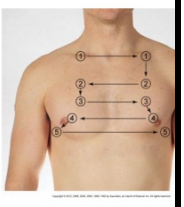
  Your comment: there's no abnormal dullness.

We feel dullness in tumor and ston y dullness in pleural effusion





Posterior Chest



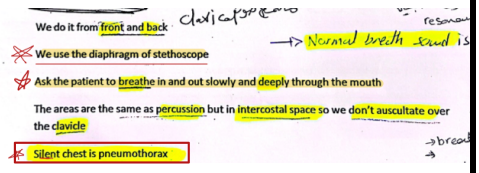
Anterior Chest

4- Auscultation: using the diaphragm

Place your stethoscope supraclavicular then infraclavicular then on each intercostal space on the midclavicular line, go down in a zigzag method, tell your patient to take a deep breath each time you place your stethoscope. Don't forget the sides.
Tell the patient to hug himself when doing the posterior.
You comment: bilateral equal airway entry with no added sounds.

- ***Tactile vocal resonance***

"Ninety nine" but with the stethoscope. (upper, middle, lower) anterior and posterior. Tell the patient to hug himself when doing the posterior.



- **POSTERIOR BREATH SOUNDS: Examiner should ask patient to breathe deeply and should move from one side of the back across to the other and down.**

- **ANTERIOR BREATH SOUNDS: Examiner should use stethoscope to listen to both sides of the front. Examiner should progress from side to side moving downward using the same sequence while listening to one full respiration on each location.**

- **VOCAL RESONANCE: While auscultating with the stethoscope over the back, the examiner asks the patient to say ".e-e-e" The examiner should move the stethoscope from one side to the other, moving downward, while listening to patient say "e-e-e" at each location. e-e-e with pneumonia**

Finish your respiratory examination by checking for lower limb edema. Press on mid tibial shaft for 20 second and remove

Respiratory examination notes:

Position: supine position + Exposure (we have to mention that's Macleod information)
Exposure: upper trunk.
Inspection: we have to know every scar meaning e.g: Pneumectomy, chest tube in axilla (thoracentesis), don't say tattoos or trachea position in inspection.

- we see if there's any devices connect to the patient.
- We have to comment on type of breathing: 1) ThoracicAbdomen (normal)
- abnormal breathing causes: tachypnea, bradypnea.
- Causes of tachypnea: 1. Acidosis 2. Asthma 3. COPD 4. Anxiety.
- Causes of bradypnes: 1. Emphysema 2. Pulmonary edema.
- If the abdomen doesn't move what doesn't mean? Peritonitis
- Muscles of breathing: (accessory muscles):

inspiration muscles: (sternocloidmastoid, scalenes group, pectoralis minor/major)
expiration: (rectus abdomins, external oblique, internal oblique, transversue abdomins)

- No hair disterbtion means high esterogen level, lung cancer, chronic liver disease.
- Respiratory distress causes (no use of accessory muscles):

— lip breathing, cyanosis.

- When looking at patient to see the symmetry and type of breathing at the end of the bed and the other right side of the patient.
- Discoloration causes: 1. Slate gray discoloration due to —> Iron accumulation.
- The patient doesn't look cachexic (doesn't look skinny)

palpation:

- trachea in the beginning in the center middle finger we write I upward then we write V. (Comment: trachea center normal) abormal: retrosternal goitre, lung collapse.
- No need to palpate the cardiac apex if the trachea is center if the trachea deviated we do the cardiac apex.
- Chest expansion 3 places up,middle lower the upper one is different hand position (we pull the skin and make sure the thumb doesn't touch each other and thumb is up and ask the patient to take deep breath don't forget to do it posteriorly too) comment: equal bilateral chest expansion.
- Tactile fermits: same as lubd.

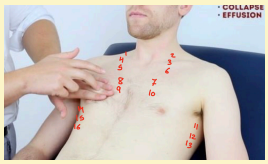
IMPORTANT: before doing any palpation + percussion we have to warm our hand (loses marks) - dr. Wagar.

Percussion: when we precuss first locate angle of Louis.

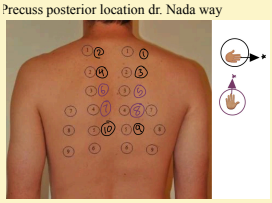
before the precussion we have to do the surface anatomy of the lung+heart, never percuss over the heart.

- Surface anatomy of the lung border: midcavilcular 6. Midaxaillary 8. Midparaveterbal 10.
- Apex of the lung where is it located? Above the first rib.
- first thing on the clavicle directly.
- Precussion normal sound is resonance abnormal dull+hyperresonance
- causes of the abnormality (dull): fluid, pleural effusion.
- Hyperresoance abnormality: pnemuthraox.
- Why we dont precuss over the heart? Cause the heart normally dull.
- Precussion posteriorly (ask him to hug himself) ——————————————————————————————->
- We stop precuss over rib N10 the end of lung border.

Precuss anterior location dr. Nada way



Precuss posterior location dr. Nada way



Auscultatory: same as lubd.

silent chest: pneumothorax.
Tactile vocal resonance: ask patient to say 99 while you auscultate (we should hear resonances)

We finish the examination with lower limb edema. (Press over the medial tibial shaft 20 seconds) causes: heart failure, liver+ kidney edema.
Bedridden: we check for sacral edema.

Won't be asked about the diagnosis of parasternal heave/thrills…. Just know how to do it :) !!

Main examination in the cvs is auscultation !!

