

The Complete - Physical Examination Checklists

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Preface to the 2nd version

Welcome to the *2nd version* of **The Complete** internal medicine physical examination checklists!

What's new

1. This eBook is written with [Quarto](#), for smoother experience than ever! No need to use slow notion websites anymore!
2. Added some important tables and images to help guide you with knowledge while performing physical examination
3. Refined content, for more cohesive experience!
4. Open sourced The Complete!

1 Cardiovascular checklist

1.1 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (**from the waist and above**)
- Asking the patient to be in the appropriate position (**semi-sitting at 45 degrees in bed**)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

1.2 General look of the patient

- Consciousness, alertness and orientation** of the patient to time, place and person (After asking the [3 questions](#))
- Comment on the patient's **position and comfort**
- Comment on the patient's **external devices** status (No oxygen masks, nebulizers etc.)
- Comment on **respiratory rate (Not tachypneic), respiratory distress**
- Comment on **cyanosis**
- Comment on **edema**

1.3 Vital Signs

- Make sure you know the [6 vital signs](#)

1.4 Hands - Inspection

Starting with the hand

- No **cyanosis**

- No pallor
- No palmar erythema
- No petechial rash
- No Xanthomata (Hyper-lipidemia)
- No Janeway lesions (painless, thenar region) (Infective endocarditis)
- No Osler's nodes (painful, tip of fingers) (Infective endocarditis)
- No tar staining
- No IV drug abuse signs

Moving on to the nails

- No finger clubbing
- No splinter hemorrhages (Infective endocarditis)

End this section by examining for tremor

- Examine for fine tremor

1.5 Hands - Palpation

- Check hands' temperature, dry/sweatiness
- Check Capillary refill (<2 seconds is a normal capillary refill time)

Check pulses bilaterally, details below

All pulses are done with 2 fingers, except for radial;

1.6 Radial pulse

- Radial pulse; using 3 fingers, lateral to flexor carpi radialis, after 1 minute (do 15sec), comment on the rate, rhythm, volume, character and compressibility.
- Check both radial pulses simultaneously to assess "Radio-radial delay", a sign for aortic dissection
- Check radial and femoral pulses simultaneously to assess "Radio-femoral delay", a sign for aortic coarctation (ONLY MENTION)
- Calculate pulse deficit, we don't do this during exams (mention it), but a difference of +10 BPM is abnormal (Associated with atrial fibrillation)
- Now ask the patient about shoulder pain first, if none is present, elevate hand above level of patient's head while checking the radial pulse, to check for "Collapsing pulse" (Aortic regurgitation)
- Don't forget to comment your findings, mention the HR measured, regular rhythm, normal volume, normal character, compressible, no radio-radial/radio-femoral delays, no pulse deficit, no collapsing pulse.

1.7 Brachial pulse

- Using **2 fingers**, assess the brachial pulse **medial to the biceps tendon** in antecubital fossa. (Bilaterally)
- Mention rate, rhythm, volume, character and compressibility

1.8 Carotid pulse

- Using **2 fingers**, gently assess the carotid pulse **anterior to sternocleidomastoid near the jaw**.
- Bilaterally, but never feel both sides at the same time as that might trigger vasovagal attack, comment on rate, rhythm, volume, character and compressibility
- Ask the patient to **hold his breath**, and auscultate for the bruit
- Comment on the bruit

**1.8.0.1 Femoral (mention only), posterior tibial and dorsalis pedis are done in PVS.
We do them if the station was a focused pulses station**

1.9 Face

- Check eyelids for **xanthelasmata** (Hyper-lipidemia)
- Check iris for **corneal arcus** (Hyper-lipidemia)
- Check conjunctiva for **pallor and petechial hemorrhage** (Infective endocarditis)
- Mention that you need **fundoscopy** to check for **roth spots** (Infective endocarditis), or **HTN/DM changes**
- Check for **malar flush** on cheeks (Mitral valve stenosis)
- Check for any signs of **central cyanosis** (Under the tongue), **peripheral cyanosis** (On the lips)

1.10 JVP Examination

As JVP is very important and might be a full station on its own, make sure you're ready for it.

1.10.1 Inspection

- Rest the patient's head on a pillow (Make sure its rested, we need a relaxed sternocleidomastoid), ask him to **turn his head slightly to the left**, using a torch, try to find JVP pulsation.
- Comment, **double peaked, inward pulsating JVP**

1.10.2 Palpation

- After doing the **usuals for any palpation**, try to palpate it

JVP is **normally impalpable**, so make this comment and move on

- Compress the root of the neck**, JVP should disappear, comment that it disappeared after compressing root of the neck
- Ask the patient to **lie flat** → **Increased JVP** (comment)
- Ask the patient to **sit straight** → **Decreased JVP** (comment)
- Ask the patient to take a **deep inspiration** → **Decreased JVP** (comment)
- Check **abdominojugular reflux**, press (**while gradually increasing pressure**) on the Rt upper quadrant for 30 seconds (don't do full 30 of course), on a positive test (normally positive), **JVP increases** (comment whether positive or negative reflux)

1.10.3 Measuring JVP

- Use a ruler, put it on the sternal angle (Straight with the ground not patient's body), assess using a straight object that's put on the highest pulsation you see of the JVP, measure on the ruler and add 5cm and comment on the measured JVP (**Normally it's <9cmH2O**)

1.11 Precordium Examination

1.11.1 Inspection

From the foot of the bed;

- First ask the patient to take a deep breath
- Comment "**Symmetrical chest with no visible deformities, bilateral movement of chest with respiration**"

From the right side of the pt;

- Check for **scars**, make sure you know what scars mean;

1. **Midsternotomy** is for **CABG**
 2. **Left submammary** is for **mitral valvotomy**
 3. **Infraclavicular** is for **pacemakers**
And mention **no scars**
- Mention **no swellings, visible masses, dilated veins.**
 - Mention **normal hair distribution**
 - Using the **torch**, mention afterwards that you see **no visible pulsation/no visible apex beat**

1.11.2 Palpation

- Do the **usuals for palpation**
- Generally palpate the chest, don't miss any point, use your whole hand
- Comment **no palpable masses, no tenderness**

Apex beat

- Try to find it using your **whole hand**
- Try to find it using **2 fingers** (roll the patient to the left side if you couldn't find it)
- Locate it → which intercostal space, is it midclavicular?
- Comment; **gently tapping apex beat, located in the 5th intercostal space, midclavicular line.**

Heaves

- Using your **hand's heel**, ask the patient to expire and hold his breath, assess both **right ventricular heave (lower left sternal angle)**, and **left ventricular heave (apex, hence "apical heave")**
- Comment! **No right or left ventricular heaves**

Thrills

- Using your **flat fingers**; not the tips nor the base, check for thrills in 4 locations; apex, parasternal, right and left second intercostals.
- Comment! **No thrills**

