

CLINICAL SKILLS & EXAMINATIONS

NOTES + BONUS VIDEOS

SECOND EDITION

PRE-SUMMARIZED
READY-TO-STUDY
HIGH-YIELD NOTES

FOR THE TIME-POOR
MEDICAL, PRE-MED,
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What's included: Ready-to-study summaries of clinical skills and the various examinations presented in succinct and logical downloadable PDF documents. Once downloaded, you may choose to either print and bind them, or make annotations digitally on your ipad or tablet PC.

Free bonuses: 10x Exemplary clinical examination demonstration videos.

File List:

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- Eye Exam (11p)
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- Focussed Gynaecological History (1p)
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- **Bonus Clinical Examination Demonstration Videos (See external folder in downloads):**
 - The Cardiovascular System Examination
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 - Upper Limb Neuro Examination
 - Lower Limb Neuro Examination
 - Hands & Wrists Examination
 - Shoulders Examination
 - Knee Examination
 - Feet & Ankles Examination

The Ear History & Hearing Tests:

The Interview – Ear Related History

1. Presenting Symptoms

- Pain,
- Discharge
- Itching,
- Vertigo
- Tinnitus
- Changing in Hearing

2. History of Presenting Symptoms

- Onset – weeks day, months
- Contributing factors – trauma, recent illness, exposure to sudden loud noise
- Which ear effected
- Does anything make it worse, does anything make it better.

3. Medical History – Note specifically

- Hypoxia at birth
- Low birth weight – less than 1500g
- Congenital abnormalities of the face or skull
- Maternal drug use
- Head trauma
- Ear trauma
- Genetic disease – Meniere's Disease
- Chronic and acute infections – ear, sinus, colds, flu

4. Surgical History – Note specifically

- Ear surgery – grommets etc
- Sinus surgery
- Head and facial surgery
- Nerosugery

5. Medications: Many medications can be ototoxic. Note spefically:

- Large doses of Aspirin
- Gentamicin Sulphate
- Aminoglycosides

6. Social History – Note specifically:

- Exposure to loud noises at work, availability and us of PPE
- Exposure to Industrial noise
- Exposure to recreational noise

7. Family History – Note Specifically

- Family history of hearing loss
- Genetic disorders

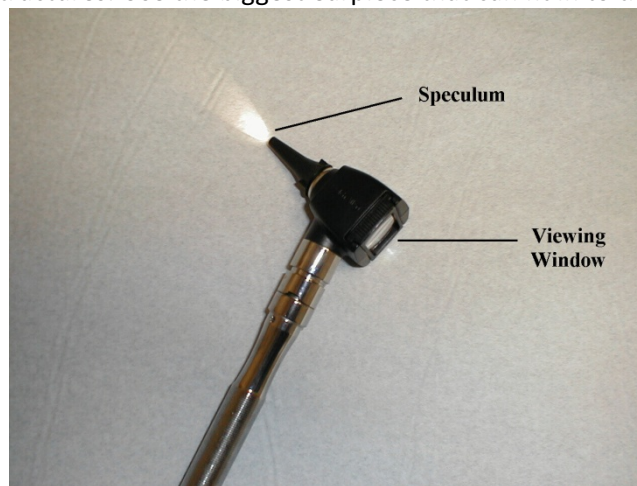
Examination of the Ear

External structures:

- Briefly examine the outer structures
 - Colour and texture of the skin
 - Any moles, cysts, nodes, or deformities
- Any skin changes suggestive of cancer (e.g basal cell, melanoma,
 - Any signs of swelling and/or redness
 - Discharge – colour and odor
- Palpate the ear for pain, tenderness, skin texture and lesions.
 1. If pain increases – external ear infection likely
 2. No pain increase – middle ear infection likely
 3. Tenderness in mastoid area – possible mastoiditis

External Auditory Canal and Tympanic Membrane:

- **The Otoscope:**
 - The otoscope allows you to examine the external canal,, as well as the tympanic membrane and a few inner ear structures. Use the biggest earpiece that can fit in to the ear canal.



Examination procedure:

Always examine the unaffected ear first.

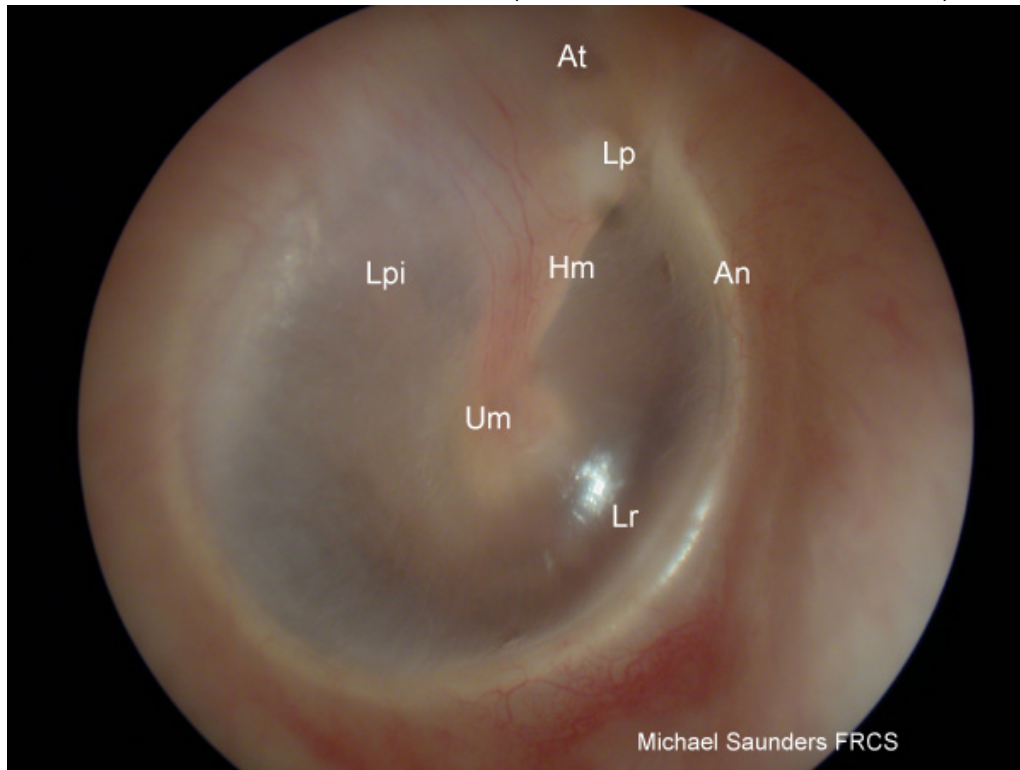
1. Place the tip of the specula in the opening of the external canal.
2. Gently grasp the top of the left ear with your left hand and pull up and backwards. This straightens out the canal, allowing easier passage of the scope.
3. Look through the viewing window with either eye. Slowly advance the scope, heading a bit towards the patient's nose but without any up or down angle.
4. As you advance, pay attention to the appearance of the external canal. In the setting of infection, called otitis externa, the walls becomes red, swollen and may not accommodate the speculum. In the normal state there should be plenty of room.

The Tympanic Membrane:

- The tympanic membrane (a.k.a. ear drum) should be visible.

Pay particular attention to:

- The color:** When healthy, it has a grayish, translucent appearance.
- The structures behind it:** The malleus, one of the bones of the middle ear, touches the drum.



An *annulus fibrosus*

Lpi *long process of incus* - sometimes visible through a healthy translucent drum

Um *umbo* - the end of the malleus handle and the centre of the drum

Lr *light reflex* - antero-inferiorly

Lp *Lateral process of the malleus*

At *Attic* also known as *pars flaccida*

Hm *handle of the malleus*

- In the setting of infection within the middle ear, the drum becomes diffusely red and the light reflex is lost.
- fluid collecting behind the drum. This is called a middle ear effusion and can cause the drum to bulge outwards.

Detecting Conductive v. Sensorineural Deficits:

1. **Conduction:** The passage of sound from outside to the level of the 8th cranial nerve. This includes transmission of sound through the external canal and middle ears.
2. **Sensorineural:** The transmission of sound through the 8th nerve to the brain.

Hearing loss can occur at either level. To determine which is affected, the following tests are performed:

Weber Test:

- 1) Grasp the tuning fork by its stem and place the stem towards the back of the patient's head equidistant from either ear. The bones of the skull will transmit this sound to the 8th nerve, which should then be appreciated in both ears equally.
 - a. If there is a conductive deficit (e.g. wax in the external canal), the sound will be heard better in that ear. This is because impaired conduction has prevented any competing sounds from entering the ear via the normal route.
 - b. In a sensorineural abnormality (e.g. an acoustic neuroma, a tumor arising from the 8th CN), the sound will be best heard in the normal ear.
- 2) If sound is heard better in one ear it is described as lateralizing to that side. Otherwise, the Weber test is said to be mid-line.



Rinne Test:

- 1) Place the stem on the mastoid bone and instruct the patient to let you know as soon as they can no longer hear the sound.
- 2) Then place the tines of the still vibrating fork right next to, but not touching, the external canal. They should again be able to hear the sound. This is because transmission of sound through air is always better than through bone.
- 3) This will not be the case if there is a conductive hearing loss which causes bone conduction to be greater than or equal to air.
- 4) If there is a sensorineural abnormality (e.g. medication induced toxicity to the 8th CN), air conduction should still be better than bone as they will both be equally affected by the deficit.



Tympanometry

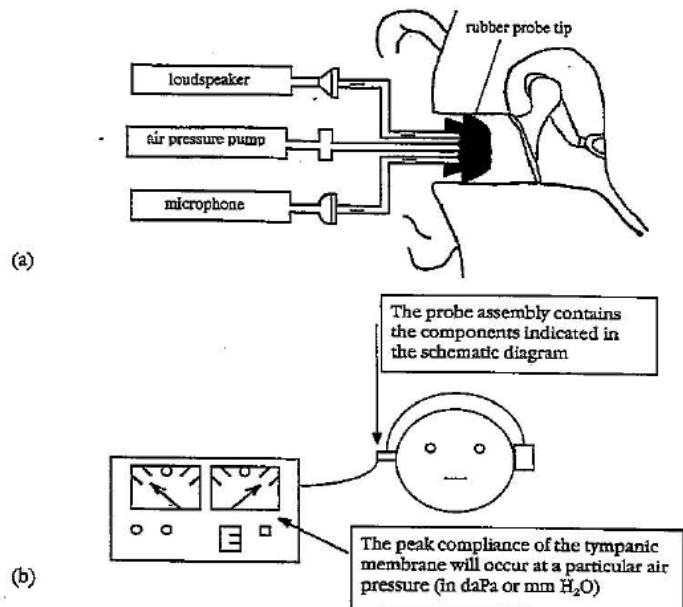


Figure 4.1: Schematic illustration of tympanometry equipment. (a) Shows detail of the probe that is inserted into the external auditory meatus. (b) Illustrates general set up. (In part, reproduced with permission from: Balthazor RJ and Cevette MJ (1978)).

Tympanometry is a sensitive procedure with the potential to detect middle-ear disorders before patient symptoms are obvious. For this reason there may sometimes be apparent inconsistency between the results of tympanometry and of visual inspection of the tympanic membrane (Haggard & Hughes, 1991).

Tympanograms

The purpose of tympanometry is to determine the point and magnitude of greatest compliance (mobility) of the tympanic membrane. A tympanogram is a graph that illustrates the compliance on the y axis (left-hand side) and pressure (in mm H₂O) on the x axis (across the bottom). The results provide important information about middle ear function, and help diagnosticians detect different conditions and diseases of the middle ear. Tympanograms can be interpreted according to the peak pressure point, peak amplitude, and shape (Feldman, 1975). Based on dimensions of the tympanogram, several classifications and possible etiologies are:

Pressure (shown by location of peak)

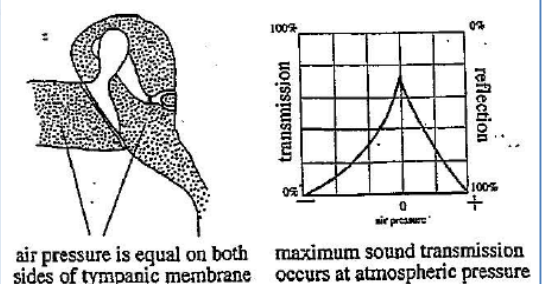
- Normal peak: otosclerosis, ossicular chain discontinuity, tympanoclerosis, cholesteatoma in the attic space
- No peak/Flat: perforated tympanic membrane

Compliance (shown by height of peak)

- increased amplitude: eardrum abnormality, ossicular chain discontinuity
- Reduced amplitude: otosclerosis, tympanosclerosis, tumors, serous otitis media
- Normal amplitude: eustachian tube blockage, early acute otitis media

Shape (shown by slope)

- Reduced slope: otosclerosis, ossicular chain fixation, otitis media with effusion, tumor
- Increased slope: eardrum abnormality, ossicular chain discontinuity
- Not smooth: vascular tumors, patulous eustachian tube, ossicular chain discontinuity, eardrum abnormality (Feldman, 1975, 1976)



THE EYE EXAMINATION:

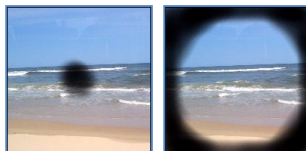
History: – (at least 80% of the diagnosis comes from the history)

- Take a meaningful, focussed history.
- Presenting complaint
 - o **Nature of Presenting complaint:**
 - 1. Abnormal Vision? (Eg. Flashing lights/blind spot/etc)
 - 2. Abnormal Sensation? (Eg. Itching/throbbing/pain)
 - 3. Altered Appearance?
 - o Time course
 - Sudden onset/Rapid Onset?
 - Duration
 - Exacerbating (What makes it worse)
 - Relieving (what makes it better)
 - Associated (What is it associated with)
- Past History
 - o Meds / allergies
 - o Eg. Are they diabetic
 - o Eg. What environmental insults (Eg. Welder)
- Family history
- Social history

Possible Presenting Complaints:

1. Abnormal vision

- **A) Reduced vision: (NB: If Sudden → *Probably Vascular in Origin*)**
 - o **Central Loss:**
 - Far/Near/Both
 - o **Peripheral Loss:**
 - Partial/Total loss
 - **Eg. Scotoma:**
 - An area of degenerated visual acuity in one's [field of vision](#), which is surrounded by a field of normal vision.



- **Hemianopia (bilateral):**
 - Type of partial [blindness](#) where vision is missing in the outer half of both the right and left visual field.
 - Usually associated with Optic Chiasm lesions.



- o **Impaired Night vision (Ie. “Night Blindness”):**
 - (a *symptom* of several eye diseases) – Eg. From Vit.A Deficiency.
 - A condition making it difficult or impossible to see in relatively low light.
- o **Colour Blindness:**
 - 8%males 0.5% females
 - (X-Linked Recessive)

- **B) Floaters:**

- Haemorrhage
- Inflammation
- Vitreous degeneration
- Muscae volitantes (Small Spots)



- **C) Flashers:**

- Due to Irritative stimulation of retinal or visual pathway (no sensation)
 - Unilateral (retinal)
 - Bilateral (Visual Pathway)(Eg. From migraine/basilar artery insufficiency)

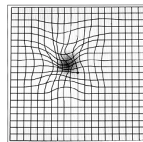
- **D) Haloes**

- Rainbow coloured rings around lights
 - Due to Diffraction
 - Corneal oedema
 - Can suggest Increased intraocular pressure



- **E) Metamorphopsia / Micropsia:**

- Metamorphopsia = Apparent distortion of straight lines



- Micropsia = Objects are perceived to be smaller than they actually are
- Possible Causes:
 - Retinal oedema → Require urgent referral
 - Macular degeneration

- **F) Diplopia (Double Vision):**

- Binocular Diplopia:
 - When axes of both eyes are not directed to the same object
 - Causes:
 - Muscle Weakness (Eg. Myasthenia)
 - Nerve – Eg. CN-III with ptosis mydriasis
 - Eg. CN-VI with head injury raised IC pressure
- Monocular Diplopia:
 - Patient sees double when viewing with only one eye.
 - Possible Causes:
 - Corneal Surface Deformity
 - Structural Defect in Eye
 - Lesion in Visual Cortex
 - Sub-Luxation of Lens

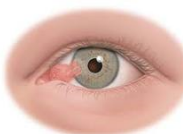


2. Abnormal Sensation:

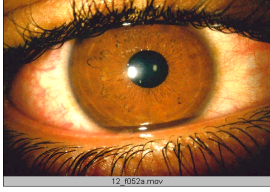
- **A) (Stinging/scratching pain) Foreign body sensation:**
 - o **Causes include:**
 - Entropion & Trichiasis (Eyelid folds inward → Eyelashes touching cornea)
 - Conjunctivitis
 - Xerophthalmia (dry eye)
 - Can be minimal in IOFB (Intra-Ocular Foreign Body)
 - o **Local anaesthetic relieves it.**
- **B) (Achy Pain):**
 - o Eg. Photophobia (excessive sensitivity to light and the aversion to sunlight)
 - o Eg. Iritis (Inflammation of Iris)
 - o Eg. Keratitis (Corneal Inflammation)
- **C) (Severe Deep Pain):**
 - o Eg. Acute Closed Angle Glaucoma → requires Pupil Constriction to open the Canal of Schlemm.
 - o Eg. Herpes Zoster infection of the Eye.
- **D) Asthenopia (eye strain):**
 - o **After intensive use of eyes**
 - o **Due to:**
 - **Inadequately corrected refractive error**
 - **Heterophoria** (motion of the eyes are not parallel to each other)
- **E) Watery eyes / discharge**
 - o **Overproduction of tears (ocular irritation/ FB)**
 - o **Faulty drainage of tears**
 - o **Instability of tears (Tears run down face instead of staying in the eyes → Dry Eyes)**

3. Altered Appearance

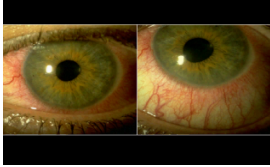
- **Proptosis (Eye Dislocation)**
 - o From Orbital Infection, trauma, mass
 - o Eg thyroid
- **Ptosis ('small' eye)**
 - o CN-III nerve lesions
 - o Levator abnormalities
 - o Local lid abnormalities eg infections
- **Lid retraction**
 - o Where the lid retracts or moves away from the surface of the eye.
- **Lesions**
 - o On lids
 - o On globe eg pterygium



- **Diffuse redness**



- **Ciliary injection**



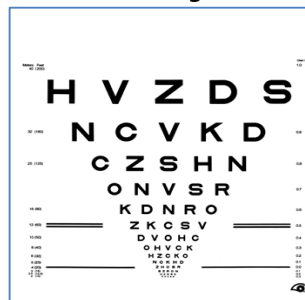
- **Corneal/Iris Opacities:**



TESTING THE VISUAL SYSTEM:

1. Visual Acuity Tests (Snellen's Chart):

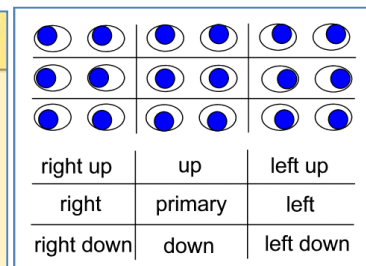
- All Australian charts are read at 6m (Or are standardised to 6m)
- Tests 'Corrected' visual acuity @ a distance. (Those with 'corrected' vision use their glasses)
- Each eye is tested Separately; Followed by vision with both eyes open.
 - Record results for:
 - Right Eye
 - Left Eye
 - Both Eyes
 - The Results are Fraction:
 - Numerator = the standardised distance that letter should be read at
 - Denominator = The distance that it should be visible from with perfect vision
- Try using a Pinhole to Improve Visual Acuity (A pinhole eliminates the need for a lens)
 - If acuity improves with pinhole, it is a refractive error;
 - If acuity doesn't improve, it is a retinal problem.
- IF they can't read the snellens chart (even from up close), you need to ask them whether they can see:
 - CF (count Fingers)
 - HM (Hand movements)
 - PL, NPL (Perception of Light/nil perception of light)(Shine a light in their eye)
- IF testing for Presbyopia – use a 'Near-Reading Chart'.



2. Testing Extraocular Muscles (Eye Movement):

- Start with the target 6 inches in front of your partner; Then move your target slowly and smoothly in an wide "H" pattern.
 - Look for **Conjugate Movement**:
 - Movement of both eyes in a coordinate manner
 - Look for **Nystagmus**:
 - Rhythmic, involuntary oscillation of the eyes.
- Is movement Comitant/Incomitant?
 - (To the eyes move parallel to each other?)
 - (If there's strabismus, is the same angle of misalignment maintained in all directions?)
- NB: Deviation greatest when move towards field of action of involved muscle.
- Test Convergence for near Vision.

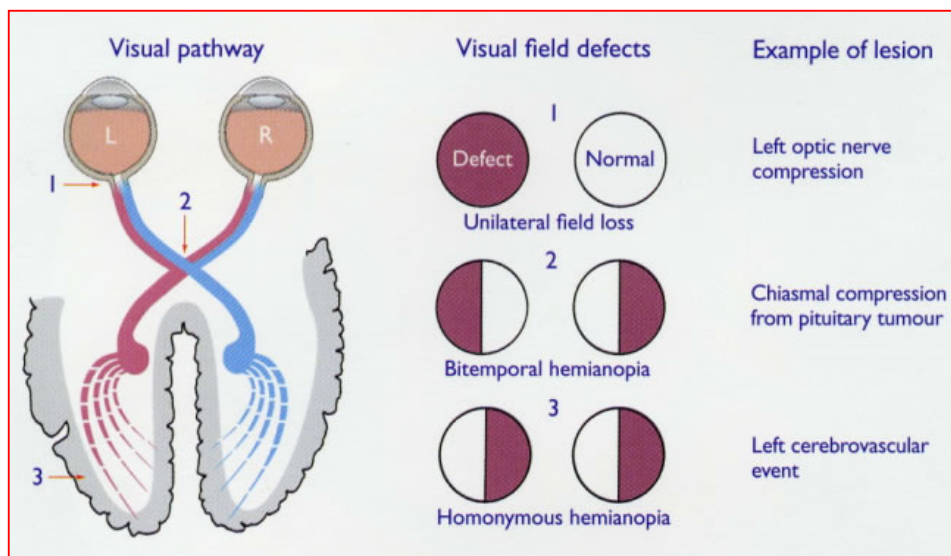
Name	Action	Controlling cranial nerve
Lateral rectus	Moves eye laterally	VI (abducens)
Medial rectus	Moves eye medially	III (oculomotor)
Superior rectus	Elevates eye and turns it medially	III (oculomotor)
Inferior rectus	Depresses eye and turns it medially	III (oculomotor)
Inferior oblique	Elevates eye and turns it laterally	III (oculomotor)
Superior oblique	Depresses eye and turns it laterally	IV (trochlear)



"SO4, LR6, the rest are 3" - Superior Oblique by CN-IV; Lateral Rectus by CN-VI, and all the other recti by CN-III.

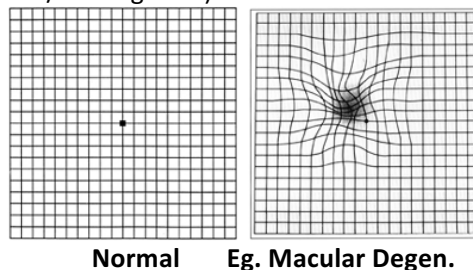
- **3. Visual field Test:**

- Pt stares at your nose.
- **A) Testing Peripheral Visual Field:** Use your fingers to test vision in peripheries of each quadrant. (Best to use a red-topped bottle/pin)
 - Sit in front of Pt with eyes at the same level, about an arm's length away.
 - Cover your left eye.
 - Ask your Pt to cover their Right eye and to stare into your open eye.
 - Compare your partner's peripheral visual field to your own:
 - Hold up your finger midway between yourself and the Pt (so it is just out of your field of vision).
 - Move your finger slowly towards the centre asking the patient when they first see it.
 - Test all four quadrants of the visual field (upper right, upper left, lower right, lower left).
 - Repeat for the right eye.
 - **Remember that the visual field and the retina have an inverted and reversed relationship:**
 - Upper field on the inferior retina
 - Lower field on the superior retina
 - Nasal field on temporal retina
 - Temporal field on nasal retina.



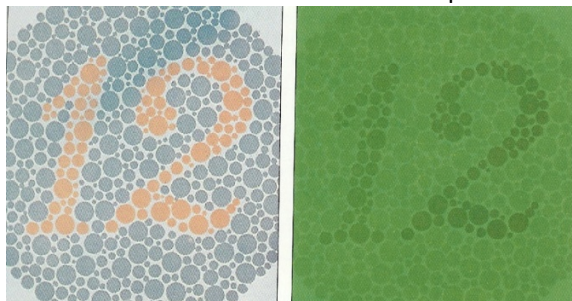
This Diagram is What was Asked in the GLS

- **B) Testing Central Visual Field:** Use an Amsler Grid to test Pt's Central Visual Field. (Pts with macular disease may see wavy lines/missing lines)



- **4. Colour vision (Ishihara Tests):**

- Tests for colour blindness
- ∴ Tests Cone Receptors.
- NB: Men are Most Affected by Colour Blindness:
 - Because it is *Sex-Linked Recessive* (on the X-Chromosome), and therefore acts dominantly when inherited in males (who only have 1x X-Chromosome).
 - Red-Green photoreceptor disorders are most common.
- People with normal colour vision can see numbers in the pics below:

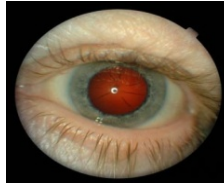


- **5. Pupillary Reflexes:**

- (NB: The *constriction* reflexes are Parasympathetic-Mediated)
- **PERLA is Pupils Equal Round Reactive to Light and Accommodation.**
- A bright source of light is used to test pupillary reflexes by swinging the light in front of right eye 2 times, while observing 1st right pupil and then the left. Test is then repeated for left eye.
 1. Dim lights.
 2. Ask Pt to stare at a target in the distance.
 3. Turn on the light and look at the **right pupil** as you swing the light over the **right eye**. Watch as the pupil constricts.
 - **This is the direct response.**
 4. Repeat the same procedure again but this time look at the **left pupil** as you swing the light over the **right eye**. Does it also constrict?
 - **This is the consensual response.**
 5. Now repeat the procedure with the **left eye**. First looks at the left pupil as you shine the light on the left eye, then look at the right pupil.
- **Direct:**
 - Eg. Right Pupil contracts when Right Eye exposed to Light.
- **Consensual:**
 - Eg. Left Pupil Contracts when Right Eye exposed to Light.
- **Testing Accommodation-Mediated Pupillary Constriction:**
 - (Pupil Constriction Associated with the Accommodation)
 - 1. Ask your Pt to hold their finger about 8 inches from their nose.
 - 2. Ask your Pt to look in the distance and then look at their finger.
 - 3. Watch for convergence (crossed eyes) and pupillary constriction.
- **NB: Corneal Opacities/Cataracts can Affect the Pupillary Response:**
 - → Decreased pupillary response in both the affected eye (Direct response) and the other eye (Consensual response) because less light falls on the retina of the affected eye.

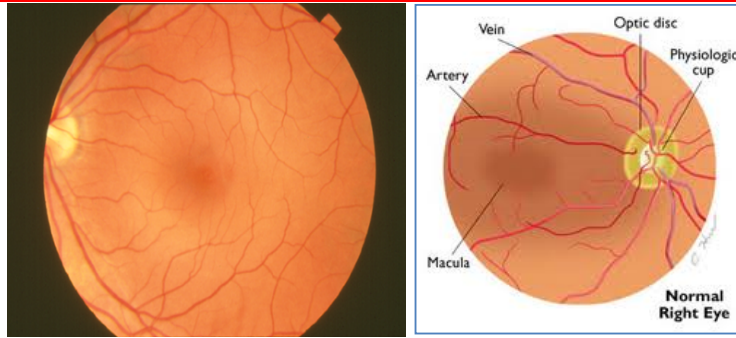
Ophthalmoscopy Technique:

- Ask pt to look straight ahead both eyes open
- Set to zero
- Use right hand and right eye for pt's right eye, and left ditto for left eye
- Hold sight hole as close as possible to your eye, steady it against your nose
- Gently raise lid with your thumb
- Find red reflex (the reddish-orange reflection from the eye's retina when using an ophthalmoscope)
 - o Stand at arms length and focus on the pupillary area with ophthalmoscope
 - o Should be able to see an uniform orange glow
 - o This is due to light being reflected from the choroidal vessels
 - o Look for any opacity in the red reflex
 - o (Abnormal or absent reflex especially in children could mean sight threatening condition. Need to be referred and treated quickly otherwise vision fails to develop)



- Follow it in at about 15 degrees temporal to line of vision
- Focus
- Find a blood vessel
- Follow it to the disc
- **Systematically examine**
 - o **Vessels / Macula / Vessels**
 - o **Optic Disc**
 - Colour (normal pink)
 - Margins – Well defined
 - Cup:Disc Ratio. Normal is less than half of the disc diameter. (If ratio is increased → Probably Glaucoma)
 - o **Retina:**
 - Look for:
 - Haemorrhages/Exudates/New Blood Vessels/Arteries/Veins (Bigger & Darker)
 - Common causes of retinal changes:
 - Diabetic Retinopathy (leading cause of blindness in <60yrs)
 - Age Related macular degeneration (Leading cause of blindness in >60yrs)
 - Hypertensive retinopathy
 - Retinal Artery Occlusion
 - Retinal Vein occlusion
 - o **Macula:**
 - Darker than rest of retina (Due to pigment and thick ganglion cell layer)
 - Temporal to the disc
 - Centre of macula is the fovea.
 - No blood vessels overlying the fovea

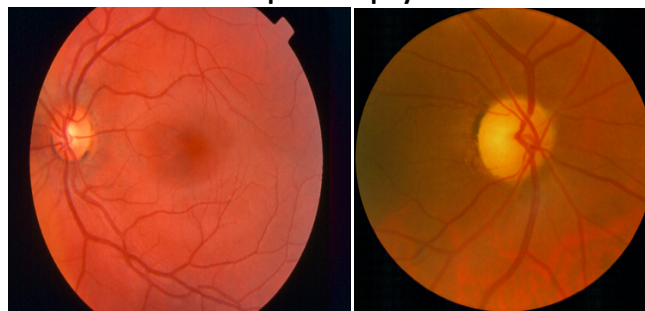
Normal Fundus



ABNORMAL OPHTHALMOSCOPY FINDINGS

OPTIC DISC ABNORMALITIES (NORMAL VS. ABNORMAL)

Optic Atrophy

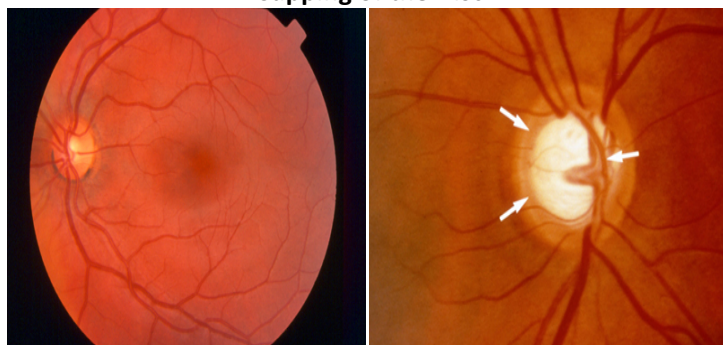


Swollen Disc

(Notice disc margin is not well defined)



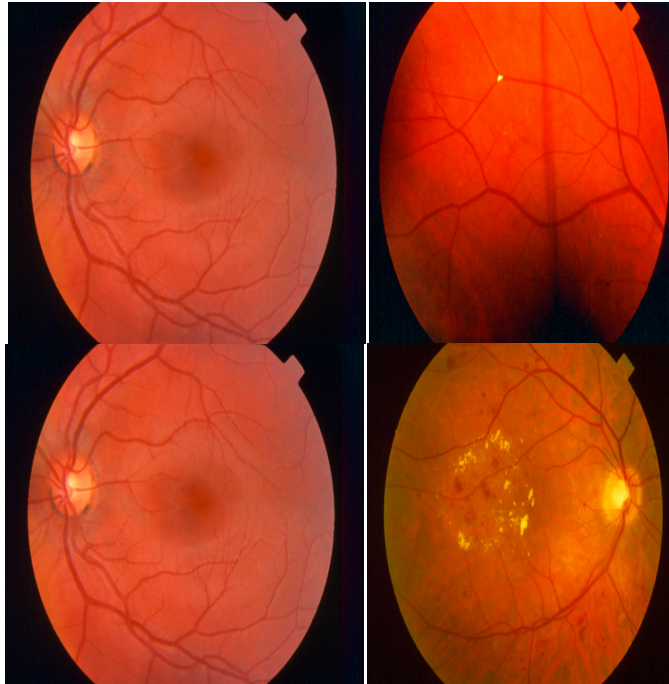
"Cupping of the Disc"



This ratio is approx. 0.6

RETINAL ABNORMALITIES
(NORMAL VS. ABNORMAL)

Exudates:



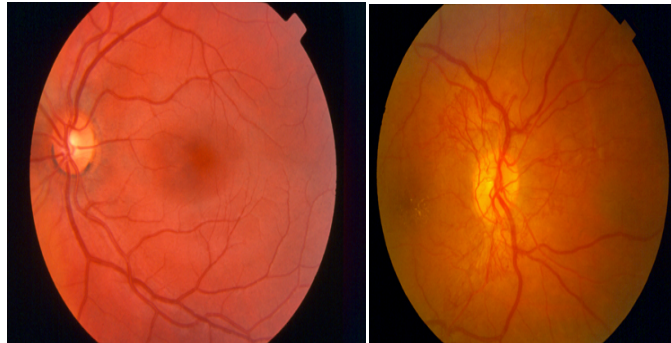
These are hard exudates because areas of leakage → protein & calcium deposits.