Cardiovascular System Examination CHECKLIST

Notes by: khadija marar
Good luck <3

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CVS examination

Primary Aortic area is on the 2nd intercostal space left side

Palpate the pericardium means: palpate the heart apex,thrills,2nd heart sound and left parasternal heave

Absent apex beat means

S4 sounds could be present in pregnant lady

The pulse by checking the rate,rhythm,character,volume ,collapsing pulse , radio-femoral delay and synchronization

- introduce yourself
- Take permission/explain what you're about to do
- Assure privacy
- Put the patient in Ideal position (45 degree)
- Ideal exposure (expose the upper trunk)

Heart & Blood Vessels

General assessment is really important in cvs examination:
- pulse
- BP
- Oxygen saturation
- Respiratory rate
- Cyanosis central/peripheral
- Jaundice
- Clubbing
- Collapsing pulse
- JVP

- **General statement** (the patient is sitting looking well not connected to IV line, not connected to oxygen mask).

- **Position of the patient in good light (45 degree)**

  Exposure: upper trunk • Don't forget the vital signs :)

- **Signs in general examination: cyanosis, clubbing, jaundice and signs of endocarditis.**

  Check for cyanosis in the hands and tongue

  Check for clubbing in the nails.

  Tell the patient to look down while holding his upper eyelid
  Your comment: No abnormal discoloration
  Check for osler nodes, jenway lesions in the palm (to exclude endocarditis).

- **Pulse, blood pressure just mention.**

- **Jugular venous pressure (JVP) explain the procedure, do it if asked.**

Hepatojagular reflex
- If the pulsation rise up jagular vein
- If it stays in its place carotid artery

JVP: Need a ruler and a paper
Patient in 45° position.
ask patient to turn his head to the left. The jugular vein should be visible not palpable. Found in front of sternocleidomastoid. For more confirmation: by hepato-jugular reflex, Bring a piece of paper and a ruler. put the ruler perpendicular (المسطرة متعامدة مع الارض) on the sternal angel (Manbrium sterni). Apply deep palpation of the liver for at least 10 seconds and notice the raising of the vein and measure it with the ruler.
Normal 3 or less.

How to distinguish between carotid artery and jagular vein:
- if you palpte and can feel it carotid
- If you see it but can't feel it jagular
- By hepatojagular reflex

- **PRECORDIAL EXAMINATION**

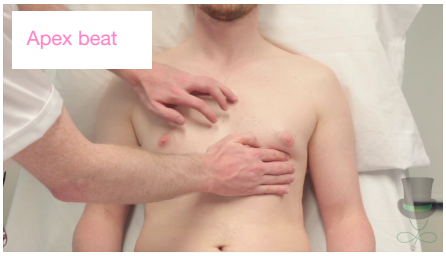
1- Inspection: deformity, scars, apex beat and venous congestion.

Inspect:
- anterior
- Posterior
- Lateral

Your comment: no signs of previous surgery, no scars, no tattoos, no visible venous congestion. No visible apex beat.

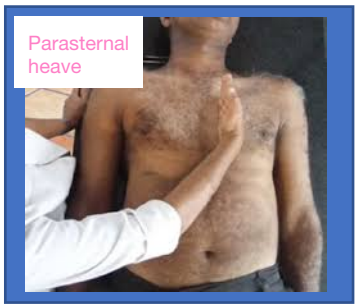
2- Palpation: heart apex, trachea, left parasternal heave palpable second heart sound and thrill + the heart valves

First, palpate the apex beat with the palm of your hand on the mid clavicular line in the 5th intercostal space. If the patient was obese, or the beat wasn't clear, tell the patient to roll on his left side. Your comment: normal apex beat.
- Comment Palpable apex beat / not palpable apex beat
- If palpable mention if it's exaggerated or not

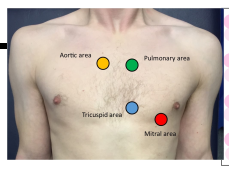


Check the tracheal position by the three-finger method, comment: the trachea is centered.

Place the side of your hand on the left of the sternum. Your comment: No left parasternal heave, (if there is, right ventricular hypertrophy).
Caused by the pressure on the heart from pulmonary hypertension and rt side heart failure
- القلب قاعد يضخ بقوه بسبب الضغط



Palpate the 4 areas by three or two fingers. Your comment: No thrill, no palpable second heart sound.



Aortic: right second intercostal space parasternal.
Pulmonary: left second intercostal space parasternal.
Tricuspid: left 4th intercostal space parasternal.
Mitral: left 5th intercostal space midclavicular line

Degrees of murmur:
1st degree: not audible not visible (only seen in echo)
2nd degree: audible not visible
3rd degree A: clearly audible not visible
3rd degree B: audible and visible
4th degree: thrill

Thrills:
- palpate the second heart sound (pulmonary) by your fingers

comment: palpable second heart sound

To be more accurate in palpation and auscultation use **synchronization** !!
- while palpating/auscultating plapate the radial to see if there's any thrills

لازم بالترتيب

3- **Percussion (limited)** when to do? In case of pericardial effusion Only when you suspect pericardial effusion

4- **Auscultation:** of four areas: **Aortic s1, pulmonary s2, tricuspid s2 and mitral s2**

- stethoscope on the valve location
- Your other hand on the radial
- Listen for 5-10 sec

To check for mitral stenosis, I tell the patient to lay on his left side and put the diaphragm on the mitral valve.

To check for aortic stenosis, auscultate the carotid.

Your comment: Normal S1+S2 no added sounds

Or say: normal S1+S2+0

- Audible first and second heart sound
- No added sounds

Aortic: right second intercostal space parasternal.

Pulmonary: left second intercostal space parasternal.

Tricuspid: left 4th intercostal space parasternal.