1.11.3 Auscultation

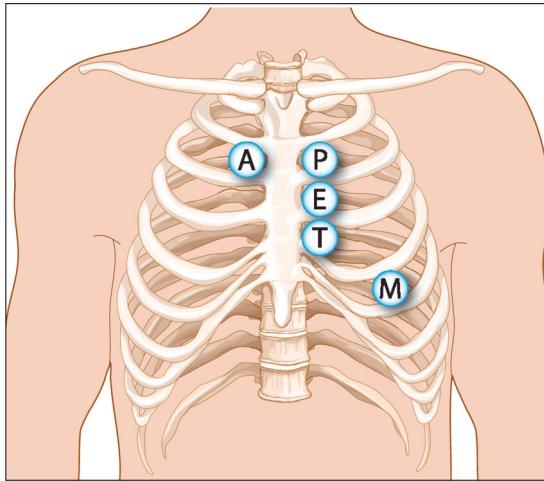
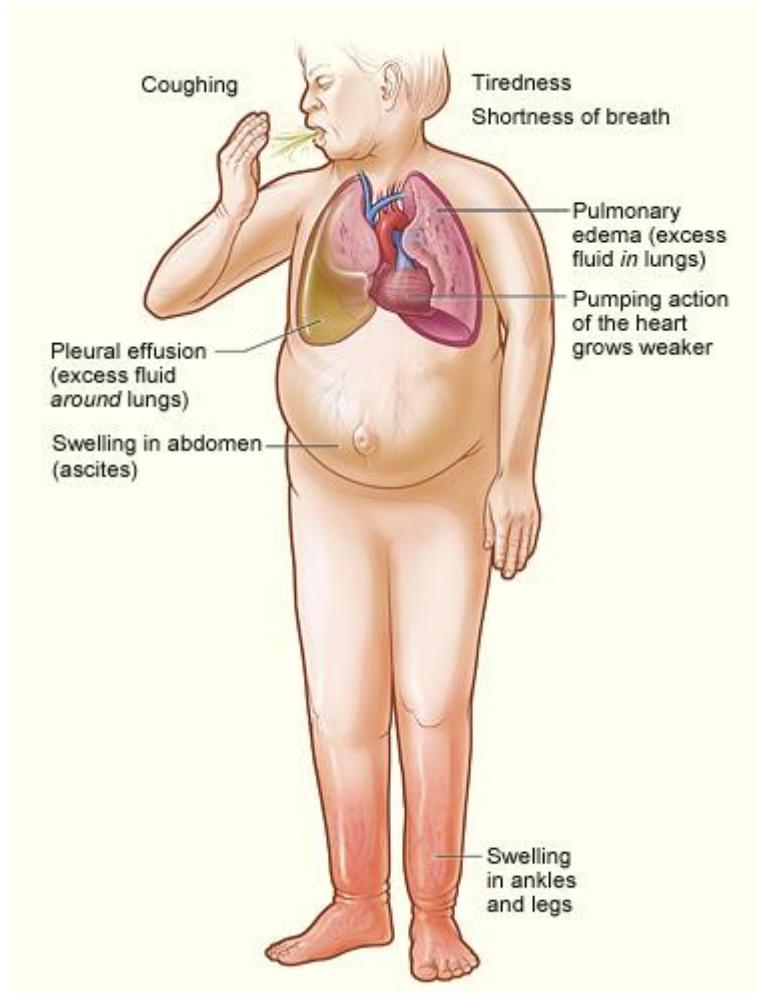


Figure 1.1: Auscultation spots

Differentiate S1/S2 by **feeling carotid pulse while auscultating the patient**

- First, with the diaphragm, 4 valvular spots and 2 radiation spots
 - 4 Valvular spots, **mitral, tricuspid, aortic and pulmonary**
 - 1 Carotid, for **radiation of aortic stenosis**
 - 1 Left axilla, for **radiation of mitral regurgitation**
- Second, with the bell, 4 spots
 - 4 Valvular spots (some only use the bell for mitral and tricuspid, you'll not be penalized for more spots anyway)
- Last, finish with 2 maneuvers
 - Aortic regurgitation**, using the diaphragm, ask the patient to sit straight and then lean forward, examine (aortic area), and **Erb's area**.
 - Mitral stenosis**, using the bell, ask the patient to roll to his left side and then put the bell on the apex.
 - Comment on the whole auscultation; "**Normal S1,S2, no S3,S4, normal physiological splitting of S2, no murmurs, no added sounds like opening snap, ejection click or friction rub**"

1.12 Ending the station



- I will auscultate **lung bases** for crackles (Heart failure - Pulmonary edema)
- I will examine the **abdomen** for ascites; hepatomegaly, sacral edema
- I will examine **lower limb** for edema, ulcers, pulses

2 Respiratory checklist

2.1 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (**from the waist and above**)
- Asking the patient to be in the appropriate position (**semi-sitting at 45 degrees in bed**)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

2.2 General look of the patient

- Consciousness, alertness and orientation** of the patient to place, time and person (Asking the 3 questions) - *in RS, disorientation is a sign for CO₂ retention, it causes confusion (Hypercapnia)*
- Commenting on the **patient's position and comfort**
- Commenting on the patient's **external devices** status (No oxygen masks, nebulizers etc.)
- Commenting on **respiratory rate** (**Not tachypneic**), **respiratory distress** (Mention these 2 signs)
 - 1) No apparent use of **accessory muscles** for breathing like *sternocleidomastoid, trapezius and scalene*)
 - 2) No Indrawing of **intercostal spaces**
- Commenting on **cyanosis**
- No abnormal **sounds**
- No abnormal **odors**

2.3 Vital signs

- Make sure you know the 6 vital signs
- What is **pulsus paradoxus**?
 - **Pulsus paradoxus** is a more marked inspiratory decrease in arterial pressure exceeding 10 mmHg
 - **BMI** is vital in respiratory system, obese patients may get *obstructive sleep apnea*
 - **Weight loss** in COPD patients **increases risk of morbidities** (++inflammatory cytokines = ++metabolic rate)

2.4 Hands examination

Starting with the still hand

- No deformities / amputations
- No palmar erythema
- No pallor
- No scars, swellings and no visible masses
- No tar staining
- No muscle wasting (thenar and hypothenar)

Moving on to the nails

- No clubbing (May be asked to do the 3 tests, **nail bed angle / schamroth's window / fluctuations**)
- No nail deformities like **yellow nail syndrome**

Hand palpation and radial pulse

- After doing the **usual for palpation**; check **temperature + dryness/sweatiness**
- Test for **HPOA (Hypertrophic pulmonary osteoarthropathy) (Wrist tenderness)**
- Test for **Capillary refill** (1 minute pressure on the nail, refill in <2 seconds)
- Check **radial pulse**

End this section by examining for tremor

- Test for **fine tremor**
- Test for **asterixis (Flapping tremor)** ~ (CO₂ retention)

2.5 Face examination

- Comment on having no **plethoric face**
- Comment on having no **face swelling**

By examining the **eye**, make these 3 comments:

- No jaundice** (Examining the sclera)
- No pallor** (Examining the color of conjunctiva)
- No conjunctival edema**
- Check for **Horner syndrome** (3 signs; **ptosis, meiosis, anhidrosis**)
- No nasal flaring**
- No pursed lips**
- Comment on **cyanosis** (Peripheral on lips, central under the tongue)
- Comment on **good oral and dental hygiene**

2.6 Neck examination

- No scars, swellings, visible masses**
- No visible dilated veins**
- Mention examining the **JVP** (SKIP)
- Mention examining the **cervical lymph nodes** (SKIP)

2.7 Chest Inspection

First, relocate to the foot of the bed

- Comment on symmetrical elliptical chest in cross section (**Shape**)
- Before chest expansion, ask the patient to **take a deep breath first**!
- Comment on **bilaterally symmetrical chest expansion**
- No **chest deformities** (kyphosis, scoliosis, pectus carinatum, pectus excavatum, barrel chest)
- Normal bilaterally symmetrical **breathing pattern** that's **Abdomino-Thoracic**
- Pemberton sign** (raise both of your hands, wait for facial plethora) to check for SVC obstruction

From the right side of the patient

- No Scars, swellings, visible masses**
- No skin lesions ~ Subcutaneous nodules** (Malignancy)
- No visible dilated veins**
- Normal hair distribution**
- Check the **axilla** too!!!!

2.8 Chest Palpation

Do the [usuals for any palpation](#) and then;

1) **General palpation:**

- Palpate using the palm of the hand around the chest

Mention that you found:

- No tenderness
- No subcutaneous emphysema
- No palpable masses

2) **Upper mediastinum palpation:**

- Using 3 fingers, check for **tracheal deviation** (comment that it's centralized)
- Ask the patient to take a deep inspiration, to check for **tracheal tug**
- Comment on no tracheal tug
- Measure the **crico-sternal distance** (Normally; 3 to 4 fingers)

3) **Lower mediastinum palpation:**

- Using **palm of the hand** at first, then **two fingers; locate the Apex beat**
- After locating it**, start from the sternal angle, horizontal with 2nd intercostal space, count and mention the position of apex beat (Normal pos is in 5th intercostal space, mid clavicular line)
- Mention that it's **gently-tapping apex beat!** / gently raises the pulsating finger!
- Using heel of the hand; putting it in the **lower-left sternal angle**; locate the **right ventricular heave**, should be negative (sign of *severe pulmonary hypertension*)

4) **Last tests**

- Test for **tactile vocal fremitus** by using palm of the hand on 4 points anteriorly, 4 points posteriorly, 3 points laterally. (SAY ????? (??????))
- Comment on **normal bilaterally symmetrical tactile vocal fremitus**
- Test for chest expansion, **upper and lower anteriorly**
- Test for chest expansion, **only once posteriorly**

Normal chest expansion is around 2.5cm on each side!