These are soft exudates (Aka: "Cotton wool Spots") due to ischaemia

BLOOD VESSEL ABNORMALITIES (NORMAL VS. ABNORMAL)

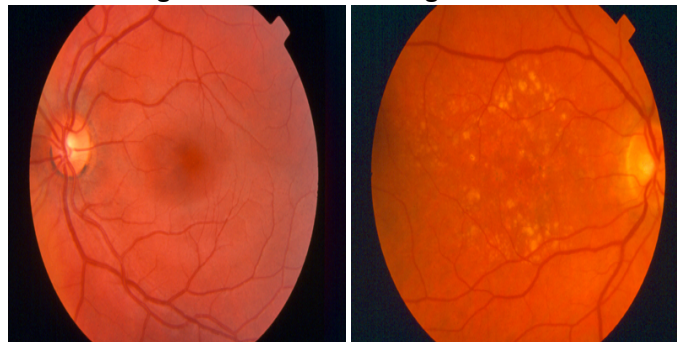
New Vessels (Proliferative Diabetic Retinopathy)



New Vessels (abnormal) - Proliferative diabetic retinopathy (Most common fundal abnormality that you'll see)
These are dangerous because they are very fragile and can bleed very easily. → Impairs Vision

MACULAR ABNORMALITIES (NORMAL Vs. ABNORMAL)

Age Related Macular Degeneration



- Loss of Vision in the Center of the Visual Field (the macula) due to Damage to the Retina.
- → Can make it Difficult/Impossible to Read or Recognize Faces, although enough peripheral vision remains to allow other activities of daily life.
- Most common form of blindness in over 65s

The "Well-Woman's Health Check" - (Breast, Pap Smear, Pelvic Exam):

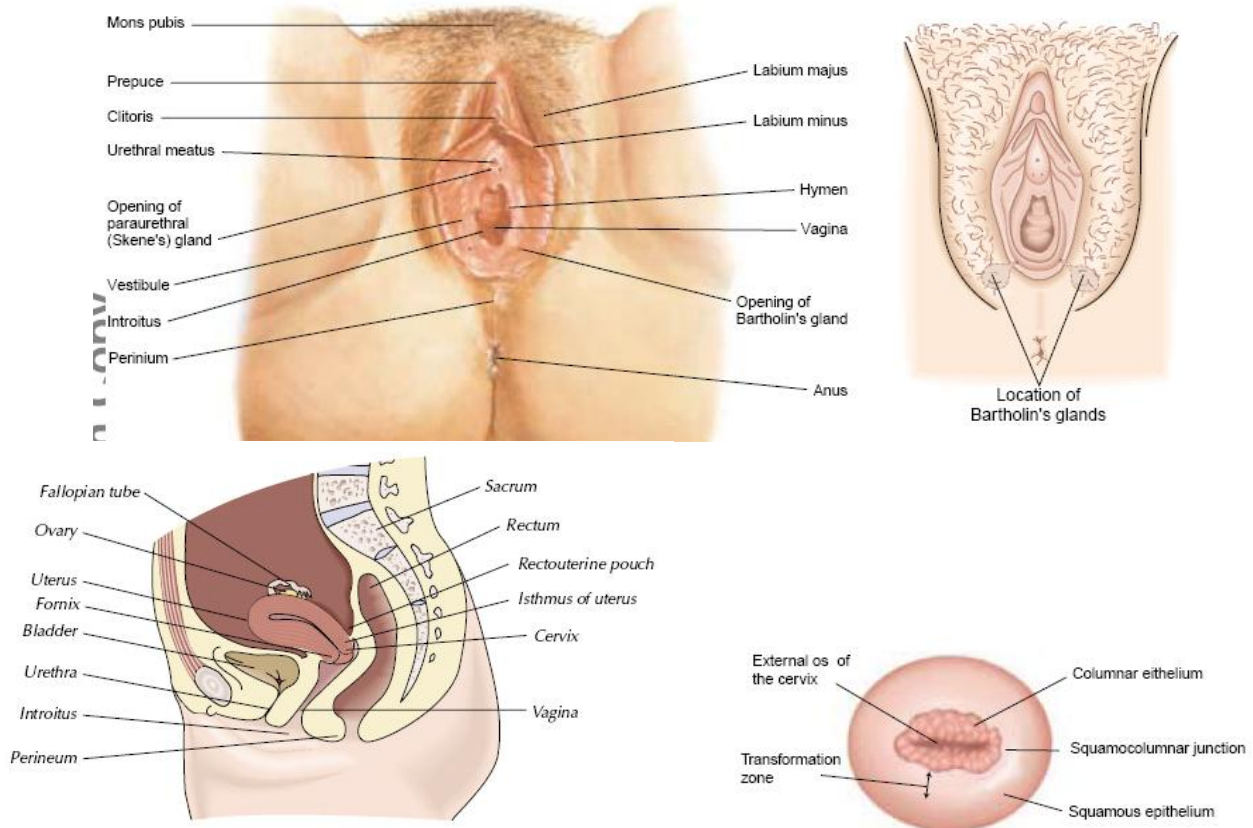
- Wash hands
- Ask about the well woman's check.
 - o Are they sexually active? When was their last pap smear? (**Pap smears recommended every 2 years starting 1-2 years after first sexual activity until death**)
 - o Have they ever been screened for breast cancer? (**Mammogram Screening is recommended every 2 years starting at age 50-70**)
 - o Do they wish to be screened for STI's? Gonorrhea, Chlamydia, HIV, Syphilis? (**Recommended For px's < 25 years old for High Vaginal Swab Chlamydia +/- Urine Sample for Gonorrhoea**)
- Explain the examination & Get consent + ASK FOR A CHAPERONE.
- Explain that the exam may be discontinued at their discretion
- Ask px to undress and drape themselves in privacy and let you know when they're ready
- Ask: Any areas of concern?

The Breast Examination:

- **General Inspection (Peud'e'Orange, Skin Puckering, Nipple Retraction, Lumps/Masses, Discharge, Tethering):**
 - o Sitting up with hands on hips
 - o Roll Shoulders forward
 - o Roll shoulders back
 - o Hands above head (do twice and look at both sides)
- **Palpation:**
 - o **Sitting Up (Lymphadenopathy):**
 - Lymph Nodes (Supraclavicular, Infraclavicular, Parasternal, Pectoral, Subscapular, Central, Lateral)
 - o **Lying Down with Arm Behind head (Firm Masses distinct from normal nodularity of breasts):**
 - Zig Zag in a North-South Fashion starting at Upper Sternal Border, all the way across the breast, and finish up in the tail (overlying the shoulder).
 - Start with light pressure, then deep pressure
 - Do not lift hand when moving to next area
 - Assess for Subareolar Masses
 - Assess for Nipple Discharge
 - **NB: Whilst doing this, Educate Patient about Breast Awareness:**
 - Do you do your own breast self examination? (Most lumps are found by themselves)
 - You don't need a FamHx to get breast cancer (> 90% breast cancer have no famHx)
 - Women with a FamHx of breast/ovarian cancer are at ↑ risk of developing breast cancer
 - Mammogram Screening is recommended **every 2 years starting at age 50-70**
 - o **REMEMBER TO DO THE OTHER SIDE AS WELL!!**
- **Conclusion:**
 - o "Everything looks healthy and normal"
 - o "Ok we are now going to move onto the pap smear and pelvic examination. Are you okay with that?"



The Pelvic Examination



General Inspection & Palpation:

- First I am going to **inspect** the external genitalia, you will feel my fingers palpating you, please put soles of feet together and relax knees to side.
 - Touch inner thigh before touching genitals
 - Open labia majora
 - Inspect labia minora, clitoral hood, urethral orifice, ask pt to bear down and inspect for cyst/rectocele, urethra/uterine prolapse, inspect bartholins glands, fourchette, perineum, anus. Also inspect skin, mons pubis, intertriginous areas and hair distribution

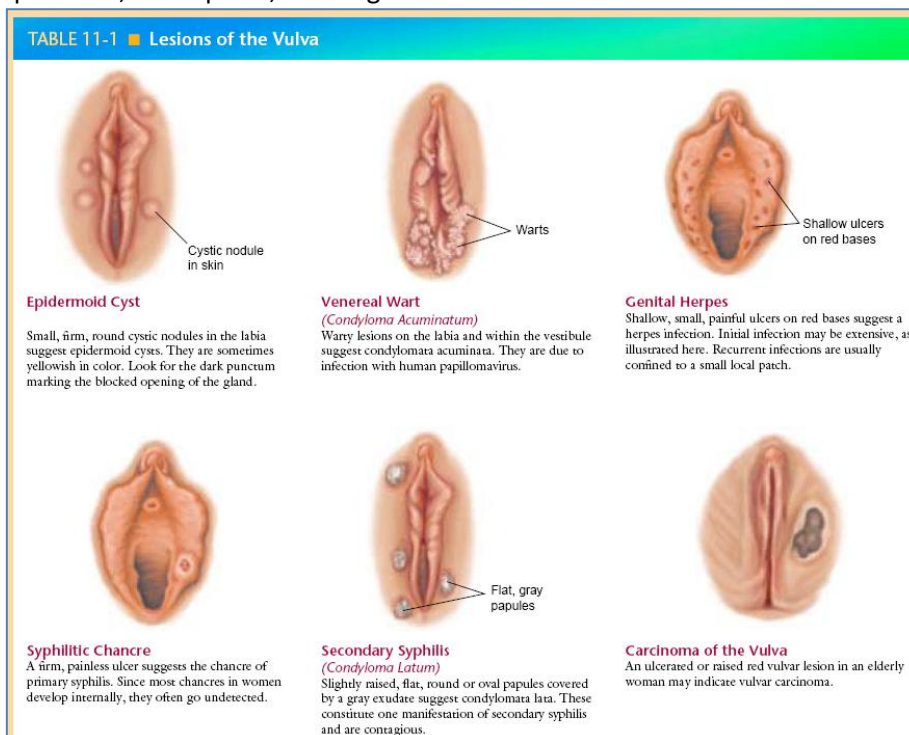
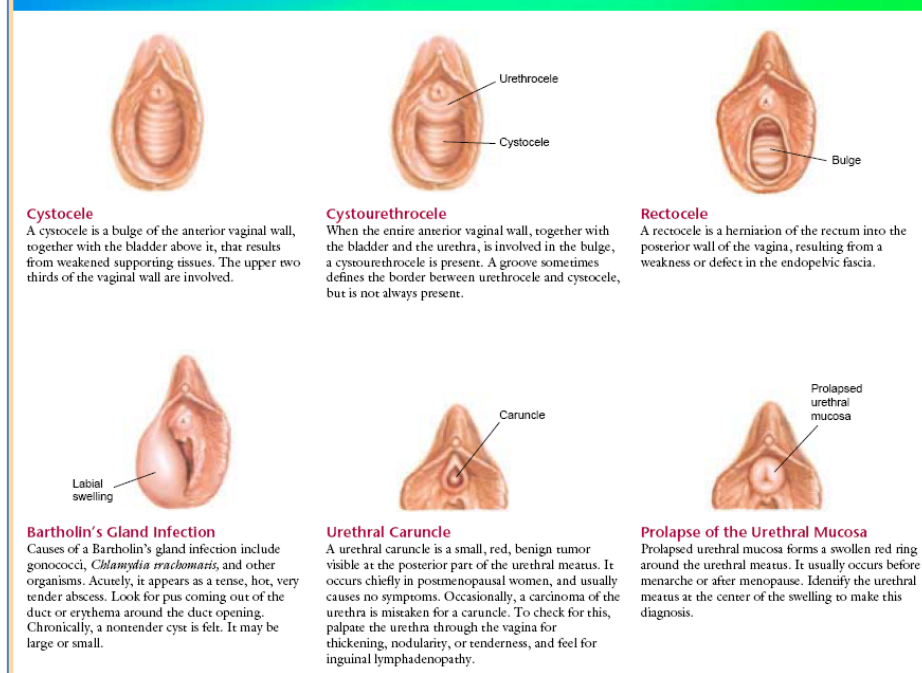


TABLE 11-2 ■ Bulges and Swelling of the Vulva, Vagina, and Urethra



Speculum Examination & Pap Smear:

- I will now insert the speculum so I can see your cervix and obtain a pap smear (and cultures)
 - Pick up speculum in left hand. Apply lubricant to back 2/3 of speculum with right index finger. Switch speculum to right hand
 - Touch the inner thigh before touching genitalia
 - Place bottom bill of speculum against the fourchette and introduce speculum into vagina with downward pressure until it is fully inserted
 - Open speculum by pressing on lever, open and adjust until cervix comes into view, tighten screw to hold speculum in open position while accessing pap/culture supplies
 - **Obtain pap/cultures – DON'T FORGET TO SPRAY THE SAMPLES WITH FIXATIVE IMMEDIATELY!!**
 - Note position of cervix – normal/prolapsed
 - Note whether cervix is parous or nulliparous
 - Note any discharge from cervix (mucoïd, clear, yellow, bloody) or in vaginal vault
 - Note if cervix is friable or has any lesions
 - Note whether vagina is rugae or is atrophic
 - Release screw while keeping pressure on level (to avoid bills closing on cervix) remove speculum approximately 1 cm and then release lever so speculum is closed as it is removed from the vagina
 - Everything appears to be healthy and normal OR discuss abnormal findings after exam is completed and px is dressed

Bimanual Pelvic Examination:

- I am now going to do the bimanual **exam** – this consists of inserting 2 gloved fingers into the vagina and palpating the uterus and ovaries:
 - Touch inner thigh before touching genitals
 - Insert gloved index and middle finger of right hand into vagina with downward pressure on fourchette, may say relax this muscle here
 - Determine location of cervix, move fingers behind cervix and move cervix upward to test for cervical motion tenderness, observe px's face for reaction
 - Place fingers on cervix while placing left hand on px's abdomen and assess size, contour and mobility of uterus
 - Remove fingers a few cm and place along left side of cervix in fornix. Fingers point upward as left hand palpates along left side of uterus to assess adnexa. Remove fingers a few cm and repeat on right side
 - Remove fingers and then gloves and say to px 'everything appears healthy and normal' 'I'll leave so you may get dressed' 'I will be back to answer any questions you may have'
 - Hand px box of tissues
 - Rectal exam as indicated

Clinical Investigations

- Pap, GC/Chlamydia, other STI, urine pregnancy test, urinalysis, mammogram, breast/pelvic US.

Post Exam Education - explain

- Any questions or concerns?
- **Explain Pap Smear:**
 - On visual inspection everything appeared “Healthy and normal”, but we will await the results of the pap smear to see if there are any microscopic abnormalities.
 - In the meantime, you may experience some **mild spotting** – If this is severe go straight to the ED.
 - Results are expected in one week. Arrange for call back.
 - Would you like to be placed on the Pap Smear Register (free register which will inform you of when you should come in for your next pap smear)
 - Remind the patient that Screening pap smear is recommended every 2 years starting 1-2 years after first sexual activity, and for as long as sexually active.
- **Thank the patient and conclude the examination.**

Gynaecological History:

Introduction

Consent – Can I ask you some questions regarding your reproductive and sexual health?

Menstrual History

- Age of Menarche (& Menopause if relevant)?
- LMP – Last menstrual period? (& Was the last period '*normal*'?)
- Regularity of periods? (N ≈ Predictable timing of menses)
 - o Duration of cycle? (N ≈ 28 days)
 - o Duration of menstruation? (N ≈ 5 days)
 - o (NB: Irregular can = PCOS/Stress/Anorexia/PID/Fibroids/etc)
- Quantity of bleeding? (Amenorrhoea, Menorrhagia)
- Intermenstrual Bleeding – i.e. bleeding between periods?
- Dysmenorrhoea – i.e. Painful periods?
- Dyspareunia – Painful Intercourse (Endometriosis)
- Associated Symptoms: Abdominal pain, Fever, Vaginal Discharge

Sexual History:

- Are you sexually active?
- Do you currently have one or more sexual partners?
- Heterosexual/Homosexual
- How many sexual partners have you had in the past 6 months?
- Have you ever been diagnosed with any STIs?
 - o Which ones?
 - o Treated?
- Last STI screen?
- Do you practice safe sex?

Contraceptive use:

- Any current contraceptives?
 - o Which one/s?
 - o For how long?
 - o Compliance?
 - o Understanding of how to use it effectively?
 - o Any side effects? (weight gain, mood swings)
- Any past contraceptives?
- Barrier protection

Past Gynaecological History?

- Up to date with Pap-Smears?
- Gardasil Vaccinations? – All 3?
- Results of last Pap-Smear?
- Any Previous Smear Abnormalities?
- Previous Colposcopy?

Past Gynaecological Surgeries?

- LLETZ Procedures? (For CIN1/3)
- Cone Biopsy? (For CIN1/3)
- Hysterectomy?
- Oophorectomy?
- Tubal Ligation? (For Contraception)

(Other History):

- Obstetric History
- PMH
- PSH
- Current Medications
- Allergies
- SocHx
- Systems Review
- Examination

Male Genitourinary Exam

Sequence

1. Wash hands
2. Introduce your self
3. Ask the patient's name
4. Ask the patients age
5. Explain the procedure
 - a. Involves inspection and palpation of the penis, testes and examination for hernia's.
6. Ask the patient to gown or drape.
7. Ask the patient to expose their groin and genitalia
8. Px can be lying or standing – standing preferable (hernia's are more easily seen this way)
9. General appearance
 - a. Anxious
 - b. Comfortable
 - c. In distress
 - d. Unable to stand
10. Penis
 - a. GLANS TO SHAFT
 - i. Glans
 1. Comment on circumcision
 2. Urethra – location (hypospadias), discharge (px may need to milk to penis)
 - a. Press end to open urethra
 3. Retract prepuce – smegma, phimosis, paraphimosis
 - ii. Shaft
 1. Inspect - vesicles, verruca (condyloma acuminatum), ulcerations, nodules, scars, inflammation (balanitis)
 2. Palpate for tenderness, induration, deformity,
 - iii. Skin at base of shaft
 1. Excoriation, inflammation, burrows, nits, lice
 - iv. Hair of pubic region
 - b. Scrotum
 - i. Inspect
 1. Rashes, epidermoid cyst, other lesions
 2. View above, below, lift penis
 - ii. Palpate
 1. Testis + epididymis
 - a. Size, shape, consistency, nodules
 2. Spermatic cord
 3. Transilluminate mass
11. Hernia Evaluation
 - a. Inguinal
 - i. Inspect
 1. Ask px to bear down, cough
 - ii. Palpate
 1. Right index finger for right inguinal
 2. Ask px to cough
 3. A hernia will touch your finger
 - iii. Auscultate
 1. Bowel sounds
 - b. Femoral
 - i. Inspect
 - ii. Palpate
 1. Femoral artery – hernia will be around there somewhere
 2. Ask px to cough

RECOMMEND

- Self examination of the testicles every month
- Clean the inside of the penis – if uncircumcised

Male Digital Rectal Examination & Prostate Examination:

12. Patient in Left Lateral Position – Get them to shuffle towards the edge of the bed until they touch your hip
13. General Inspection of Perineum (Scars, Fissures, Haemorrhoids, Skin Tags, Infection, Discharge)
14. “Ok we’re going to begin the rectal examination now”
15. Lubricate Index Finger and place on the anus, tell the patient to exhale or bear down, and as they do, curl your finger inside the anus.
16. Assess Sphincter tone & power by asking them to tighten their anus
17. Rotate finger a full 360° noting:
 - a. rectal masses, tenderness, faeces
 - b. Prostate: Normal rubbery & smooth with median sulcus? Nodular, hard and enlarged? Loss of median sulcus? Tenderness (Prostatitis)
18. Advise patient that you’re removing your finger.
19. Wipe finger onto white towel and inspect for any blood, pus or mucus.
20. Wipe patient’s anus with towel
21. Advise patient to get dressed

Pictures

TABLE 10-1 ■ Abnormalities of the Penis



Venereal Wart (*Condyloma acuminatum*)

Venereal warts are rapidly growing excrescences that are moist and often malodorous. They result from infection by human papillomavirus.



Genital Herpes

A cluster of small vesicles, followed by shallow, painful, nonindurated ulcers on red bases, suggests a herpes simplex infection. The lesions may occur anywhere on the penis. Usually there are fewer lesions when the infection recurs.



Peyronie's Disease

In Peyronie's disease, there are palpable nontender hard plaques just beneath the skin, usually along the dorsum of the penis. The patient complains of crooked, painful erections.



Hypospadias

Hypospadias is a congenital displacement of the urethral meatus to the inferior surface of the penis. A groove extends from the actual urethral meatus to its normal location on the tip of the glans.



Syphilitic Chancre

A syphilitic chancre usually appears as an oval or round, dark red, painless erosion or ulcer with an indurated base. Nontender enlarged inguinal lymph nodes are typically associated. Chancres may be multiple, and when secondarily infected may be painful. They may then be mistaken for the lesions of herpes. Chancres are infectious.



Carcinoma of the Penis

Carcinoma may appear as an indurated nodule or ulcer that is usually nontender. Limited almost completely to men who are not circumcised in childhood, it may be masked by the prepuce. Any persistent penile sore must be considered suspicious.

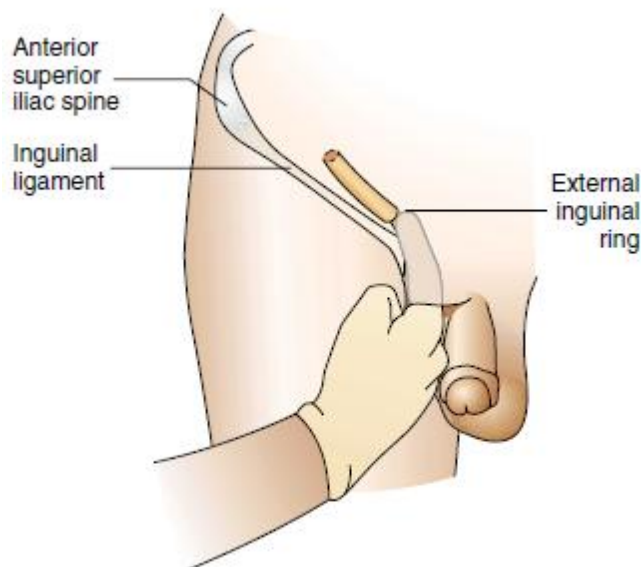
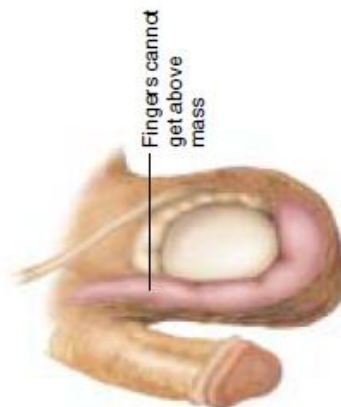


TABLE 10-2 ■ Abnormalities of the Male Genitalia



Hydrocele

A hydrocele is a nontender, fluid-filled mass within the tunica vaginalis. It transilluminates and the examining fingers can get above the mass within the scrotum.



Scrotal Hernia

A hernia within the scrotum is usually an *indirect inguinal hernia*. It comes through the external inguinal ring, so the examining fingers cannot get above it in the scrotum.



Scrotal Edema

Pitting edema may make the scrotal skin taut. This may accompany the generalized edema of congestive heart failure or nephrotic syndrome.



Cryptorchidism

In cryptorchidism, the testis is atrophied and may lie in the inguinal canal or the abdomen, resulting in an undeveloped scrotum as above. There is no palpable left testis or epididymis. Cryptorchidism markedly raises the risk of testicular cancer.



Acute Orchitis

The testis is acutely inflamed, painful, tender, and swollen. It may be difficult to distinguish from the epididymis. The scrotum may be reddened. Seen in mumps and other viral infections; usually unilateral.



Small Testis

In adults, the length is usually ≤ 3.5 cm. Small firm testes in *Klinefelter's syndrome*, usually ≤ 2 cm. Small soft testes suggesting atrophy seen in cirrhosis, myotonic dystrophy, use of estrogens, hypopituitarism; may also follow orchitis.



Early

Tumor of the Testis

Usually appears as a painless nodule. Any nodule within the testis warrants investigation for malignancy.



Late

As a testicular neoplasm grows and spreads, it may seem to replace the entire organ. The testicle characteristically feels heavier than normal.

(table continues next page)

TABLE 10-2 ■ Abnormalities of the Male Genitalia (Continued)



Acute Epididymitis

An acutely inflamed epididymis is tender and swollen and may be difficult to distinguish from the testis. The scrotum may be reddened, and the vas deferens inflamed. It occurs chiefly in adults. Coexisting urinary tract infection or prostatitis supports the diagnosis.



Spermatocele and Cyst of the Epididymis

A painless, movable cystic mass just above the testis suggests a spermatocele or an epididymal cyst. Both transilluminate. The former contains sperm and the latter does not, but they are clinically indistinguishable.



Tuberculous Epididymitis

The chronic inflammation of tuberculous produces a firm enlargement of the epididymis, which is sometimes tender, with thickening or beading of the vas deferens.



Varicocele

Varicocele refers to varicose veins of the spermatic cord, usually found on the left. It feels like a soft "bag of worms" separate from the testis, and slowly collapses when the scrotum is elevated in the supine patient. Infertility may be associated.



Torsion of the Spermatic Cord

Torsion, or twisting, of the testicle on its spermatic cord produces an acutely painful, tender, and swollen organ that is retracted upward in the scrotum. The scrotum becomes red and edematous. There is no associated urinary infection. Torsion, most common in adolescents, is a surgical emergency because of obstructed circulation.



Epidermoid Cysts

These are firm, yellowish, nontender, cutaneous cysts up to about 1 cm in diameter. They are common and frequently multiple.

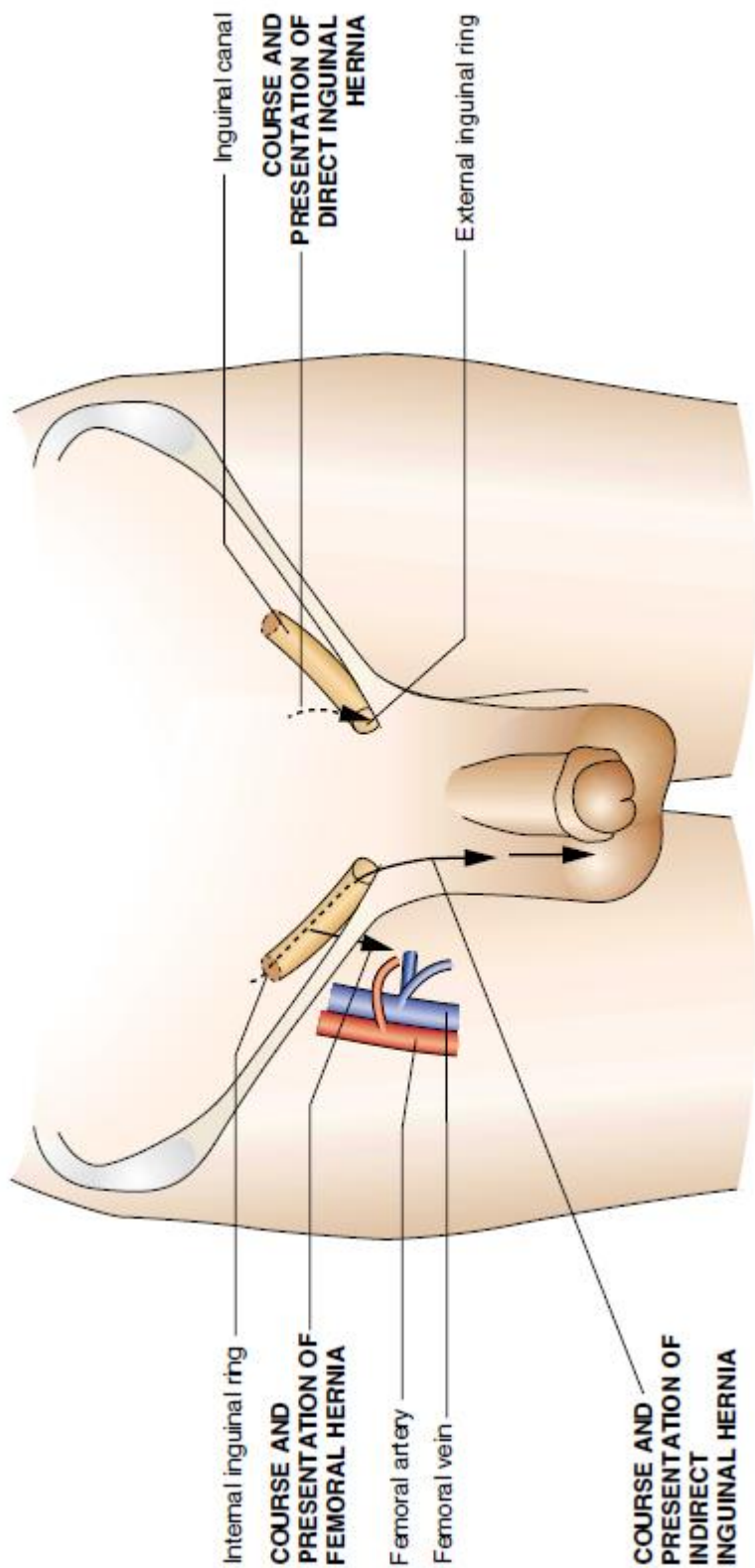


TABLE 10-4 ■ Differentiation of Hernias in the Groin

Differentiation among these hernias is not always clinically possible. Understanding their features, however, improves your observation.

	Inguinal		Femoral
	<i>Indirect</i>	<i>Direct</i>	
Frequency	Most common, all ages, both sexes	Less common	Least common
Age and Sex	Often in children, may be in adults	Usually in men over age 40, rare in women	More common in women than in men
Point of Origin	Above inguinal ligament, near its midpoint (the internal inguinal ring)	Above inguinal ligament, close to the pubic tubercle (near the external inguinal ring)	Below the inguinal ligament; appears more lateral than an inguinal hernia and may be hard to differentiate from lymph nodes
Course	Often into the scrotum The hernia comes down the inguinal canal and touches the fingertip.	Rarely into the scrotum The hernia bulges anteriorly and pushes the side of the finger forward.	Never into the scrotum The inguinal canal is empty.