Mitral: left 5th intercostal space midclavicular line

- **PULSES: includes radial, dorsalis pedis, posterior tibial and carotids.**
- **Radio-femoral**
- **radio-radial**
- **femoral-femoral**
- **radio-central (radial with carotid)**
- **femoro-central (femoral with carotid)**

When you check the pulse (usually done in general examination in the vital signs, won't be asked in cvs)
- compare between right and left (radio-radial)
- Compare between upper and lower (radio-femoral)

2 second delay is normal. if more, abdominal aorta coarctation or common iliac artery coarctation.

If you were asked to do a pericardial examination, it means you should auscultate the heart

Special examination:

Collapsing pulse: **palpate the radial pulse, place your other hand on the patient's arm. Lift it suddenly. Normally you wouldn't feel a flush of blood but if you did, suspect thyrotoxicosis.**

Finish your CVS examination by checking for lower limb edema.

Cardiovascular examination notes:

Position: 45 degree.
Exposure: upper trunk.
Inspection: same as the checklist.
- midline scar: open heart surgery.
- Transverse over the lateral side indicates: maitral valve replacement.
- Abnormal hair disterbation high estrogen level due to lung cancer.
- discoloration:
- veins dilation (veins congestion): SVC obstruction.
- there's no diferomty in the heart what might be of the heart? Pectus exacavatum.

Palpation:
- Absent of apex beat: obiesty, pericardial effusion
- Normal apex beat palpable; first we finger to feel it if we didn't ask him to roll to the left side, then we fix our finger over the apex beat بعدها نخلي المريض يرجع لوضعيته واصبعنا بنفس مكانه اللي حسينا فيه بعدها نعد (حطي اصبع بالمكان وعدي) للتأكيد.
- The apex beat if not palpable: obesity, pericardial effusion, severe heart failure.
- Parasternal heave: we put our hand on left to sternum causes of the right ventricular hypertrophy.
- Thrill: is a palpable murmur, using two fingers each valve, normal not palpable (Abnormality: aortic stenosis)
- 2nd heart sound: normally not palpable, two fingers over the pulmonary valve. (Abnormality: Pulmonary hypertension)
- Puluse
- Jugular venis pressure: same as the checklist the most important point is when you press over the liver the jugular vein will be more visible. it is visible but not palpable. (carotid is palpable) .

precussion: limited in case of pericardial effusion.
Auscultation: we have to locate angle of Louis to auscultate the valves.

arotic valve we have to ask the patient to lean forward and ask the patient to take a deep breath and expirate it then hold after that we hear it.

mitral valve turn to the side same like the apex beat and we hear it over the bell and diaphragm.
- And the other are the same by the diaphragm.

Comment: audible 1st and 2nd heart sound no add sound.
- while auscultate we palpate radial aretery at the same time.

Pulses

If you were asked to check the pulses, you should pulsate these sites:

Abdominal aorta:2 fingers above the umbilicus.

Carotid artery: the location is posterior to the sternocleidomastoid. but when you palpate, palpate anterior to the sternocleidomastoid.

- Do one side first the do the other side

Brachial artery: in the cubital fossa, medial to the biceps tendon.

Radial artery: medial or above the styloid process.

- Measure for 30 sec and multiply by 2 . Normally form (60 -90)

Femoral artery: midway below the inguinal ligament (the inguinal ligament is between ASIS and pubis).

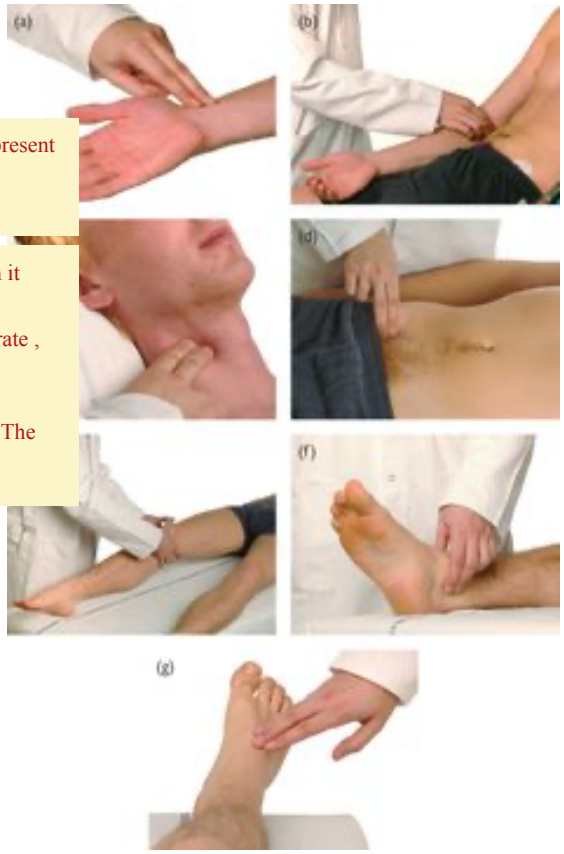
- You must say it but we don't have to do it

Popliteal artery: flex the knee and place two hands in the popliteal fossa between the two heads of gastrocnemius.

Posterior tibial artery: behind the medial malleolus.

Dorsalis pedis artery: dorsum of the foot between the first and the second metatarsals lateral to the hallucis longus tendon.

compare everything on both sides.



- Collapse pluse in Normal pt should be absent . It it present it indicates hyperserculation like pregnancy, Graves' disease and anemia .

- Radial femoral delay it is normal we should mention it only.
- Just mention why we check the pluse (to check for rate , rhythm and Character)

Capillary filling we press over any finger for 5-10 sce. The normal filing is 2 to 3 sec.