- Comment on normal bilaterally symmetrical **chest expansion**

2.9 Chest Percussion

Percuss bilaterally for each spot;

- Start percussing for the **lung apex** (left hand pointing posteriomedial)
- Percuss on the **clavicle heads** with **only your right middle finger**
- Percuss from the 2nd intercostal space and keep going space by space
- Anteriorly and on the right, **find the liver's level**
- Percuss both lateral sides of the chest**
- Percuss posteriorly** ('Ask patient to hug a magical pillow!')
- Calculate diaphragmatic excursion on each side!** (Remember what we ask the patient for ~ deep inspiration etc) - normal distance 5-8cm

Comment on having normal, bilaterally symmetrical resonant percussion note

2.10 Chest Auscultation

Get your stethoscope ready! set it to use the diaphragm (large one), test that by **GENTLY tapping it, WARM it** by rubbing it with your hand

- Ask the patient to **face the other side** (his left side; you're on the right side right? wait right?!)
- Ask the patient to take a **deep inspiration and expiration** every time the stethoscope touches him (from the mouth and not the nose)
- Listen to chest sounds using **diaphragm** of stethoscope on the lung apex, anterior chest, lateral and posterior chest (again, bilaterally on each spot)
- Comment on normal **bilaterally symmetrical vesicular breathing sound with inspiration phase longer than expiration**
- Comment on **good bilateral air entry**
- Comment on having **no added sounds** (examples; **wheeze, crackles, pleural rub**)

Vocal resonance (Non-tactile)

- Listen to the chest again, same positions but instead of deep insp/exp ask the patient to say **?????? ?????**
- Comment on **normal bilateral vocal resonance**

Whispered pectoriloquy

- Listen to the chest again, same positions but instead of deep insp/exp ask the patient to **WHISPER ????? ???? (???????)**
- Comment on hearing **no whispering pectoriloquy**

Aeogphony

- Listen to the chest again, same positions but instead of deep insp/exp ask the patient to say E
- Comment on hearing **no aeogophony**

2.11 ENDING the station!

- I would like to request **ENT examination** for my patient to check his upper airways
- I would like to examine the abdomen for **hepatomegaly** and **ascitis**
- I would like to examine lower limbs for **edema**, **erythema nodosum**, signs of **DVT**

3 Gastrointestinal checklist

3.1 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (from the **xiphisternum** to the **symphysis pubis**) (nipples to mid thigh originally)
- Asking the patient to be in the appropriate position (flat with 1 or 2 pillows ~ around 10 – 15 degrees)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

3.2 General look of the patient

- Consciousness, alertness and orientation of the patient to time, place and person (After asking [the 3 questions](#))
- Comment on the patient's **position** and **comfort**
- Comment on the patient's **external devices** status, such as ~ stomas, drains, catheters, etc
- Patient is not in **respiratory distress**, not **tachycardic**, if he's **cachectic** or **obese**
- No skin redundancy

3.3 Vital signs

- Make sure you know the [6 vital signs](#)
- Take height and weight to calculate BMI and assess nutritional status of the pt

3.4 Hands

Starting with a quick glance at the nails:

- No finger clubbing
- No koilonychia (IDA), leukonychia (Hypoalbuminemia)

Moving to the still-hand-examination:

- No dupuytren's contracture (Alcohol related chronic liver diseases)
- No muscle wasting
- No tar stain
- No palmar erythema
- No pallor
- No I.V drug abusing marks

Moving to the palpation part of hand examination + tests:

- Do the **usuals for palpation**, then palpate hand's **temperature** and comment on **dryness/sweatiness** (Bilaterally)
- Test for **flapping tremor** (Asterixis) (Don't apply resistance!!)

3.5 Face

Eyes;

- Ask the patient to look down and retract upper eyelid to expose sclera {*scleral icterus*},
No jaundice
- Do the opposite of the previous tick, examine conjunctiva for **pallor**

Cheeks and lips;

- No visible sialadenitis or sialadenosis (Parotid swellings; *chronic alcohol abuse, bulimia nervosa*)
- No spider nevi (Better mentioned on chest!!)
- No aphthous ulcers (Celiac, IBD but m/c idiopathic)

Mouth;

- No angular cheilitis (Iron deficiency)
- No atrophic glossitis (Iron deficiency)
- No beefy tongue (deficiency of B12/folate)
- No halitosis (*Fetor hepaticus* (Chronic liver diseases), alcohol, uremia, ketones..)
- Comment on **good oral hygiene**

3.6 Neck

Check for:

- Left supraclavicular node enlargement (Troisier's sign) (Gastric, pancreatic CA)**
- Widespread lymphadenopathy, hepatosplenomegaly → (Lymphoma)**

3.7 Chest

- Comment on normal hair distribution (hair loss in CLD)**
- No scratch marks**
- No spider nevi**
- No gynecomastia (Male) / breast atrophy (Female)**

3.8 Abdominal Exam

If this was your osce station, proceed with WIPPER, vital signs and then directly;

3.8.1 Inspection; Foot of the bed

Comment on 3 things;

1. **Contour** (Flat, Protuberant,Scaphoid) ~ abdomen might be filled with the **5F's** and **Symmetry**
2. **Umbilicus** (Normally it's centrally located, inverted) (*Can be shifted or everted if abdominal pressure is increased*)
3. Ask the patient to breath, comment that **abdomen moves with respiration** (*It may not move in case of acute abdomen*)

3.8.2 Inspection; Right side of the pt

5 S's, 2 P's, 1 D, 1 B, and hair

- No scars, swellings, skin lesions**
- No stomas, striae**
- No visible peristalsis (RIF)**
- No visible pulsations**
- No visible dilated veins (Caput medus)**
- No bruising**
- Normal hair distribution**

Maneuvers:

Ask the patient to cough facing his left side while looking at his hernial orifices

- Comment on no cough impulse / no bulging masses

Ask the patient to raise his head ????? (Don't apply resistance!!)

- Comment on no diversion of recti

3.8.3 Palpation

First, as always, **usuals of palpation** (hand hygiene, warmth, permission, ask about pain, hold eye to eye contact)

Second!! **SIT ON THE CHAIR**

Light

- Comment that you're doing light palpation to gain pt's confidence.
- Gently! palpate the 9 regions
- Comment "Soft and lax abdomen, no guarding, no superficial masses, no superficial tenderness"

Deep

- Deeply palpate 9 regions of abdomen
- Comment "No deep masses, No deep tenderness"
- Mention testing for Murphy's sign and Rebound tenderness

Our prof's tips after finishing palpation;

- Start by examining organs, with each organ, palpate then percuss directly, and we do every one of them while asking pt to breath (Lead his respiration, ask to inhale and exhale)
- Orient your hands by keeping the fingers parallel to the rib cage
- Normal liver span is 6-12cm
- Spleen → Percuss it only on 9,10,11th ribs, it's dull and non-ballottable normally. During spleen's maneuver, after rolling the patient with your left hand, start from the umbilicus to save time.

Back to the steps!

3.8.4 LIVER; palpation

- Place your hand on RIF, parallel to rib cage, ask the patient to mouth-breath, ask to inspirate → push deep, ask to exhale → release, moving 1cm at a time until you get to either the liver edge or rib cage.

You have 2 choices,

if you found the edge; - [] Ask the patient to hold his hand on the point and comment; **smooth, sharp, non tender liver edge**

if you didn't, you'll have to percuss in upward direction afterwards.

3.8.5 LIVER; percussion

- Ask the patient to hold his breath after full expiration.
- Starting from 2nd intercostal space, percuss downwards until the tone changes from resonant to dull indicating highest point of liver span
- measure from this point to the other point the patient is holding (6-12cm is normal liver span) and comment on it's span and **no hepatomegaly**
- (Percuss upward if u didn't feel liver edge, look for the point of tone change from tympanic to dull (no breathing required), measure..

3.8.6 Spleen; palpation

- Again, start from RIF, parallel to left rib cage, and go diagonally 1 cm at a time, do same steps of liver including breathing, but here you'll 100% not feel the spleen as its normally impalpable
- Ask the patient to roll towards you and hold him with your left hand
- Restart palpating from the umbilicus region

3.8.7 Spleen; percussion

- Only percuss on 9,10,11th ribs mid axillary and comment on normal dullness, no palpable spleen.