Full Cardio Exam:

- **Introduction + Consent + Wash Hands**
- **General Inspection:**
 - Body Habitus:
 - Cardiac Cachexia (Portal Hypertension/RHF)
 - Obesity (Diabetes/Dyslipidaemia/Poor Diet)
 - Alert & Orientated?
 - Dyspnoea/Respiratory Distress (CCF, Pulmonary Hypertension, Cor pulmonale, MI)
 - Discomfort/Pain (Angina, MI, Pericarditis, Tamponade)
 - Diaphoresis (Angina, MI, Pain)
 - Chest Deformities/Surgical Scars (CABG, Valve Repairs)
 - Congenital Facies (Marfan's, Down's, Turner's Syndromes)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Shock, MI, Pain, Anaemia)
 - Irregular (AF – MI, Alcohol, Mitral Regurg/Stenosis)
 - Low Volume (Shock, MI, Tamponade)
 - **Respiratory Rate:**
 - Tachypnoea (Shock, MI, Pain, Anaemia)
 - **Blood Pressures:**
 - Hypertension (Pain, Essential Hypertension)
 - Hypotension (Shock, Heart Failure)
 - **Temperature:**
 - Fever (Infective Endocarditis, Pericarditis, Myocarditis)
- **Hands:**
 - Perfusion + CRT
 - Pale Nails & Palmar Crease Pallor (Anaemia)
 - Palmar Erythema (Polycythaemia)
 - Peripheral Cyanosis (Heart Failure, Pulmonary Oedema)
 - Clubbing (Chronic Cyanosis – eg. "Cyanotic Heart")
 - Splinter Haemorrhages/Osler's Nodes (Painful Fingertips)/Janeway Lesions (Palms Infec.Endo)
 - Xanthomata (Cholesterol in tendons - Dyslipidaemia)
 - Dupuytren's Contracture (Alcohol – Dilated Cardiomyopathy)
- **Arms:**
 - RR-Delay (Coarctation of the Aorta)
 - RF-Delay (Coarctation of the Aorta)
 - Track marks (IVDU/Infec.Endo)
- **Face:**
 - **Eyes:**
 - Conjunctival Pallor (Anaemia)
 - Scleral Icterus (Jaundice)
 - Xantholasma (periorbital cholesterol)
 - +Fundoscopy for Roth's Spots (Infective Endocarditis)
 - Arcus Senilis (Sign of CVD risk factors)
 - **Mitral Facies/Malar Rash (Mitral Stenosis)**
 - **Mouth:**
 - Hydration
 - Central Cyanosis/Peripheral Cyanosis (CCF - Pulmonary Oedema)
 - Gum Pallor (Anaemia)
 - Poor Dental Hygiene (Infec.Endo)
 - High Arched Palate (Marfan's Syndrome)
- **Neck:**
 - ↑JVP (RVF, Pulmonary Hypertension) + Hepatojugular Reflex
 - Jugular Venous Pulsations (Tricuspid Regurgitation)
 - Carotid Pulses (Character/Volume)
 - Carotid Bruits (Carotid Stenosis – Atheroma)

- **Chest:**
 - **Inspection:**
 - Scars (CABG, Sternotomy)
 - Chest Deformities (Pectus Excavatum, Pectus Carinatum, Barrell Chest, Kyphosis, Lordosis)
 - Bruising
 - Visible Apex Beat
 - Pacemaker
 - **Palpation:**
 - Apex Beat (Normally 5ICSMCL) – Displaced in Cardiomegaly & Hypertrophic Cardiomyopathy.
 - Heaves (Mitral/Tricuspid Regurgitation)
 - Thrills (Palpable Systolic Murmurs)
 - **Percussion (NOT NECESSARY):**
 - Heart Borders
 - **Auscultation:**
 - Muffled Heart Sounds (COPD, Tamponade)
 - Murmurs (Mitral/Tricuspid/Aortic/Pulmonary Valves) (Bell – Diastolic)(Diaphragm – Systolic)
 - +/- Axillary/Carotid Radiation
 - Pericardial Friction Rub (Pericarditis)
- **Back:**
 - (+ Respiratory if CCF – Basal Inspiratory Crackles)
 - Sacral Oedema (RHF)
- **Abdomen – LYING FLAT!!:**
 - Visible Pulsatile Masses (Aneurysm)
 - Scars
 - Tenderness
 - Hepatomegaly (Portal Hypertension/RHF)
 - + Pulsatile (If Tricuspid Regurg)
 - Splenomegaly (Infec.Endo)
 - Ascites/Shifting Dullness/Fluid Thrill (RHF)
 - Aortic Width (Aneurysm)
 - Renal Bruits
- **Legs & Feet:**
 - Peripheral Oedema (RHF)
 - Venous Stasis (Shiny Skin, Hair Loss, & Venous Ulcers)
 - Calf Tenderness (PVD, PE)
 - Arterial Ulcers
 - Pulses (Popliteal/Dorsalis Pedis/Posterior Tibial)
 - Cap Refill/Warm/Well Perfused
 - Clubbing
 - Splinters/Janeways/Osler's

Full Endocrine Exam:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - **Facies:**
 - Moon Facies (Cushings),
 - Frightened Stare (Graves - Hyperthyroidism)
 - Anhedonic + Puffy Eyes (Hashimotos – Hypothyroidism)
 - Frontal Bossing, Enlarged Jaw/Tongue/Nose/Ear/Brow (Acromegaly)
 - Hyperpigmented + Wasting (Addison's)
 - Hirsutism + Receding Hairline (PCOS)
 - **Body Habitus:**
 - Obesity (D2M, Cushing's, Hypothyroidism)
 - Wasting (D1M, Addison's, Hyperthyroidism)
 - Central Adiposity (Cushing's Syndrome)
 - **Hair Distribution:**
 - Hair Loss (Hypothyroidism)
 - Hirsutism (Cushing's & PCOS)
 - **Pigmentation:**
 - Generalised Hyperpigmentation (Addisons, Haemochromatosis)
 - Acanthosis Nigrans (Diabetes, Cushing's, Acromegaly, PCOS)
 - **Mental Changes:**
 - Slowness (Hypothyroidism, DKA, HONC, Addison's)
 - ↓Affect (Hypothyroidism)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Hyperthyroidism, Pheochromocytoma, DKA)
 - Bradycardia (Hypotension)
 - **Blood Pressure:**
 - Hypertension (Hyper & Hypothyroidism/Pheo/Cushing's/Conn's/PCOS/Acromegaly)
 - Hypotension (Addison's)
 - **Respiratory Rate:**
 - Typically Normal
 - Tachypnoea (DKA)
 - **Temperature:**
 - Hyperthermia (Hyperthyroidism)
 - Hypothermia (Hypothyroidism)
- **Hands:**
 - Warm, Well Perfused, ↓CRT, Erythema, Sweaty (Hyperthyroidism/Pheochromocytoma/Acromegaly)
 - Cool, Poorly Perfused, ↑CRT, P. Cyanosis, Dry (Hypothyroidism)
 - Tremor (Hyperthyroidism, Pheochromocytoma)
 - Clubbing/Thyroid Acropathy (Grave's Disease [Hyperthyroidism])
 - Plummer's Nails/Onycholysis (Grave's Disease [Hyperthyroidism])
 - Brittle Nails (Hypothyroidism)
 - Palmar Crease Pigmentation (Addison's Disease)
 - Large, Spade-like Hands (Acromegaly)
 - Osteoarthritic Heberden's & Bouchard's Nodules (Acromegaly)
 - Xanthomata (Hypothyroidism, Diabetes, Cushings, Acromegaly, PCOS)
- **Arms:**
 - Proximal Myopathy (Hyperthyroidism, Hypothyroidism, Cushing's, Acromegaly)
 - Hyperreflexia (Hyperthyroidism); Hung Reflexes (Hypothyroidism)
 - Muscle Wasting (Diabetes, Addison's)

- **Face:**
 - (Conjunctival Pallor, Central/Peripheral Cyanosis)
 - Receding Hairline + Loss of Lateral 1/3 Eyebrow + Periorbital Myxoedema (Hypothyroidism)
 - Exophthalmos + Lid Lag (Hyperthyroidism)
 - Xanthelasma (Hypothyroidism, Diabetes, Cushing's, Acromegaly, PCOS)
 - Bitemporal Hemianopsia (Pituitary Adenomas → Cushing's, Hyperthyroidism, Acromegaly, Prolactinoma, Conn's)
 - Fundoscopy (Hypertensive & Diabetic Retinopathy)
 - Buccal Hyperpigmentation (Addison's)
 - Mouth Infections (Diabetes, Cushing's)
 - **Facies:**
 - Moon Facies (Cushing's),
 - Frightened Stare (Graves - Hyperthyroidism)
 - Anhedonic + Puffy Eyes (Hashimoto's – Hypothyroidism)
 - Frontal Bossing, Enlarged Jaw/Tongue/Nose/Ear/Brow (Acromegaly)
 - Hyperpigmented + Wasting (Addison's)
 - Hirsutism + Receding Hairline (PCOS)
- **Neck:**
 - **Thyroid Gland Examination:**
 - **General Inspection:**
 - Thyroidectomy Scars
 - Goitre (Hyperthyroidism/Hypothyroidism)
 - Swallow Test (Is it mobile?)
 - **Palpation From Behind:**
 - Locate Thyroid Gland (2cm below laryngeal prominence)
 - Goitre (Hyper/Hypo) – Size, Consistency, Tenderness, Mobility, Thrill
 - Swallow Test (Mobility)
 - Cervical Lymphadenopathy (Grave's & Hashimoto's)
 - **Auscultate:**
 - Thyroid Bruits (Hyperthyroidism)
 - **Retrosternal Goitre?:**
 - Pemberton's Sign
 - Abdominojugular Reflux
 - ↑JVP
 - Percuss Across Sternum
 - Acanthosis Nigricans (Diabetes, Cushing's, Acromegaly, PCOS)
 - Buffalo Hump & Supraclavicular Fat Pads (Cushing's)
 - Carotid Bruits (Diabetes, Cushing's, Acromegaly, PCOS)
- **Chest:**
 - Hair Distribution (PCOS)
 - Gynaecomastia (Hyperthyroidism, Cushing's, Acromegaly)
 - Bony Tenderness (Cushing's [Osteoporosis], Hyperparathyroidism [Osteoclast], Acromegaly [Growth])
 - Hypertrophic Cardiomyopathy (Acromegaly) → Murmurs, Displaced Apex Beat
 - Pericardial Effusion + Pleural Effusion (Hypothyroidism)
 - Molluscum Fibrosum in Axilla (Acromegaly)
- **Abdomen:**
 - Central Adiposity (Type2Diabetes, Cushing's)
 - Obesity (Type2Diabetes, Cushing's, Hypothyroidism, PCOS [Metabolic Syndrome])
 - Striae (Cushing's)
 - Fat Atrophy @ Injection Sites (Diabetes)
 - Hepatomegaly (Diabetes [fatty liver], PCOS [fatty liver], Acromegaly [GH stimulation])
 - Hepatomegaly + Splenomegaly + Renal Enlargement (Acromegaly)
 - Adrenal Masses (Cushing's, Addison's, Conn's, Pheochromocytoma)
 - Ovarian Masses (PCOS)
 - ↑Bowel Sounds (Hyperthyroidism); ↓Bowel Sounds (Hypothyroidism)

- **Legs:**
 - Proximal Myopathy (Hypothyroidism, Hypothyroidism, Cushing's, Acromegaly)
 - Quadriceps Atrophy (Diabetes)
 - Fat Atrophy @ Injection Sites (Diabetes)
 - Pretibial Myxedema (Hyperthyroidism); Non-Pitting Oedema (Hypothyroidism)
 - Shiny, Hairless Skin + Pitting Oedema (Diabetes→PVD)
 - Charcot's Joint (Diabetes)
 - Arterial/Venous Ulcers (Diabetes)
 - Hyperreflexia (Hyperthyroidism); Hung Reflexes (Hypothyroidism)
 - Foot-Drop (Acromegaly[Common Peroneal Nerve Entrapment])
- **Feet:**
 - Tendon Xanthomata (Hypothyroidism, Diabetes, Cushing's, Acromegaly, PCOS)
 - Warm, Well Perfused, Erythema, ↓CRT, Sweaty (Hyperthyroidism, Acromegaly)
 - Cool, Poorly Perfused, ↑CRT, P.Cyanosis, Dry (Hypothyroidism)
- **Diabetic Leg & Foot Exam:**
 - **General Inspection:**
 - Quadriceps Wasting (Diabetic Amyotrophy)
 - Shiny Skin + Hair Loss + Pitting Oedema + Venous Stasis Ulcers
 - Arterial Ulcerations
 - Neuropathic Ulcerations
 - *Necrobiosis Diabeticorum*
 - Tendon Xanthomata
 - Peripheral Perfusion + CRT + Peripheral Pulses
 - Bunions (Hyperkeratosis on Pressure Points)
 - Halux Valgus, Pes Cavus, Loss of Transverse Arch, Hammer Toes
 - Fungal Infections of Nails & Between Toes
 - **Neurological Testing (Pt's Eyes Closed)**
 - Monofilament[light touch] on 10 Areas of Feet
 - Monofilament[light touch] on All Dermatomes of Leg
 - Vibration Sense – Start as distally as possible
 - Proprioception Sense
 - Pain Sense – Over All Dermatomes of Leg
 - Muscle Power
 - Reflexes

Diabetic Patient Focussed Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Obese Body habitus
 - Acanthosis Nigricans
 - Xanthelasma
 - Fat Atrophy @ Insulin Injection Sites
 - Endocrine Facies (Cushing's, Acromegaly, PCOS)
 - Pigmentation (Haemochromatosis)
- **Vital Signs:**
 - Tachycardia (if Dehydrated)
 - Hypotension (if Dehydrated)
 - Tachypnoeic (If DKA)
 - Febrile (If Infection)
- **Lower Extremities:**
 - **General Inspection:**
 - Quadriceps Wasting
 - Fat Atrophy @ Insulin Injection Sites
 - PVD: Hair Loss + Shiny Skin + Oedema + Venous Ulcers
 - Arterial Ulcers
 - Neuropathic Ulcers
 - Charcot's Joint
 - Pes Cavus, Loss of Transverse Arch, Hammer Toes, Halux Valgus
 - Fungal Nail Infections
 - Infections/Cuts Between Toes
 - **Palpation:**
 - Muscle Wasting
 - Temperature
 - Perfusion (CRT & Pulses)
 - **Neurological Examination – Patient's Eyes Closed:**
 - **Soft Touch (Monofilament):**
 - All 10 Areas of the foot
 - All Dermatomes of the Leg
 - **Vibration:**
 - Tuning Fork on Toes
 - **Proprioception:**
 - Big Toe
 - **Pain:**
 - All Dermatomes of Leg (But NOT the sole of foot)
 - **Muscle Power:**
 - All movements
 - **Muscle Reflexes:**
 - Patellar Tendon
 - Achilles Tendon
 - Babinski (Positive if Upgoing)(Normal = Downgoing)
 - **Further Examinations & Tests:**
 - Cardiovascular Examination
 - Respiratory Examination
 - Eye Exam + Fundoscopy
 - BSL + Urine Dipstick + HBA1C
 - Candida Mouth Infections
 - Acetone Fetor
 - Carotid & Renal Bruits
 - Hepatomegaly (Fatty Liver/Haemochromatosis)

Hyperthyroid Focussed Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Weight Loss
 - Flushing
 - Sweating
 - Anxiety
 - Frightened Stare + Exophthalmos
 - Goitre
 - Hoarseness
- **Vital Signs:**
 - Tachycardia
 - Hyperthermia
 - Hypertension
- **Hands:**
 - Hands Warm, Well Perfused, ↓CRT, Sweaty, Erythematous
 - Hyperthyroid Acropathy (Clubbing, Swelling & Redness of Fingers)
 - Onycholysis/Plumber's Nails (Separation of Nails from Nailbed)
 - Hand Tremor
- **Arms:**
 - Proximal Myopathy (Weakness Abducting Arm)
- **Face:**
 - (Standard check for: Conjunctival Pallor, Central Cyanosis, Peripheral Cyanosis)
 - Frightened Stare + Exophthalmos + **LID LAG**
 - **Bitemporal Hemianopsia** (If Central Hyperthyroidism)
 - Pemberton's Sign
 - Fundoscopy (hypertensive changes)
- **Neck:**
 - **Thyroid Examination:**
 - **General Inspection:**
 - Thyroidectomy Scars
 - Goitre
 - Swallow Test
 - **Palpation (From Behind):**
 - Locate Thyroid (2cm below Laryngeal Prominence)
 - Palpate Size, Consistency, Nodules, Mobility, Thrills, Tenderness
 - Swallow test (Mobility)
 - **Percuss:**
 - Retrosternal goitre
 - **Auscultate:**
 - Thyroid Bruits
 - **Cervical Lymphadenopathy:**
 - Submental/Submandibular/Pre-Auricular/Post-Auricular/Occipital/Jugular Chain/Posterior Triangle)
- **Chest:**
 - Gynaecomastia
- **Abdomen:**
 - Hepatojugular Reflux (Retrosternal Goitre)
- **Legs:**
 - Pretibial Myxoedema
 - Proximal Myopathy
- **Feet:**
 - Warm, Well Perfused, ↓CRT, Erythema, Sweaty
- **Thank Patient "That concludes my examination, now I'd like to run some tests"**

Hypothyroid Focussed Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Hypothyroid Facies (Apathetic, Puffy Eyes, Loss of Lateral Eyebrows, Thinning of Hair)
 - Obesity
 - Oedema
 - Mental Slowness & ↓Affect
- **Vital Signs:**
 - Bradycardia
 - Hypothermia
 - Hypertension
- **Hands:**
 - Cool, Poorly Perfused, ↑CRT, Peripheral Cyanosis, Dry
 - Brittle nails
 - Xanthomata
 - Palmar Crease Pallor + Koilonychia (Menorrhagia)
 - Inverse Prayer Test for Carpal Tunnel
- **Arms:**
 - Proximal Myopathy (Abduction Weakness)
 - Hung Reflexes
- **Face:**
 - Conjunctival Pallor (Menorrhagia)
 - Central/Peripheral Cyanosis
 - Loss of Lateral 1/3 of Eyebrow
 - Periorbital Myxoedema
 - Xanthelasma
 - Fundoscopy (Hypertensive Changes)
- **Neck:**
 - **Thyroid Examination:**
 - **General Inspection:**
 - Thyroidectomy Scars
 - Goitre
 - Mobility (Swallow Test)
 - **Palpation (From Behind):**
 - Locate Thyroid Gland (2cm Below Laryngeal Prominence)
 - Goitre (Hyper/Hypo) – Size, Consistency, Tenderness, Mobility, Thrill
 - Swallow Test (Mobility)
 - **Cervical lymphadenopathy:**
 - Submental/mandibular, Pre/Post-Auricular, Occipital, Jugular Chain, Post-Triangle
 - Pemberton's Sign (Retrosternal Goitre)
 - ↑JVP
- **Chest:**
 - Percuss for Retrosternal Goitre
 - Pericardial Effusion (Soft Heart Sounds)
 - Pleural Effusion (Stony Dullness)
- **Abdomen:**
 - Abdominojugular Reflux (Retrosternal Goitre)
 - Obesity
- **Legs:**
 - Non-Pitting Oedema
 - Proximal Myopathy (Squat)
 - Hung Leg Reflexes
- **Feet:**
 - Cool, Poorly Perfused, ↑CRT, Pale, Dry
 - Xanthomata
- **Thank patient “that concludes my examination”, I'll go organise further tests.**

Cushing's Focussed Examination:

- **Introduction + Wash hands + Consent**
- **General Inspection:**
 - Central Adiposity
 - Obesity
 - Moon Facies
 - Buffalo hump
 - Striae
 - **Hirsutism**
- **Vital Signs:**
 - **Hypertension**
- **Hands:**
 - Warm & Well Perfused, Normal CRT
 - Standard: No Palmar Crease Pallor
 - **Xanthomata**
- **Arms:**
 - Easy Bruising
 - Poor Wound Healing
 - **Proximal Myopathy (Ab/Adduction)**
- **Face:**
 - Characteristic *Moon Facies*
 - Xanthelasma
 - Fundoscopy (Hypertensive & Hyperglycaemic Changes)
 - Bitemporal Hemianopsia (if Pituitary Adenoma)
 - Mouth Infections
- **Neck:**
 - Carotid Bruits (Hypercholesterolaemia)
 - **Acanthosis Nigricans**
- **Chest:**
 - **Gynaecomastia**
 - **Bony Tenderness (Osteoporosis)**
- **Abdomen:**
 - Central Adiposity
 - Striae
 - Adrenal Masses
- **Legs:**
 - Easy Bruising
 - Poor Wound Healing
 - **Proximal Myopathy (Squat)**
- **Feet:**
 - Tendon Xanthomata

Acromegaly Focussed Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Acromegalic Facies – Frontal Bossing, Prominent Jaw/Brow Ridge/Nose/Lips/Tongue
- **Vital Signs:**
 - Hypertension
- **Hands:**
 - Large Spade-Hands
 - Warm & Well Perfused, ↓CRT, Palmar Erythema, Sweaty-Greasy Hands
 - Thickened Skin
 - Xanthomata
 - Osteoarthritis (Heberton's Nodules, Bouchard's Nodules)
- **Arms:**
 - Proximal Myopathy (Ab/Adduction)
- **Face:**
 - Acromegalic Facies – Frontal Bossing, Prominent Jaw/Brow Ridge/Nose/Lips/Tongue
 - Xanthelasma
 - Bitemporal Hemianopsia (Pituitary Adenoma)
 - Fundoscopy (Hypertensive Changes)
- **Neck:**
 - Acanthosis Nigricans
 - Carotid Bruits (due to ↑cholesterol)
- **Chest:**
 - Gynaecomastia
 - Bony Tenderness (Ribs & Spine) due to Osteoarthritis
 - Molluscum Fibrosum in Axillae (Skin Tags)
 - Hypertrophic Cardiomyopathy (Displaced Apex Beat, Murmurs & Signs of CCF)
- **Abdomen:**
 - Hepatomegaly
 - Splenomegaly
 - Renal Enlargement
- **Legs:**
 - Proximal Myopathy (Squat)
- **Feet:**
 - Enlarged Feet
 - Warm, Well-Perfused, ↓CRT, Erythema, Sweaty
 - Tendon Xanthomata
- **Thank patient "that concludes my examination", I'll go organise further tests.**

Addison's Disease Focussed Examination:

- **Introduction + Wash hands + Consent**
- **General Inspection:**
 - Wasting (Weight Loss)
 - Hyperpigmentation
 - Obvious Fatigue
 - **Mental Slowness**
- **Vital Signs:**
 - Hypotension (Hypovolaemia)
 - Tachycardia (Hypovolaemia)
- **Hands:**
 - Warm & Well Perfused, Normal CRT,
 - Palmar Crease Pigmentation
- **Arms:**
 - Generalised Muscle Weakness
 - **Muscle Wasting**
- **Face:**
 - Wasting (thin face)
 - Hyperpigmented + Pigmented Buccal Mucosae
 - Dry Mucosae (Dehydration)
- **Neck:**
- **Chest:**
- **Abdomen:**
 - Adrenal Masses
- **Legs:**
 - Generalised Muscle Weakness
 - **Muscle Wasting**
- **Feet:**
 - Warm & Well Perfused, Normal CRT,

PCOS Focussed Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Hirsutism (Hair + Acne)
 - Receding Hairline
 - Obesity (Metabolic Syndrome)
 - (Not Pregnant[infertile])
- **Vital Signs:**
 - Hypertension
- **Hands:**
 - Warm & Well Perfused
 - No Palmar Crease Pallor
 - Hirsutism (Hairy Dorsum of Hands)
 - Xanthomata
- **Arms:**
 - Hirsutism (↑ Hair)
- **Face:**
 - Xanthelasma
 - Fundoscopy (Diabetic & Hypertensive Retinopathy)
 - Hirsutism (Facial Hair & Acne)
 - Deepening Voice
- **Neck:**
 - Acanthosis Nigricans (Metabolic Syndrome)
 - Carotid Bruits (↑ Cholesterol)
- **Chest:**
 - Hirsutism (Chest Hair)
- **Abdomen:**
 - Ovarian masses/Tenderness
 - PV Examination
 - Central Adiposity (Metabolic Syndrome)
- **Legs:**
 - Hirsutism (hair)
- **Feet:**
 - Tendon Xanthomata

Full GI/Abdo Exam:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Alertedness/Orientation
 - ↓ in Hepatic Encephalopathy (Ammonia)
 - ↓ in Uraemic Encephalopathy
 - Pain/Distress (Acute Abdomen, Appx, Pancrx, Cholecystx, Diverticx, B.Obstrucx, Perforation, etc)
 - Body Habitus:
 - Obesity (Fatty liver, Diabetes, Ascites, GORD)
 - Cachexia (Malignancy, Malabsorption, Crohns/UC)
 - Colour:
 - Jaundice (Hepatitis, Cholelithiasis, Liver Failure, Cirrhosis, Haemolysis)
 - Pallor (Anaemia, Malignancy, Malabsorption, GI Bleeding)
 - Pigmentation (Haemochromatosis)
 - Bruising, Bleeding, Petechiae (Liver Failure, Haematological Malignancy)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Anaemia, Blood Loss, Pain, Infection)
 - AF (Dilated Cardiomyopathy in Alcoholism)
 - **Blood Pressure:**
 - Hypertension (Renal Failure, Pain)
 - Hypotension (Blood Loss, Shock)
 - Postural Hypotension (Anaemia)
 - **Respiratory Rate:**
 - Tachypnoea (Pain, Anaemia)
 - **Temperature:**
 - Fever (Infection)
- **Hands:**
 - **Perfusion + CRT**
 - Warm & Sweaty (Carcinoid) + (Hyperthyroid, Phaeox, Acromegaly)
 - Cool & Dry (Shock, Hypovolaemia)
 - **Clubbing (Crohn's Disease & Ulcerative Colitis)** + (Cardiac/Resp Disease & ↑Thyroid Acropathy)
 - **Leukonychia & Muercke's Lines** (Hypoalbuminaemia – Liver Failure, Nephrotic Syndrome)
 - **Koilonychia** (Iron Deficiency – Blood Loss, GI Bleed, Malabsorption)
 - Blue Lunulae (Wilson's Copper Disease)
 - Palmar Crease Pallor + Pale Nails (Anaemia)
 - Palmar Erythema (↑Oestrogen in Liver Disease)
 - Dupuytren's Contracture (Alcoholic Hepatitis/Cirrhosis)
 - Xanthomata (↑Cholesterol – Fatty Liver, Nephrotic Syndrome, Diabetes)
 - **Hepatic Flap** (Asterix – Hepatic Encephalopathy)
- **Arms:**
 - Bruising, Petechiae
 - Scratch Marks (Uraemic Pruritis)
 - Uraemic Frost
 - Acanthosis Nigricans in Axilla (GI Malignancy)
- **Face:**
 - **Eyes:**
 - Conjunctival Pallor (Anaemia)
 - Scleral Icterus (Jaundice)
 - Kayser Fleischer Rings (Wilson's Disease)
 - Iritis (Crohn's/Ulcerative Colitis)
 - Xanthelasma (↑Cholesterol – Biliary Obstruction, PBC, Cirrhosis, Diabetes)

- **Mouth:**
 - Hydration
 - Parotid Gland Enlargement (Alcoholism)
 - Central/Peripheral Cyanosis
 - Mucosal Ulcers (Crohn's/UC)
 - Glossitis/Angular Stomatitis (Anaemia, Alcoholism B12, Malabsorption B12)
 - Peutz Jegher's Pigmentation
 - Fetor Hepaticus
 - Mucosal Petechiae
 - Leukoplakia (Spirits, Smoking, Sepsis, Syphilis, Shit teeth)
- **Neck:**
 - Supraclavicular Lymph Nodes (Virchow's Node = GI/Lung Malignancy)
- **Chest:**
 - Gynaecomastia (↑ Oestrogen – Liver Failure)
 - >3 Spider Naevi (↑ Oestrogen – Liver Failure)
- **Abdomen:**
 - **Inspection:**
 - Abdominal Distension (Ascites, Obstruction)
 - Scars
 - Visible Masses (Cancer, Hernias)
 - Visible Peristalsis (Obstruction)
 - Bruising, Petechiae (Liver Failure)
 - **Cullen's & Grey Turner's Sign (Pancreatitis, Haemoperitoneum)**
 - Caput Medusa (Portal HTN, Cirrhosis)
 - **Striae**
 - Vesicles (Shingles)
 - **Palpation:**
 - Light Palpation – Tenderness, **Guarding, Rigidity, Rebound? (Peritonitis)**
 - Deep Palpation – Masses?
 - Hepatomegaly (Fatty Liver, Portal HTN, Hepatitis, Hepatocellular Carcinoma, Polycystic Liver)
 - Small Liver (Cirrhosis)
 - Pulsatile Liver (Tricuspid Regurg)
 - Splenomegaly (Infection, Haem. Malignancy)
 - **Ballott Kidneys**
 - Aortic Aneurysm
 - Para-Aortic Lymph Nodes (Malignancy, Infection)
 - **Special Tests:**
 - **Cholecystitis:** Murphey's Sign
 - **Appendicitis:** Rovsing's Sign, Pain @ McBurney's Point, Psoas Sign, Obturator Sign.
 - **Pyelonephritis/Renal Stones:** Murphey's Kidney Punch
 - **Percussion:**
 - Ascites & Shifting Dullness (Portal HTN, Liver Failure, Renal Failure) + (Heart Failure)
 - Percuss for Splenomegaly & Hepatomegaly
 - **Auscultation:**
 - Bowel Sounds (Absent in Ileus)
 - Renal Bruits
 - **+ Deferred PR Exam for Cancer, Blood, Malena.**
- **Legs:**
 - Pitting Oedema (Liver Failure, Renal Failure)
 - Bruising, Petechiae (Liver Failure)
 - Varicosities (Portal Hypertension)
- **Feet:**
 - Perfusion & CRT
 - Xanthomata (↑ Cholesterol – Biliary Obstruction, PBC, Cholelithiasis)
 - **Leukonychia & Muercke's Lines** (Hypoalbuminaemia – Liver Failure, Nephrotic Syndrome)
 - **Clubbing (Crohn's Disease & Ulcerative Colitis)**

Full Haematology Exam:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Wasting, Cachexia (Malignancy)
 - **Mediterranean Origin & Frontal Bossing (Thalassaemias)**
 - **African Origin (Sickle Cell Anaemias)**
 - Gross Pallor (Anaemia & All Haem Malignancies)
 - Jaundice & Scratch Marks (Haemolytic Anaemia)
 - Cyanosis
 - **Facial Plethora (Polycythaemia, SVC obstruction from Lymphoma)**
 - Bruising, Bleeding, Petechiae, Purpura (Thrombocytopaenia, Haemophilia & All Haem Malignancies)
 - Neck Swellings (Lymphoma & All Haem Malignancies)
 - Abdominal Distension (Organomegaly due to Infection & All Haem Malignancies)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Infection, Anaemia)
 - **Blood Pressure:**
 - Postural Hypotension (Anaemia)
 - **Respiratory Rate:**
 - Tachypnoea (Anaemia)
 - **Temperature:**
 - Fever (Malignancy, Infection)
- **Hands:**
 - Warm/Well Perfused + CRT
 - Palmar Crease Pallor (Anaemia)
 - Peripheral Cyanosis
 - Koilonychia (Spoon Nails) and Pale Nails (Iron Deficiency Anaemia)
 - Palmar Erythema (Polycythaemia, Chronic Leukaemias)
 - Blue Lunulae (Wilson's Disease)
 - **Digital Infarcts & Raynaud's (Rheumatoid, Multiple Myeloma)**
 - **Arthropathy (Rheumatoid, Connective Tissue Disease, Haemophilia)**
 - **Gouty Tophi (↑Cell Turnover in Malignancy, Myeloproliferative Diseases & Hb Disorders)**
 - **Dupuytren's Contracture (B12 Deficiency, Alcoholism & Megaloblastic Anaemia)**
- **Arms:**
 - Bruising, Petechiae, Purpura (Haemophilia, Thrombocytopaenia & All Haem Malignancies)
 - Scratch Marks (Jaundice – Haemolytic Anaemia)
 - Epitrochlear & Axillary Lymph Nodes (All Haem Malignancies)
 - Supraclavicular, Infraclavicular, Parasternal, Subpectoral, Subscapular, Central, Lateral
- **Face:**
 - Conjunctival Pallor, **Angular Stomatitis, Atrophic Glossitis** (Anaemia)
 - Scleral Icterus
 - Central/Peripheral Cyanosis
 - Facial Plethora (Polycythaemia)
 - Pemberton's Sign (SVC Obstruction due to Lymphoma)
 - Buccal Petechiae (Thrombocytopaenia, Haemophilia, Bleeding Disorders & All Haem Malignancies)
 - Candidal Mouth Infections (All Haem Malignancies)
 - **Gum Hypertrophy + Bleeding (AML - Acute Myeloid Leukaemias)**
 - **Gum Hypertrophy (Methotrexate Chemotherapy)**
 - **Enlarged Tonsils (MALT Lymphoma)**
 - Wasting (All Haem Malignancies)