Abdominal Examination
CHECKLIST

Notes by: khadija marar, shaden alsenidi
Good luck <3

Hello ☺
This is the default Check list downloaded from the moodle, We asked Dr Abdulaziz batati to review it with us and give the exact answer for each question to make sure we get full marks in OSCE exam, all writings in blue color is the answer. Good luck.

Abdominal examination

When doing superficial palpating you look for rigidity,guarding and temperature
Hepatomegaly causes: liver cirrhosis , malaria and right sided heart failure
Diverticulos recti can happen after pregnancy
Spica nevi is: small red to purple mark on skin caused by dilated blood vessels
Caput Medusae:swollen veins around the umbilicus
Mention the position of the umblicus,the hair distribution
Hernial orifices are: umblicus,paraumblicus.inguinal,epigastric and femoral
Dilated veins directed upwards because of IVC obstruction
Dilated veins directed downwards because of SVC obstruction
Visible peristaltic waves means pyloric sphincter obstruction
Pigmentations of abdomen:Turner grey sign and collie's sign they indicate acute pancreatitis
Stretch marks are called srtiae
Silver striae caused because of pregnancy
Purple striae caused because of Cushing
Know the dermatomes

- introduce yourself
- Take permission
- Assure privacy
- Position
- Exposure

Abdomen

General examination:
- jaundice/pallor/hands....

Examine all the signs that are related to the GIT

INSPECTION

Exposure: from nipple to mid thigh we have to stay at the end of the bed.

Position: supine we sit at the end of the bed.

- **Scars, venous dilatation, mass and shape** — Hair distribution/skin pigmentation/bulging masses on the sides/striate

Stand at the end of the bed in front of the patient's feet

Tell the patient to take a deep breath, your comment: normal thoracoabdominal breathing

Then stand on the patient's right side and tell him to cough to check for hernia and to inspect. I'll tell the patient to roll on his side to inspect the back.

Your comment: No hernia, no scars, no tattoos, no venous dilatation, no visible masses, no abdominal distention, no abdominal wall deformities, normal hair distribution.

- **Ask patient to cough for any hernia**

For patient's privacy it's okay to expose the upper trunk only

comment on umbilicus

To check for any bulging masses/hernia
- Then ask him to sit down and resist again
- Ask him to cough

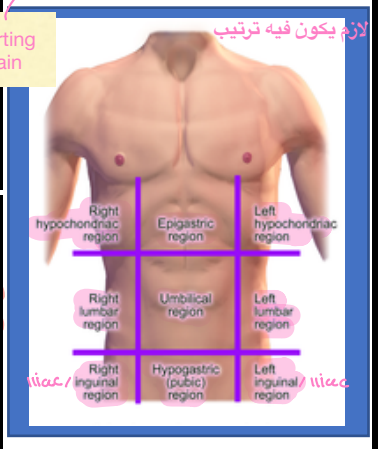
Keep your eyes on the patient while palpating to see his reaction

PALPATION — we do it clock wise.

Because if you start palpating on the pain site the patient will get distracted and feel the pain everywhere

First ask the patient if he has any pain, if he does then palpate starting from the area farthest from the area of pain. Always look at the patients face while palpating

Ask the patient before starting palpation if he have any pain



Two type of palpation

To identify any superficial masses or tenderness

1. **Superficial: palpate all nine quadrants and the epigastrium lightly (comment: no superficial palpable masses)** our goal — No superficial tenderness

To identify any deep masses or tenderness
- organomegally

2. **Deep: palpate all nine quadrants and the epigastrium more deeply (comment: no deep palpable masses)** goal

we have to ask the pt to take deep breath on each one.

Liver is **normally** in the **right hypochonreum**

- **Liver margin (liver span) palpate from the right iliac fossa upwards, telling the patient to take a deep breath each time till you reach the lower liver margin.**

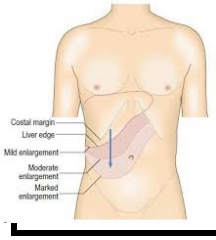
When **enlarged** it will cover the whole right area that's why we start from the **right iliac** upward

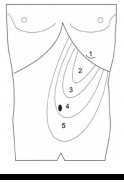
- **Spleen margin**

start palpating from the right iliac fossa going obliquely till you reach the spleen area. Tell the patient to take a deep breath each time

Left hypochondreum

You comment: no palpable spleen Normally





Spleen is **Normally** behind the stomach in the **Left hypochondrum**

When the spleen is **enlarged** it will reach the **right iliac fossa** (that's why we start from there)

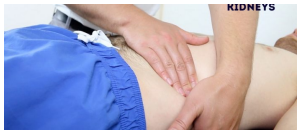
If the examiner asked to "check for organomegaly", it means you should do palpation of liver, kidneys and spleen.

Obvious in children/skinny people/kidney pathology

Palpate and Percuss over the whole abdomen + liver and spleen and kidney !!

Two techniques
- ballottement
- Bimanual

- **Kidneys**
  - **Kidney ballottement: Keep your anterior hand steady in the deep palpation position in the right upper quadrant laterally. Attempt to ballot (push up) the kidney with the other hand in costophrenic angle. If the kidney was enlarged, it should be palpable by the anterior hand.**
    - fix the upper hand
    - Push the lower hand
  - **Bimanual: Place one hand on top of the kidney and the other hand under the kidney (under the lest rib), then press your hands together.** push at the same time سوا مع بعض
    Your comment: no palpable kidney



PERCUSSION

If you were asked to percuss the abdomen you have to start by percussing the 9 areas.