3.8.8 Kidney; palpation (3 tests)

- Bimanual test:** left hand is always below, palpate by right hand over the flanks, again just like other organs, ask the patient to breath.
- Ballottement test:** just after bimanual test, pump using the left hand that's below the flank, and feel the kidney with the right hand
- Comment on **palpable, ballottable kidney, not tender, not enlarged**

- Ask the patient to sit, fist his costovertebral angle twice, while holding eye-eye contact to assess renal angle tenderness
- Comment on **no renal angle tenderness**

3.8.9 Kidney; percussion (retro peritoneal organ, cannot percussion it (resonant tone)

- Percuss bilaterally pt's flanks
- Comment on **resonant kidney percussion**
- Percuss the urinary bladder ~ Dull for full bladder, tympanic for empty one (pelvic organ when empty)

3.9 Ascites assessment

3 tests, 2 done, 1 mentioned

1- Shifting dullness; (best for moderate ascites, will miss massive ascites)

- Start below xiphisternum, percussing with fingers horizontal, and find a very loud tympanic percussion note to help you.
- from that point, rotate finger to be vertical and start going laterally (towards you, for easier operation) until you find a dull spot
- Ask the patient to roll while holding your hand (To his left side) (mention that you will wait 15 seconds but don't actually wait)
- percuss again, it should still be dull normally
- comment on **no shifting dullness**

2- Transmitted thrill (positive only in massive ascites)

- Ask the patient to put edge of his hand on the midline, place one of your hands flat on a side, and with the other one, flick a finger against its side, if you feel nothing on the flat hand; (DO IT BILATERALLY)
- mention **no transmitted thrill**

3- Mention **successional splash** test; don't actually do it!!

3.10 Auscultation

3 things to auscultate for; (All using diaphragm)

1- Bowel sounds;

- Put the diaphragm on paraumbilical areas

- Comment on **present bowel sounds** (Normally, if you didn't hear any, you'd wait up-to 2 minutes)

2- Bruits

- Above umbilicus → Aortic bruit
- Comment on **no aortic bruit**
- 2cm above, 2cm lateral to umbilicus → Renal artery bruit
- Comment on **no renal artery bruit**
- 2cm below, 2cm lateral to umbilicus → Iliac artery bruit
- Comment on **no iliac artery bruit**

3- Friction rub over organs;

- RUQ for liver → **No friction rub**
- Spleen area → **No friction rub**
- Kidney area → **No friction rub**

3.11 Ending the station

- I will examine the external genitalia (we do that to assess genitalia atrophy in case of chronic liver diseases)
- I will perform per-rectal examination *Melena*
- Lower limbs for edema *CLD*
- Sacral edema *CLD*
- Pyoderma gangrenosum *IBD*
- Auscultate femoral artery for its bruit
- Hernial orifices

THE END

4 CLD stigmata checklist

Deeply focus on **points in bold**.

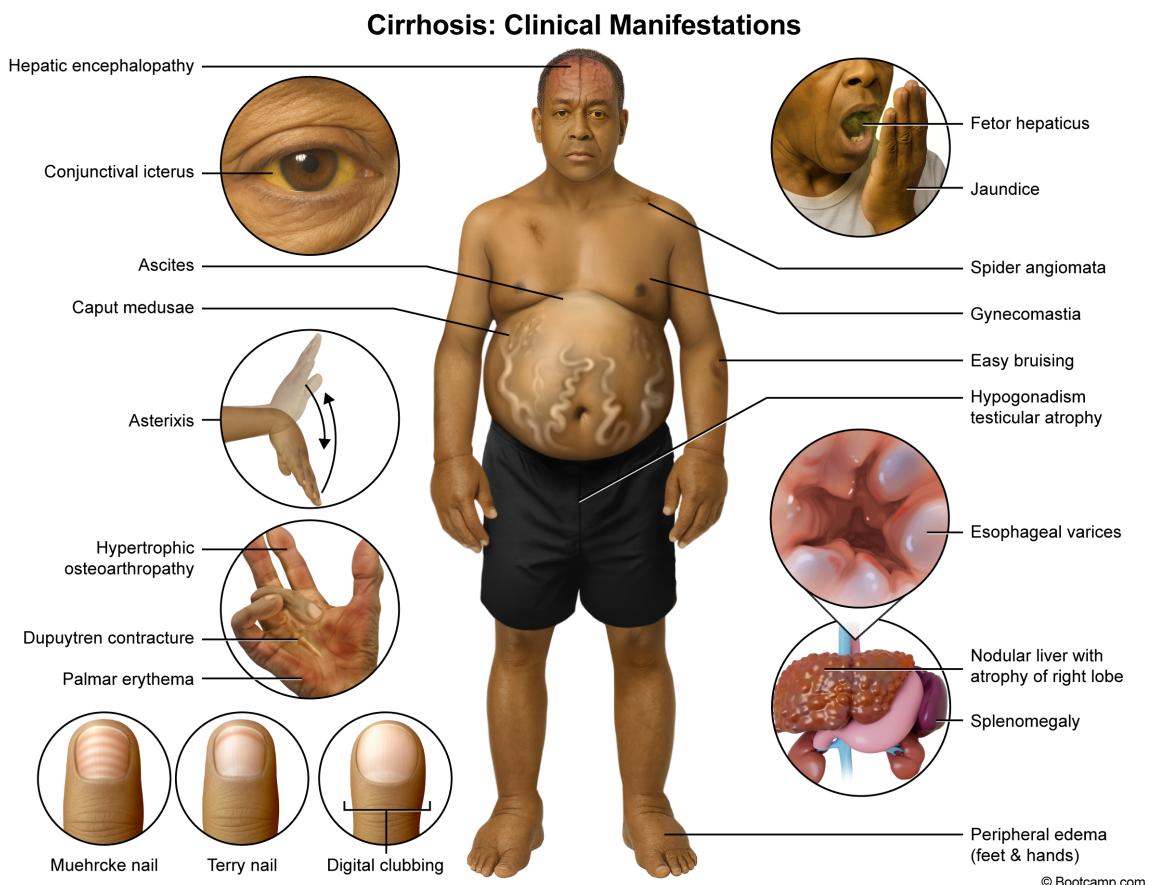


Figure 4.1: Stigmata of chronic liver disease - Bootcamp

4.1 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy

- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (from the **xiphisternum** to the **symphysis pubis**) (nipples to mid thigh originally)
- Asking the patient to be in the appropriate position (flat with 1 or 2 pillows ~ around 10 — 15 degrees)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

4.2 General look of the patient

- Consciousness, alertness and orientation** of the patient to time, place and person (After asking [the 3 questions](#))
- Comment on the patient's position and comfort
- Comment on the patient's **external devices** status, such as ~ stomas, drains, catheters, etc
- Patient is not in respiratory distress, not tachycardic, if he's cachectic or obese

4.3 Vital signs

- Make sure you know the [6 vital signs](#)
- Take height and weight to calculate BMI and assess nutritional status

4.4 Hands

Starting with a quick glance at the nails:

- No finger clubbing
- No koilonychia (IDA), leukonychia (Hypoalbuminemia)

[Mention **Terry's Nails**, type of apparent leukonychia, characterized by ground glass opacification of nearly the entire nail]



Figure 4.2: Terry's Nails

Moving to the still-hand examination:

- No **dupuytren's contracture** (Alcohol-related CLD)
- No muscle wasting
- No **palmar erythema**
- No **Hypertrophic osteoarthropathy** (clubbing + periostitis of hand joints)
- No marks of I.V drug abuse

Palpation + tests:

- Palpate temperature and dryness/sweatiness (bilaterally)
- Test for **flapping tremor (Asterixis)** (don't apply resistance!)

4.5 Face

Eyes

- Retract upper eyelid → no **jaundice**

- Examine conjunctiva → no **pallor**

Cheeks & Lips

- No **sialadenitis/sialadenosis** (parotid swelling; chronic alcohol abuse)
- No **spider nevi** (better mentioned on chest)

Mouth

- No **halitosis** (*Fetor hepaticus*)

4.6 Neck

Nothing specific to CLD stigmata.

4.7 Chest

- Normal hair distribution (no **hair loss**)
- No **scratch marks**
- No **spider nevi**
- No **gynecomastia** (male) / **breast atrophy** (female)

4.8 Abdominal Exam

4.8.1 Inspection – Foot of the Bed

- Contour** (flat, protuberant, scaphoid)
In CLD → distended abdomen due to ascites

4.8.2 Inspection – Right Side

- No distended veins (**Caput medusae**)
- No **bruising**

4.8.3 Palpation & Percussion

Tips:

- Palpate and percuss organs systematically with respiration.
- Normal liver span: 6–12 cm.
- Spleen → percuss ribs 9–11 (normally dull, non-ballottable).