- **Neck:**
 - Cervical Lymph Nodes (Submental/Submandibular/Pre/Post-Auricular/Occipital/Jugular/Post-Triangular) (In All Haem Malignancies)
 - Firm, Non-Tender, Immobile = Malignancy
 - Tender, Mobile = Infection
 - Site
 - Size (>1cm)
 - Consistency (Hard – Carcinoma; Rubbery – Lymphoma)
 - Tenderness (Infection)
 - Mobility (Fixed if Malignant)
 - Neck Swellings/Masses
 - ****Check for Dysphagia/Odynophagia (Plummer Vinson Oesophageal Web from Iron def. Anaemia)**
 - **Thyroid Examination (As Hypothyroidism can → menorrhagia)**
 - BCC/SCCs from Immunosuppression (Chemotherapy)
 - Radiotherapy Tattoos
- **Chest:**
 - Bruising, Petechiae, Purpura (Bleeding Disorders, Haemophilia, Thrombocytopaenia & All Haem Malignancies)
 - Chest Infections (Immunosuppression)
 - **Systolic Flow Murmur (Severe Anaemia)**
 - *****Bony Tenderness (ALL Haematological Malignancies) - Ribs, Clavicles, Spine, Hips.**
- **Abdomen:**
 - Bruising, Petechiae, Purpura (Bleeding Disorders, Haemophilia, Thrombocytopaenia & All Haem Malignancies)
 - Hepatomegaly, Splenomegaly (All Haem Malignancies)
 - Para-Aortic Lymph Nodes
 - **Ascites**
 - **Per Rectal Examination – Blood on Stool**
 - **Palpate Kidneys (Signs of Renal Failure → Anaemia of Chronic Disease)**
- **Inguinal:**
 - **Inguinal Lymph Nodes (All Haem Malignancies)**
 - **Testicular Masses in Children (ALL – Acute Lymphoblastic Leukaemia)**
 - **DRE (Lymphoma)**
- **Legs:**
 - Bruising, Petechiae, Purpura (Bleeding Disorders, Haemophilia, Thrombocytopaenia & All Haem Malignancies)
 - Scratch Marks (Haemolytic Jaundice)
- **Feet:**
 - Peripheral Perfusion & CRT
 - Koilonychia & Pale Nails (Iron Deficiency Anaemia)
 - Sole Erythema (Polycythaemia)
 - Gouty Tophi (↑Cell Turnover in Myeloproliferative Diseases & Hb Disorders)
- **Thank patient “that concludes my examination”, I’ll go organise further tests.**

Focussed Anaemia Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Alert & Oriented
 - Racial Origin (African = Sickle Cell Anaemia; Mediterranean = Thalassemia)
 - Gross Pallor (Anaemia), Jaundice (Haemolytic Anaemia), or Cyanosis.
 - Scratch Marks (Jaundice from Haemolytic Anaemia)
 - Bruising, Petechiae, Purpura (Thrombocytopaenia any Haem Malignancies)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia
 - **Blood Pressure:**
 - Postural Hypotension
 - **Respiratory Rate:**
 - Tachypnoea
 - **Temperature:**
 - Normal
- **Hands:**
 - Warm & Well Perfused + CRT
 - Koilonychia (Iron Deficiency Anaemia)
 - Pale Nails (General Anaemia)
 - Leukonychia (Chronic Kidney Disease → Hypoalbuminaemia)
 - Palmar Crease Pallor
 - Dupuytren's Contracture (Megaloblastic Anaemia from Alcoholism)
- **Arms:**
 - Bruising/Petechiae/Purpura (Thrombocytopaenia due to Myelosuppression which also → Anaemia)
 - Scratch Marks (Haemolytic Jaundice → Anaemia)
- **Face:**
 - Conjunctival Pallor
 - Scleral Icterus (Haemolytic)
 - Central/Peripheral Cyanosis
 - Angular Stomatitis (General Anaemia)
 - Atrophic Glossitis (General Anaemia)
 - Gum Bleeding (AML → As a cause of Iron Deficiency Anaemia)
 - Buccal Petechiae/Purpura (Thrombocytopaenia due to Myelosuppression which also → Anaemia)
- **Neck:**
 - Cervical Lymphadenopathy (Because All Haem Malignancies cause Anaemia)
 - ****Check for Dysphagia/Odynophagia (Plummer Vinson Oesophageal Web from Iron def. Anaemia)**
 - Thyroid Examination (As Hypothyroidism can → menorrhagia)
- **Chest:**
 - Bony Tenderness (All Haem Malignancies)
 - Systolic Flow Murmurs (hyperdynamic circulation)
- **Abdomen:**
 - Cullen's/Grey Turner's Signs of Haemoperitoneum (Haemorrhagic Anaemia)
 - Tenderness (Peptic Ulcer Disease, Crohns, Ulcerative Colitis)
 - Hepatomegaly & Splenomegaly (All Haem Malignancies cause Anaemia)
 - **Per Rectal Examination – Blood on Stool**
 - Palpate Kidneys (Signs of Renal Failure → Anaemia of Chronic Disease)
- **Legs:**
 - Peripheral Perfusion
- **Feet:**
 - Peripheral Perfusion + CRT
 - Koilonychia (Iron def Anaemia)
 - Pale Nails (General Anaemia)
- **Thank patient "that concludes my examination", I'll go organise further tests.**

Focussed Leukaemia Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Alert & Orientated?
 - Wasting, Weight Loss
 - Gross Pallor (Marrow Overcrowding - All Haem Malignancies)
 - Lethargy
 - Obvious masses (Neck/Abdomen)
 - Bruising, Bleeding, Petechiae, Purpura (Thrombocytopaenia - All Haem Malignancies)
- **Vital Signs:**
 - **Pulse:**
 - Normal
 - Tachycardia (If Anaemia)
 - **Blood Pressure:**
 - Normal
 - Postural Hypotension (if Anaemia)
 - **Respiratory Rate:**
 - Normal
 - Tachypnoea (If Anaemia)
 - **Temperature:**
 - Febrile (All Haem Malignancies, Infection)
- **Hands:**
 - Peripheral Perfusion + CRT
 - Pale Nails & Palmar Crease Pallor (Marrow Overcrowding Anaemia)
 - **Palmar Erythema (Chronic Leukaemias)**
 - **Gouty Tophi (High Turnover in Myeloproliferative)**
- **Arms:**
 - Bruising, Petechiae, Purpura (Marrow Overcrowding Thrombocytopaenia)
 - Epitrochlear & Axillary Lymph Nodes (All Haem Malignancies)
 - Supraclavicular, Infraclavicular, Parasternal, Subpectoral, Subscapular, Central, Lateral
- **Face:**
 - Gross/Conjunctival Pallor (Marrow Overcrowding Anaemia)
 - Central/Peripheral Cyanosis
 - Gum Hypertrophy & Bleeding (Acute Myeloid Leukaemia)
 - Gum Hypertrophy (Methotrexate Side Effect)
 - Candidal Mouth Infections (Neutropaenia - All Haem Malignancies)
- **Neck:**
 - Cervical Lymphadenopathy (All Haem Malignancies)
 - Meningism (Due to CNS Infiltration – esp. ALL)
- **Chest:**
 - Bruising, Petechiae, Purpura (Thrombocytopaenia)
 - Bony Tenderness (Bony Infiltration - All Haem Malignancies)
 - Chest Infections (Immunocompromise – From Chemo or Neutropaenia)
- **Abdomen:**
 - Bruising, Petechiae, Purpura (Thrombocytopaenia - All Haem Malignancies)
 - Distension
 - Hepatomegaly, Splenomegaly (All Haem Malignancies)
 - Para-Aortic Lymph Nodes
- **Legs:**
 - Inguinal lymph Nodes
 - Testicular Masses (Acute Lymphoblastic Leukaemia)
 - Bruising, Petechiae, Purpura (Thrombocytopaenia - All Haem Malignancies)
- **Feet:**
 - Peripheral Perfusion + CRT
 - Pale Nails (Anaemia)
- **Thank patient “that concludes my examination”, I’ll go organise further tests.**

Focussed Lymphoma Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Alert & Orientated
 - Wasting, Weight Loss
 - Neck Swellings
 - Facial Plethora (SVC Obstruction)
 - Gross Pallor (Marrow Infiltration)
 - Bruising, Petechiae, Purpura (Marrow Infiltration)
- **Vital Signs:**
 - **Pulse:**
 - Normal
 - Tachycardia (if Anaemia due to BM Infiltration)
 - **Blood Pressure:**
 - Normal
 - Postural Hypotension (if Anaemia due to BM Infiltration)
 - **Respiratory Rate:**
 - Normal
 - Tachypnoea (If Anaemia due to BM Infiltration)
 - **Temperature:**
 - Fever
- **Hands:**
 - Peripheral Perfusion + CRT
 - Peripheral Cyanosis
 - Palmar Crease Pallor (Anaemia of BM Infiltration)
 - Pale Nails (Anaemia of BM Infiltration)
 - Scratch Marks (Pruritis of Lymphoma)
- **Arms:**
 - **Epitrochlear Lymph Nodes** (All Haem Malignancies)
 - **Axillary Lymph Nodes** (Supra/Infraclavicular/Parasternal/Pectoral/Subscapular/Central/Lateral)
 - ***Painful**
- **Face:**
 - Conjunctival Pallor (Anaemia of BM Infiltration)
 - Scleral Icterus
 - Wasting
 - Central/Peripheral Cyanosis
 - **Enlarged Tonsils (MALT Lymphoma)**
 - **Candidal Mouth Infections (Immunocompromise - All Haem Malignancies)**
- **Neck:**
 - **Painful Cervical Lymphadenopathy (All Areas)**
- **Chest:**
 - Chest Infections (Immunocompromise - All Haem Malignancies)
 - Systolic Flow Murmurs (if Anaemia of BM Infiltration)
 - Bony Tenderness (Bony Infiltration - All Haem Malignancies)
- **Abdomen:**
 - Hepatomegaly (All Haem Malignancies)
 - Splenomegaly (All Haem Malignancies)
 - Para-Aortic Lymphadenopathy
 - Abdominal Masses (MALT Lymphoma)
 - Bruising, Petechiae, Purpura (Thrombocytopaenia of BM Infiltration)
- **Legs:**
 - Bruising, Petechiae, Purpura (Thrombocytopaenia of BM Infiltration)
- **Feet:**
 - Peripheral Perfusion + CRT
 - Fungal Nail Infections (Pancytopaenia of BM Infiltration)
- **Thank patient “that concludes my examination”, I’ll go organise further tests.**

Focussed Multiple Myeloma Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Wasting, Weight Loss
 - Pallor (Anaemia of BM Infiltration)
 - Bruising, Petechiae, Purpura (Thrombocytopaenia of BM Infiltration)
 - Abdominal Masses (Hepatomegaly +/- Splenomegaly)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Anaemia of BM Infiltration)
 - **Blood Pressure:**
 - Postural Hypotension (Anaemia of BM Infiltration)
 - **Respiratory Rate:**
 - Tachypnoea (Anaemia of BM Infiltration)
 - **Temperature:**
 - Fever (Due to Infection/Malignancy)
- **Hands:**
 - Peripheral Perfusion + CRT
 - Raynaud's Phenomenon & Digital Infarcts (Blood Hyperviscosity)
 - Palmar Crease Pallor & Pale Nails (Anaemia of BM Infiltration)
- **Arms:**
 - Bruising, Petechia, Purpura (BM Infiltration → Thrombocytopaenia)
 - Epitrochlear Lymphadenopathy (All Haem Malignancies)
 - Axillary Lymphadenopathy (All Haem Malignancies)
- **Face:**
 - Conjunctival Pallor
 - No Central or Peripheral Cyanosis
 - Mucosal Candida Infections (Immunocompromise & Neutropaenia)
- **Neck:**
 - Cervical Lymphadenopathy (All Haem Malignancies)
- **Chest:**
 - **BONY TENDERNESS (Especially in Ribs & Lumbar Spine)**
 - Bruising, Petechiae, Purpura (BM infiltration → Thrombocytopaenia)
- **Abdomen:**
 - Bruising, Petechiae, Purpura (BM infiltration → Thrombocytopaenia)
 - Massive Hepatomegaly +/- Splenomegaly
 - Signs of Renal Failure (Due to Ig-Deposition in Kidneys) → Ascites, Uraemic Fetor, etc
- **Legs:**
 - Peripheral Neuropathy (Due to Spinal Cord Compression)
 - Bruising, Petechiae, Purpura (BM infiltration → Thrombocytopaenia)
 - Oedema (If Renal Failure)
- **Feet:**
 - Peripheral Perfusion + CRT
 - Peripheral Neuropathy (Due to Spinal Cord Compression)
 - Fungal Nail Infections (Immunocompromise)
- **Thank patient "that concludes my examination", I'll go organise further tests.**

Eye Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection of Patient:**
 - Guide Dog
 - Walking Aids
 - Visual Aids/Glasses/Eye Patch
- **Vital Signs:**
 - **Pulse:**
 - Particularly Irregularity (AF can → TIAs → Transient Visual Loss **"Amaurosis Fugax"**)
 - **Blood Pressure:**
 - Particularly Hypertension (Hypertensive Retinopathy)
 - **Respiratory Rate:**
 - **Temperature:**
 - Fever in Infection
- **Eye Examination:**
 - **Visual Acuity:**
 - **Snellens Charts**
 - Unilateral Corrected + Bilateral Corrected
 - If Poor Visual Acuity – Use a Pinhole to see if it is a REFRACTIVE ERROR?
 - Blind Spot (Enlarged in Macular Degeneration or Papilloedema)
 - **Colour Vision:**
 - **Ischihara Charts** (Colour Blindness)
 - **Visual Inspection:**
 - **Eyelids:**
 - Lid Retraction (Graves Hyperthyroid)
 - Lid lag (Graves Hyperthyroid)
 - Ptosis (Facial Nerve Palsy, Horner's Syndrome)
 - Periorbital Oedema (Nephrotic Syndrome, Hashimoto Hypothyroidism, Allergies)
 - Xanthelasma (Liver Disease, Diabetes, CVD, Cushing's, Acromegaly, Hypothyroidism)
 - Skin Lesions (SCCs, BCCs)
 - Eyelashes (Trachoma)
 - **Eyeball:**
 - Exophthalmos/Proptosis (Grave's Hyperthyroid, Leukaemias, Head Injury, Cushing's)
 - Enophthalmos (Horner's Syndrome, Dehydration)
 - **Conjunctiva:**
 - Conjunctival Pallor (Anaemia)
 - Scleral Icterus (Liver Disease)
 - Subconjunctival Haemorrhages (Extreme Coughing)
 - Conjunctivitis (Inflammation + Pus)
 - **Iris, Cornea & Lens:**
 - Arcus Senilis (Sign of CVD Risk factors)
 - Copper Ring around the Iris (Wilson's Disease)
 - Horner's Syndrome (Unilateral Miosis [pinpoint pupils])
 - Band Keratopathy (Hypercalcaemia, Hyperparathyroidism, Renal Failure)
 - Cataracts (Diabetes, Hypertension, Iodine Deficiency ∴ Hypothyroidism)
 - Corneal Ulceration (Herpes, Trachoma)
 - Pus/Blood in Anterior Chamber
 - **Pupil Reactivity To Light:**
 - **Pupil Size** (normally 2.5mm-3.5mm)
 - **Direct Response** (If absent = Afferent OR Efferent Nerve Lesion in THAT Eye)
 - **Consensual Response** (If absent = Efferent Nerve Lesion in THAT Eye)
 - **Marcus-Gunn Pupil** (Swinging Torch Test – both pupils should stay the same after a few oscillations due to the Consensual Response) (If one pupil dilates whilst the torch is on the other eye, then that is a Marcus-Gunn Pupil)

- **Visual Fields (Remove Glasses & in Confrontation Position + Patient covers one eye):**
 - Betemporal Hemianopsia = Optic chiasm compression (Pituitary Adenoma)
 - Homonymous Hemianopsia = Optic Radiation Lesion
 - Unilateral Hemianopsia = Optic Nerve Lesion
 - + **Blind Spot** (If enlarged – May = Macular Degeneration, or Papilloedema)
- **Extraocular Movements:**
 - Oculomotor = Superior Rectus, Medial Rectus, Inferior Rectus, Inferior Oblique
 - Trochlear = Superior Oblique (Down & Out) - ∴ In III-Nerve Palsy, eye faces Down & Out.
 - Abducens = Lateral Rectus
 - + **Nystagmus** = Points to the side of a Cerebellar Lesion.
- **Fundoscopy:**
 - Papilloedema
 - Macular Degeneration
 - Diabetic Retinopathy
 - Hypertensive Retinopathy
 - Roth's Spots in Infective Endocarditis.

“Thankyou, that concludes my Examination”

Ear, Nose & Throat Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Hair distribution (PCOS, Hypothyroidism)
 - Hair Infestations (nits, lice)
 - Oily, sweaty hair (Hyperthyroidism, Acromegaly)
 - Thin, Dry Hair (Hypothyroidism)
 - Scars
 - Skull Deformities (Injuries, Congenital, Cleft Lip)
 - High Arch Palate (Marfan's)
 - Skin lesions (SCCs, BCCs)
 - Skin Pigmentation (Addison's, Haemochromatosis, Acanthosis Nigricans in Diab/Cush/PCOS/Acr)
 - Skin Scaling (Psoriasis, Autoimmune Disorders)
 - Abnormal Facies – (Cushing's, Acromegaly, Addison's, Graves Hyperthyroidism, Hashimoto Hypothyroidism, Downs Syndrome, Turner's Syndrome(Female).)
 - Facial Symmetry (Facial Nerve Palsies)
 - Facial Muscle Fasciculations
 - Eye Inspection (Conjunctival Pallor, Scleral icteris, Conjunctivitis, Discharge, Periorbital Oedema)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Infection)
 - Bradycardia (if ↑ ICP)
 - **Blood Pressure:**
 - Hypertension (if ↑ ICP)
 - **Respiratory Rate:**
 - Bradypnoea (if ↑ ICP)
 - **Temperature:**
 - Fever (Infection)
- **Ears:**
 - **External Inspection:**
 - Redness (Infection)
 - Swelling (Gouty Tophi)
 - Scars
 - Lesions (SCC/BCC)
 - Discharge
 - **Palpation:**
 - Tug Test (for External Ear Infection)
 - Cervical Lymphadenopathy (Infection, Malignancy)
 - **Otoscopy:**
 - Explain to the patient that it may feel uncomfortable
 - Pull Pinna Back and Upward to straighten the canal
 - Examine the Left Ear with the Left hand holding the Otoscope (and vice versa)
 - **Look for:**
 - Inflammation of External Ear Canal (Otitis Externa)
 - Discharge, Blood, Pus, CSF
 - Light Reflex of Tympanic Membrane (Eardrum)
 - Inflammation of Eardrum (Otitis Media)
 - Bulging of Eardrum (Otitis Media)
 - Visible Malleus (Normal)
 - Identify Borders (Pars Flaccida, Pars Tensa, Umbo)
 - Sclerosis (Chronic Otitis Media)
 - Tympanic Membrane Rupture
 - Impaction by Cerumen (earwax)
 - **Hearing:**
 - **Whisper Test** – “69 & 100” – Whilst distracting the other ear with your hand.
 - **Weber's Test** – Lateralising? (Conductive Deafness)
 - **Rine's Test** – Normally Air Conduction is better than bone conduction.

- **Nose:**
 - **Visual Inspection:**
 - Redness (Rosacea, SLE, Acne)
 - Enlargement (Rosacea, Acromegaly)
 - Skin Lesions (Comedones, BCCs, SCCs)
 - Scars, Deformities (Broken Nose)
 - Discharge, Pus, Blood (Epistaxis)
 - Nasal Deviation
 - Nasal Polyps (inflammatory from chronic URTI)
 - Septal deformities
 - Enlarged, Inflamed Turbinates (URTl)
 - **Palpation:**
 - Tenderness
 - Swelling
 - Deformities
 - Block Each nostril & Assess for Obstruction
 - **Sinuses:**
 - Press/Percuss over Frontal Sinuses (Tenderness = Sinusitis/Congestion)
 - Press/Percuss over Maxillary Sinuses (Tenderness = Sinusitis/Congestion)
 - Transilluminate Maxillary Sinuses (Shine otoscope through Maxillae & observe illumination in the mouth)
- **Throat:**
 - **Visual Inspection:**
 - Hydration
 - Central or Peripheral Cyanosis
 - Mouth Ulcers (UC/Crohns/SCC/BCC)
 - Leukoplakia/Erythroplakia (Smoking – Precancerous)
 - Buccal Petechiae (Leukaemias, Bleeding Disorders, DIC, Haemorrhagic Infections)
 - Buccal Pigmentation (Addison's Disease)
 - Angular Stomatitis (Microcytic OR Macrocytic Anaemias)
 - Atrophic Glossitis (Microcytic OR Macrocytic Anaemias)
 - Gum Hyperplasia (AML, Methotrexate)
 - Bleeding Gums (AML)
 - Dentition & Dead Teeth (CVS Risk Factor)
 - High Arched Palate (Marfan's Syndrome)
 - Inflamed, Enlarged Tonsils
 - Tonsillar Exudate
 - Inflamed Pharynx (URTl)
 - "Say Ah" – (Glossopharyngeal & Vagus Nerve Lesions)
 - Note any Fotor/Bad Breath (Uraemic, Hepatic, Acetone)
 - **Palpation:**
 - Bimanual Palpation for enlarged Parotid Gland (Alcoholism, Sialolithiasis)
 - Feeling Tongue & Buccal Mucosa for Lumps/Tenderness/Ulcers
 - **+ Cervical Lymph Nodes**
- **Thank patient "that concludes my examination", I'll go organise further tests.**

Musculoskeletal History:

- **PC – Injury/Pain/Stiffness/Movement Limitation.**
- **HxPC:**
 - **Acute or Chronic problem?**
 - **Mech of injury – Utmost Importance!!**
 - **Problems experienced:**
 - **Pain Vs Tenderness.** (+ Be mindful of referred pain)
 - NILDOCARF
 - **Movement limitation**
 - **Pain:**
 - Tendinopathy
 - Impingement
 - Sprain
 - Labral
 - **Mechanical Block:**
 - Stiffness/Creakiness + Time of day & Duration
 - Labral
 - Frozen shoulder
 - **Instability** (clicking/clunking)
 - **Joint swelling**
 - **Night pain?** (Lying on affected joint)
 - Eg. Rotator cuff
 - Eg. AC joint injury
 - Eg. Collateral Knee Ligaments
 - Eg. Bone Cancers
 - **Associated Rheumatologic Symptoms:**
 - Fever, Weakness, Fatigue, Weight Loss, Conjunctivitis/Iritis.
 - **Progression with time (Trending Better/worse/same)**
- **Pmh, Meds, Famhx, Sochx, Systems Review**
- **Red Flags? (I.e. Things that if you miss → mortality/morbidity)**
 - Open fractures
 - Neurovascular compromise
 - Cauda equina syndrome
 - Infections (Joints/Bones)
 - Acute Compartment Syndrome
 - Cancer
 - Temporal arteritis (high risk in pts with PMR – poly something rheumatica)
 - Serious/life-threatening conditions that present with sx mimicking msk pain (eg. MI)
- **Yellow Flags – Conditions ‘masquerading’ as msk conditions:**
 - Eg. Psychological – depression & back pain.

GALS Screen:

- **Introduction, Wash Hands, Consent,**
- **Adequate Exposure!!! (Remove Shirt, Pants & Shoes)**
- **Gait – (Observe for Fluidity, Symmetry, Limp, Compensation, Foot Drop[L4,L5]):**
 - Walk to the other side of the room, Turn around, and walk back to me.
- **Arms:**
 - **Shoulder & Elbow:**
 - Raise hands up to the ceiling, then down behind your head. Push your shoulders backwards.
 - Touch your fingers on your shoulders, and raise your elbows as high as you can.
 - Lock your elbows into your side, and turn your arms outward as far as you can. (Ext.Rotation)
 - Run your thumb up the middle of your back. (Internal Rotation)
 - Push your hands as far back behind you as you can. (Extension)
 - Touch your left thigh with your right hand (and Vice Versa) (Adduction)
 - Supinate & Pronate your Hands
 - **Hands & Fingers:**
 - Splay your fingers wide + **Resist me squeezing them.**
 - Fingers together + **Resist me pulling them apart.**
 - Grip my fingers as hard as you can + **Assess Grip Strength**
 - Make a fist
 - Touch each of your fingers with your thumb.
 - **+ Metacarpophalangeal Squeeze Test (For Tenderness)**
- **Legs:**
 - **3x Half Squats** (Patellofemoral Joint)
 - **1x Full Squat** (Knee Joint Proper)
 - Ankle Eversion & Inversion
 - Dorsiflexion & Plantarflexion
 - Splay Toes & Scrunch Toes.
- **Spine:**
 - (Feet shoulder-width apart)
 - Observe for Lordosis, Kyphosis, Scoliosis.
 - Bend from Lumbar Spine and reach for your toes
 - Bend from Lumbar Spine and look at the ceiling
 - Bend Sideways & Slide your hand down your thigh
 - Neck Flexion (Chin on chest)
 - Neck Extension (look at ceiling)
 - Lateral Neck Flexion (Ear on Shoulder)
 - Neck Rotation (Look to the side)
- **Reporting on a GALS Screening. (WHAT YOU NEED TO DO IN THE EXAM)**
 - G – Normal/Abnormal + Comments on Findings
 - A – Normal/Abnormal + Comments on Findings
 - L– Normal/Abnormal + Comments on Findings
 - S– Normal/Abnormal + Comments on Findings
 - (Eg. Abnormal Arm (limited abduction of the shoulder to ?degrees))
- **“Thankyou that concludes my examination”**

Focussed Joint Exam Algorithm (Shoulder or Knee):

- **Look (Visual Inspection)**
 - Symmetry? (Size, Shape, Position, Height)
 - Scars
 - Redness
 - Bruising
 - Lumps
 - Atrophy
 - Swelling
- **Feel (Palpate Relevant Anatomy for Tenderness, Heat, Swelling, Crepitus):**
 - **Objective Findings:**
 - Tenderness
 - **Subjective Findings:**
 - Warm (Inflammation, Trauma, Infection, Tumour)
 - Swelling (Effusion, Tumour)
 - Crepitus (Osteoarthritis, Tendinopathy, Fracture)
- **Move (Active +/- Passive if Required):**
 - Symmetry?
 - **Active Movement in All Planes:**
 - Range of Movement
 - Fluidity
 - Pain with Movement
 - If a pt can't do something, ask them why? (Blockage/weakness/Neuro)
 - (Passive – Only for Movements that were Limited)
- **Measure (Range of Movement):**
 - Done at the same time as "Move"
 - Compare with opposite side (ballpark – doesn't have to be objective)

- **+/- Special Tests:**

- **Shoulder:**
 - Empty Can Test (Supraspinatus Tear)
 - Drop Arm Test (Supraspinatus Tear)
 - Hawkin's Kennedy Test (Impingement)
 - Apprehension & Relocation Test (Instability)
- **Knee:**
 - Lachman's Test (Anterior Cruciate Ligament)
 - Thessaley Test (Meniscal Tear)
 - Apley's Grind Test (Meniscal Tear)
 - Varus & Valgus Stress Tests (Collateral Ligament Tears)
 - Half Squats (For Patellofemoral Maltracking Syndrome)

Focussed Shoulder Examination:

- **1. EXPOSE THE PATIENT FULLY!!**
- **Look (Visual Inspection)**
 - Symmetry? (Size, Shape, Position, Height)
 - Scars
 - Redness, Bruising
 - Lumps, Swelling
 - Atrophy
- **Feel (Palpate Relevant Anatomy for Tenderness, Heat, Swelling, Crepitus):**
 - Palpate BOTH joints (Say you'd like to examine the other side)
 - Palpate Definite Anatomical Structures for Tenderness:
 - Sterno-clavicular Joint
 - Clavicle
 - Acromio-clavicular Joint
 - Gleno-humoral Joint Line
 - Spine of Scapula
 - Edges of the Scapula
 - Feel for Heat, Swelling, & Crepitus
 - Eg. "Non tender to firm palpation"
- **Move (Active +/- Passive if Required):**
 - Symmetry?
 - Active Movement in All Planes:
 - Range of Movement
 - Fluidity
 - Pain with Movement
 - If a pt can't do something, ask them why? (Blockage/weakness/Neuro)
 - (Passive – Only for Movements that were Limited)
 - Eg. "Symmetrical and full ROM in all planes"
- **Measure (Range of Movement):**
 - Done at the same time as "Move"
 - Compare with opposite side (ballpark – doesn't have to be objective)
 - "Limited active extension of l-elbow to 150deg"
- **(Clinical Presentations Requiring Special Tests):**
 - Tears – Eg. Supraspinatus Tear:
 - Special Tests:
 - "Drop Arm Test" – Passive abduction of pt's arm → let go and get them to lower arm as slow as possible. Arm Drops at around Parallel = Positive.
 - "Empty Can Test" – Passive abduction of Pt's arm with full internal rotation (ie. Emptying can). Push down and get them to resist your movement. Pain &/or Weakness = Positive.
 - Impingement – Eg. Of Subacromial Contents:
 - Subacromial contents get squashed between the humoral head and the acromion. (eg. Supraspinitis, Subacromial Bursa)
 - Special test:
 - "Hawkins test" – Pain = Positive, No Pain = Negative
 - Passive Internal Rotation of Shoulder with elbow in 90deg and humerus at parallel to the ground.
 - Instability – Eg. Anterior Instability of Shoulder (ie. Post dislocation)
 - Eg. Dislocation/Post Dislocation/Stretch of Anterior Capsule of the Shoulder
 - Special Test:
 - "Apprehension & Relocation Test" – Apprehension (not pain) in 1. Less apprehension in 2. = Positive
 - 1. Patient lies on bed while you Abduct & Externally Rotate their arm to precipitate apprehension (Ie. High five position)
 - 2. Same thing, but with pressure on the anterior capsule. (This should be much more bearable for the patient.)