1- Liver: upper and lower border and span

The normal span is 8-11 in male and 7-10 in female 8-12 in both

Liver span:
- start from the 2nd intercostal space mid clavicle line downward:

Resonant—> lung
Dullnes —> reached the liver, stop here and mark it
- Start from the right iliac fossa and move upward:

Dullness —> reached the liver, stop and mark it and
- measure it with a ruler

Normal liver span is:
8-10 in female
10-12 in male

2- Spleen

Start percussion from the right iliac fossa going upwards and obliquely till you reach the spleen. Then place three fingers on the spleen on the side of the patient, percuss on each finger then ask the patient to take a deep breath and hold it, percuss again on the three fingers. Your comment: no abnormal dullness.

In spleen ask the patient to take a deep breath and hold:
- The lung will push the stomach and the dullness will be more clear because nothing is covering the spleen

3- Ascites: shifting dullness and fluid thrill

If the examiner asked you to do "ascites examination" then you should do both shifting dullness and fluid thrill.

Shifting dullness: for mild to moderate ascites. Start percussing from midline under the umbilicus till you reach the other side where you hear the dullness. Don't remove your finger from the site of dullness. Ask the patient to roll over to his other side and wait 15-20 seconds then percuss back to the midline.

Wait for the fluid to move

If you Percuss on the other side and it's still dull —> suspect a mass !!

Your comment: no shifting dullness

fluid thrill: for massive ascites. Ask the patient to put his hand in the mid line (why? To prevent transmission of fluid through the anterior abdominal wall).

We will be asked about this question in the exam so make sure to know the answer

Place one hand on the patient's side. Flick the other side with your opposite hand. You shouldn't feel the wave. If you did, there's ascites.

Your comment: no fluid thrill

If there's ascites you will feel the fluid hitting your other hand

Kidney percussion is called costo phrenic angle

4- Costo-phrenic angle tenderness

Area of Maximum tenderness in acute pyelonephritis

Place one palm on the back of the patient under the last rib, make a fist with your other hand and hit the patients back on top of your first hand. If the patient felt any pain, he might have pyelonephritis. Do it on both sides.

Your comment: no tenderness

AUSCULTATION

Bowel sounds
Arteries abnormalities

- **Bowel Sound.** Below the umbilicus
- **Listen to all nine quadrants of the abdomen**

Anaesthesia for example affect the bowel movement لكذا نسمع اصواتها

Comments
- Audible bowel sound normal
- Audible bowel sound exaggerated
- Silent abdomen

Your comment: normal present bowel sound

- **Listen to the AORTIC artery (located in the middle of the abdomen above the umbilicus) for bruit.**

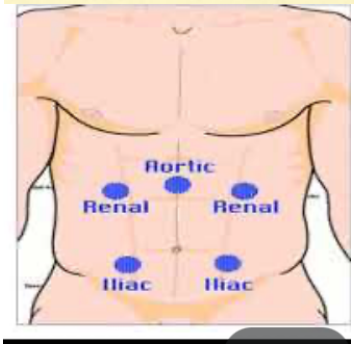
2 - 3 Fingers above

- **The renal arteries the iliac arteries** 2-3 Fingers above Right Left

Your comment: normal sounds, no bruit.

Bruit in
- renal artery stenosis
- Aortic dissection/coaortation of aorta
- Abdominal aortic dissection/aneurysm

Paralytic ileus: the bowel stop moving
- no gases
- No stool



Lower Limbs

Check for Lower Limb Edema

If the patient is bed ridden check for sacral edema

PR Examination or PR & PV for female

- **Check for prostate gland abnormality**
- **Check for anal sphincter tone**
- **Check for hemorrhoid**

Just mention it, say: I will finish my examination by doing PR examination in males or PR and PV in female.

Only if indicated (pain/mass/swelling)
- check for inguinal hernia
- Check scrotal area in male
- Check genital area in male/female

- inspection
- Palpation
- Percussion → If there is a mass
- Auscultation

PR examination (two parts)

1. **superficial**

Inspection for any masses or any collection or any scars.
Palpate for any masses or collections.

2. **Digital rectal examination.**

- Tone of the Anal sphincter
- Stool color
- Tenderness

MCQ مابيسالنا فيه الجين ;) لكن ممكن يجي

- To check for **acute appendicitis**: do rebound tenderness and Rovsing sign

1- Rebound tenderness: patient in supine position. press your hand on the McBurney point (in the right iliac fossa) and release suddenly, if he feels pain: positive rebound tenderness. Do the same procedure on the left iliac fossa. If he feels pain in the right side: positive 2- Rovsing sign.

- To check for **acute cholecystitis**:

Deep palpation while the patient is taking a deep breath
- if the patient hold his breath —> positive murphy's sign

Murphy's sign: Patient in supine position. Place your left hand on the patient's right hypochondrium, push it into the right hypochondrium and hold. Ask the patient to take a deep breath. If Positive: The patient experiences pain/tenderness sufficient to cause an abrupt halt in Inspiration, he wouldn't be able to fully breath. (normally occurs toward the end of inspiration) and acute cholecystitis suspected, your comment: negative murphy's sign.