4.8.4 Liver – Palpation

- Start at RIF, move 1 cm at a time with inspiration/expiration.
- If found → comment (smooth, sharp, non-tender edge).
- If not found → percuss upwards.

4.8.5 Liver – Percussion

- Ask for breath hold (after full expiration).
- During expiration, percuss down from the 2nd intercostal space to the point of dullness.
- Measure span (6–12 cm normal, **no hepatomegaly**).

4.8.6 Spleen – Palpation

- Start from RIF diagonally, normally impalpable.
- Roll patient and palpate again from umbilicus.
- Impalpable spleen; **no splenomegaly**.

4.8.7 Spleen – Percussion

- Percuss ribs 9–11 → normal dullness.

4.9 Ascites Assessment

Three tests:

1. Shifting dullness

- Percuss midline → flank dullness
- Roll patient (wait 15s) → **no shifting dullness**

2. Fluid thrill

- Hand on midline, flick other side
- **No transmitted thrill**

3. Successional splash (mention only)

4.10 Auscultation

- Auscultate over liver, spleen
- No friction rub

4.11 Ending the Station

- Examine **external genitalia (atrophy)**
- Examine **PR (anorectal varices)**
- Examine **lower limb for edema, hair loss**
- Check **sacral edema**

4.11.1 Hepatic Encephalopathy

We assess grade using **West Haven Criteria**:

Grade	Criteria
Grade 1	Trivial lack of awareness. Euphoria or anxiety. Shortened attention span. Impaired performance in addition.
Grade 2	Lethargy or apathy. Minimal disorientation in time or place. Subtle personality changes. Inappropriate behavior. Impaired performance in subtraction.
Grade 3	Somnolence to semistupor but responsive to verbal stimuli. Confusion. Gross disorientation.
Grade 4	Coma (unresponsive to verbal or noxious stimuli).

Adapted from Ferenci, *et al.*³

Figure 4.3: West Haven Hepatic Encephalopathy Grading

THE END

5 Thyroid checklist



Figure 5.1: Graves' ophthalmopathy

5.1 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (**The neck and the upper chest**)
- Asking the patient to be in the appropriate position (**Sitting**)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

5.2 General look of the patient

- Consciousness, alertness and orientation** of the patient to time, place and person (After asking the [3 questions](#))
- Comment on the patient's position and **comfort**
- Patient is **not in distress, tachypnea or in pain, not obese nor thin**
- Comment that the patient is showing **normal facial expression, no apathy or agitation**
- Ask the patient to **say his full name**
- Comment on the patient's **normal clothing for the weather**
- Comment on **normal speech with no hoarseness, no slow or pressured speech**

5.3 Vital signs

- Mention that you want to check the pulse as **tachycardia** and **atrial fibrillation** occur with **hyperthyroidism** and **bradycardia** with **hypothyroidism**
- Mention that you will have to check the blood pressure for **diastolic/systolic HTN**
- Mention that you will have to check the **BMI** for weight gain/loss
- you might be asked to mention the [rest of the vital signs](#)

5.4 Hands

Inspect for; palm and dorsum

- No **palmar erythema**
- No **thenar/hypothenar muscle wasting**
- No **vitiligo**
- Normal **hair distribution**
- No **dry and course skin**

Nail changes;

- No **finger clubbing**
- No **onycholysis**
- No **thyroid acropachy**
- No **brittle nails**
- Do the [usuals for palpation](#), check and comment on **hand's temperature, dryness/sweatiness**

Tests;

- Ask the patient to extend his arms **?????** (**??????**)
- Comment on no **fine tremor**
- Do the **carpal tunnel test!** (You can find it [here](#) in the mss checklist)

6 Face

- No dry or coarse hair, no hair loss
- No hair loss of last third of eyebrows (*Hypothyroidism*)
- No periorbital puffiness or myxedema
- No lid retraction
 - Ask the patient to look at your finger without moving his head, test for lid lag (vertically move your finger)
- No lid lag
- No exophthalmos
- No proptosis
- No Conjunctival redness (Chemosis)
- Test for Ophthalmoplegia (H shape)!
- Comment on no diplopia or nystagmus

6.1 Thyroid

6.1.1 Inspection

- Ask the patient to hyperextend his neck, look at his thyroid
- No scars, swellings, skin lesions
- No asymmetry
- No visible dilated veins
- Ask the patient to swallow
- Mention that thyroid moves with swallowing
- Ask the patient to protrude his tongue
- Mention that thyroid doesn't move (*No thyroglossal cyst*)
- Ask the patient to raise his arms, notice any facial congestions (**Pemberton's sign**)
- Comment negative Pemberton's sign

6.1.2 Palpation

- As always, do the **usuals before palpation**
- Stand behind the patient, ask him to slightly look down (Neck flexion)
- Palpate the thyroid
- Comment on **symmetrical thyroid lobes**
- Comment on **no tenderness** (Make sure to hold eye contact to notice any tenderness)

- Comment on **no nodules or masses**
- Comment on **no enlargement**
- Feel for thrills, comment on **no thrills**
- Mention **palpating cervical lymph nodes!** (should be skipped)
- Ask the patient to swallow, comment on **thyroid moves while swallowing**
- Ask the patient to protrude his tongue, comment on **no movement**

6.1.3 Tracheal tests

- Using 3 fingers, check for **tracheal deviation** (comment that it's centralized)
- Ask the patient to take a deep inspiration, to check for tracheal tug
- Comment on **no tracheal tug**
- Measure the **crico-sternal distance** (Normally; 3 to 4 fingers)

6.1.4 Percussion

- Percuss over the **clavicle's head**, note if there's dullness

dullness = retrosternal goiter

- Comment on **no dullness, normal resonance**
- Percuss over the **manubrium** too, and comment **no dullness, normal resonance**

6.1.5 Auscultation

- Auscultate for **thyroid bruit**
- Mention no thyroid bruit
- Auscultate for murmurs
- Mention** no midsystolic murmur**

6.2 Finishing off your station!

I want to check/examine for;

- Proximal myopathy** (Testing for it would be by asking the patient to stand up with his hands on his chest)
- Test for **deep tendon reflexes** (*in hypothyroidism = delayed relaxation, in hyperthyroidism = hyperreflexia*)
- Pretibial myxedema** of grave's
- Ankle swelling** of heart failure
- Lower limb skin** if its *dry and coarse*

THE END

7 Hand and Wrist checklist

7.1 Rules:

1. Look, feel and move :)
2. We don't say abnormal until we compare right and left!

7.2 WIPPER and the intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (**One joint above, one joint below**)
- Asking the patient to be in the appropriate position (**Sitting upright with a pillow under his hands**)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

7.3 Vital signs:

- Make sure you know the **6 vital signs**

8 Look

Look at the palm, dorsum, lateral sides of the hands and in between fingers.

- No scars, skin rash, no bruises :)
- No color changes; palmar erythema, (raynaud's syndrome)
- No nail changes; nail pitting/brittle nails ...
- No deformities; Swan neck / boutonnière/ mallet / Trigger finger / Sausage fingers / dupuytren's contractures (Alcoholic-CLD) / Z thumb (RA) / Ulnar deviation (RA)
- No skin nodules ~ Bouchard's/Heberden's (Osteoarthritis)
- No gouty tophi
- No visible soft tissue swelling
- No muscle wasting (thenar wasting in carpal tunnel syndrome)/ hypertrophy / fasciculations
- While looking at the hand's fingertips, mention No Calcinosis (Systemic Sclerosis)
- Ask the patient to form a fist, mention No loss of "Hill-Valley-Hill-Valley" on the dorsal aspect of the hand (RA)

Look at the patient's elbow

- Comment on "No rheumatoid nodules"

9 Feel

- Palpate dorsum of the hand to check for **temperature/dryness and sweatiness** (and comment)
- Pinch the skin** of the dorsal aspect of the hand, mention **No thick nor tightening** of the skin found (*Scleroderma-Rodnan score*)

The Modified Rodnan Skin Score

- **17 different body areas**
(fingers, hands, forearms, upper arms, chest, abdomen, thighs, lower legs, feet)
- **The maximum score is 51**