Focussed Knee Examination:

- **1. EXPOSE THE PATIENT FULLY!!**
- **Look (Visual Inspection)**
 - Symmetry? (Size, Shape, Position)
 - Scars
 - Redness, Bruising
 - Lumps, Swelling
 - Atrophy/Wasting
- **Feel (Palpate Relevant Anatomy for Tenderness, Heat, Swelling, Crepitus):**
 - Palpate BOTH Knees (Say you'd like to examine the other side)
 - Palpate Definite Anatomical Structures for Tenderness:
 - Quadriceps Tendon
 - Patella (+ Patella "Tap" test for Effusion)
 - Patella Tendon
 - Tibial Tuberosity
 - Joint Line
 - Collateral Ligament Attachments.
 - Feel for Heat, Swelling, & Crepitus
 - Eg. "Non tender to firm palpation"
- **Move (Active +/- Passive if Required):**
 - Symmetry?
 - 3x Half Squats (Patellofemoral Joint)
 - 1x Full Squat (Knee Joint Proper)
 - Range of Movement
 - Fluidity
 - Pain with Movement
 - If a pt can't do something, ask them why? (Blockage/weakness/Neuro)
 - (Passive – Only for Movements that were Limited)
 - Eg. "Symmetrical and full ROM in all planes"
- **Measure (Range of Movement):**
 - Done at the same time as "Move"
 - Compare with opposite side (ballpark – doesn't have to be objective)
 - "Limited active extension of l-elbow to 150deg"
- **(Clinical Presentations Requiring Special Tests):**
 - Acute Knee pain:
 - Cruciate Ligament Tear ("went to change direction, felt something pop, and was swollen within hours" = ACL)
 - Lachman's Test – Pt supine, examiner's knee under pt's knee, stabilise femur with one hand, move tibia ant-&-post firmly. Positive if displacement > other side.
 - Anterior Drawer – (NB: Only really useful in an anaesthetised, paralysed pt. NB. A conscious pt will guard). Pt supine, knee bent to 90deg. Sit on pt's foot. With 2 hands apply anterior force to the tibial head. Positive if Anterior Displacement is > than other side.
 - Meniscal Tear
 - **Thessaly Test (For Meniscal Tear) – Hold hands standing. Stand on 1 foot. Bend the weight-bearing leg 20°. Do the Twist. Pain = Positive. (NB: Pt must point to source of pain – same place both times)
 - Collateral Ligament Sprains/Tears
 - Valgus & Varus Stress Tests –Pt supine, support knee from below, 30deg flexion & apply valgus & varus stresses. (Positive = Laxity/gaping.)
 - Patellofemoral Mal-Tracking Syndrome. Tracking of the Patella through it's groove isn't right; or groove isn't straight; or vastus medialis isn't working properly.
 - → Pain with stairs/squatting
 - Half squats - Good indication of patella-femoral function

Full & Focussed Neurological Exams
(Cranial Nerves, Cerebellar, Upper Limb Motor/Sensory, Lower Limb Motor/Sensory)

Start of Every Neuro Exam:

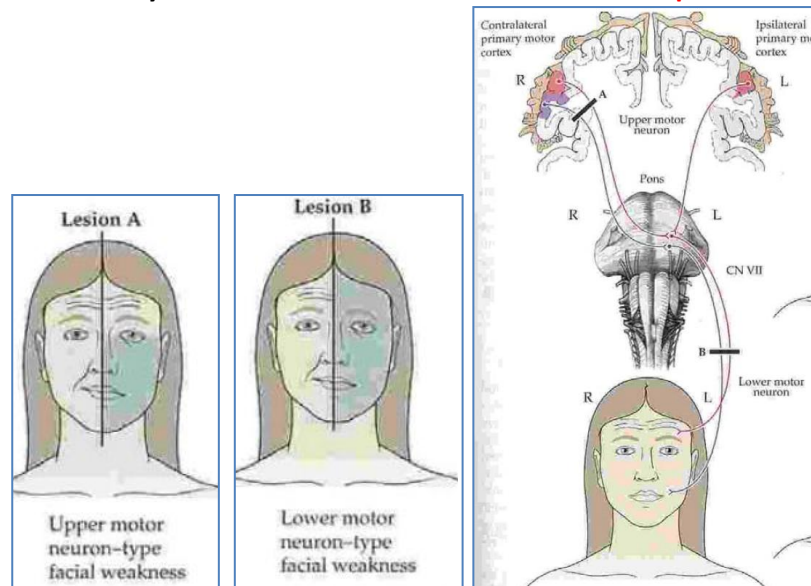
- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Altered Level of Consciousness?
 - Patient Alert? Oriented to Person Place & Time?
 - Facial Asymmetry?
 - Evidence of Trauma?
 - Fasciculations/Tremors?
 - Muscle Wasting?
 - Speech Impediments (Dysphasia?/Dysarthria?/Dysphonia)
- **Vital Signs:**
 - **Pulse:**
 - Bradycardia (Cushing's Triad of ↑ICP)
 - **Blood Pressure:**
 - Hypertension (Cushing's Triad of ↑ICP)
 - **Respiratory Rate:**
 - Cheyne Stokes Respiration (Cushing's Triad of ↑ICP)
 - **Temperature:**
 - Febrile if Meningitis/Encephalitis

Full Cranial Nerve Exam:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - o Altered Level of Consciousness?
 - o Patient Alert? Oriented to Person Place & Time?
 - o Facial Asymmetry?
 - o Evidence of Trauma?
 - o Fasciculations/Tremors?
 - o Muscle Wasting?
 - o Speech Impediments (Dysphasia?/Dysarthria?/Dysphonia)
 - o **Ptosis?**
 - o **Inability to Close the Eye?**
 - o **Facial Muscle Wasting?**
 - o **Facial Sweating?**
- **Vital Signs – “Ordinarily I’d get the vitals next, but in the interest of saving time today I will move on”:**
 - o **Pulse:**
 - o **Blood Pressure:**
 - o **Respiratory Rate:**
 - o **Temperature:**
- **I - Olfactory:**
 - o “Have you noticed any change in smell or taste lately?”
- **II - Optic:**
 - o “Have you noticed any changes in your vision lately?”
 - o Corrected Visual Acuity in Each Eye Separately, then both eyes. (Snellen’s Chart)
 - o Assess for Colour Blindness (Ishihara Charts)
 - o 6 Point Visual Field Testing (confrontation position. Use hat pin and cover ipsilateral eyes)
 - o Pupil Response to Light (Direct & Consensual + Swinging Torch Test)
 - o Fundoscopy (Cataracts/Diabetic Retinopathy/Hypertensive Retinopathy)
- **III - Oculomotor, IV - Trochlear & VI - Abducens:**
 - o “Keeping your head still, follow this hat pin with your eyes”
 - o “Let me know if at any time you begin to see double”
 - o Do the 6-speed gearbox positions
 - o Asymmetrical Movement of the Eyes
 - o Nystagmus (NB: This is a sign of Cerebellar Pathology – and always points to the side of the lesion)
 - o **Oculomotor:** Superior Rectus, Medial Rectus, Inferior Rectus, Inferior Oblique
 - o **Trochlear:** Superior Oblique
 - o **Abducens:** Lateral Rectus
- **V - Trigeminal:**
 - o **“I’m going to be testing your facial sensation now”**
 - o **“First I’m going to test your “Sharp” (Pain) sensation, and this is what it feels like (on sternum)”**
 - **Pain:** Ophthalmic Division, Maxillary Division, Mandibular Division
 - o **“next i’m going to test your “light touch” sensation, and this is what it feels like (on sternum)”**
 - **Light Touch (Cotton Wool):** Ophthalmic Division, Maxillary Division, Mandibular Division.
 - o **“Ok now look straight ahead with your eyes wide open thank you”**
 - **Corneal Reflex (Cotton wool):** touch rolled cotton wool onto the corneas from the sides
 - o **“Next I’m going to test the motor function of the trigeminal nerve”**
 - **“Clench your jaw please” → Feel the Masseter Muscle**
 - **“Open your jaw and resist me closing it” → Pterygoids**
 - **“Just open your jaw halfway and relax, and I’m going to tap it with this” → Jaw jerk reflex**

- **VII – Facial Nerve:**

- “Wrinkle your forehead and don’t let me flatten it”
- “Close your eyes and don’t let me open them”
- “Smile”
- “Puff out your cheeks and don’t let me squash them”
- **(NB: UMN Lesions – you lose the Lower Quadrant of the face on the Contralateral Side)**
- **(NB: LMN Lesions – you lose the Whole Half of the face on the Ipsilateral Side)**



- **VIII – Vestibulocochlear Nerve:**

- “Next I’m going to test your hearing and balance”
- **Romberg’s Test** (“Stand feet together and close your eyes”)
- **Weber’s Test** (“Tell me if you hear the sound more in one ear, or is it equal in both?”) – Comment on lateralisation. If it lateralises to one ear, then there is CONDUCTIVE DEAFNESS in that ear.
- **Rinne’s Test** (“Tell me when you cannot hear the sound any more”) – then move the blades close to the ear canal – “Can you hear it now?”
- **Whisper Test** (“No repeat what I whisper” – 69, 100) Whilst distracting the other ear with rubbing fingers.

- **IX – Glossopharyngeal & X – Vagus:**

- “Open your mouth and say AH”
 - Look for asymmetrical elevation of the Uvula.
- Mention that you’d also do the gag reflex.
- “Can you say your name please” – Assess for Hoarseness
- “Can you cough please” – Assess for bovine cough.

- **XI – Accessory Nerve:**

- “Turn your head to the side and resist me moving it” (Contralateral Sternocleidomastoids)
- “Shrug your shoulders and resist me pushing them down” (Trapezius)

- **XII – Hypoglossal:**

- “Poke your tongue out as far as you can”
- Assess for Asymmetry (The tongue will point to the side of the lesion)

“Thankyou that concludes my examination”

Focussed Cerebellar Examination:

- **Introduction + Wash Hands + Consent**
- **General Inspection:**
 - Patient Alert & Orientated?
 - Tremor? Fasciculations
 - Wasting?
 - Evidence of Head Injury?
- **Speech:**
 - Say "British Constitution" (Listen for Dysphasia, Dysarthria, Dysphonia)
- **Horizontal Nystagmus:**
 - Oscillations of the eyeball when looking from one side to the other.
 - **NB: Nystagmus always points to the side of the cerebellar lesion.**
- **Standing Coordination:**
 - **Romberg's Test – "Stand with feet together and close your eyes for me" – SUPPORT THE PATIENT:**
 - Loss of balance with eyes closed = Proprioceptive Dysfunction (Dorsal Column)
 - Loss of balance with eyes open = Cerebellar Dysfunction
 - **GAIT:**
 - Walk Normally (Note any wide-based gait = Cerebellar Dysfunction)
 - **Heel to toe Walking:**
 - Inability to do this = Cerebellar Dysfunction
 - **Pronator Drift - "Can you open your palms, raise your arms out to the front and close your eyes":**
 - **Upward Drift** = Cerebellar Dysfunction
 - **Downward Drift** = Pyramidal
 - **Rebound – "Can you raise your arms out to the front as quick as you can and then stop them":**
 - Rebound = Cerebellar Dysfunction
 - **Disdiadochokinesis:**
 - "Clap your hands like this as fast as you can"
 - **Finger nose Test (Past Pointing):**
 - Touch your nose
 - Touch my finger
 - Etc.
- **Supine Coordination:**
 - **Heel-Shin Test:**
 - "Place your heel on your knee and slide it down your shin...then lift off...then back to knee & repeat."
 - **Finger Toe Test (Past Pointing):**
 - Touch My finger
 - Touch the bed
 - Etc.
 - **Disdiadochokinesis:**
 - "Tap my hands with your feet alternating as fast as you can."
 - **Clonus:**
 - Flex the knee, externally rotate the hip, and Rapidly Dorsiflex (Sustained Rhythmic Contraction = Clonus = Cerebellar Dysfunction)
- **Truncal Ataxia:**
 - "Have a seat...Cross your arms...now stand up without using your hands"

"Thankyou that concludes my examination"

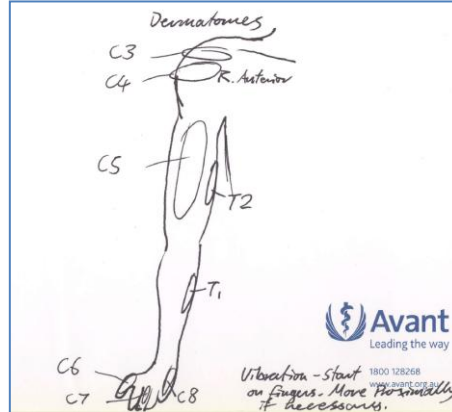
Focussed Upper Limb Neurological Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - “Can you please take your shirt off”
 - “Patient appears alert and oriented, and in no apparent pain or distress”
 - Wasting (LMN Lesion)?
 - Tremors (Parkinsons/Benign)? Fasciculations (LMN Lesion)?
 - Scars? Deformities?
 - Bruising? Injury?
 - Asymmetry?
 - “Are you left or right handed?”
- **Vital Signs - “Ordinarily I’d get the vitals next, but in the interest of saving time today I will move on”:**
 - **Pulse:**
 - **Blood Pressure:**
 - **Respiratory Rate:**
 - **Temperature:**
- **Motor Function:**
 - **Muscle Bulk/Wasting of:**
 - Intrinsic Hand Muscles
 - Forearm
 - Biceps/Triceps
 - Shoulders
 - **Tone – *Hyertonia (UMN Lesion), Hypotonia (LMN Lesion), Cogwh./Leadpipe Rigidity (Parkinson’s):***
 - Shoulder Abduction/Adduction
 - Shoulder Flexion/Extension
 - Elbow Flexion/Extension
 - Supination/Pronation
 - Wrist Flexion/Extension
 - Finger Flexion/Extension
 - **Power – Graded 0→5 (0=None; 1=Flicker; 2=Gravity Limited; 3=Gravity Unlimited; 4=Fatigue; 5=Full)**
 - Shoulder Abduction (C5, C6) “Pick up sticks”
 - Shoulder Adduction (C7, C8) “Lay them straight”
 - Elbow Flexion (C5, C6) “Pick up sticks”
 - Elbow Extension (C7, C8) “lay them straight”
 - Wrist Flexion (C6, C7) “Point to heaven”
 - Wrist Extension (C7, C8) “lay them straight”
 - Grip Strength (C7, C8) “masterbate”
 - Finger Adduction & Abduction (C8, T1)
 - Thumb Opposition (C8, T1)
 - **Reflexes – Hyperreflexia (UMN Lesion); Hyporeflexia (LMN Lesion):**
 - Triceps Reflex (C6, C7)
 - Biceps Reflex (C5, C6)
 - Brachioradialis (C5, C6)
 - **Coordination/Cerebellar Function:**
 - **Pronator Drift** – “Can you open your palms, raise your arms out to the front and close your eyes” (**Downward = Pyramidal; Upward = Cerebellar**)
 - **Rebound** – “Keep your hands there & your eyes closed, and don’t let me move your arms” OR “Quickly raise your arms to the front and stop”.
 - **Disdiadochokinesis** – “Clap your hands like this as fast as you can”
 - **Past-Pointing (Cerebellar Dysfunction)** – “Touch your nose, Touch my finger”

- **Sensory Function – (Standardise on Sternum first):**

○ **OVER ALL DERMATOMES:**

- C3 (Carpals Patch)
- C4 (Carpals Patch)
- C5 (Biceps)
- C6 (Thumb)
- C7 (Middle Finger)
- C8 (Pinky)
- T1 (Medial Forearm)
- T2 (Medial Bicep)



- **1. Pain (Spinothalamic)**
 - EYES CLOSED
 - (Temperature – Not done)
- **2. Vibration (Dorsal Column)**
 - Start Distally → Move Proximally
- **3. Proprioception (Dorsal Column)**
 - EYES CLOSED
- **4. Light Touch (Both Pathways)**
 - EYES CLOSED

“Thankyou that concludes my examination”

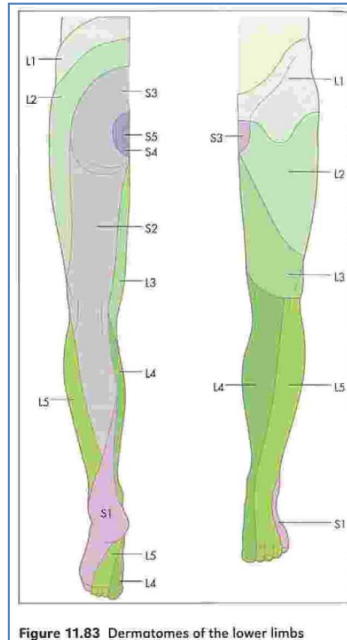
Focussed Lower Limb Neurological Examination:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - **Standing:**
 - Muscle Wasting? (LMN)
 - Fasciculations? (LMN)
 - Scars? Deformities?
 - Injury?
 - Involuntary Movements?
 - **GAIT – “Can you walk to the other end of the room, turn round, and walk back”. Look for:**
 - **Foot Drop L4 + L5 Lesion** (Common Peroneal/Fibular Nerve Palsy)
 - **Cannot Walk on Toes S1 Lesion.**
 - **Shuffling Gait** (Parkinsons)
 - **Wide Based Gait** (Cerebellar)
 - **Poor Heel-Toe Walking** (Cerebellar)
 - **Romberg’s Test – “Stand with feet together and close your eyes for me” – SUPPORT THE PATIENT:**
 - Loss of balance with eyes closed = Proprioceptive Dysfunction (Dorsal Column)
 - Loss of balance with eyes open = Cerebellar Dysfunction
- **Motor Function – On Examination Couch:**
 - **Muscle Bulk:**
 - Feel for any wasting (LMN Lesion)
 - **Tone – (Hypertonia = UMN Lesion; Hypotonia = LMN Lesion; Cog/Leadpipe Rigidity = Parkinson’s):**
 - Hip Flexion
 - Knee Flexion & Extension
 - Ankle Flexion & Extension
 - Toe Flexion & Extension
 - **Power:**
 - Hip Flexion (L2, 3, 4) “Enforce the Law” (With Roundhouse Kick)
 - Hip Adduction (L2, 3, 4) “Enforce the Law” (With Roundhouse Kick)
 - Hip Abduction (L2, 3, 4) “Enforce the Law” (With Roundhouse Kick)
 - Hip Extension (L5, S1) + (S2) “Tense your bum”
 - Knee Extension (L3, L4) “Kick the Ball”
 - Knee Flexion (L5, S1) “Kick your bum”
 - Dorsiflexion (L4, L5) “Walk on Fire”
 - Plantar Flexion (S1) “Find your son”
 - **Reflexes:**
 - Patellar Tendon (L3, L4) “Kick the Ball”
 - Archilles Tendon (S1) “Find your son”
 - Plantar Reflex/(Babinski’s Positive if UMN Lesion)
 - **Coordination/Cerebellar Function:**
 - **Disdiadokokinesia:**
 - “Tap your feet against my hands as quickly as possible”
 - **Finger-Toe Test (Past Pointing Test):**
 - “touch my finger, touch the bed, touch my finger”
 - **Heel-Shin Test:**
 - Place your heel on your knee and slide it down your shin, lift off, and place back on knee...Repeat.
 - **+ Test for CLONUS (Cerebellar Dysfunction)**

- **Sensation:**

○ **OVER ALL DERMATOMES – With EYES CLOSED:**

- L1 Garter Band 1
- L2 Garter Band 2
- L3 Anterior Knee
- L4 Medial Calf
- L5 Lateral Calf
- S1 Lateral Foot (little toe)
- S2 Posterior Thigh



- Pain
- Vibration
- Proprioception
- Light Touch

- **Special tests for Meningitis:**

- **Kernig's Sign** – Neck pain on hip flexion & knee extension
- **Brudzinski's Sign** – Involuntary Hip Flexion & knee Extension on Neck Flexion
- **Neck Stiffness** – Pain on Neck Flexion

“Thankyou that concludes my examination”

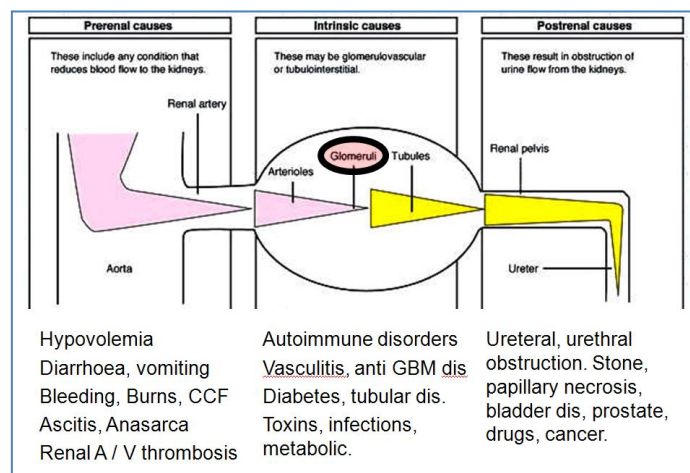
Full Renal Exam:

- **Introduction, Wash Hands, Consent,**
- **Expose Patient & General Inspection:**
 - Alert & Orientated? (Uraemic Encephalopathy, **UTI in Elderly**)
 - Acute pain or distress (Renal Colic, Pyelonephritis)
 - Signs of Fluid Overload (Ascites, Peripheral Oedema)
 - Signs of Dehydration (Causing Pre-Renal Failure)
 - Facial Oedema (Nephrotic Syndrome)
 - Obesity
 - Scars
 - In-Dwelling catheter
 - **Uraemic Fetor/Tinge (Ammonia Smell from Hyperuricaemia)**
 - **Easy bruising on Arms, Legs & Trunk**
- **Vital Signs:**
 - **Pulse:**
 - Normal
 - Tachycardia (Infection, Hypovolaemia, Anaemia)
 - **Blood Pressure:**
 - Hypertension (**Nephritic**, Fluid Overload, Polycythaemia, Polycystic Kidney)
 - Postural Hypotension (Anaemia, Hyponatraemia, Addisons, Diabetic Neuropathy)
 - **Respiratory Rate:**
 - Normal
 - Tachypnoea (if Renal Acidosis)
 - Bradypnoea (if Renal Alkalosis)
 - **Temperature:**
 - Normal
 - Fever (Infection, Malignancy)
- **Hands:**
 - Peripheral Perfusion + CRT
 - **Mee's Lines [single horizontal bands] (Arsenic/Heavy metal Poisoning)**
 - **Muercke's Lines [paired horizontal bands] & Leukonychia (Hypoalbuminaemia due to Nephrotic Syndrome)**
 - Palmar Crease Pallor & Pale Nails (Anaemia, Nephritic Syndrome)
 - Palmar Crease Pigmentation (Addisons Disease → Hyponatraemia & Hypovolaemia)
 - Xanthomata (Diabetes, Obesity, Metabolic Syndrome)
 - **Gouty Tophi (Hyperuricaemia)**
 - **Vasculitic Changes (Eg. Digital Infarcts – Sign of Autoimmune Glomerulonephritis)**
- **Arms:**
 - Uraemic Tinge/Uraemic Frost (Hyperuricaemia)
 - Scratch Marks (Uraemia)
 - AV-Fistulae (ESRD - Dialysis)
 - Scars
 - Asterixis (Uraemic Encephalopathy)
- **Face:**
 - **Butterfly Malar Rash of SLE (Cause of Renal Failure)**
 - Periorbital Oedema (Nephrotic Syndrome)
 - Conjunctival Pallor (Anaemia, Nephritic Syndrome)
 - Central/Peripheral Cyanosis
 - Mouth Infections:
 - (Strep Pharyngitis can → PSGN Nephritic Syndrome)
 - (Also Immunocompromise from Nephrotic Syndrome)
 - Thrush (Immunocompromise from diabetes)
 - Xanthelasma (Diabetes, Nephrotic Syndrome)
 - **Band Keratopathy (calcification of cornea due to 2° Hyperparathyroidism due to Vit D Deficiency)**
 - Dehydration (Nephrotic Syndrome)
 - **+Fundoscopy (Diabetic Retinopathy)**
 - **Gum Hyperplasia (Methotrexate – Transplant Medication)**

- **Neck:**
 - Carotid Bruits (Hypercholesterolaemia, PVD, Diabetes)
 - Vas Cath (Haemodialysis)
 - **Parathyroidectomy Scars (due to 2° Hyperparathyroidism due to VitD Deficiency)**
 - **Acanthosis Nigricans (Diabetes, Metabolic Syndrome, Obesity)**
- **Chest:**
 - **CCF & Pulmonary Oedema** (Due to Fluid Overload – i.e. Nephrotic Syndrome, CKD, ESRD)
- **Abdomen:**
 - **Inspection:**
 - Distension (Ascites in Nephrotic, Nephritic, Peritoneal Dialysis)
 - Surgical Scars
 - Peritoneal Dialysis Port
 - Visible Masses
 - **Palpation:**
 - Renal masses (Polycystic Kidneys, Carcinoma)
 - Insulin Injection Sites
 - **Polycystic Liver → Hepatomegaly (Polycystic Kidneys)**
 - **Abdominal Aorta (Aneurysm → Pre-Renal Failure)**
 - Enlarged Bladder (Obstructive Uropathy)
 - **Auscultation:**
 - Renal Bruits (Renal Artery Stenosis, Pre-Renal Failure)
 - Bowel Sounds Present
 - **Percussion:**
 - Shifting Dullness (Ascites – Nephrotic, Nephritic, CKD)
- **Back:**
 - Surgical Scars
 - **Costovertebral Angle Tenderness (Murphey's Kidney Punch) – (Pyelonephritis/Stones)**
 - **Bony Tenderness**
 - **Sacral Oedema**
- **Legs:**
 - Pitting Oedema (Nephrotic, Nephritic, CKD, Diabetes, PVD)
 - Scratches/Uraemic Frost (Hyperuricaemia)
- **Feet:**
 - Xanthomata (Hypercholesterolaemia)
 - Gouty Tophi (Hyperuricaemia)
 - Mee's Lines (Arsenic/Heavy metal Poisoning)
 - Meurkhe's Lines & Leukonychia (Hypoalbuminaemia – Nephrotic Syndrome)
 - Peripheral Perfusion + CRT
 - Peripheral Pulses
 - **(+ Diabetic Neuropathy & Foot Examination)**
- **+ Urine Dipstick**
 - Blood (Nephritic, Pyelonephritis, Renal Stones)
 - Protein (Nephrotic, Nephritic)

Focussed Examinations:

- **Pre-Renal Failure Exam (Hypovolaemia, CCF, Ascites, Renal Artery Stenosis/Thrombosis):**
- **Intra-Renal Failure (Nephrotics & Nephritics):**
 - **Nephrotic (Less Serious) (Autoimmune [adults] or Post-URTI [child]):**
 - Polyuria
 - Massive Proteinuria → Hypoalbuminaemia, Oedema & Periorbital Oedema
 - Compensative Hyperlipidaemia (Xanthomata/Xanthelasma)
 - Immunosuppression (Loss of IgG in Urine)
 - Hypercoagulability (Loss of AT3 in Urine)
 - No Haematuria
 - **Nephritic (More Serious) (Post URTI [Adults] or Post Strep-Pharyngitis [Children]):**
 - Anuria/Oliguria (↓GFR)
 - Modest Proteinuria (*NB: NORMAL ALBUMIN*) → Oedema
 - Anaemia (PainLESS Haematuria)
 - Hypertension
- **Post-Renal Failure (Obstructive Uropathy):**
- **Renal Carcinoma**



Full & Focussed Respiratory Exams

Full Respiratory Exam:

- **Introduction, Wash Hands, Consent**
- **General Inspection:**
 - Alert/Orientated
 - Pain/Distress
 - **Body Habitus:**
 - Obesity (Blue Bloaters)
 - Cachexia (Pink Puffers, Malignancy)
 - Chest Deformities (Pectus Excavatum, Pectus Carinatum, Barrel Chest, Kyphosis, Lordosis)
 - Chest Scars
 - **Respiratory Distress?**
 - Tripoding
 - Pursed-Lip Breathing (Obstructive Lung Disease)
 - Dyspnoea
 - Audible Wheeze/Cough/Stridor (Obstructive Lung Disease)
 - Intercostal Recession & Tracheal Tug (Restrictive Lung Disease)
 - **Colour:**
 - Cyanosis (Blue Bloaters)
 - Plethora (Pink Puffers)
 - Pallor (Anaemia)
- **Vital Signs:**
 - **Pulse:**
 - Tachycardia (Anaemia, Cyanosis, Infection)
 - **Blood Pressure:**
 - Typically Normal
 - Postural Variation (Severe Anaemia)
 - Pulsus Paradoxus (Severe COPD, Asthma, Tamponade, Pneumothorax)
 - **Respiratory Rate:**
 - Tachypnoeic (Anaemia & All Lung Diseases)
 - **Temperature:**
 - Fever (Infection)
- **Hands:**
 - Perfusion/CRT
 - Clubbing (Chronic Cyanosis)
 - Pale Nails (Anaemia)
 - Koilonychia (Iron Deficiency Anaemia)
 - Palmar Crease Pallor (Anaemia)
 - Tar Staining (Smoking)
 - Intrinsic Hand Muscle Wasting *(Pancoast Tumour)
 - Hand Muscle Weakness *(Pancoast Tumour)
 - Asterixis (CO₂ Retention)
- **Arms:**
 - HPOA (Lung Tumour)
 - Pemberton's Sign *(SVC Obstruction due to Pancoast Tumour)
- **Face:**
 - Plethora (Polycythaemia, SVC Obstruction)
 - Skin Lesions (SCC/BCCs)
 - Conjunctival Pallor (Anaemia); Subconjunctival Haemorrhages (Severe Cough)
 - Atrophic Glossitis/Angular Stomatitis (All Types of Anaemia)
 - Hydration
 - Central/Peripheral Cyanosis (All Lung Pathology)
 - Leukoplakia/Erythroplakia (Premalignancy from Smoking)
 - Tar-Stained Teeth (Smoking)
 - **HORNERS Syndrome** (Sympathetic Nerve Palsy):
 - Unilateral Ptosis, Anhidrosis, Miosis (Pinpoint Pupil, Enophthalmos, Laryngeal Hoarseness)

- **Neck:**
 - Virchow's Node (Supraclavicular) (Malignancy)
 - Cervical Lymphadenopathy (Infection, Malignancy)
 - ↑JVP (SVC Obstruction – Pancoast Tumour)(or Pulmonary Hypertension)
 - Abdojugular Reflux (Negative if SVC Obstruction)
 - Tracheal Deviation (Atelectasis, Pneumothorax)
 - Tracheal Tug (Restrictive Lung Disease)
- **Chest – ONCE FROM BEHIND, ONCE FROM THE BACK:**
 - **Inspection:**
 - Chest Deformities
 - Scars
 - Visualise Chest Expansion FROM BEHIND
 - **Palpation:**
 - Chest Expansion >5cm = Normal (From Behind)
 - ↑Tactile Fremitus (Consolidation)
 - Hoover's Sign (Severe COPD, Emphysema, Asthma)
 - Chest Wall Tenderness (Malignancy)
 - **Percussion:**
 - Dullness = Consolidation
 - Stony Dullness = Pleural Effusion
 - Hyperresonant = COPD/Emphysema/Asthma/Pneumothorax
 - Lung Borders for Hyperinflation (6th rib anteriorly = normal) (COPD, Emphysema, Asthma)
 - **Auscultation:**
 - ↑Vocal Resonance
 - **Breath Sounds:**
 - Vesicular = Normal
 - Bronchial = Consolidation
 - Pleuritic Rub = Pleuritis/Mesothelioma
 - Muffled = Pleural Effusion
 - Inspiratory Crepitations/Crackles = Pulmonary Oedema/Pneumonia
 - Expiratory Wheezes = Bronchial Disease
 - (+ Mention Cardiovascular Examination)
- **Abdomen:**
 - Percuss & Palpate for Liver Ptosis (Lung Hyperinflation)
- **Legs:**
 - Oedema
 - Calf Tenderness & Erythema (DVT→PE)
 - Signs of Venous Stasis – Shiny Skin, Hair Loss, Venous Ulcers (DVT→PE)
- **Feet:**
 - Perfusion/CRT
 - Clubbing
 - Koilonychia (Iron Deficiency Anaemia)
 - Pale Nails (Anaemia)

Full Rheumatological Exam:

- **Introduction, Wash Hands, Consent,**
- **General Inspection:**
 - Cushingoid Appearance (Steroids → Osteoporosis)
 - Bird-like Facies (Scleroderma)
 - Weight Loss (Autoimmune, Scleroderma)
 - Butterfly Rash & Hair Loss (SLE)
- **Vital Signs:**
 - **Pulse:**
 - **Blood Pressure:**
 - **Respiratory Rate:**
 - **Temperature:**
 - Fever (Rheumatoid, SLE)
- **Hands:**
 - **Rheumatoid Arthritis:**
 - Symmetrical PIP Synovitis (Red + Swollen + Tender)
 - Ulnar Deviation
 - Subluxation of MCP Joints
 - Z-Deformity of the Thumbs
 - Swan Neck Deformity of the Fingers
 - Vasculitic Splinters in the Fingers
 - Small Muscle Wasting
 - Palmar Tendon Crepitus
 - Carpal Tunnel (Inverse Prayer Test)
 - **Reiter's Syndrome:**
 - Syphilitic-like Lesions on Soles & Palms.
 - **Osteoarthritis:**
 - Heberston's Nodes (DIP Joints)
 - Bouchard's Nodes (PIP Joints)
 - **Gouty Arthritis:**
 - Gouty Tophi in Hands
 - **Scleroderma (CREST):**
 - Calcinosis (Calcific Nodules in Skin of Fingers)
 - Raynaud's Phenomenon
 - (+ Esophageal dysmotility)
 - Sclerodactyly
 - Telangiectasias on the Fingers
- **Arms:**
 - Rheumatoid Nodules (Rheumatoid Arthritis)
 - Gouty Tophi in Wrists & Elbows (Gout)
 - Psoriatic Plaques on Extensor Surfaces (Psoriasis & Psoriatic Arthritis)
- **Face:**
 - **Rheumatoid Arthritis:**
 - Dry Eyes (Sjogren's Syndrome)
 - Cataracts (Steroid Side Effect)
 - Conjunctival Pallor (Anaemia from NSAIDs → GI Bleeding)
 - Parotid Gland Enlargement (Sjogren's Syndrome)
 - Dryness of Mouth (Sjogren's Syndrome)
 - Mouth Ulcers & Gum Hypertrophy (Methotrexate Side Effects)
 - TMJ Joint Crepitus
 - **Ankylosing Spondylitis:**
 - Acute Iritis
 - **Reiter's Syndrome:**
 - Conjunctivitis
 - Iritis
 - **Gout:**
 - Gouty Tophi in the Ear

- **Neck:**
 - Cervical Lymphadenopathy (Rheumatoid, SLE)
- **Chest:**
 - **Rheumatoid Arthritis:**
 - Bony Tenderness (Particularly Spine)
 - Pleural Effusions
 - Pericardial Rub
 - Aortic Regurgitation Murmur
 - **Ankylosing Spondylitis:**
 - Lordosis + Kyphosis
 - Lumbar Tenderness
 - **Markedly ↓ ROM of Spine
 - ** ↓ Chest Expansion
 - Aortic Regurgitation Murmur
 - Sacroiliac Joint Tenderness
- **Abdomen:**
 - **Rheumatoid & SLE:**
 - **Splenomegaly
 - **Hepatomegaly
- **Genitals:**
 - **Reiter's Syndrome:**
 - Urethral Discharge
 - Balanitis
 - Prostatitis
- **Legs:**
 - **Rheumatoid Arthritis:**
 - Quadriceps Wasting
 - Knee Crepitus
 - Valgus (Bowing) Deformity of the Knee
 - Baker's Cysts (in Popliteal Fossa)
 - Peripheral Neuropathy (***Including Foot Drop***)
 - **Ankylosing Spondylitis:**
 - Achilles Tendonitis
 - Plantar Fasciitis
 - **Gouty Arthritis:**
 - Tophi in Big Toe (75% of cases)
 - Tophi in Achilles Tendon
- **Feet:**
 - **Rheumatoid:**
 - Foot Drop (Common Fibular Nerve Palsy)
 - MTP Joints Swelling & Subluxation
 - Achilles Tendon Nodules
 - Claw Toes
 - **Reiter's Syndrome:**
 - Sausage Toes
 - Plantar Fasciitis
 - Achilles Tendonitis
 - Syphilitic-like Lesions on Soles & Palms.