لو كمل تنفس طبيعي

How to differentiate between liver or RT kidney?
- Liver moves with respiration
- Kidney no relation with respiartion.

precussion between RT kidney and liver?
- kidney is resonance
- Liver is dull

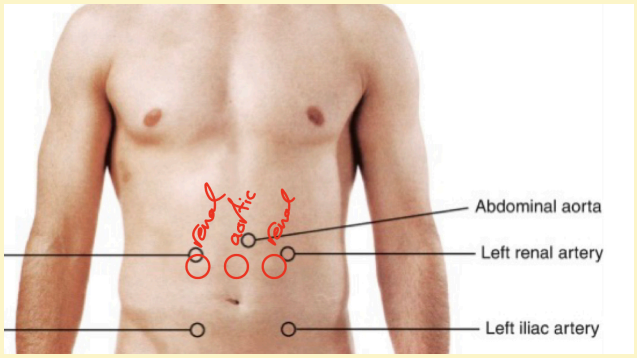
How to differentiate between spleen or RT kidney?
- Spleen moves with respiration
- Kidney no relation with respiartion.
- Do bimanual to make sure it is kidney

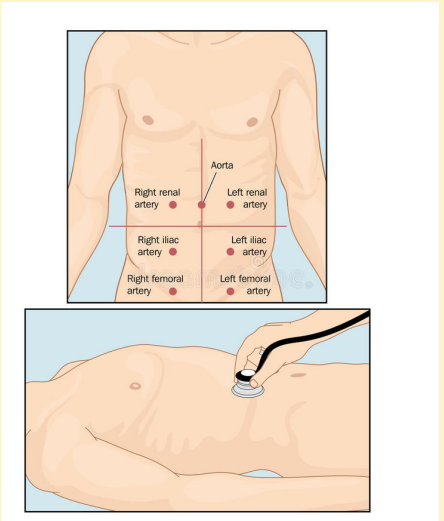
Position: supine
Expusre: nipple to the middle of the thigh we cover the genitalia.
Inspection:
- In the beginning we inspect at the end of the bed and we comment on the symmetry of the abdomen then we see the movement of the abdomen during respiartion and ask them take a deep breath. (Comment: normal thracoabdomen breathing, and abdomen looks symmetrical)
- If there's visible peristaltic waves —> pyloric sphincter obstruction.
- Then we go to the right side and comment on the flanks we at the level of the bed or abdomen (نزل راسك واثني ركبك)
- Then we ask the patient to cough to check any hernia or bulging and after that resist my hand.
- Scar —> removal of kidney, liver transplants, C-section incision (pfannensitel incision)
- Medial scar —> laparotomy
- Kocher incision —> cholecystectomy
- Venus dilation —> capital Medusa due to portal hypertension.
- Dilated veins directed upward —> IVC obstruction
- Dilated venis directed downward —> SVC obstruction
- Mass if not normal —> red mass around the umbilicus is sister Mary joseph nodule it indictes GIT tumor.
- Shape of the abdomen (comment: no abdominal distention flat abdomen normally) abnormal in scaphoid abdomen (skinny, thin pt) or distended abdomen (Ascaites).
- Hair distribution—> high estrogen due to lung cancer
- Striations —> Cushing syndrome.
- But if in case normal we have to comment no visible mass and normal skin color.
- We see umbilical , the normal umbilical is inverted (the abnormal umbilical is smiling:obesity, ascites and everted:skinny) causes of everted umbilical is: massive ascaties, increase intrabdominal pressure.
- Stretch marks (striae): Silver —> pregnancy, purple —> Cushing.
- i compare the flanks if there's distended flanks we think about renal problems (kidney stones, polycystic kidney disease, UTI, ascaties)
- Types of hernia: 1. Femoral hernia 2. Inguinal (direct, indirect) 3. Incisional hernia.
- Wall deformities: diverticulum recti due to pregnancy
- Pigamenation —> Linea nigra during pregnancy
- Skin change —> acute pancreatitis sign grey turner sign.

Palpation:
- **WARM YOUR HANDS**
- superficial palpation: ask if there's any any pain and palpte far from the pain and look at the patient face.
- if doctor nada asked about deep palpation you palpate to liver and spleen ask patient to take a deep breath.
- In plapation of the liver same as the checklist we palpte in the epigastric region to assist the left lobe of the liver. (Comment: normally not palpable)
- **When the liver becomes down?** COPD, Pleural effusion
- If we do palpation to fluid we do the thrill. (why do we ask the patient to put his hands in the middle? To prevent transmission of fluid through the anterior abdominal wall)
- Kidney normally not palpable if palpable polycystic kidney disease.
- The other steps check the checklist.

Precussion:
- If she asked about precuss the fluid we do shifting dullnes.
- The remaining is the same as checklist.

Auscultate:
- when we don't hear bowel sound —> paralytic ileus
- We hear bruit —> renal artery stenosis
- Renal artery we hear it with the bell.





CNS examination

2nd CN

For the 2nd CN you examine the visual acuity , visual field ,light reflex and (mention you will do funduscopy)

3RD CN

We must know the movements of the medial, lateral ,superior and inferior rictus muscles also the superior and inferior oblique muscles and finally for every movement what are the functioning muscles of every movement in each eye.

5th CN

For testing the sensation the reference point should be the sternum
The muscles you examine are: lateral pterygoid ,masseeter,temporalis,
abnormalities: trigeminal neuralgia ,neuritis ,palsy
Abrupt close of jaw in jaw reflex indicates:brisk jaw

7TH CN

Don't forget to mention the corneal reflex

Abnormality: bells palsy

The root values
Ankle jerk s1,s2
Knee jerk L3.L4
Biceps reflex c5,c6
Triceps reflex c6,c7
Positive babinski sign means UMNL
Hyperactive reflexes indicates UMNL
Common peroneal nerve injury causes: foot drop

Neurological Examination
1-Mental Status

- **Level of consciousness** (asses by glows coma scale)

  Say: Patient is awake and alert

- **Orientation (person, place, time)**

  Do you know this person? Where are you now? Do you know what time is it? Is it nigh or day time?

  Your comment: the patient is well oriented

- **Memory:**

  - ✓ **Short term: recent and immediate (name 3 objects)**
  - ✓ **Long term**

    Your comment: normal short and long term memory.