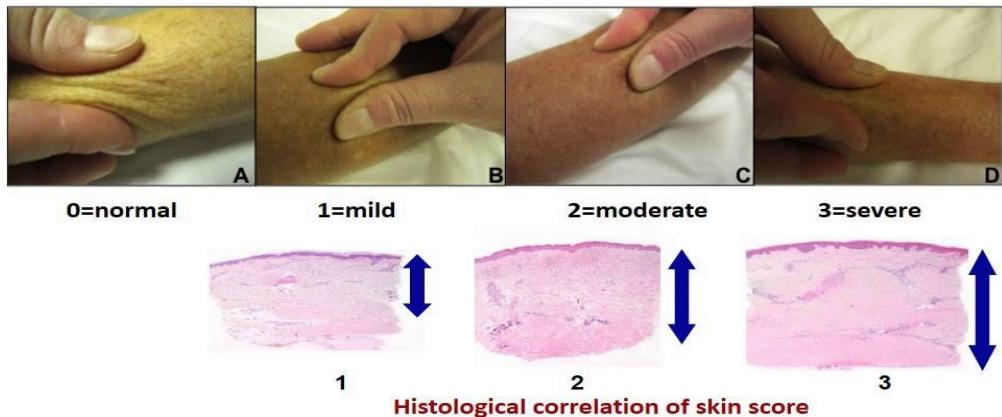


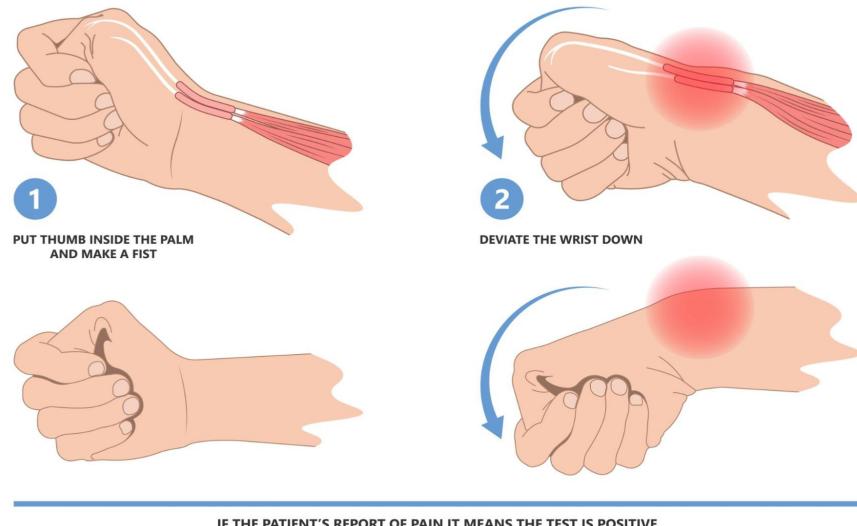
Figure 9.1: Scleroderma-Rodnan Score

- Check all other joints for **soft tissue swelling and fluctuations** using your 2 thumbs
(Wrist joint, MCP, PIP, DIP, don't forget the thumb's 2 joints!)
- Squeeze test** ~ squeeze all MCP joints for **tenderness**

10 Move

- Give the patient 2 fingers and ask him to **squeeze** to assess power of his hands
- Comment on normal power
- Ask the patient to move his **wrist in all 4 directions** to assess range of motion in his wrist
- Comment on full range of motion
- Ask the patient to move his **thumb in all directions** to assess its range of motion, and ask him to move it against resistance too.
- Ask the patient to count their fingers (**MCP joint flexion maneuver**)
- Test **flexor digitorum profundus** (isolate each finger, and ask to do flexion on **DIP** (extend pip)) and **flexor digitorum superficialis** (isolate each finger, and ask to do flexion on **PIP** (extend MCP))
- Ask the patient to form a semi fist and make sure his fingers point towards **scaphoid bone**
- Finkelstein's test**; ask the patient to make fist with thumb tucked inside, then ask him to do ulnar deviation. Positive test: pain above the radial side of the hand. **De Quervain's**

FINKELESTEIN'S MANEUVER



IF THE PATIENT'S REPORT OF PAIN IT MEANS THE TEST IS POSITIVE

tenosynovitis

10.0.1 Nerves

10.0.2 Median nerve

- For motor, ask the patient to do “**Ok sign**” this is only testing the anterior interosseous branch of median, that’s why we need a test for median proper, next step for that.
- After patient does the “Ok sign”, assess its power by trying to pull on his ok sign after asking him to resist.

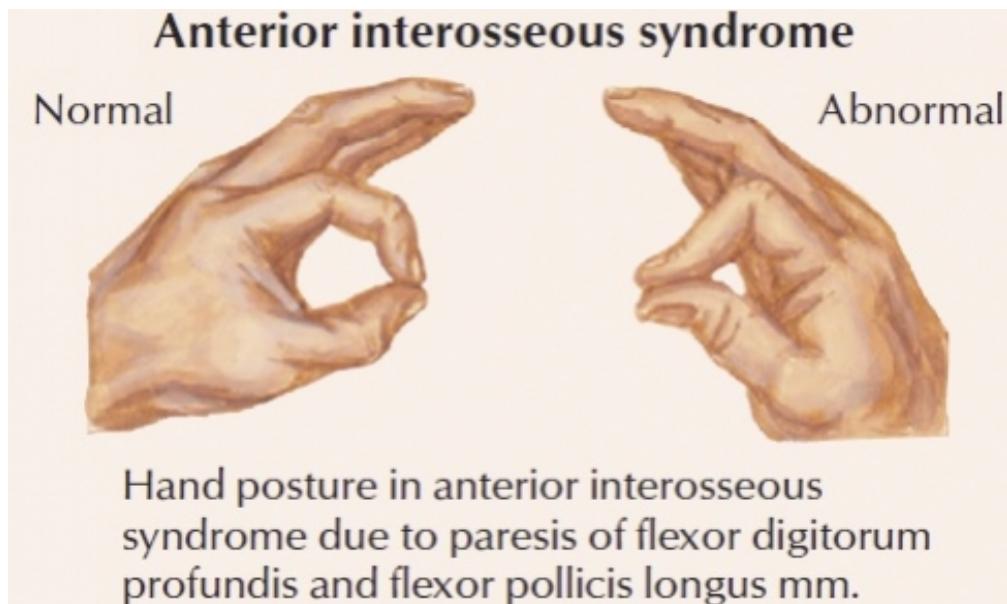


Figure 10.1: Ok sign and anterior interosseous syndrome

- To test median nerve proper, we do opposition test of thumb (Oppose thumb and little finger)
- For sensory, ask the pt to close his eyes, palpate thenar eminence and ask if patient felt it.

10.0.3 Ulnar nerve

- For motor, ask the patient to **abduct and adduct his fingers (scissoring)**. Also, Adduction power can be assessed by putting a paper between patient’s finger (Ask him to not let it go) and trying to pull it.
Abduction power can be assessed by:

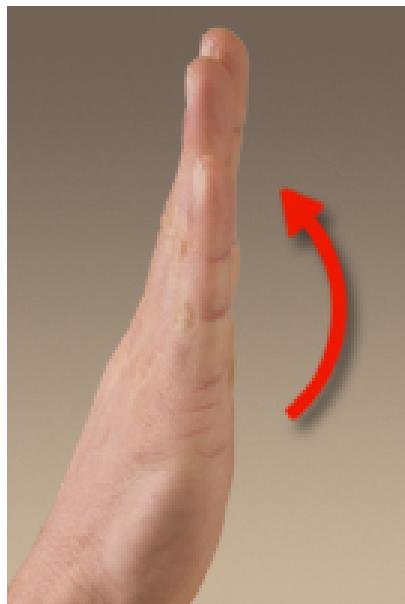
Ulnar - abduction testing

Scissoring

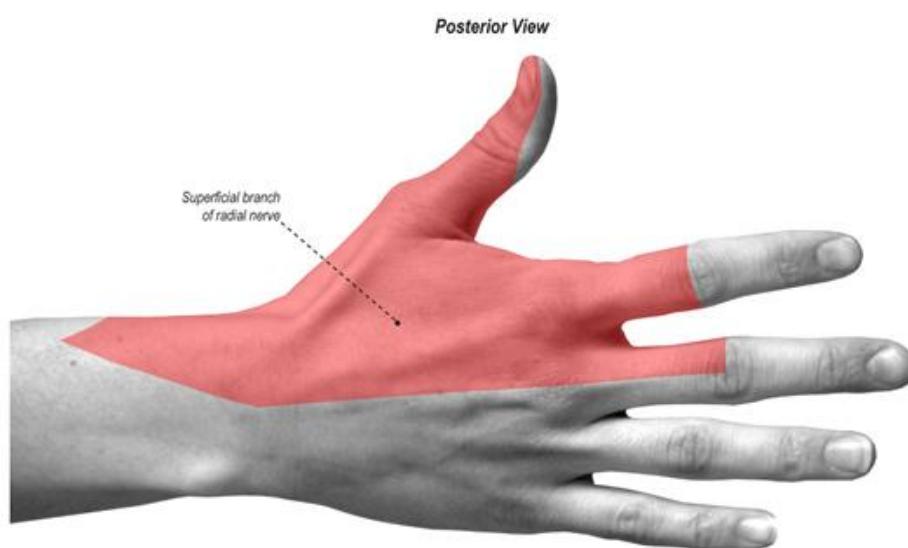
- For sensory, ask the pt to close his eyes, palpate hypothenar eminence and ask if patient felt it