NB: Limited Cutaneous Scleroderma = CREST Syndrome =

- **Calcinosis (Calcific Skin Nodules in the Fingers)**
- **Raynaud's Phenomenon**
- **Esophageal Dysmotility → Dysphagia**
- **Sclerodactyly of fingers**
- **Telangiectasia on fingers**

Preoperative Care:

1. Right Patient, Right Surgery, Right Side?

- a. "Time out" is done in the OR; X-References Pt info with Operation etc.
- b. Ask Pt what surgery?
- c. Mark the correct side.

2. Informed Consent (P570 oxford)

a. General Risks:

i. Anaesthetic Risks:

1. Atelectasis (Lung Collapse)
2. Pneumothorax (Lung Rupture)
3. Pneumonia
4. Aspiration
5. Mouth Injury
6. Sore Throat
7. Awareness
8. Coma
9. Malignant Hyperthermia (Rare, Inherited → Rhabdomyolysis & Fever → **Usually Fatal**)
10. Anaphylaxis (Anaesthetic Reaction)
11. Cardiac Arrest
12. Death

ii. Surgical Risks:

1. Bleeding
2. Transfusion (+/- Reaction)
3. Wound (Pain, Scars)
4. Infection
5. DVT +/- PE
6. Disability
7. Death
8. Nerve Palsy

b. Specific Risks:

- i. Brain Damage (Neurosurgery)
- ii. Stroke (Carotid Endarterectomy)
- iii. Hypothyroidism (Thyroidectomy)
- iv. Hypoparathyroidism (Thyroidectomy)
- v. CBD Dissection (Cholecystectomy)
- vi. Ileus (Abdominal Surgery)
- vii. Adhesions (Abdominal Surgery)

c. Final Words:

- i. Consent is NOT a contract; It can be revoked at any time.
- ii. Risks are relative & depend on Pt Health & Procedure.
- iii. Anaesthetic Mortality $\approx 1/200,000$ healthy pts.
- iv. Benefits should outweigh Risks

3. Anaesthetic Risk Assessment:

- a. **Cardiorespiratory Function**
- b. **Co-Morbidities?**
 - i. IHD
 - ii. Diabetes
 - iii. Asthma
 - iv. HTN
 - v. Epilepsy
 - vi. Jaundice
 - vii. Pregnant
- c. **Allergies**
- d. **Smoker**
- e. **Previous Anaesthesia + any complications?**
- f. **FamHx of Malignant Hyperthermia**

4. Drug Assessment:

- a. **Pt on Steroid Therapy?**
 - i. Pts on steroids have suppressed adrenals ∴ need extra cortisol to cope with the stress of surgery. Give **Hydrocortisone 50-100mg IV with premeds**, then **TDS for <3days**.
- b. **Pt on Anticoagulants?**
 - i. Typically **Aspirin is fine**.
 - ii. **Stop Warfarin >2-5days pre-op**. (Emergency Reversal with **Vitamin K +/- FFP**.)
 - iii. **Stop Heparin 6hrs pre-op**. (Emergency Reversal with **Protamine**)
 - iv. (NB: When re-warfarinizing, DO NOT stop Heparin until INR is Therapeutic, as Warfarin is *Pro-Thrombotic* in the early stages)
 - v. (NB: Avoid Epidural, Spinal & Regional Blocks)
- c. **Pt on OCP/HRT?**
 - i. ↑Oestrogen = ↑ DVT Risk, ∴ **Stop OCP 4wks Pre-Op** (major/leg surgery); **Resume 2wks Post-Op**.

5. Pre-Operative Checklist:

- a. **Fast The Patient:**
 - i. **NBM <2hr Pre-Op**
 - ii. **Clear Fluids >2 Pre-Op**
 - iii. **No Solids >6hrs Pre-Op**.
- b. **IV Cannula**
- c. **Catheterise (if Necessary)**
- d. **Group & Hold/Crossmatch**
 - i. **G&H for Moderate Surgery** (Eg. Mastectomy, Cholecystectomy)
 - ii. **X-Match for Major Surgery** (Eg. Caesarean=2U, Gastrectomy=4U, AAA=6U)
- e. **Usual Blood tests:**
 - i. **FBC** (Hb)
 - ii. **U&E** (if Diabetic/on Diuretics/Burns Pt/Renal Dx/Liver Dx/Ileus/on TPN)
- f. **Specific Blood Tests:**
 - i. **LFT** (if Jaundiced/Malignancy/ETOH Hx)
 - ii. **Amylase** (if Acute Abdomen)
 - iii. **Drug Levels** (eg. Digoxin/Lithium)
 - iv. **TFT** (if Thyroid Hx)
- g. **CXR** (If Cardiac/Resp Hx, Possible Lung Mets, >65yrs)
- h. **ECG** (If >55yrs/IHD/HTN/Other CVD)
- i. **Book any imaging**

6. **DVT Prophylaxis needed? (P580 oxford):**

- Graduated Compression Stockings (NOT FOR Vasculopathies!!!)**
- + Heparin 5000Units SC 2hr Pre-Op (OR LMWH/Enoxaparin 20mg/d SC); then BD Post-Op until Walking**

7. **Prophylactic Antibiotics:**

<u>Procedure</u>	<u>Likely Pathogen/s</u>	<u>Antibacterial Cover</u>
General Surgery: - Appendectomy (Non Perfd) - Colorectal Surgery - Biliary/Duodenal Surgery	Enteric G-Negs Enteric G-Negs + G-Pos Enterococcus, Anaerobes Enteric G-Negs + G-Pos Cocci	Cefalexin / Gentamicin Cefalexin + Metronidazole Cefalexin + Metronidazole
Orthopaedic Surgery	Staphs + Streps + G-Neg Bacilli + Anaerobes	Cefalexin / Gentamicin
Vascular Surgery	Staphs + G-Neg Bacilli + G-Pos Enterococcus	Cefalexin / Gentamicin / Augmentin
Urologic Surgery	G-Neg Bacilli + G-Pos Enterococcus	Cefalexin / Ciprofloxacin
Gynaecologic Surgery: - C-Section - Hysterectomy	Staphs + Strep + G-Pos Enterococcus Enteric G-Negs + Group B Strep + G-Pos Enterococcus	Cefalexin / Gentamicin Cefalexin / Gentamicin / Ampicillin

	<u>Egs:</u>	<u>Effective Antibiotics:</u>
<u>G. Positives ("-cocci")</u>	Enterococcus Spp. Staphylococcus Spp. Streptococcus Spp.	Penicillins (Benz-Pen-G, Amoxicillin, Ampicillin, Flucloxacillin) - (NB: Augmentin for β -lactamase resistant bacteria = Amoxil + Clavulonate) Cephalosporins (Ceftriaxone ³ , Cefipime ⁴ , Cefalexin ⁴) [Vancomycin (For resistant G-Pos/ if Penicillin Allergy)]
<u>G. Negatives</u>	E. Coli Neisseria Spp. Pseudomonas Haemophilus Spp. Klebsiella Spp. Enterobacter Spp.	Aminoglycosides (Gentamicin, Tobramycin, Streptomycin) - (NB: Used with Penicillins/Cephs for <i>Synergy</i>) Tetracyclines (Tetracycline, Doxycycline) Macrolides (Erythromycin, Azithromycin) Quinolones (Ciprofloxacin, Norfloxacin) Cephalosporins (Ceftriaxone ³ , Cefipime ⁴ , Cefalexin ⁴) [Benz-Pen-G (For Neisseria Gono/Mening)]
<u>Anaerobes</u>	Bacteroides Spp. Clostridium Spp.	[Metronidazole (For Bacteroides)] [Vancomycin (For C.Diff)]
<u>Atypicals</u>	Mycoplasma Legionella	Tetracyclines (Tetracycline, Doxycycline) Macrolides (Erythromycin, Azithromycin)

NB: Triple Therapy: –Ampicillin, Gentamicin, Metronidazole- give great 'Broad Cover'. (Remember by AGM – Annual General Meeting...If you want to be around next year, take these 3)

Sexual History	Intro + Consent Presenting Complaint: – Any current symptoms? Unusual vaginal d/c or itching? Painful IC? Urinary complaints? Menstrual problems? Relationship Status, Sexual Orientation: • Are you in a relationship? • DO you have a regular partner? Male or female? • DO you partake in sexual activities with males, females or both? How many partners? • How many partners have you had in the last 12 months? • Have you had sex with anyone different in the last 3 months • DO you know your partners? – friends?, random's?, what country are they from? Monogamous/Promiscuous? Safe Sex • Do you use condoms? Effectively? • When was your last unprotected sex? • What type of sexual activities do you partake in? • Sex with Prostitutes History of STIs • Have you had any STD's before? When was your last Pap Smear? Is there anything else you would like to add? Follow up with OBGYN History ↓
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OBGYN History	Intro + Consent Presenting Complaint: – Any current symptoms? Unusual vaginal d/c or itching? Painful IC? Urinary complaints? Menstrual problems? Date of Last Period – – Was it normal? Regularity? – – Are your periods generally monthly (10-12 periods a year)? Symptoms related to Periods? – – Do you have excessive bleeding or cramping with menses? Age of Menarche – – How old were you when you started having periods? Has Menopause Occurred? – – How old were you when you stopped having periods? (menopause = 1 year since last menses) – Any vaginal bleeding since menopause? Possibility of Pregnancy? – – Are you contracepting? Sexually active? New partner? – Any chance you might be pregnant now? Maternal History? – – Gravida - # pregnancies – Para - # deliveries – Live births – full term or premature – Still births – Multiple births – C-Sections? – Spontaneous abortions – Therapeutic abortions – Living children “Well-Woman Screening” History: – When was last pap smear? Was it normal? – When was your last breast exam? Do you examine yourself regularly? – Any Family History of Female Cancers? PMH/PSH: – Past STIs? – Any OB/GYN surgeries? Follow up with Sexual History ↑
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Cardiovascular Pre-Op Assessment

1. Assess the Pump (Heart):

- a. **Power (Myocardium)**
- b. **Valves (Stenosis/Regurg)**
 - i. NB: Stenosis is worse than Regurg because they cap the CO under load/stress.
- c. **Piping (Vessels)**
- d. **Control (Conduction)**

2. CVS Systems Review:

- a. **Cardiac Failure:**
 - i. Dyspnoea
 - ii. PND
 - iii. Orthopnoea
 - iv. Peripheral Oedema/Ascites
- b. **IHD:**
 - i. Angina (Stable/Unstable)
 - ii. Prev. MI
 - iii. FamHx of IHD
- c. **Valve Disease:**
 - i. Hx of Rheumatic Fever
 - ii. Old Age
- d. **PVD:**
 - i. Claudication
 - ii. Smoker?/Diabetic?
 - iii. Dizziness/Blackouts/Prev. TIA
- e. **Conduction Deficits:**
 - i. Palpitations
 - ii. Arrhythmias

3. CVS Examination:

- a. **Signs of Failure:**
 - i. Basal Crepitations (LVF)
 - ii. Peripheral Oedema/Ascites/Organomegaly (RVF)
- b. **Signs of Structural Abnormality:**
 - i. Displaced Apex (Dextrocardia/Cardiomegaly)
 - ii. Parasternal Heave
 - iii. Murmurs/Thrills
 - iv. Previous Surgery
- c. **Signs of PVD:**
 - i. Peripheral Pulses
 - ii. CRT
 - iii. Ulcers (Arterial/Venous)
- d. **Signs of Arrhythmias:**
 - i. Irregular Pulse
 - ii. Rapid Pulse
 - iii. ECG

4. Medications:

- a. **Diuretics** – because they ↓K⁺ & ↑Mg⁺
- b. **Antihypertensives**
- c. **Antiarrhythmics**
- d. **Anticoagulants** – esp. Dagabattran (Irreversible)
- e. **Antibiotics**

Likely Focussed Cardio Exams for OSCE

Heart Failures		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Left Heart Failure (LVF):</u>	- Exertional Dyspnoea - Orthopnea - Paroxysmal Nocturnal Dyspnoea - Wheezing Cough (“Cardiac Asthma”)	Vitals: - Tachypnoea, Tachycardia (Low Volume), Hypotension Other: - ↓CO → Cold peripheries, ↑CRT, Peripheral Cyanosis, Cerebral Hypoperfusion (Inattention, Confusion) - Pulmonary Congestion → Central Cyanosis, Basal Lung Crepitations, Diffuse Wheezes. - Abdo-Jugular Reflux Positive. - Laterally Displaced Apex Beat (LV Dilation) Signs of Causes: - Mitral Facies & Mitral Regurg (Pan-Systolic Murmur over Mitral/Apex) - Mitral Facies, Mitral Stenosis (Pan-Diastolic Crescendo Murmur over Mitral/Apex) - OR Aortic Stenosis (Syst-Ejection Murmur over R.Sternal Border) - OR Aortic Regurg (Decrescendo Diastolic Murmur over R.Sternal Border) - (Cardiac Cachexia if → Right Heart Failure)
<u>Right Heart Failure (RVF):</u>	- Anorexia/Cardiac Cachexia (Portal HTN) - Swollen Ankles, Sacrum & Abdomen, - Weight Gain (Fluid) (+ Pulsatile Liver = Tricuspid Regurg)	Vitals: - Low-Volume Pulse Other: - ↓CO → Cold peripheries, ↑CRT, Peripheral Cyanosis, Cerebral Hypoperfusion (Inattention, Confusion) - RV-Heave - Peripheral Congestion → Peripheral Oedema (Sacral/Tibial), Ascites, Small Pleural Effusions. - ↑JVP, Kussmaul’s Sign (↑JVP on Inspiration) - Portal Hypertension → “Cardiac Cachexia”, Caput Medusa, Tender Hepatomegaly, Pulsatile Liver (TR), Signs of Causes: - COPD & Cor Pulmonale (RVF due to Pulmonary Hypertension) - LVF (Pulmonary Congestion) - Tricuspid Regurg (Pansystolic Murmur over Tricuspid + Pulsatile Liver)

Cardiac Causes of Chest Pain		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
IHD & Acute Myocardial Infarction:	IHD: - Angina (Severe Central Crushing Chest Pain): ○ Stable = Transient Exertional ○ Variant/Prinzmetal = Transient @ Rest ○ Unstable = Resting Angina of ↑Severity & Frequency - (+/- Diaphoresis, Dyspnoea, Anxiety) AMI: - Angina (Severe Central Crushing Chest Pain) ○ >20mins ○ Radiating to L-Arm, Neck & Jaw - Dyspnoea - Diaphoresis - Anxiety	Vitals: - Tachycardia/Bradycardia ○ +/-Arrhythmias (AF, VT, VF, Heart Block) - Tachypnoea - Hypotension - Afebrile Other: - Clammy, Sweaty Hands - If LV Infarct → LVF → Pulmonary Congestion, ↓CO, Cool Peripheries, Central & Peripheral Cyanosis, (Cardiogenic Shock) ○ If Papillary Muscle Dysfunction → Mit.Regurg (Midsystolic Murm) - If RV Infarct → RVF → ↑JVP, Kussmaul's Sign. - If Transmural → Pericardial Friction Rub Signs of Causes: - PVD, Hypertension, Diabetes, Hypercholesterolaemia, Obesity, Smoker.
Pulmonary Embolism:	- Sudden, SEVERE Dyspnoea - Pleuritic Chest Pain - (+/- Haemoptysis) - (+/- Syncope)	Vitals: - Fever, Tachycardia, Tachypnoea, Hypotension (LVF) Other: - RVF → Cool Peripheries, ↑CRT, Peripheral Cyanosis, ↑JVP, RV-Heave, Tricuspid Regurg Murmur - ↓Resp.Function → Central Cyanosis - Pleural Friction Rub, Signs of Causes: - DVT – Calf Pain, Calf Tenderness, Calf Swelling/Erythema, Pedal Oedema. ○ (B/G of Pregnancy, Air Travel, Recent Surgery, Clotting Disorders)
Acute Aortic Dissection:	- Sudden, Severe Tearing Chest/Abdo Pain ○ Radiating to Back - (+/- Stroke) - (+/- ALOC – due to Tamponade) - (+/- Sudden Death)	Vitals: - Unequal Radial Pulse Pressures, - Asymmetrical Blood Pressure Other: - Pulsatile, Expansile Abdominal Masses, Renal Bruits - Signs of Tamponade (↑JVP, ↓Heart Sounds, Low-Volume Pulse, etc) - Aortic Regurg (Due to disruption of annulus) (Decrescendo Diastolic Murmur) Signs of Causes: - Marfan's Habitus Complications: - Myocardial Infarction (Coronary Occlusion), Mesenteric Ischaemia (Mesenteric Artery Occlusion), Pre-Renal Failure (Renal Artery Occlusion), Limb Ischaemia

Endocardial Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Rheumatic Fever/ Rheumatic Heart Disease:</u>	(Preceding Strep Throat): - Fever, Pharyngitis, Tonsillitis, Lymphadenopathy Rheumatic Fever (>2wks Post GABH Strep Pharyngitis): - Fever - Joints - Migratory Polyarthritits, Ataxia - Heart - Pleuritic Chest Pain (Fibrinous Pericarditis) - Nodules – Subcut Nodules - Erythema Marginatum – Red rings on trunk & limbs - Sydenham Chorea – Rapid, Involuntary Mvts. - (↑in Indigenous) Rheumatic Heart Disease: - Palpitations (AF) - LVF → Exertional Dyspnoea, Orthopnoea, PND - Mitral Facies	Acute Rheumatic Fever: Vitals: - Fever, Tachycardia, Tachypnoea Other: - Ataxia (due to polyarthritits) - Pericardial Friction Rub (Fibrinous Pericarditis) - Subcutaneous Nodules - Erythema Marginatum (Red rings on trunk and limbs) - Sydenham's Chorea (Rapid, Involuntary, Purposeless Movements) Rheumatic Heart Disease: Vitals: - Afebrile, Tachycardia (+/- AF), Tachypnoea (CCF), Hypotensive Other: - Mitral Facies & Mitral Stenosis (+/- Mitral Regurgitation) - CCF → Inspiratory Creps, Peripheral & Central Cyanosis, ↑JVP, Dyspnoea Signs of Cause: - Indigenous, Low SES, Poor Hygeine
<u>Infective Endocarditis:</u>	- Acute PUO – (+ Chills, Night-Sweats/Weight Loss) - Dyspnoea - Mild Arthralgia ("clicks joints, bites the heart") - Palpitations - Haematuria	Vitals: - Fever, Tachycardia, Tachypnoea Other: - Clubbing, Palmar Crease Pallor, Splinter Haemorrhages (Septic Emboli), Janeway Lesions (Painless Maculopapular Bacterial Colonies on Palms), Painful Osler's Nodes (Tender, Red, Raised Nodules on Pulp of Fingers) - Trackmarks (IVDU), - Conjunctival Pallor, Retinal Roth's Spots (Retinal Haemorrhages), Poor Dentition, New or Changing Murmur (Either side of heart) (Often Tricuspid), Prosthetic Valve Click, - Splenomegaly Signs of Causes: - IVDU, Poor Dentition, Open Heart Surgery.

Pericardial Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Acute Pericarditis:	- Fever - Dyspnoea (+/- Dry Cough) - pleuritic Chest Pain (Worse on Supine)	Vitals: - Tachycardia, Tachypnoea (Fast, Shallow), Febrile, Other: - Pericardial Friction Rub (Best heard when sitting forward + hold breath) - IF Tamponade → ↑JVP, ↓Heart Sounds, Impalpable apex, & ↓CO. Signs of Causes: - URTI, Post MI, Post Cardiac Surgery, Uraemia, SLE/Rheumatoid.
Acute Cardiac Tamponade:	- Dyspnoea - Anxiety - Syncope	Vitals: - Tachypnoea, Tachycardia (Low Volume & Pulsus Paradoxus), Hypotension, Afebrile Other: - ↑JVP, - Impalpable Apex, ↓Heart Sounds, - Left Lung: Dull & Bronchial Breathing @ Base (Compressed by Heart)

Hypertensive Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Pulmonary Hypertension & Cor pulmonale: (LVF, COPD)	RVF Secondary to Pulmonary Hypertension: - COPD: Dyspnoea, Cough, Wheeze - Pul HTN: Cough/Dyspnoea/PND/Orthopnea - RVF: Swelling (Legs, Abdo), Chest Pain	Vitals: - Tachycardia (if LVF), Tachypnoea (if COPD/LVF), Hypotension (if LVF), Afebrile Other: - If LVF: Cool Peripheries, ↑CRT, Peripheral & Central Cyanosis, Low Volume Pulse - If COPD: Clubbing, Tar Staining, Peripheral & Central Cyanosis - ↑JVP + a-Wave, RV-Heave, Loud S2 (closure of Pul.Valve) Abdojugular Reflux Positive, Portal Hypertension (Tender Hepatomegaly), Ascites, Sacral/Pedal Oedema, Signs of Causes: - LVF, Smoking, COPD, IPF

Running Tally of Diseases Learned

ENDOCRINE

<u>Thyroid Disease (Temperature Intolerance + Weight Change + Menstrual Change + Appearance Change):</u>		
<u>Disease:</u>	<u>TYPICAL Symptoms/Presentation:</u>	<u>TYPICAL Clinical Signs:</u>
<u>Hyperthyroidism & Thyrotoxicosis:</u> (Eg. Graves Disease or Central ↑TSH)	Fatigue, Weight Loss (Despite ↑ Appetite) Diarrhoea Heat intolerance, ↑ Sweating, Facial Flushing Irregular Menstruation Painless Goiter Anxiety, Tremor, Insomnia, Palpitations (NB: May → CCF in Elderly)	Vitals: - Tachycardia (Irreg. Irreg: AF), Hyperthermia, Hypertension, Other: - Weight Loss, Flushing, Anxiety, Sweating, Tremor, Alopecia, Frightened Facies - Hands Warm & Well Perfused, Palmar Erythema, Sweaty Hands, Acropathy (Digital Clubbing & Swelling; Fingers & Toes) –GRAVES, Onycholysis (Plummer's Nails = Separation of Nails from Nailbed), Hand Tremor, - Proximal Myopathy (Muscle Weakness) & Wasting, But HYPERREFLEXIA - Exophthalmos (Frightened Facies), Lid Lag, - Neck Scars (Thyroidectomy → ↑ Exogenous Thyroid Hormone), Palpable Painless Goitre (Diffuse if Grave's Disease; Nodular if TMG), Mobile on Swallowing, Cervical Lymphadenopathy (Graves) - Thyroid Bruit - Check Pemberton's Sign (Retrosternal Goitre) & Percuss Across the Chest - Gynaecomastia - Pretibial oedema, HYPERREFLEXIA Signs of Causes: - Goiter - Pituitary Adenoma (Bitemporal Hemianopsia)
<u>Hypothyroidism & Myxoedema:</u> (Hashimoto Thyroiditis, Iodine Deficiency or Central ↓TSH)	Early symptoms: - Fatigue, Depression - Weight Gain (Despite ↓ Appetite) - Constipation - Cold Intolerance, Dry Skin, Pale Skin - Menorrhagia - Painless Goiter - Stupor, Memory Loss - Muscle Pain - Puffy Eyes, Hair Loss of Eyebrows	Vitals: - Bradycardia (Small Volume), Hypotension, Hypothermia Other: - Obesity, Oedema, Mental Sluggishness, Anhedonia, Slow Hypothyroid Speech, Hoarseness, Apathetic (Emotionless) Face, - Hands Cool, Dry & Poorly Perfused, ↑CRT, Peripheral Cyanosis, Brittle Nails, Palmar Crease Pallor (from Menorrhagia), Inverse Prayer Test for Carpal Tunnel, Xanthomata (↑Cholesterol) - Proximal Myopathy (Muscle Weakness) & Wasting, with "HUNG REFLEXES" - Facial Oedema, Periorbital Oedema, Alopecia, Loss of lateral 1/3 eyebrows, Xanthelasma (↑Cholesterol) - Painless Goitre, Mobile on Swallowing, - Pericardial Effusion, Pleural Effusions - Pedal Oedema, Hung Leg Reflexes, Peripheral Paresthesia Signs of Causes: Cretinism (Iodine Deficiency)

Parathyroid Disorders (Symptom Cluster):		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Hyperparathyroidism: (↑PTH → Hypercalcaemia & Hypophosphataemia)	(F > M) Asymptomatic – Incidental Hypercalcaemia. Symptomatic – "Bones, Moans, Stones & Abdominal Groans" : - Bone: Pain/Osteoporosis/Fractures - CNS: Depression/Lethargy/Seizures - Gallstones & Kidney Stones. - Abdo: Constipation/Nausea/Ulcers Other Organs : Metastatic Calcification in Stomach/Lungs/Myocardium/Heart Valves/ & Vessels	Vitals: - ? Other: - Mental State (Hypercalcaemia can → Coma & Convulsions) - Signs of Dehydration (Hypercalcaemia can → Polyuria) - Band Keratopathy (Calcium Deposition underneath the Corneal Epithelium) - Bony Tenderness (Shoulders, Sternum, Ribs, Spine, Hips) - Pseudogout (Calcium Pyrophosphate deposition in the knee) - Haematuria (Renal Stones) Signs of Causes: - ↑PTH 2° to Chronic Renal Failure (CKD signs + Osteoporosis)
Hypoparathyroidism: (↓PTH → Hypocalcaemia → Tetany) (Typically Post-Operative after Thyroidectomy)	*Hypocalcaemia → Neuromuscular **Tetany**: - → Distal Paraesthesias - → Cramping & Spasms - → *Laryngospasm (Emergency) - → Seizures (+/- CNS : Confusion/Depression/Psychosis) (+/- CVS : Characteristic Prolonged QT-Interval)	Vitals: - ? Other: - Trousseau's Sign (Tetany of hand after 2mins of arm ischaemia with BP Cuff) - Chvostek's sign (Unilateral Facial Twitch when the Facial Nerve Outlet is Struck) - Hyperreflexia - Fragile Nails - Dry Skin - Tooth Deformities Signs of Causes: - Neck Scars (Thyroidectomy)

Pancreatic Disorders - (PPP – Polyuria, Polydipsia, Polyphagia):		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Type 1 Diabetes: Absolute Insulin Deficiency	Juvenile Disease; Rapid onset: - Polyuria, Polydipsia, Polyphagia - Rapid Weight Loss Despite ↑ Appetite - Nausea, Vomiting - Fatigue (+ LADA → Slowly Progressing “Type 1 Diabetes”): - Typically Slim Adults (≈40yrs) - Slow Progression to Insulin Dependency - Same symptoms as D1M.	Vitals: - Tachycardia (Dehydration), Postural Hypotension (Dehydration), Tachypnoea (DKA) Other: - Wasting (If Type 1), Obesity (If Type 2) - Fat Atrophy @ Insulin Injection Sites Face: - Visual Acuity, Fundoscopy (Retinopathy–Dots/Blots), Cataracts, Xanthelasma, - Sweet Breath (DKA) - Mouth Infections (Candida) - Carotid Bruits (PVD) - Acanthosis Nigricans Go From Face to Lower Limbs: - Inspection: Ulcers, Hyperkeratosis, Shiny Skin, Hair Loss, Fungal Nail Infections, Cellulitis, “Necrobiosis Lipoidica Diabetorum” (Disgusting-looking Ulcer), “Charcot’s Joint” (Poor Proprioception), Hallux Valgus, Pes Cavus, Hammer Toes, Loss of Transverse Arch - Palpation: Cool Feet, ↑CRT, ↓Distal Pulses, Pedal Oedema, - Neurological: Monofilament (In 9 Areas of the Foot), Vibration, Proprioception, Pain (All Leg Dermatomes EXCEPT on Soles of Feet), Reflexes
Type 2 Diabetes: Insulin Resistance And/Or Relative Insulin Deficiency	Adult Disease; Slow, insidious onset: - Polyuria, Polydipsia, Polyphagia - Usually Overweight (Central Obesity) - No Ketonuria - Metabolic Syndrome ○ 1. Central Obesity ○ 2. Hypertension ○ 3. Impaired Glucose Tolerance ○ 4. Dyslipidaemia (↑TGs, ↓HDL) (+MODY: Genetic – Autosomal Dominant): - Young People, Non-Obese - Syx of Hyperglycaemia – PPP	Signs of Causes: - Cushings Facies, Acromegaly Facies, Pigmentation (Haemochromatosis) Further Examination: CVS (PVD), CKD (Renal), Full Neurological,
Diabetic Ketoacidosis: (Only in D1M or LADA)	- Polyuria, Polydipsia, Polyphagia - Ketoacidosis → ○ Hyperventilation ○ Headache/Altered Mental State ○ Vomiting → Dehydration, ↓Na, ↓Ca,	Vitals: - Tachycardia (+/- Arrhythmia), Hypotension, Tachypnoea Other: - Sweet Breath (Acetone Breath) - ALOC (↓GCS) - Dehydration Signs (Loss of Skin Turgor, Enophthalmos, Dry Mucosae) - <i>Kussmaul’s Breathing</i> (A form of Hyperventilation: Deep, Laboured Breathing) Signs of Causes: - Diabetes (Insulin Injection Sites, Diabetes Bracelet, Peripheral Neuropathy, CKD) (NB: Hypokalaemia in DKA is a RED FLAG) Treatment: - IV access → Correct Dehydration - Insulin + Potassium Supp. → Correct Hyperglycaemia & Electrolytes - Treat underlying cause (Infection)

<u>HONC – Hyperosmolar Non-ketotic Crisis:</u> (Only in D2M)	(NB: NO Ketogenesis – Even Low <i>Insulin</i> is enough to Inhibit Ketogenesis). - Hyperglycaemia - Polyuria (Osmotic Diuresis) & Dehydration - Hyperviscosity → ↑ Risk of Thrombosis - Mental Impairment (Stupor/Coma)	Vitals: - Tachycardia (Dehydration), Hypotension (Dehydration) Other: - Signs of Dehydration - Tremor - ALOC (Stupor/Coma) - Neurology – (Sensory/Motor Impairment, Focal Seizures, Hyporeflexia, Tremors) Treatment: - IV Fluids - Insulin + Potassium (Since Insulin causes K^+ Shift <i>Into Cells</i>)
<u>Hypoglycaemia</u> <u>(BSL < 6.0mmol/L):</u> (Eg. Insulinoma, Insulin Overdose, Missed Meal)	- Polyphagia - Tremor - ALOC (Confusion, Drowsiness, Seizures, etc)	Vitals: - Tachycardia, Other: - Sweating, Anxiety, Tremor, Palpitations - Confusion, Drowsiness, Visual Disturbances, Seizures, Coma Signs of Causes: - Mental Illness (Suicide Attempt), Treatment: - #1 – Give conservative dose of Oral/IV Glucose (Jellybeans/Juice/Biscuits/etc.) - OR – IM/IV Glucagon