- **Speech. Just check for it during history. Your comment: normal speech**

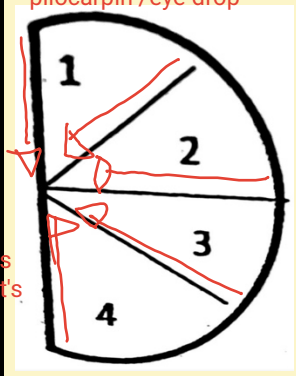
Recent memory (what did you eat for dinner yesterday?)
For **immediate short memory** I say: I want you to remember 3 thing I'm going to ask you to say it to me again after a while: door, pen and light)
Long term: who was the president?

2-CRANIAL NERVES

- Olfactory.
Tell the patient to close his eyes and close one nostril, bring out a known smell such as coffee and ask him to smell it, do the same for the other nostril.

- Optic:
Visual acuity (by Snellen chart and color vison by ishihara chart), (visual acuity by fingers counting)
Visual field (use your finger in half circle and move like the arrows)
Stand in front of the patient, ask him to close his left eye by his hand, then close your own right eye.
Ask the patient to look into your eyes and not to move his head, then proceed to move your finger in a half circle. ask the patient with each move if he can still see your finger flicking in his field. Do the same for the other eye.
and fundi.
Just mention it
((light reflux)) do it don't just mention it
and when you shine the light on one eye pupil will be constricted this is direct reflux and the other pupil without the light will constrict also that's called indirect reflux or consensual reflux
When you finish examining the optic nerve, ~~mention that you'll have to end the~~ examination with the light reflex.

Q :
1.fixid dilated pupil causes ?
atropine, optic nerve abnormalities
2.small irregular pupil causes ?
DM
3.pin point pupil causes ?
4ps ..
pain killer/opioid
phosphate /organophosphate
pontin hemorrhage
pilocarpin /eye drop



accommodation reflux : bring pen and put it away in the midline of patient face then bring it back slowly toward patient nose focus on the eye

- **Third(Oculomotor),fourth(Trochlear), Sixth(Abducent): Extraocular movement:**

Examiner should be positioned in front of patient and ask him to follow examiners finger or a pencil (H or +) without moving the head.

- **Fifth (Trigeminal):** (put your hand on muscle first then ask to clench the teeth don't roll over the muscle)
  1- **Clenching teeth while palpating the muscles of the jaw.** (palpate the masseter and the temporalis)
  2- **Close his/her eyes and identify bilateral facial touch as soft or sharp for the three branches (ophthalmic, maxillary and mandibular)**

First take a piece of tissue paper and place it over the patient's sternum or upper arm and explain to him that that's what he should feel. ask him to close his eyes then stroke the tissue over the patient's face on both sides over each division (ophthalmic, maxillary and mandibular). Finish by doing the jaw reflex and the corneal reflex. (just touch don't scratch and do right then left right then left like zigzag to compare)

- **Seventh (Facial):**
  1- **Inspection of asymmetry**
  No atrophy
  Normal blinking of the eye
  No abnormalities
  No drooping angle
  No ptosis
  No drooling of saliva
  2- **Contract muscle of expression:**
  (wrinkle forehead (raise your eyebrows), eyes closure (close your eyes and resist me), smile and whistle (blow his cheeks and squish them on each side)
  3- **Reflexes (corneal and ~~jaw~~)** mention that you are going to examine "stapedius muscle "special test sensation of tongue

- **Eighth (Acoustic):**

Hearing the ticking of watch or rubbing of fingers

Rinne's and weber's tests:

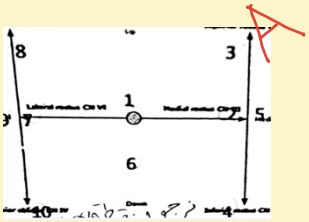
Weber's Test: Explain the test, then strike the fork (test the fork on yourself first). Place the base of the fork in the midline on the head, ask the patient: "Do you hear the sound louder on your left ear or right ear or hear it in the middle? Normal: Sound heard in midline

Rinne's Test: Explain the test, then strike the tuning fork, place the vibrating tips perpendicular about 1cm from the external auditory meatus for a few seconds (A). place the tuning fork base against the patient's mastoid process for 2-3 seconds and steady the patient's head with your other hand (B). Ask the patient in which position you hear louder in A or B? Normal: Air louder than Bone (A) (Rinne's Positive).

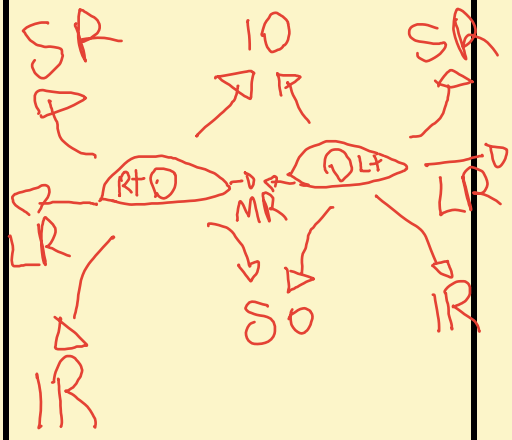
- **Ninth and Tenth: (Glossopharyngeal and Vague) Gag reflex.**

check for Gag reflex.