10.0.4 Radial nerve

- For motor, ask the patient to extend his fingers at (**MCP joint**) ask the patient to lay hand flat on a table, and raise only the fingers. (Then against resistance for power assessment)



- For sensory, ask the pt to close his eyes, palpate dorsum of the hand on the lateral half



Carpal tunnel syndrome (3 tests):

- 1) **Carpal Compression Test (most sensitive);** compress with your thumb the position of the median nerve (Proximal to the distal hand crease) for 1 minute, this should (If the nerve is compressed) trigger the compression thus causing signs of carpal tunnel syndrome (Pain, Paresthesia and Numbness on the lateral 3.5 fingers) aka **Durkan's test**
- 2) **Tinel's test;** tap the position of the median nerve (Proximal to the distal hand crease) for 1 minute, this should (If the nerve is compressed) trigger the compression thus causing signs of carpal tunnel syndrome (Pain, Paresthesia and Numbness on the lateral 3.5 fingers)



- 3) **Phalen's test;** (Reverse prayer) for 1 minute, a positive test again will produce symptoms of carpal tunnel syndrome (Pain, Paresthesia and Numbness on the lateral 3.5 fingers)



End your exam by:

- Mention doing a neurovascular check
- Mention doing capillary refill test
- Mention assessing radial pulse

11 Peripheral Arterial Disease checklist

11.1 WIPPER and the Intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (**from the waist and above and from the knees and down**)
- Asking the patient to be in the appropriate position (**semi-sitting at 45 degrees in bed**)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

11.2 General Look of the Patient

- Consciousness, alertness and orientation** of the patient to time, place and person
(After asking the 3 questions)
- Comment on the patient's **position and comfort**
- Comment on no obvious **shortness of breath** (PE)
- Comment on the patient's **external devices** such as any mobility aids (Wheelchairs, walking aids)

- Comment on any **Medical equipment's** such as any dressings or limb prosthesis
- Comment on **cyanosis**
- Comment on no **limb pallor**

11.3 Vital Signs (Mention)

- Mention measuring Blood pressure **bilaterally**
- Make sure you know the [6 vital signs](#)

11.4 Inspection

- Inspect the **upper** limbs bilaterally and do not forget the hands and fingers
- Inspect the **lower** limbs bilaterally and do not forget the feet and toes, also check the back of the legs + sole
- Mention no **missing limbs or digits, and no scars and no dressings**
- Mention no **xanthomata** (*Hyperlipidemia is a major risk factor for PAD*)
- Mention no **Tar stain** (*Smoking is a major risk factor for PAD*)
- Mention no **muscle wasting**
- Mention seeing no **dry skin, no shiny skin, no hair loss, no thickened or brittle nails**
- Mention no **signs of infections** such as fungal → *between the toes*
- Mention no **color changes** such as pallor or darker pigmented skin (*Lipo-dermatosclerosis*)
- Mention no **gangrene**

i Note

Gangrene definition

Gross description of a necrotic tissue with mummification and black discolouration.
Wet gangrene is infected, looks black and unclearly demarcated, needs emergent amputation for risk of sepsis.

Dry gangrene is not infected, dark and well demarcated.
Finger tip necrosis is a sign for Buerger's disease aka thromboangiitis obliterans.

- Mention no **ulcers**
- Mention no **guttering of veins**

i Note

Guttering of veins

In a warm room the veins of a normal foot are dilated and full of blood, even when the patient is lying horizontally.

In an ischaemic foot the veins collapse and sink below the skin surface to look like pale-blue gutters.

- Ask the patient to move his limbs and mention no **paralysis**

11.5 Palpation

- Do the **usuals for palpation**
- Generally and gently palpate the limbs for any **tenderness or crepitus** (Gas gangrene)
- Mention **no tenderness or crepitus**
- Palpate with the dorsum of your hand to **check temperature of upper and lower limbs**, check on 3 points per limb, bilateral limbs at a time, normally you should feel symmetrically warm limbs.
- Check **capillary refill time by applying 5 seconds of pressure to a digit's nail**, then release, notice its returning to its normal color (Normally takes <3 seconds)

11.5.1 All Pulses (Compare right and left!)

- Radial pulse**; using 3 fingers, *lateral to flexor carpi radialis*
- Check both **radial pulses** simultaneously to assess "Radio-radial delay", a sign for aortic dissection
- Check radial and femoral pulses simultaneously to assess **Radio-femoral delay**, a sign for aortic coarctation (ONLY MENTION)

- Brachial pulse**, using 2 fingers, assess the brachial pulse *medial to the biceps tendon in antecubital fossa* (Bilaterally)
- Using 2 fingers, gently assess the **carotid pulse** *anterior to sternocleidomastoid near the jaw*
- Check **posterior tibial pulse** (*posterior to medial malleolus, 1/3 distance between medial malleolus and calcaneus | 1 cm behind, 1 cm below medial malleolus (Macleod)*)
- Check **dorsalis pedis pulse** (*lateral to extensor hallucis longus, against navicular bone*)
- Also mention **popliteal pulse** just in case :)

11.5.2 Special - Buerger's Test

- With the patient lying supine, stand at the end of the bed and **raise both of the patients' legs to 45 degrees and keep them for 1-2 minutes** observing the colors of them
- Ask the patient to sit on the edge of the bed with his **legs hanging**
- Notice how the legs first turn blue due to the passage of deoxygenated blood through the ischemic tissue then they will become red (**Reactive hyperemia**)

i Note

Interpretation of Buerger's Test

- In a healthy individual, the legs should **remain pink** even up to 90°.
 - Development of **pallor** indicates *inadequate perfusion against gravity*.
 - Record the angle of pallor (Buerger's angle): the **lower the angle, the more severe the disease**.
 - When sitting, legs may first appear **blue** (deoxygenated blood in ischemic tissue), then turn **red** (reactive hyperemia).
- This indicates ischemia and correlates with delayed capillary filling.

i Note

Capillary Filling Time

After elevating the legs, patients should be asked to sit up and dangle their feet over the side of the couch.

A normal leg and foot will remain a healthy pink colour, whereas an ischaemic leg slowly turns from white (after elevation) to pink and then takes on a suffused purple-red colour.

The time taken for the colour of the foot to change from white to pink is the capillary filling time, and depends upon the degree of arterial obstruction.

In severe ischaemia it may be as long as 15-30 seconds. A red-purple foot is indicative of severe ischaemia.

11.6 Auscultation

- Mention auscultating over the **femoral and carotids** and mention no bruit

11.7 Further Investigations and Theoretical Knowledge

- Examine bilateral blood pressure to assess any **discrepancies between the two arms** suggestive of *aortic dissection*
- Complete **CVS exam**
- Upper and lower **neurological examination**
- I want to test for **thoracic outlet syndrome**

Roos stress test



Figure 11.1: Roos Stress Test Position

Ask the patient to **abduct his shoulders to 90 degrees**, with **maximal external rotation** on.
Test is positive when patient *can't keep this for more than 3 minutes*.

- Allen's Test**
- Raynaud's**
- Ankle brachial pressure index**

i Note

Ankle Brachial Pressure Index (ABPI)

It is a ratio between the blood pressure measured in the ankle and that measured in the brachial artery, used to assess lower limb perfusion.