Adrenocortical Hyperfunction Disorders (Symptom Cluster):		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Cushing's Disease:</u> (Hyper-Cortisolism) <i>(Central – Pituitary Adenoma; or Exogenous Steroids)</i>	- Weight Gain - Change in Appearance (Moon Facies) - Mood Swings/Depression/Psychosis - + Hirsutism & Menstrual Abnormalities	Vitals: - Hypertension Other: - Moon Facies, Central Adiposity (Weight Gain), Striae, Buffalo Hump, Supraclavicular Fat Pads - Thin Skin, Easy Bruising, Poor Wound Healing - Hirsutism (in Females) - Visual Field Testing for Pituitary Tumour - Immunocompromise (Candida in Mouth, Fungal Nail Infections) - Ask Pt to Squat (Proximal Limb Muscle Atrophy & Weakness) - Bony Tenderness or Vertebral Bodies (Osteoporosis) - $\uparrow$ Cortisol $\rightarrow \uparrow$ Gluconeogenesis & Insulin Resistance $\rightarrow 2^{\circ}$ Diabetes: - o Hyperglycaemia $\rightarrow$ Polyuria, Polyphagia, Polydipsia - Osteoporosis, Backache Signs of Causes: - Bodybuilders? (Exogenous Steroid Use) Diagnosis: Negative Dexamethasone Suppression Test
<u>Conn's Disease:</u> (Hyper-Aldosteronism) (Pituitary Adenoma, Adrenal Hyperplasia, Carcinoma)	($\uparrow$ Aldosterone $\rightarrow$ Hypernatraemia (& Hypokalaemia)) Renal Fluid Retention $\rightarrow$ - ***Hypertension (Often the ONLY Syx) - Hypernatraemia $\rightarrow$ Neuromuscular Syx (Paraesthesia/Weakness/VisualΔ/Tetany)	Vitals: - ***Hypertension Other: - Paraesthesia/Weakness/VisualΔ/Tetany - Ballott Kidneys for Adrenal Tumours (NB: Hypertension can $\rightarrow$ LVH, $\uparrow$ Risk of CVA & MI)
<u>Phaeochromocytoma:</u> (Hyper-Adrenalinism) (Idiopathic or MEN2 Tumour Syndrome)	Symptoms: - Palpitations/Tachycardia - Headache (Hypertension) - Sweating/Hot Flushes - Tremor - Anxiety - Nausea/Vomiting	Vitals: - Paroxysmal Hypertension, Tachycardia, Other: - Warm Sweaty Peripheries, $\downarrow$ CRT, Facial Flushing, Pinpoint Pupils, - Cardiac Flow Murmurs (Hyperdynamic Circulation), $\uparrow$ Bowel Sounds, - Ballott Kidneys for Adrenal Tumour Complications of Hypertension: - Congestive Heart Failure & Pulmonary Oedema (Dyspnoea, PND, Orthopnoea, Inspiratory Creps, RV Heave, $\uparrow$ JVP) - Myocardial Infarction - Ventricular Fibrillations - CVAs

Adrenocortical Hypofunction Disorders (Symptom Cluster):			
Addison's Disease: (CHRONIC Adrenal Insufficiency) (Autoimmune Adrenalitis)	(↓ ↓ Aldosterone & ↓ ↓ Cortisol) Insidious Onset: - Weakness, Fatigue, Lethargy, Depression - Anorexia, Weight Loss, - Vomiting, Diarrhoea - Skin Hyperpigmentation - Polyuria → Dehydration (↓ Aldosterone)	Vitals: - Postural Hypotension (Hypovolaemia) Other: - Cachexia, Pigmentation (Palmar Creases, Elbows, Gums, Buccal Mucosa) [due to melanocyte-stimulating activity of ACTH], - Generalised Weakness - Dehydration Signs (Loss of Skin Turgor, Enophthalmos, Dry Mucosae) Diagnosis: - Clinical Diagnosis - Synacthen Test (Measure Cortisol & Aldosterone 30mins after ACTH Injection) - Hypoglycaemia (Due to Glucocorticoid (Counter-Reg) Deficiency)	
Waterhouse-Friderichsen Syndrome: (ACUTE Adrenal Insufficiency due to Meningococcal Sepsis → Adrenal Infarction)	Abrupt & Severe Clinical Course - ↓ Aldosterone → Na & H₂O Loss → Hypovolaemic Shock (Death in Hours-Days unless Treated) + Symptoms of Meningococcal: - Fever - Headache - Photophobia - Neck Stiffness	Vitals: - Fever (Due to Meningococcal) Other: - Kernig's Sign (Pain on Hip Flexion & Knee Extension) & Brudzinski's Sign (Neck Flexion causes Involuntary Hip & Knee Flexion), Photophobia, Headache, - Petechiae (Skin, Mucosae, Conjunctiva) Signs of Causes: - Typically Meningococcal Septicaemia ○ ∴ Neck stiffness ○ ∴ DIC	

Gonadal Disorders (Symptom Cluster):			
Polycystic Ovaries PCOS: (Hyper-Androgenism) (Genetic – Sex-Limited Autosomal Dominant)	(↓ Conversion of Androgens → Oestrogen → Hyperandrogenism) - 1. Infertility: Due to Anovulation - 2. Menstrual Changes: Amenorrhoea → Infertility - 3. Masculinisation: Acne, Hirsutism (↑ Hair), Deepening Voice - 4. Metabolic Syndrome ("Synd. X"): Insulin Resistance (+/- Obesity, D2M, ↑ Cholesterol) High risk of Testicular Cancer	Vitals: - Hypertension Other: - Hirsutism (Facial hair, deepening voice, acne) - Metabolic Syndrome (Obesity, Xanthelasma, Xanthomata, Acanthosis Nigricans, Polyuria, Polydipsia, Polyphagia) - Palpate Abdomen for Ovarian Masses Signs of Causes:	Vitals: Other: Signs of Causes: - Hypopituitarism, Chronic Alcoholism, Chemotherapy/Radiation, Chronic Anabolic Steroid Use

Pituitary Disorders (Symptom Cluster):

Space-Occupying Lesions – (Eg. Adenomas):

- → Compression of Optic Chiasm → Visual Field Defect (Bitemporal Hemianopia)
- → Compression of Extrinsic Ocular Muscles → Oculomotor Palsies (“Ophthalmoplegia”)
- → Increased Intracranial Pressure → Headaches

Increased Hormone Secretion → Hyperpituitarism:

○ **Anterior Pituitary:**

- Eg. ↑ PRL – Due to Prolactinoma → Galactorrhoea
- Eg. ↑ GH – Pit. Tumour → Gigantism (Kids)/Acromegaly(Adults)
- Eg. ↑ ACTH – Pit. Tumour → Cushing’s Disease
- Eg. ↑ FSH/LH – Pit./Hypothalamic Tumour → Precocious Puberty
- Eg. ↑ TSH – (Rare) Pit. Tumour → Primary Central Hyperthyroidism

○ **Posterior Pituitary:**

- Eg. ↑ ADH – Hypothal. Osmorecep. Dysfunction → SIADH

- **Decreased Hormone Secretion → Pan-Hypopituitarism:** (Eg. Sheehan’s Disease: Post-Partum Hypopituitarism)(Eg. Pituitary Apoplexy/ Infarction)

○ **Initially Asymptomatic**

○ **Later:**

- 2° Hypothyroidism
- 2° Adrenal Insufficiency (Similar to Addisons)
- 2° Dwarfism (GH Deficiency)
- **(In Sheehan’s Syndrome):**
 - *Agalactorrhoea* (No Lactation)
 - /Amenorrhoea after Delivery.

Acromegaly/Gigantism:

(Excess GH due to Pituitary Adenoma)

+/- Compressive Pituitary Adenoma → Headache + Bitemporal Haemianopsia	Vitals: - Hypertension Other: - Acromegaly Facies (Frontal Bossing, Prominent Jaw, Prominent Brow Ridge, Enlarged Tongue, Thickened Lips) - Soft-Tissue Swelling (Hands, Feet, Nose, Lips, Ears, Skin, Carpal Tunnel, Thyroid) - Bitemporal Haemianopsia, Fundoscopy (Papilloedema & Hypertensive Changes) - Spade-Like Hands (Soft Tissue Enlargement), Warm & Sweaty, Thick Greasy Skin, Osteoarthritis Heberton’s Nodules - Proximal Myopathy (Arms & Legs), Foot Drop (Common Peroneal Nerve Compres) - Kyphosis, - Gynaecomastia, Skin Tags in Axillae (Molluscum Fibrosum), - CVS (Arrhythmias, Cardiomegaly, CCF) - Hepatomegaly, Splenomegaly, Renal Enlargement
Insidious Onset Mostly Middle-Aged Adults (But Gigantism if before/during puberty) Change in Appearance (Severe Disfigurement)	
Complications: - Hypertrophic Cardiomyopathy & Heart Failure - Hypertension & Kidney Failure - Hyperglycaemia & Diabetes Mellitis - Accelerated Osteoarthritis	
Possible Malignancy	

<u>Prolactinoma:</u>	Bitemporal Haemianopsia Headaches Galactorrhoea	Vitals: Other: - Bitemporal Haemianopsia - Nipple Discharge
<u>SIADH:</u> (Hypothalamic Dysfunction → ↑ADH)	- 1. Fluid Overload <i>Without</i> Oedema or Hypertension - 2. Hyponatraemia (Dilutional + ↑ Excretion): ○ If Severe → Cerebral Oedema → ▪ Nausea/Vomiting ▪ Headache/Confusion/Seizures/Coma - 3. High [Sodium] in Urine - 4. High Urine Osmolarity (relative to Plasma Osmolarity)	
<u>Diabetes Insipidus:</u> (ADH Deficiency or Renal ADH Insensitivity)	5. Normal Renal & Adrenal Function - Polydipsia (Extreme Thirst) - Polyuria (Excessive Urination) - Risk of Hypokalaemia	
	Risk of Dehydration (If water isn't available)	

<u>Multiple Endocrine Neoplasia Syndromes (Symptom Cluster):</u> (Autosomal Dominant)		
<u>MEN 1:</u>	Pituitary Adenomas HyperParathyroidism Insulinomas	
<u>MEN 2:</u>	Thyroid Cancer Pheochromocytoma	

Running Tally of Diseases Learned

GIT

Oesophageal Disorders:

NB: Dysphagia – Symptom NOT Disease:

- **Types of Dysphagia:**
 - **With Solids Only** = **Mechanical Obstruction** – (Hiatus Hernia/Strictures/Plummer Vinson Web from Iron Deficiency/Tumours)
 - **With Solids & Liquids** = **↓ Motility** – (Achalasia/Neural[Vagus Nv]/**Scleroderma**)
 - **With Liquids Only** = **Pharyngeal Disorders** – (Globus Pharyngeus)

Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Oesophagitis:</u> (Infection in Imm.comp Or Eosinophilic/Allergic)	- Dysphagia - Heartburn - Sore Throat/Chest Pain (Oesophageal Pain)	Vitals: - Fever, Tachycardia, Signs of Causes: - Immunocompromise (Eg. Oral Candidiasis)
<u>Achalasia:</u> (Oesophageal <i>Aperistalsis</i>)	- Chronic Dysphagia of BOTH Liquids & Solids <i>FROM THE ONSET.</i> - Regurgitation of food – Particularly at Night → Can cause Aspiration Pneumonia - Spontaneous Chest Pain (Due to Oesophageal Spasm)	Vitals: - Normal Other: - None
<u>Mallory Weiss Syndrome Tear:</u> = Oesophageal laceration – (Longitudinal tear)	- Dysphagia & Odynophagia - Chest Pain - Haematemesis	Vitals: - Normal (Tachy if Pain/Dehydration/Blood Loss), Bradypnoeic (if Alkalotic from Vomiting) Other: - Signs of Causes: - Obesity (Gluttony), Subconjunctival Haemorrhages (Severe Coughing), Low BMI (Bulimia), Destroyed dentition (Bulimia) - NB: Nothing to do with Alcohol.
<u>Oesophageal Varices</u> <u>(Due to Portal Hypertension):</u> (Often 2° to alcoholic cirrhosis)	- Hematemesis - Hematochezia - May Rupture → Massive Bleeding	Vitals: - Normal unless Haemorrhage (Tachycardia, Tachypnoea, Hypotension) Other: - Portal HTN (Caput Medusa, Ascites, Hepatomegaly, Splenomegaly, Pedal Oedema) - If Cirrhosis (Palmar Erythema, Mee's/Meurkhe's/Leukonychia, Jaundice, Xanthomata, Xanthelasma, Scleral Icterus, Hepatic Fetor, Hepatic Flap, Ascites, Pedal Oedema) Signs of Causes: - Chronic Alcoholism (Dupuytren's Contracture, Cerebellar Dysfunction)

Gastro-Oesophageal Junction Disorders		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Hiatus Hernia:	- Mostly Asymptomatic - "Heartburn" GORD - Epigastric Pain (Oesophageal Torsion) - Dyspnoea (Affect on Diaphragm) - Palpitations (Irritation of Vagus Nerve)	Vitals: - Normal Other: - None
GORD, Barrett's Oesophagus & Oesophageal Tumours:	- Heartburn (Retrosternal Burning/Pain) - Dysphagia Complications: - Bleeding, Stricture - Barrett's Oesophagus - Malignancy → Progressive Dysphagia (Solids → Liquids), Weight Loss, Anorexia	Vitals: - Normal Other: - None Signs of Causes: - Obesity, Indian (Spicy Foods), Alcoholism, Pregnancy

Stomach Disorders			
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:	
<u>Gastritis:</u> = Inflammation of the Stomach Lining	- Epigastric Pain - Nausea/Vomiting - Indigestion (Dyspepsia)	Vitals: - Tachycardia (if infection), all else normal Other: - Epigastric Tenderness Signs of Causes: - Infection - Pernicious Anaemia (B12 Deficiency → Peripheral Neuropathy & Macro Anaemia) - Alcohol Abuse (Dupuytren's Contracture, Macro Anaemia, Cerebellar Dysfunction)	
<u>Peptic Ulcer Disease:</u> (NSAIDs, H. Pylori, or Gastrinoma/ZE-Synd)	- Burning Epigastric Pain (Relieved by Food) - Haematemesis/Melena - Nausea & Vomiting - (If Perforated → Acute Peritonitis & Shock) - (If Pyloric Stenosis → Irretractable Vomiting) - NB: May → Gastric Ca. → Weight Loss	Vitals: - Normal unless Perforated (Tachycardia, Tachypnoea, Hypotension) - If Anaemic from GI Bleeding (Tachycardia, Tachypnoea) Other: - But may have weight-loss - If Anaemic from NSAIDs → Pale Nails, Koilonychia (↓Fe), Palmar Pallor, SC Pallor, Atrophic Glossitis. - If Ruptured → Peritonism (Guarding, Rigidity, Rebound, Shoulder-tip Pain, Shallow Breathing, Cullen's Sign, Grey Turner's Sign, Peripheral Shutdown, ALOC)	
<u>Zollinger Ellison Syndrome:</u> (Adenoma/Gastrinoma)	- Abdominal Pain - Dyspepsia - Chronic Steato-Diarrhoea (Inactivation of Pancreatic Lipase by ↑ Acid)	Vitals: - Normal (unless hypovolaemic from diarrhoea) Other: - None Signs of Causes: - Abdominal Masses (but usually way too small to detect)	
<u>Gastric & Duodenal Cancers:</u> ("Fungating" – H. Pylori) ("Leather Bottle" – Familial)	- Asymptomatic until Advanced Disease - Early Sx: - Epigastric Pain, Nausea/Vomiting, Anorexia/Weight Loss, Adenopathy, Anaemia. - Late Symptoms: Malignant Ascites/Jaundice, Symptoms of Brain/Bone/Lung Mets	Vitals: - Fever, Tachycardia (if Anaemia or Hypovolaemic), Tachypnoea (if Anaemia) Other: - Virchow's Node (L-Supraclavicular LN), Acanthosis Nigricans in Axillae, Anaemia (Pale Nails, Palmar Pallor, SC Pallor, Atrophic Glossitis) - Metastases (Oesophagus, LN, Liver, Lungs) Signs of Causes: - Peutz Jegher's Syndrome (Mouth Pigmentation, Clubbing) - Alcoholism, Smoking	

Intestinal Malabsorption Disorders		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Coeliac Disease:</u> (SI Gluten Hypersensitivity)	- Can Present at ANY Age (Peaks = Infancy, in 50's) - Fatigue, Malaise - Diarrhoea/Steatorrhoea - Abdo Pain/Discomfort/Bloating	Vitals: - Normal Other: - Weight Loss, Mouth Ulcers, Angular Stomatitis, Atrophic Glossitis,
<u>Radiation Enteritis:</u> (Fibrosis from Radiotherapy)	- Acute Sx – Nausea, Vomiting, Diarrhoea, Abdo Pain. (Improves within 6wks of Radiation) - Chronic Sx – (Symptoms for >3mths) Pain due to Obstruction, Malabsorption, Diarrhoea, Tenesmus	Vitals: - Tachycardia (Hypovolaemia/Anaemia), Tachypnoea (Anaemia), Hypotension (Hypovolaemia) Other: - Radiation Tattoos, Radiation Fibrosis of Skin (Abdomen/Back/Perineum), Anal Fissures (Diarrhoea), Surgical Scars, Abdominal Distension
<u>Tropical Sprue:</u> "Severe Infective Malabsorption, Accompanied by Diarrhoea & Malnutrition" – But Unknown Agent.	- **Chronic Diarrhoea + Malabsorption - Anorexia, Weight Loss - Abdo Distension (Residents/Visitors of Affected Tropical Areas (Asia, Caribbean, S.America))	Vitals: - Fever, Tachycardia (Hypovolaemia/Anaemia/Infection), Tachypnoea (Anaemia/Infection), Hypotension (Hypovolaemia) Other: - Malabsorption → Macro Anaemia (Pale Nails, Palmar Pallor, SC Pallor, Atrophic Glossitis, Peripheral B12 Neuropathy) - Low BMI
<u>Whipple's Disease:</u> (Chronic Bacterial Infection: <i>Tropheryma Whipplei</i>)	- Initially – Arthritis & Arthralgia - YEARS Later → Fever, Abdo Pain, Diarrhoea, Weight Loss → MALABSORPTION	Vitals: - Fever, Tachycardia Other: - Lymphadenopathy, Poly Arthritis, Steatorrhoea, Oedema, Anaemia (Fe/B12), Weight Loss - Can → Brain Damage (Mental Changes/Memory Loss) - Can → Endocarditis (Heart Murmur)

Specific Diarrhoeal Disorders		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Acute Bacterial Diarrhoeal Diseases: (ETEC = Traveller's) (S. aureus & Salmonella = Food Poisoning) (Shigella = Dysentery)	Duration: - Hyperacute (<24hrs) – Probably ETEC Toxin - Sub-Acute (<3-5days) – Probably Infective Gastroenteritis (Food Poisoning) (If Chronic, more likely to be Parasitic than Bacterial)	Vitals: - Fever, Tachycardia, Tachypnoea, Hypotension (Hypovolaemic) Other: - Peripheral Shutdown, ↑CRT, Low-Volume Tachycardia, Dry Mucosae, Enophthalmos, Loss of Skin Turgor Signs of Causes: - Dysentery (Blood & Pus in Stools) = Shigella
Acute Viral Diarrhoea: (Rotavirus)	- Vomiting - + Watery Diarrhoea - + Fever (Typically In a Child/Infant)	Vitals: - Fever, Tachycardia, Tachypnoea, Hypotension (Hypovolaemic) Other: - Typically In a Child/Infant → Irritability, Poor Feeding - Peripheral Shutdown, ↑CRT, Low-Volume Tachycardia, Dry Mucosae, Enophthalmos, Loss of Skin Turgor Signs of Causes: - Hippie Mother Not Vaccinating!
Chronic Diarrhoea (Usually Parasitic/Irritable Bowel/ or Malignancy)	- Long-Term Diarrhoea - Weight Loss - Fatigue	Vitals: - Normal Other: - Anaemia (Microbleeding → Pale Nails, Koilonychia, Palmar Pallor, SC Pallor, Atrophic Glossitis), Anal Fissures. - If CD/UC – Clubbing, Mucosal Ulcers, Red Eyes Signs of Causes: - Immunocompromise - (Also Think Coeliac Disease & Colon Ca)

Unique Intestinal Infections:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Intestinal Tuberculosis</u> Mycobacterium tuberculosis	- **Fever + Night Sweats - **Weight Loss - *Ileocaecal Area is most commonly affected → RIF Abdominal Pain	Vitals: - Fever, Tachycardia, Tachypnoea (if Pulmonary TB) Other: - Palpable Masses, Generalised Peritonitis, Bowel Obstruction, Anaemia Signs of Causes: - Immunocompromised (HIV/Drugs) - Pulmonary TB
<u>Pseudomembranous Colitis:</u> Clostridium Difficile Overgrowth due to Antibiotic → ↓ Gut Flora (C. Diff is Directly Cytotoxic)	- Onset within 2days of Antibiotics; Persists for 2wks After. - Fever, - Abdo Cramps - Profuse Water Diarrhoea (<10/day) - Faecal Urgency	Vitals: - Fever, Tachycardia (infection & Dehydration), Tachypnoea (infection), Hypotension (Dehydration) Other: - Abdo Pain, Haematochezia - (If Perforation – Peritonitis, Shoulder-tip Pain, Cullen's/Grey-Turner's, Shock) - (If Toxic Megacolon – Abdominal Distension, Abdo Tenderness, Septic Shock, Loss of Bowel Sounds) Signs of Causes: - History of Antibiotic Usage
<u>Diverticulosis/Diverticulitis:</u>	NB: Diverticulosis is Asymptomatic NB: Diverticul-ITIS is Symptomatic: - Severe <u>LEFT</u> Iliac Fossa Pain - Fever - Constipation (IE. Similar to Appendicitis, but on the Left)	Vitals: - Fever, Tachycardia, Other: - LIF Tenderness/Guarding/Rigidity - GI Bleeding → Anaemia (Pale Nails, Koilonychia, Palmar/SC Pallor, Glossitis) - (NB: If Perforation → Peritonitis, Shoulder-Tip Pain, Sepsis, Shock, Death) Signs of Causes: - Opioid Addicts (Chronic Constipation), Paraplegic, Multiparity.
<u>Appendicitis:</u>	- Initially Umbilical Pain → Severe <u>RIGHT</u> Iliac Fossa Pain - Fever - Nausea/Vomiting/Anorexia/Diarrhoea (occasionally) (ie. Similar to Diverticulitis, but on the Right)	Vitals: - Fever, Tachycardia, Other: - R-Iliac Fossa Pain/Tenderness/Guarding - Rovsing's Sign: Referred Rebound Pain in the RIF when the LIF is Pressed. - Psoas Sign: RIF Pain on Flexion of the Hip - Obturator Sign: RIF Pain on Internal Rotation of the Hip - McBurney's Sign: Deep tenderness at McBurney's point If Ruptured Appendix: - Sepsis, Shock, High Fever, Generalised Peritonitis (Guarding/Rigidity/Rebound)

Inflammatory (Autoimmune) Bowel Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Crohn's Disease:</u> (Mouth → Anus) (Patchy)	- Typically Starts @ Ileocecal Valve (RIF) Common Symptoms (Both CD & UC): - ** Abdominal Pain/Severe Internal Cramps - ** Vomiting/Diarrhoea * (Porridge-like, Fatty) - ** Rectal Bleeding (+ Fever, Weight Loss)	Vitals: - Fever, Other: - Clubbing - Mouth Ulcers & Anus Involvement, - GI Bleeding → Anaemia (Pale Nails, Koilonychia, Palmar/SC Pallor, Glossitis) Signs of Causes: - Autoimmune (Arthritis, Iritis, Pyoderma Gangrenosum, Primary Biliary Cirrhosis)
<u>Ulcerative Colitis:</u> (Typically affects Colon) (Continuous)	- Typically Starts @ Rectum (LIF) Common Symptoms (Both CD & UC): - ** Abdominal Pain/Severe Internal Cramps - ** Vomiting/Diarrhoea * (Bloody & Mucus – but NO Pus. {Not Dysentery}) - ** Rectal Bleeding (+ Tenesmus)	Vitals: - Afebrile, Other: - Clubbing - No Mouth or Anus Involvement, - GI Bleeding → Anaemia (Pale Nails, Koilonychia, Palmar/SC Pallor, Glossitis) Signs of Causes: - Autoimmune (Arthritis, Iritis, Pyoderma Gangrenosum, Primary Biliary Cirrhosis)

Functional Bowel Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Irritable Bowel Syndrome/'Spastic Colon':</u> (Umbrella Term)	- Chronic Abdo Pain/Discomfort - Alternating Bowel Habits (+ Tenesmus) - (All Investigations Normal)	Vitals: - Normal Other: - Normal Signs of Causes: - *Stress/Anxiety/Depression, Chronic Pain, Gut Hypersensitivity.
<u>Hirschsprung's Disease</u> ("Congenital Aganglionic Megacolon"): (Immotile Section of Colon)	Presentation within 2-3days after Birth: - Delayed Meconium (First Defecation) - Abdo Distension - Vomiting	Vitals: - Normal Other: - Abdominal Distension & Tenderness, Poor Feeding, Irritability, Anorexia Signs of Causes: - Baby
<u>Meckel's Diverticulum:</u> (Congenital SI True Diverticulum)	(NB: Majority are Asymptomatic) Presentation @ 2yrs Old: - Malena (Bleeding) - Severe Central Abdo Pain (Obstruction/Volvulus/Intussusception)	Vitals: - Tachycardia (Pain/if infected), Tachypnoea (Pain), Hypertension (Pain) Other: - Abdominal Distension, Abdominal Tenderness, Peritonitis & Sepsis (perforation), Loss of Bowel Sounds, Visible Peristalsis, Cullens/Grey-Turners (Hemoperitoneum) Signs of Causes: Baby

<u>Intestinal Tumours:</u>		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Colonic Polyps: - Asymptomatic in Early Stages - (+/- Change in Bowel Habits) - (+/- Syx of Anaemia) (NB: Common in Autosomal Dominant Peutz-Jeger's Syndrome)		Vitals: - Normal Other: - None - If Anaemia (Koilonychia, Pale Nails, PC/SC Pallor, Atrophic Glossitis) Signs of Causes: - Peutz-Jeger's Syndrome (Clubbing + Melanin Pigmentation on Lips & Hands)
Bowel Cancers:		
Sporadic Bowel Cancer: (Most Common) → Descending Colon	Bowel Ca. Common Symptoms: - (Asymptomatic in Early Stages) - Change in Bowel Habit & Stool Shape - Blood Mixed Within Stool (+/- Anaemia) - Abdominal Cramping & Bloating - Fevers/Night Sweats - Weight Loss - Fatigue - (Late → Bowel Obstruction +/- Metastasis)	Vitals: - Tachycardia (if Anaemia/Hypovolaemic/Perforation/Septic) - Tachypnoea (if Anaemia/Perforation/Septic) - Hypotension (If Perforation/Septic/Shock) - Febrile (If Septic) Other: - Acanthosis Nigricans in Axillae (Sign of GI Malignancy) - If Anaemia (Koilonychia, Pale Nails, PC/SC Pallor, Atrophic Glossitis) - If Shock (↑CRT, Cool Peripheries, Peripheral Cyanosis, Low-Vol Pulse, Dry Mucosae) - If Perf/Peritonism (Cullen's/Grey-Turner's Signs, Tenderness/Guarding/Rebound, Rigidity, Shoulder-Tip Pain) - If Metastasis to Liver (Obstructive Jaundice, Clubbing, Leukonychia, Muercke's Lines, Mee's Lines, Xanthomata, Palmar Erythema, Scleral Icterus, Hepatic Flap, Hepatic Encephalopathy, Xanthelasma, Hepatic Fetor, Hepatomegaly, Gynaecomastia, Spider Naevi, Abdominal Distension, Caput Medusa, Ascites, Pedal oedema, Bruising, Scratchmarks)
Inherited Bowel Cancer: (Rare; Autosomal Dom) → Ascending Colon	HNPCC; Amsterdam Criteria: - 1. Must have 3 Affected Relatives - 2. >One Relatives must be a 1st-Degree - 3. FamHx must span >2 Generations - 4. 1⁺ cases diagnosed @ <50yrs. FAP: - APC Gene Mutation	Signs of Causes: - NB: Both HNPCC & FAP → ↑ Risk of other Cancers (Endometrial/Gastric/Ovarian)
Carcinoid Tumour of the Intestines: (Serotonin Neuroendocrine Tumour)	- Hot Flushes - Watery Diarrhoea - Abdominal Pain - Palpitations (3 Common Sites = Appendix, Terminal Ileum, Rectum; Also the R-Sided Heart Valves)	Vitals: - Hypotension (Systemic Vasodilation; & Hypovolaemia), Tachycardia (Hypovol) Other: - Cardiac Abnormalities – Pulmonary Stenosis or Tricuspid Regurgitation → Tender Pulsatile Hepatomegaly. - "Pellagra" (Sign of Niacin/B3 Deficiency) → Delusions, Confusion, Scaly Skin Sores.

Back-Passage Disorders:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Haemorrhoids (Internal & External)</u> (Incompetent Valves in Rectal Vasculature)	- Internal H.rhoids → Painless Rectal Bleeding - External H.rhoids → Painful Rectal Bleeding - (Blood on Toilet Paper) - (+/- Itching)	Vitals: - Normal Other: - Normal Signs of Causes: - Previous Pregnancies, Weight-Lifters, Chronic Pain, Antiepileptics, Poor Diet, Homosexual Men
<u>Anal fissures</u>	- Painful Defecation - Blood on Toilet Paper	Vitals: - Normal Other: - Usually extend Outwards from Anal Opening; Depth may be superficial or deep Signs of Causes: - Constipation/Prolonged Diarrhoea/Crohn's Disease/Post-partum/Anal sex
<u>Pilonidal Sinuses/Cyst/Abscess:</u>	- Extremely Painful, Tender Cyst/Abscess between the Buttocks.	Vitals: - Normal Other: - Cyst/Abscess between the buttocks that often contains hair and skin debris Signs of Causes: - Hairy Men, Adolescents, Poor Hygiene

Clinical Evaluation of a Pt with an "Acute Abdomen":

- **Conditions Requiring Laparotomy:**
 - **Organ Rupture (Spleen/Aorta/Ectopic)**
 - → Shock
 - **Peritonitis (Perf'd PUD/DUD/Diverticulum/Appendix/Bowel/Gallbladder)**
 - → Prostration, Shock, Lying Still, Tenderness (Guarding/Rebound/Percussion), Abdo Rigidity, No Bowel Sounds.
- **Conditions NOT Requiring Laparotomy:**
 - **Local Peritonitis (Diverticulitis, Cholecystitis, Salpingitis, Appendicitis)**
 - → Lying Still, Tenderness (Guarding/Rebound/Percussion), Abdo Rigidity
 - **Colic**
 - → Restlessness, Regularly Waxing/Waning Pain.
- **Tests to Perform:**
 - U&E, FBC, Amylase, LFT, CRP, ABG, Urinalysis
 - Erect CXR (look for Air under Diaphragm)
- **Immediate Priorities:**
 - Resuscitation Before Surgery!! – NB: Anaesthesia compounds shock!!

Pathogenesis & Signs of Hepatic Encephalopathy (Hepatic Coma)

- Hepatic Encephalopathy (↑↑ Ammonia in Bloodstream due to ↓↓ Liver Breakdown)
 - → Forgetfulness/Confusion/Irritability
 - → Tremor/Asterixis (Due to ↓ Proprioception)
 - → Seizures/Coma

Background Info on Jaundice:		
Disease:	TYPICAL Symptoms/Presentation:	
Unconjugated (Prehepatic/Haemolytic) Jaundice	Jaundice + Neonate Jaundice + Dyspnoea + Fatigue Jaundice + Young + Family Hx of Jaundice Jaundice + Young + Malaise Jaundice Epidemic Jaundice + Recent Shellfish Consumption Jaundice + Hx of IVDU/Injections/Tattoos Jaundice + Sodomomy/Prostitution Jaundice + Elderly + Weight Loss	→ Physiological Neonatal Jaundice → Haemolytic Anaemia → Gilbert's Disease. → Hepatitis → Hep A Virus → Hep A Virus → Hep B/C Viruses → Hep B Virus → Carcinoma
Conjugated (Posthepatic) Jaundice	Jaundice + Elderly + Weight Loss Jaundice + Abdo Pain Jaundice + 50yr old Woman Jaundice + Dyspepsia + Steatorrhoea Jaundice + Fevers/Rigors	→ Carcinoma → Biliary Obstruction (Gallstones) → Priamry Biliary Cirrhosis → Head of Pancreas Tumour → Cholangitis or Liver Abscess.