Ask the patient to open his mouth and press the by a tongue depressor on the posterior pharynx + tell the patient to say (Ahh) and the patient will gag.



please remember the extraocular muscle that responsible for each movement and the nerve supply



when you ask person to look at the "A" point mentioned above you will say that he is using SR muscle of Lt eye and IO muscle of Rt eye and like this.
and remember nerve supply by SO4,LR6,rest with 3

Q
1.what are the muscle supplied by facial nerve ?
.occipitofrontalis . orbicularis oculi . orbicularis Oris. levator labii superioris. buccinator ..... .
2.what is the branch of the facial nerve ?
temporal .
zygomatic.buccal .mandibular. cervical
3. what I'd crocodile tears syndrome and how it is happened?
spontaneous tearing with normal salivation of eating happened after Bell's palsy

**For testing the sensation the reference point should be the sternum
**the muscle of mastication supplied by trigeminal nerve : lateral pterygoid ,masseeter,temporalis,
**abnormalities in trigeminal nerve
trigeminal neuralgia ,neuritis ,palsy
Abrupt close of jaw in jaw reflex indicates:brisk jaw

- **Eleventh (Spinal Accessory):**
  1- **Push his/her head against examiners hands**
  2- **Shrug shoulders up against examiner hands.**

- **Twelve (Hypoglossal):**
  Stick his/her tongue out of the mouth and move it From side to side. (check for deviation)
  Put your hand on the patient's cheek and tell him to push your hand with his tongue. Do it on both sides.

3-Motor Examination

- **Inspection:**
- ✓ **Wasting**
- ✓ **Abnormal movement**
- ✓ **Deformities**
- ✓ **Fasciculation.**

  First expose the upper or lower limb
  Inspection: your comment: no ulcer, no scar, no tattoo normal hair distribution, no muscle wasting no muscle atrophy. ask the patent to extend his arms in front of him and look for 30 second. Your comment: no fine tremor no abnormal movement no deformity, no fasciculation (tap by your fingers or by the hammer on a big muscle and wait for 20 sec, no twitching = normal)

- **Tone:**
  passive movement of different joints
  ask the patient to relax. Then move in a zigzag line comparing each joint to the other side. Your comment: normal tone.

Tone:
-upper limb: (sitting)
1- Carpometacarpal joint
2- Wrist: flexion extension and rotation movement then compare
3- Elbow: flexion extension and compare
4- Radioulnar: put the patient hand in 90 degree (like shaking hands) move in pronation and supination and compare
5- shoulder in a circular motion while supporting the pt. elbow and compare.
- lower limb: (laying down)
1. Ankle: flexion extension and rotation movement compare.
2-Knee: flexion and extension and compare 3. Hip: flexion and extension then in a circular motion and compare.

- **Strengths:**
  - ✓ **Power grading (0-5).**
  - ✓ **Ask patient to raise hands or legs.**
    Comment: Power is 3+
  - ✓ **Active movement**
    Ask the patient to resist you.
    Check for adduction, abduction, flexion, extension for each joint and compare with the other side. Don't forget to put a tissue paper between the patient's fingers and ask him to try to hold it in between them to test the metacarpal joints.
    Your comment: power is 5 for all joints.

- **Reflexes (spinal or deep tendon):**
  Ask the patient to relax
  locate the tendon for every reflex first
  - ✓ **movement of the hammer should be a rapid downward snap of the wrist. The hammer should not be held too firmly.**
  - ✓ **Each of the following reflexes should be tested bilaterally**
  - ✓ **Biceps (strike over your finger), Triceps, Brachioradialis, Knee, Ankle (put the foot in a dorsiflexion position) and Planter (Babinski) do it if asked or at least mention it.**
    Your comment: normal reflexes


Babinski

Coordination

The root values
Ankle jerk s1,s2
Knee jerk L3.L4
Biceps reflex c5,c6
Triceps reflex c6,c7
Positive babinski sign means UMNL
Hyperactive reflexes indicates UMNL
Common peroneal nerve injury causes: foot drop

- **Upper Extremities:**
  - ✓ **The examiner should ask patient to touch examiner's index finger and patient's nose. The examiner should place his/her index finger 18 inches from the patient while changing the location of his/her finger several times. This procedure should be repeated with the Pt's other hand (finger-Nose-Finger).**
  - ✓ **Rapid alternating movement.**

    Ask the patient to repeatedly alternate his hand movement from supination to pronation over and over again, then do it faster. Do the same for the other hand.

    or

The examiner should ask each finger on patient to rapidly and repeatedly touch his/- her thumb with the same hand. Repeat with the Pt's other hand.

- **Lower Extremities and:**

  Patient should be lying down

  Exposure: legs from knees down.

  - ✓ **The examiner should ask patient to run the heel of one foot up and down the shin of the opposite leg. Repeat with opposite leg (Heel to Shin)**
  - ✓ **The examiner should ask patient to walk a straight line in a heel-to-toe fashion.**
- **Romberg Sign:**

  Examiner should observe patient stand with his/her arms stretched out in front or beside him/her with eyes closed.

  Ask the patient to put his feet together before starting the test. Tell the patient to close his eyes.

  Wait for some time while the patient's eyes are closed and guard him with your hands from the front and the back.
- **Gait:**

The examiner should observe patient walk, turn, and return. On the heels then on the toes.

4-Sensory function

Compare two sides and patient should close his eyes

- **Superficial:**
  - **touch,**
  - **pinprick,**
  - **Pressure**

Temperature. **(by two test tubes one hot and one cold. Stroke each tube individually over each dermatome. Ask the patient what he feels on each dermatome).**

- **Deep Sensation:**

1- Position sense:

The examiner should hold either side or the tip of patient's finger then move the finger up or down and ask patient to say which way it is being moved
Repeat with the big toe.

2- Vibration sense:

The examiner should place a vibrating tuning fork against the bony prominence of patient's wrist (Styloid process) and ankle (medial malleolus) and ask patient to state when the vibration stops.

- **Cortical Sensation:**

Stereognosis, graphesthesia

Ask the patient to close his eyes.
Stereognosis: put a key in his hand and ask him what is this.
Graphesthesia: write a number or letter on his palm and ask him what is it.