- Left ABPI = (Highest pressure of either left Post. tibial artery or left dorsalis pedis) / (Highest brachial pressure (R/L))
- Right ABPI = (Highest pressure of either right Post. tibial artery or right dorsalis pedis) / (Highest brachial pressure (R/L))

Normal ranges:

- Normal → 0.8 – 1.3
- Mild or moderate arterial disease → 0.5 – 0.79 (*claudication*)
- Severe arterial disease → < 0.5 (*Rest pain, ulceration, gangrene → critical limb ischemia*)
- Calcified vessels → > 1.3 (*suggestive of DM, vasculitis, atherosclerosis → need duplex US/CT angio*)

12 Cranial Nerve Examination checklist

12.1 WIPPER and the Intro

- Introduce yourself and shake hands
- Washing of hands and appropriate hand hygiene
- Asking for permission
- Ensuring the room's privacy
- Ensuring the environmental warmth and good lighting conditions
- Asking for appropriate exposure (Head and neck)
- Asking the patient to be in the appropriate position (Sitting on a chair)
- Relocating to the right side of the patient
- Asking for a chaperon
- "I have all of my equipment's"

12.2 Olfactory Nerve Examination (Useless)

- Check the nasal passage
- Ask the patient to close his eyes
- Close one nostril to test the other
- Ask the patient to smell (Use scratch and sniff test cards from UPSIT test)
- Close the other nostril and repeat

12.3 Optic Nerve Examination

12.3.0.1 Inspection

- Comment on no head tilt
- Comment on no facial asymmetry
- Comment on no proptosis
- Comment on no lid retraction
- Do lid lag test, stand up and ask the patient to follow your finger, move it up and back, bottom and back, and comment on no lid lag

12.3.0.2 Palpation

- Do the usuals for palpation
- Comment on no tenderness over the eyes

12.3.0.3 Tests to Mention

- "I will assess visual acuity using Snellen's chart"
- "I will assess color vision using Ishihara plates"
- "I will assess macular sparing using Amsler's grid"
- "I will do fundoscopy examination for things like optic disk examination, papilledema etc."

12.3.1 Pupillary Reflexes Tests

- Dim the room and check the pupils' size for anisocoria
- Ask the patient to fixate his eye on a distant point
- Get your torch, slide it horizontally to one eye, notice "Direct" reflex, then look at the other eye for "Indirect/consensual" reflex
- Comment on intact direct and indirect pupillary reflexes
- While patient is fixating, put your finger ~15cm in front, ask him to focus on it and notice "Convergence"
- Comment on normal accommodation reflex

12.3.2 Visual Field Tests

- Ask the patient to look at your eyes
- Hold 1 hand at full extent, wiggle fingers and ask if patient sees movement
- Test at 2, 4, 8 and 10 o'clock positions
- Comment no homonymous visual field defect
- For sensory inattention: hold both hands at 2 and 10 o'clock, wiggle one then both
- Comment no sensory inattention

12.3.3 Peripheral Visual Fields (one eye at a time)

- Perform 1 eye closing maneuver
- Ask patient to look at your eyes
- Test each quadrant (2,4,8,10 o'clock) with finger wiggling
- Test the other eye
- Comment no peripheral visual field defects

12.3.4 Color Desaturation

- Show red object to ensure patient sees it red
- Perform 1 eye closing maneuver
- Place red object in front of open eye, ask about color
- Test the other eye
- Comment "No red desaturation"

12.3.5 Central Visual Field

- Perform 1 eye closing maneuver
- Ask patient to look at your eyes
- Move red object from side to center until color is noticed
- Test the other eye
- Comment no central visual field defects

12.3.6 Blind Spot

- Perform 1 eye closing maneuver
- Ask patient to look at your eyes
- Move red object horizontally until it disappears
- Test the other eye
- Comment on normal blind spot size

12.4 Ocular Movement Nerves (3rd, 4th, 6th)

- Ask patient to fix head and only move eyeballs following your finger
- Draw H shape, observe eye movements
- Ask about diplopia and its features if present
- Comment on no nystagmus, no diplopia, full range of motion

12.5 Trigeminal Nerve

12.5.0.1 Sensory

- Test light touch on V1,V2,V3 areas bilaterally with cotton-wool
- Repeat with neural tip for superficial pain
- Mention testing general sensation on anterior 2/3 of tongue
- Comment on intact symmetrical sensation

12.5.0.2 Motor

- Palpate/inspect temporalis for wasting
- Ask patient to clench teeth, check masseters
- Ask patient to open mouth, inspect for jaw deviation
- Comment no muscle wasting, good bulk, no deviation

12.5.0.3 Reflexes

- For jaw reflex: place finger between lower lip/chin, percuss with hammer
- Comment on normal jaw reflex
- Mention testing corneal reflex

12.6 Facial Nerve

12.6.0.1 Motor

- Ask patient to raise eyebrows, assess symmetry (frontalis)
- Comment symmetrical wrinkles
- Ask patient to forcefully close eyes against resistance
- Comment normal power of orbicularis oculi
- Ask patient to "Blow out your cheeks and don't let me deflate them"
- Comment normal power of buccinator/orbicularis oris
- Ask patient to show teeth (smile)
- Comment symmetry and no mouth angle deviation

12.6.0.2 Sensory

- Test touch sensation behind ear
- Mention testing taste on anterior 2/3 of tongue
- Mention corneal reflex
- Ask about hearing changes (stapedius muscle)

12.7 Vestibulocochlear Nerve

12.7.0.1 Hearing Tests

- Stand behind patient, ensure normal hearing first
- Close one ear, whisper at 60cm, ask patient to repeat
- If needed, whisper at 15cm

12.7.0.2 Weber's Test

- Tap 512Hz fork, place on forehead midline
- Ask if sound is louder in any ear
- Comment negative Weber's test (no lateralization)

12.7.0.3 Rinne's Test

- Tap 512Hz fork, place on mastoid prominence
- Ask patient to signal when sound stops
- Move fork near ear, ask if sound returns
- Comment positive Rinne's test (air>bone conduction)

12.8 Glossopharyngeal and Vagus Nerves

- Ask patient to talk, note no dysphonia/dysarthria
- Ask patient to say "aah", check uvula
- Comment no uvula deviation
- Ask patient to puff cheeks, listen for nasal regurgitation
- Comment no nasal regurgitation
- Ask patient to cough (assess for bovine cough)
- Mention testing gag reflex
- Mention giving water to assess swallowing
- Mention testing taste on posterior 1/3 of tongue

12.9 Accessory Nerve

- Inspect SCM and trapezius
- Comment no wasting/asymmetry in trapezius
- Palpate both muscles for bulk
- Comment normal bulk
- Test trapezius power: shrug shoulders against resistance
- Comment normal trapezius power
- Test SCM power: turn head against resistance
- Test other SCM
- Test bilateral SCM: look down against chin resistance
- Comment normal SCM power

12.10 Hypoglossal Nerve

- Ask patient to open mouth, inspect tongue
- Comment no wasting/fasciculations
- Ask patient to protrude tongue, check deviation
- Comment no deviation/fasciculations
- Ask patient to move tongue side-to-side quickly
- Comment normal movement
- Ask patient to press tongue against cheek, assess power
- Comment normal power
- Assess speech with "Yellow lorry" etc.
- Comment normal speech
- Mention testing swallowing

THE END

13 Miscellaneous

13.0.1 *The 3 questions in general look of the patient*

1. Do you know who I am?
2. Do you know where you are?
3. Do you know what time it is?

13.0.2 *The 6 vital signs*

1. *Heart rate (pulse rate) (60 – 100 beat per minute)*
2. *Blood pressure*
3. *Respiratory rate (12 – 20 breath per minute)*
4. *Oxygen concentration (SpO_2) ($\geq 95\%$ or 88%-92% if COPD)*
5. *Body temperature ($36.5 \leq x \leq 37.2$)*
6. *Pain score out of 10*

13.0.3 *The usals for palpation*

1. Mention that your hands are warm and clean (you can also rub your hands together to warm them, re-apply hygiene too)
2. Ask about pain in the area you're about to palpate, hold eye contact and begin

13.0.4 *The 5F's of abdominal distension*

1. *Fetus (Pregnancy)*
2. *Flatus (Any cause of bloating such as IBS..etc)*
3. *Feces (Constipation)*
4. *Fluid (Any cause such as ascites of chronic liver disease)*
5. *Fat*