General Liver Syndromes:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Fulminant Hepatic Failure (Acute Liver Failure): (Alcohol/Drugs/Chronic Hepatitis/Biliary Obstruction/Etc)	- Jaundice, Pruritis - Bleeding, Bruising - RUQ Pain - Fetor Hepaticus - Cerebral Oedema, Vomiting - Hepatic Encephalopathy (within 2 wks) - Death without transplant.	Vitals: - May be Febrile Other: - Jaundice, Scratch marks, - Bruising/Petechiae/Purpura, - Hepatic Flap, Hepatic Encephalopathy, Hepatic Fetor - RUQ Tenderness - Oedema
Hepatic Cirrhosis (Chronic Liver Failure): (Alcohol/Drugs/Chronic Hepatitis/Biliary Obstruction/ Haemochromatosis/ Wilson's Disease/Etc)	May be Asymptomatic - RUQ Pain - Pruritis (Jaundice), Bruising (Liver Failure) - Abdominal Distension, Ankle Swelling, Caput Medusa (Portal Hypertension) - Gynaecomastia, ↓Libido, Amenorrhoea, Palmar Erythema, Spider Naevi (Oestrogen Excess) - Confusion/Forgetfulness/Drowsiness/Flap/ Coma/Seizures (Hepatic Encephalopathy)	Vitals: Normal Other: - Jaundice, Ascites, Pedal Oedema - Clubbing, Leukonychia, Muercke's Lines, Mee's Lines, Xanthomata, Palmar Erythema, Bruising, Scratchmarks, Scleral Icterus, Hepatic Flap, Hepatic Encephalopathy, Xanthelasma, Hepatic Fetor, Shrunken Nodular Liver (Micro or Macro-Nodular depending on Aetiology), Splenomegaly, Gynaecomastia, Spider Naevi, Abdominal Distension, Caput Medusa, Testicular Atrophy, Ascites, Pedal oedema) Signs of Causes: - IVDU, Alcoholism, Tattoos, Skin Pigmentation (Haemochromatosis), Cachexia (Ca), Xanthelasma/mata (Chronic Biliary Obstruction)

Hepatitis: Liver Inflammation: (Acute <6mths; Chronic >6mths)		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Alcoholic Liver Disease</u> <u>(Alcoholic Hepatitis):</u>	- Jaundice - RUQ Tenderness - Palpitations - Gynaecomastia, Spider Naevi, Testicular Atrophy - Abdo Distension - (Ataxia)	Vitals: - AF (if Dilated Cardiomyopathy) Other: - Fatty Liver Changes → Hepatomegaly, RUQ Tenderness - If Portal Hypertension → Hepatomegaly, Splenomegaly, Ascites, Pedal Oedema - CLD (Clubbing, Leukonychia, Muercke's Lines, Mee's Lines, Xanthomata, Palmar Erythema, Bruising, Scratchmarks, Scleral Icterus, Hepatic Flap, Hepatic Encephalopathy, Xanthelasma, Hepatic Fetor, Hepatomegaly, Gynaecomastia, Spider Naevi, Abdominal Distension, Caput Medusa, Testicular Atrophy, Ascites, Pedal oedema) Signs of Causes: - Dupuytren's Contracture - ** ↓ Thiamine → Wernicke/Korsakoff Syndrome, Cerebellar Degeneration, Peripheral Neuropathy - Dilated Cardiomyopathy - Pancreatitis - Anaemia (Macrocytic – B12 Deficiency) (Microcytic – if GI Blood Loss)
<u>Paracetamol-Induced Hepatitis:</u>	- Jaundice - RUQ Pain/Tenderness - Abdo Distension	- Jaundice - RUQ Pain/Tenderness - Abdo Distension
<u>Autoimmune Hepatitis:</u> (Unknown Aetiology)	May be Asymptomatic – Incidental Diagnosis. - Or – Jaundice + Fatigue, Fever, Polyarthrits, Pleurisy.	Vitals: - Fever Other: - Jaundice, Striae, Ascites, Acne. - Hepatomegaly, Splenomegaly Signs of Causes: - Associated Diseases – (Pernicious Anaemia/Thyroiditis/Coeliacs/AHA/Polyarthrits)
<u>Non-Hepatitis-Virus</u> <u>Acute Hepatitis's:</u> (Yellow Fever Virus, CMV, HHV, EBV)	Yellow Fever = Hepatitis (Jaundice) + Dengue-Like Sx (Fever + Fatigue + Myalgia + Haemorrhages)	Cytomegalovirus/HHV = Hepatitis in Immunocompromise Epstein Barre Virus = Hepatitis (Jaundice) + Teenage + Fever + Pharyngitis + Lymphadenopathy + Hepato/Splenomegaly + Haemorrhages.

Hepatitis-Viruses → Acute Hepatitis: (Hep A & E) (Faecal-Oral) (Acute ONLY)	Epidemics Common Acute Hepatitis ONLY: - Viraemia → Flu-like Symptoms (Fever, Malaise, Anorexia, Nausea, Arthralgia) - Jaundice after 10days	Vitals: - Fever, Tachycardia Other: - Jaundice (Intrahepatic Cholestasis ∴ Pale Stools & Dark Urine) - +/- Hepatomegaly - +/- Splenomegaly - +/- Tender Lymphadenopathy
Hepatitis-Viruses → Chronic Hepatitis: (Hep B, B+D, & C) (Blood-Transmission) (Acute → Chronic)	Acute → Non-Specific Viral Symptoms: - Viraemia → Flu-like Symptoms (Fever, Malaise, Anorexia, Nausea, Arthralgia) - (90% of Hep B → Full Recovery) - (10% of Hep C → Full Recovery) Chronic → Chronic Hepatitis Symptoms: - May have Non-Specific Viral Sx if Reactivation (Eg: "Chronic Active Hep B") - OR...May be Completely Asymptomatic until Cirrhosis → Liver Failure Cirrhosis → Liver Failure: - Abdominal Distension +Ankle Swelling - Pruritis (Jaundice), Bruising - Gynaecomastia, ↓Libido, Amenorrhoea (Oestrogen Excess) - Confusion/Drowsiness/Coma/Flap (Hepatic Encephalopathy)	Vitals: - Fever, Tachycardia Other: - Jaundice (Intrahepatic Cholestasis ∴ Pale Stools & Dark Urine) - +/- Hepatomegaly - +/- Splenomegaly - +/- Tender Lymphadenopathy Acute: - Fever, Tachycardia Other: - Jaundice (Intrahepatic Cholestasis ∴ Pale Stools & Dark Urine) - +/- Hepatomegaly, +/- Splenomegaly, +/- Tender Lymphadenopathy Chronic: - (If Active → Fever, Tachycardia) - If Subclinical → Normal Vitals. Other: - Jaundice (Both Types), - Small, Nodular Liver - Signs of Portal HTN – (Telangiectasias, Caput Medusa, Ascites, Pedal Oedema, Hepatomegaly, Splenomegaly, Gynaecomastia) - Hep. Encephalopathy (10% of Hep B & 90% of Hep C) → Cirrhosis → Liver Failure: - CLD (Clubbing, Leukonychia, Muercke's Lines, Mee's Lines, Xanthomata, Palmar Erythema, Bruising, Scratchmarks, Scleral Icterus, Hepatic Flap, Hepatic Encephalopathy, Xanthelasma, Hepatic Fetor, Gynaecomastia, Spider Naevi, Abdominal Distension, Caput Medusa, Testicular Atrophy, Ascites, Pedal oedema)

Genetic Liver Disorders:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Primary Biliary Cirrhosis</u> (AKA: " <i>Chronic, Non-Suppurative Destructive Cholangitis</i> ":) (Genetic Autoimmune)	Mid-Aged Females!! - Insidious Onset - Pruritis, <i>then</i> (Cholestatic) Jaundice - Fatigue - Hepatomegaly	Vitals: - Normal Other: Chronic Cirrhosis: - Jaundice, Ascites, Pedal Oedema - Clubbing, Leukonychia, Muercke's Lines, Mee's Lines, Xanthomata, Palmar Erythema, Bruising, Scratchmarks, Scleral Icterus, Hepatic Flap, Hepatic Encephalopathy, Xanthelasma, Hepatic Fetor, Shrunken Nodular Liver (Micro or Macro-Nodular depending on Aetiology), Splenomegaly, Gynaecomastia, Spider Naevi, Abdominal Distension, Caput Medusa, Testicular Atrophy, Ascites, Pedal oedema) Signs of Causes: - Mid-Age Female.
<u>Gilbert's Syndrome:</u> (Genetic; Benign)	- Asymptomatic - Occasional Mild Jaundice (<i>Associated with Fasting/Infection/Stress/Exertion</i>).	Vitals: - Normal Other: - Occasional Jaundice Precipitated by Stress/Infection/Exertion/etc. Signs of Causes: - Jaundice + Young + Family Hx of Jaundice
<u>Haemochromatosis – (Primary – Genetic; or Secondary)</u>	- Initially Asymptomatic - Early – (Fatigue, Arthralgia, Loss of Libido) - Later – (Skin Bronzing, Abdo Pain, Hepatomegaly, Liver Cirrhosis)	Vitals: Other: - Skin "Bronzing" - Cirrhosis – (Jaundice, Bruising, Ascites, Oedema, etc.) - Other Complications: ○ Heart - Cardiomyopathy ○ Endocrine Glands – Failure of gland: ○ Joints - Arthritis (Iron Deposition in the Joints) Signs of Causes: - (Acquired – Transfusions/Supplements/Haemolysis)

Other Random Liver Disorders:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Reye Syndrome</u>	Causes Multi-Organ Failure (Brain, Respiratory, & Liver) - Liver Failure (but NO jaundice) - Acute Encephalopathy (Lethargy/Irritability/Aggression/Confusion/Seizures/Coma)	Vitals: ? Other: - Acute Encephalopathy(Irritability/Aggression/Confusion/Seizures/Coma) - Respiratory Arrest Signs of Causes: - <u>Associated with Use of Aspirin in Viral URTI's (Chickenpox/Influenza)</u>
<u>Liver Abscesses:</u> (Infection – Typically E.Coli – 2° to Sepsis)	- Fever, Rigors, Malaise, - Anorexia, Weight Loss - Vomiting, Abdo Pain (Similar to TB)	Vitals: - Fever, Tachycardia, Tachypnoea, Hypotension (if Septic Shock) Other: - Sepsis, Jaundiced, - Tender, Enlarged Liver Signs of Causes: - Intra-Abdominal Sepsis
<u>Hydatid Disease of the Liver ("Hydatid Cysts"):</u> (Parasite Infection: <i>Echinococcus Granulosus</i> – Spread by Dogs & Sheep)	- May be Asymptomatic - May have Dull Ache in RUQ	Vitals: - ?Fever Other: - ? Signs of Causes: - ?

Liver Disorders Caused by Portal Hypertension:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Nutmeg Liver (AKA: Congestive Hepatopathy):</u> (Due to RH-Failure)	- Often Asymptomatic (incidentally dx on LFT) - RUQ Pain (due to stretching of liver capsule) - Abdo Distension (Ascites)	Vitals: - Normal (+/- Low Vol Pulse due to RVF) Other: - ↑JVP with Large Pulsations (RVF), POSITIVE Hepatojugular Reflux, Tender Pulsatile Hepatomegaly, Caput Medusa, Ascites, Peripheral Oedema - Jaundice & Hepatic Encephalopathy Signs of Causes: - RVF (Tricuspid Stenosis/Regurg, Pulmonary Stenosis/Regurg)
<u>Budd-Chiari Syndrome:</u> (Due to Hepatic Vein Obstruction/Occlusion)	- RUQ Pain (due to stretching of liver capsule) - Abdo Distension (Ascites) - Nausea/Vomiting	Vitals: - Normal (+/- Low Vol Tachycardia due ↓ Venous Return to the Heart) Other: - ↑JVP with Large Pulsations (RVF), NEGATIVE Hepatojugular Reflux, Tender Pulsatile Hepatomegaly, Caput Medusa, Ascites, Peripheral Oedema Signs of Causes: - Hypercoagulability (Eg, Polycythaemia), Thrombophilia, Leukaemia, Tumour

Liver Cancers:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Hepatocellular Carcinoma:</u> (Primary Liver Tumour)	(NB: EXTREME RISK in Chronic Carriers of HBV, HCV) (NB: EXTREME RISK in Cirrhotics) - RUQ Pain - Fever, Anorexia, Weight Loss - Ascites NB: Suspect HCC if you see these signs in a Cirrhotic.	Vitals: - Fever Other: - RUQ Tenderness/Mass, Hepatomegaly, - Anorexia/Weight Loss - Ascites/Peripheral Oedema - (+/- Obstructive Jaundice) Signs of Causes: - Cirrhosis (Shrunken, Nodular Liver + <i>Signs of Chronic Liver Failure</i>) - HBV/HCV Infected (IVDU/Homosexual/Tattoos/Prostitutes/etc)
<u>Liver Metastases:</u> (Secondary Liver Ca's) (Most Common)	RUQ Pain - Jaundice (if Obstructive) - Fever, Anorexia, Weight Loss - + Previous Hx of Cancer	Vitals: - Fever Other: - RUQ Pain - Fevers/Sweats - Confusion - Jaundice - (**Will eventually progress to show signs of <i>Chronic Liver Failure</i>) Signs of Causes: - Typically from Colorectal Ca, Breast Ca, Lung Ca, Melanoma.

Biliary Tract Disorders:			
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:	
Biliary Colic: (AKA: " <u>Cholelithiasis</u> ")	NB: Cholelithiasis is typically Asymptomatic. HOWEVER if Gallstones get Stuck → Biliary Colic: - (= Biliary Pain for <3hrs) - Severe, Colicky RUQ Pain - Radiation to the R-Shoulder - Fat Intolerance → Clay Stools (NB: Can → Perforation or Obstructive Pancreatitis)	Vitals: - Pain → Tachycardia, Tachypnoea, Hypertension Other: - Positive Murphy's Sign (RUQ pain in deep inspiration) - Obstructive Jaundice (Pale Stools, Dark Urine) Signs of Causes: - Xanthelasma/Xanthomata (Hypercholesterolaemia), Pregnancy, Obesity, Rapid Weight LOSS, Cystic Fibrosis	
Acute Cholecystitis:	- (= Biliary Pain for >3hrs) - Severe, Colicky RUQ Pain - Radiation to the R-Shoulder - * Pain Associated/Exacerbated with FOOD - * Nausea, Vomiting	Vitals: - Fever, Tachycardia, Tachypnoea, Hypertension Other: - Positive Murphy's Sign (RUQ pain in deep inspiration) - Obstructive Jaundice (Pale Stools, Dark Urine) - Peritoneal Involvement – Rigidity/Guarding/Rebound - RUQ Mass (Swollen Gallbladder) Signs of Causes: - Xanthelasma/Xanthomata (Hypercholesterolaemia), Pregnancy, Obesity, Rapid Weight LOSS, Cystic Fibrosis	
Biliary Cancers			
Bile Duct Carcinoma (<u>"Cholangiocarcinoma"</u>):	- Fever, Chills - Anorexia, Weight Loss - Obstructive Jaundice	Vitals: - Fever Other: - Obstructive Jaundice - (Icterus, Dark Urine, Pale Stools) - RUQ/Epigastric Pain → Radiating to Shoulder	
Gallbladder Carcinoma: (Commonly due to Chronic Gallstones)	- Females Common - Abdominal Pain - Anorexia, Weight Loss - ↑ Alk Phos (Late Diagnosis → Poor Prognosis)	Vitals: - Fever Other: - Signs of Causes: - Cholelithiasis (Xanthelasma/Xanthomata, Nephrotic Syndrome)	

Congenital Pancreatic Disorders:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Pancreatic Divism: (CBD & Pancreatic Duct FAIL TO FUSE)	- → → Predisposes to Chronic Pancreatitis	Vitals: Other: Signs of Causes: -
Annular Pancreas: (Head of Pancreas Encircles the Duodenum)	- → → Duodenal Obstruction	Vitals: Other: Signs of Causes: -
Cystic Fibrosis: (Autosomal Recessive) (CFTR Gene)	- Chronic Pancreatitis → (Malabsorption, Diabetes Mellitus, Epigastric Pain, Vomiting, Fatty, Liquid Stools) - Salty Sweat - Chronic Lung Obstruction/Infection	Vitals: - Tachycardia (infection), Tachypnoea (Pulmonary Disease), Hypertension (↑ Aldosterone due to Hyponatraemia), Fever (infection) Other: - Clubbing, Thin (Malabsorption), Peripheral Cyanosis, Chronic Cough + Sputum, Salt-Frost on Skin,

Pancreatitis:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
Acute Pancreatitis: (50% - Gallstones 40% - Alcohol)	- Epigastric/Abdo Pain – Following <u>Large Meal</u> <u>OR Alcohol</u> - Vomiting - Shock	Vitals: - Tachycardia (Shock), Hypotension (Shock), Tachypnoea (Shock) Other: - Epigastric Tenderness, - **Peritonitis → Guarding, Rigidity, Rebound + Referred Shoulder Tip Pain - If Haemorrhage → (Cool Dry Peripheries, ↑ CRT, Peripheral Cyanosis, Low-Vol Tachy, Dry Mucosae, Cullen's & Grey-Turner's Signs) Signs of Causes: - Alcoholism (Ataxia, Anaemia, Dupuytren's, Wernicke-Korsakoff Syndrome) - Cholelithiasis (Xanthelasma, Xanthomata)
Chronic Pancreatitis: ** Alcohol Abuse	- Intermittent Epigastric Pain - Weight Loss (Malabsorption) - Steatorrhea - → Secondary Diabetes (Can → → Pancreatic Cancer)	Vitals: - ? Other: - Jaundice - Weight Loss - Epigastric Tenderness Signs of Causes: - Alcoholism (Ataxia, Anaemia, Dupuytren's, Wernicke-Korsakoff Syndrome)

Pancreatic Tumours:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Gastrinoma (Zollinger Ellison Syndrome):</u> (Adenoma/Gastrinoma) (Often in the Pancreas)	- Abdominal Pain - Dyspepsia - Chronic Steato-Diarrhoea (Inactivation of Pancreatic Lipase by ↑ Acid) (NB: Malignant Potential)	Vitals: - Normal (unless hypovolaemic from diarrhoea) Other: - None Signs of Causes: - Abdominal Masses (but usually way too small to detect)
<u>Insulinoma:</u> (Pancreatic Tumour which produces too much Insulin)	Hypoglycaemia: - Hunger, Headache, Tremor, Anxiety, Seizures, Coma, Death	Vitals: - Tachycardia Other: - Sweating, Tremor, Seizures, Coma, Death - Acanthosis Nigricans on Neck (Hyperinsulinaemia)
<u>Pancreatic Adenocarcinoma:</u> (Ductal Tumour):	NB: Asymptomatic until Advanced Disease - Pain – Mid Epigastrium → Back - Migratory Venous Thrombosis (Trousseau Sign) - ** Anorexia & Weight Loss - ** Extreme Fatigue - ** Depression - + Steatorrhoea, Malabsorption - +/- Jaundice (NB: 25% 1yr Survival; 5% 5yr Survival)	Vitals: - Fever, Other: - Obstructive Jaundice, Epigastric Pain (+/- Radiation to Back), Courvoisier's Palpable Gallbladder, - Low BMI, Migratory Venous Thrombosis (Trousseau Sign of Malignancy – Due to Hypercoagulability), - 2° Diabetes Signs of Causes: - Smoking, Alcohol, Chronic Pancreatitis (Eg. CF/Alcohol), Diabetes - Familial Syndromes – Eg. BrCA, Peutz-Jeger's Syndrome, Hereditary Pancreatitis
<u>Pancreatic Cysts & Pseudocysts:</u> (Simple Cysts of the Pancreas)	- If Small → Asymptomatic - If Large → Abdo Pain/Back Pain/Jaundice (If Head of Panc)/Duodenal Obstruction - If Infected → Fever/Chills/Sepsis	Vitals: - Fever (if Infected), Tachycardia (if Infected) Other: - Jaundice (if Biliary Obstruction), Epigastric Tenderness Signs of Causes: - Congenital - OR 2° to Pancreatitis (Acute or Chronic) (∴ Alcoholic/Cholelithiasis)

Running Tally of Diseases Learned
RESPIRATORY

URTIs (Fever + Runny Nose + Sinusitis + Pharyngitis + Cough):			
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:	
<u>URTI:</u> (Bacterial or Viral)	- Fever - Sore-Throat - Runny Nose, Sneezing, Hoarseness, Cough - Sinus Headache	Vitals: - Fever, Tachycardia, Other: - Runny Nose, Inflamed Tonsils, Inflamed Pharynx, Sputum (From Post-Nasal Drip), Hoarseness, Cough, - Cervical Lymphadenopathy - NORMAL Chest Examination	
<u>Sinusitis:</u> (Strep Pneumo)	- Fever - Sinus Headache (Facial Pain) - Nasal Congestion/Obstruction - Post Nasal Drip & Purulent Nasal Discharge	Vitals: - Fever, Tachycardia Other: - Runny Nose (+ Purulent Nasal Discharge), Nasal Congestion, Tooth Pain, Tenderness Over Sinuses, Headache Worse on Leaning Forward - Cervical Lymphadenopathy - +/- Inflammatory Nasal Polyps, +/- Orbital Cellulitis	
<u>Tonsillitis:</u> (GABS, Staph, HIB, EBV)	- Fever - Sore Throat + (Referred Ear Pain) - Dysphagia, Odynophagia, Trismus (Jaw Spasm)	Vitals: - Fever, Tachycardia Other: - Inflamed Pharynx, Enlarged Inflamed Tonsils (+/- Exudates) - Tender Cervical Lymphadenopathy Signs of Causes: - Strawberry Tongue (SCARLET FEVER) - Palatal Petechiae, Overwhelming Fatigue, Splenomegaly (GLANDULAR FEVER; EBV) - Pseudomembrane on Tonsils & Pharynx (DIPHTHERIA)	
<u>Epiglottitis:</u> (HIB)	- Fever - Sore Throat, Drooling (Dysphagia) - +/- Inspiratory Stridor & Dyspnoea	Vitals: - Fever, Tachycardia, (+/- Tachypnoea if Obstruction) Other: - Dysphagia, Drooling, Pooling of Secretions, Inspiratory Stridor, Cyanosis Signs of Causes: - Unvaccinated Child	
	+ Non-Specific Viral (Fever, Malaise, Headache, Myalgia)		

URTI CONCLUSION – DIFFERENTIATING BETWEEN URTI's – (Their Distinguishing Features):

- **Typical URTI Symptoms:**
 - Fever, Malaise, Headache, Cough
- **+ Specific Symptoms:**
 - *Adolescent + Sore Throat + Lymphadenopathy* = EBV (Glandular Fever)
 - *Toddler + Drooling Saliva* = **Epiglottitis** (Haemophilus Influenza)
 - *Photophobia + Neck Stiffness* = **Meningitis** (Eg. Nisseria Meningitidis)
 - *Arthritis + New Cardiac Murmur after 2wks* = **GAB-Strep Pharyngitis** → **Rh-Fever/Rh-Heart Disease**
 - *Hx of Recurrent Pneumonia + SOB* = **Cystic Fibrosis/Immunocompromised/Smoker**
 - **SOB + Weight Loss** = **Tuberculosis** (Mycobacterium Tuberculosis)
 - *Community Outbreak + Travel History* = **SARS** (SARS-Associated Coronavirus)

<u>Bronchial Disorders (Wheezy Cough + Sputum +/- Fever):</u>		
<u>Acute Bronchiitis:</u> (Rhinovirus)	- Fever - Productive, Wheezy Cough, +/- Dyspnoea + URTI Symptoms (Sore-Throat, Runny Nose, Sneezing, Hoarseness) + Non-Specific Viral (Fever, Malaise, Headache, Myalgia)	Vitals: - Fever, Tachycardia, Tachypnoea Other: - End-Expiratory Wheezes Signs of Causes: - 2° to URTI
<u>Bronchial Asthma</u> <u>(Variable Obstructive):</u>	Asymptomatic unless during an "Attack": - Wheezy Dry Cough, - Dyspnoea - Anxiety If Severe: - Exhaustion - Inability to Speak in Full Sentences	Vitals: - Tachypnoea, Tachycardia, Other: - Peripheral Cyanosis, Wheals, Hives, Rhinitis - Accessory Muscle Usage - Inspiratory Wheezes, Marked Expiratory Wheezes, Prolonged Expiratory Phase, ↑Chest Expansion (+/- Hyperinflated Lung Fields) - Reduced Breath Sounds (Silent if Severe) - NO signs of Consolidation (Normal ↑Fremittis, ↓Percussion & ↑Vocal Resonance) - (+/- Pulsus Paradoxus if Severe) Signs of Causes: - Signs of Atopia (Wheals, Allergic Rhinitis, Hives) - Family History

<u>Emphysema (Dry):</u>	Pink Puffers: - Wheeze - Severe Dyspnoea - Weight Loss - (+/- Peripheral Oedema & Ascites in Corpulmonale)	Vitals: - Tachypnoea, Tachycardia Other: - (NB: Does NOT cause Clubbing or Haemoptysis) - Thin (No Oedema), Pink (No Cyanosis), - Tachypnoea, Accessory Muscle Usage, Intercostal Recession, Tripoding (Stooping), Pursed-Lip Breathing, Barrel Chest, - ↓ Chest Expansion, Hoover's Sign Positive, Tracheal Tug - Hyperinflated Lungs Fields, Hyperresonant Percussion (Gas Trapping) - ↓ Breath Sounds, Early Expiratory Crackles (Small Airway Disease), (+/- Wheeze). - (+/- ↑ JVP, Ascites, Oedema if RVF Due to Cor-Pulmonale) Signs of Causes: - Heavy Smoking (Tar Staining, Smoke Smell, Yellow Teeth, leuko/Erythroplakia) - (If Young Age – Think Congenital α1-Antitrypsin Deficiency.)
<u>Chronic Bronchitis (Wet):</u> (+/- Emphysema)	Blue Bloaters: - Wet, Wheezy Productive Cough - Chronic Sputum Production (>3mths/year for >2years) - Severe Dyspnoea - Oedema	Vitals: - Tachypnoea, Tachycardia Other: - (NB: Does NOT cause Clubbing or Haemoptysis) - Obese Patient, Gross Cyanosis (Central & Peripheral), - Cor-Pulmonale (Ascites, Oedema, Cyanosis, ↑ JVP) - Tachypnoea, Accessory Muscle Usage, Intercostal Recession, Tripoding (Stooping), Pursed-Lip Breathing, Barrel Chest - ↓ Chest Expansion, Positive Hoover's Sign, Tracheal Tug - Hyperinflated Lung Fields, Hyperresonant Percussion - ↓ Breath Sounds, End-Expiratory Wheezes (Bronchial Disease) Signs of Causes: - Heavy Smoking (Tar Staining, Smoke Smell, Yellow Teeth, leuko/Erythroplakia)
<u>Bronchiectasis:</u> (Chronic Bronchial Thickening & Dilation + Mucus Accumulation due to ↓ Mucociliary)	- Wheezy Productive Cough - Copious Purulent Sputum (Green/Yellow) - (+/- Haemoptysis)	Vitals: - Tachypnoea, Tachycardia, (+/- Fever if Infection) Other: - Clubbing, Cyanosis, Cachexia, - Foul-Smelling Sputum (Sometimes Haemoptysis) - Coarse Pan-Inspiratory Crackles, End-Expiratory Wheezes - (+/- Cor-Pulmonale if Severe) Signs of Causes: - **Cystic Fibrosis (Clubbing, Peripheral Cyanosis, Sputum, Salty Frost, Wasting)

Chest Infections (Fever + Cough + Dyspnoea):		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Pneumonia</u> <u>(Consolidation):</u>	- Acute High Fever + Chills + Rigors - Productive Cough (+/- Haemoptysis) - Pleuritic Chest Pain	Vitals: - Fever, Tachycardia, Tachypnoea Other: - Appears Ill: P/C-Cyanosis, Exhaustion, Dyspnoeic, Respiratory Distress, - Consolidation: Area of ↓ Expansion, ↑ Tactile Fremitus, Dull Percussion, Bronchial Breathing, ↑ Vocal Resonance. - Bronchial Breath Sounds, Pleural Friction Rub, Pan-Inspiratory Crackles Signs of Causes: - Broncho Pneumonia → Diffuse, Patchy Consolidation - Lobar Pneumonia → Localised Consolidation
<u>Melioidosis:</u> (Burkholderia Pseudomallei)	Presents Similar to TB but with Pneumonia: - PUO (Fever, Night Sweats, Chills, Rigors) - Skin Lesions (Abscesses/Ulcers) - Pneumonia (Dyspnoea, Cough, Sputum, Pleuritic Chest Pain) (May → Sepsis)	Vitals: - Fever, Tachycardia, Tachypnoea Other: - Cyanosis, Dyspnoea, Skin Lesions (Melioid Abscesses/Ulcers), Lymphadenopathy, - Consolidation: Area of ↓ Expansion, ↑ Tactile Fremitus, Dull Percussion, Bronchial Breathing, ↑ Vocal Resonance. - Bronchial Breath Sounds, Pleural Friction Rub, Pan-Inspiratory Crackles Signs of Causes: - Living in Tropical NQ
<u>Pulmonary Tuberculosis:</u>	- Fever, Night Sweats, - Chronic Productive Cough (+/- Haemoptysis) - Weight Loss - +/- Pleuritic Chest Pain	Vitals: - Fever, Tachycardia, Tachypnoea Other: - Cachexia, Dyspnoea, Lymphadenopathy, Hepatomegaly, Splenomegaly, - (NB: Cavitation Can → Pleural Effusion (Stony Dullness), Haemoptysis, Atelectasis) Signs of Causes: - Immunocompromise (HIV), Immigrant, Overseas Travel,

Pulmonary Vascular Disorders (Dyspnoea + Fluid Overload):		
<u>Pulmonary Embolism:</u>	- Sudden, Severe Dyspnoea - Pleuritic Chest Pain - (+/- Haemoptysis) - (+/- Syncope)	Vitals: - Fever, Tachycardia, Tachypnoea, Hypotension (LVF) Other: - RVF → Cool Peripheries, ↑CRT, Peripheral Cyanosis, ↑JVP, RV-Heave, Tricuspid Regurg Murmur - ↓Resp.Function → Central Cyanosis - Pleural Friction Rub, Signs of Causes: - DVT – Calf Pain, Calf Tenderness, Calf Swelling/Erythema, Pedal Oedema. - (B/G of Pregnancy, Air Travel, Recent Surgery, Clotting Disorders)
<u>Pulmonary Hypertension & Corpulmonale:</u> (LVF, COPD)	RVF Secondary to Pulmonary Hypertension: - COPD: Dyspnoea, Cough, Wheeze - Pul HTN: Cough/Dyspnoea/PND/Orthopnea - RVF: Swelling (Legs, Abdo), Chest Pain	Vitals: - Tachycardia (if LVF), Tachypnoea (if COPD/LVF), Hypotension (if LVF), Afebrile Other: - If LVF: Cool Peripheries, ↑CRT, Peripheral & Central Cyanosis, Low Volume Pulse - - If COPD: Clubbing, Tar Staining, Peripheral & Central Cyanosis - RVF: ↑JVP + a-Wave, RV-Heave, Medium Pan-Inspiratory Crackles in Lung Bases, Loud S2 (closure of Pul. Valve) Abdojugular Reflux Positive, Portal Hypertension (Tender Hepatomegaly), Ascites, Sacral/Pedal Oedema, Signs of Causes: - LVF, Smoking, COPD, IPF

Pleural Disorders (Dyspnoea + Pleuritic Chest Pain):		
Pneumothorax <u>(Including Tension Px):</u> (Air in Pleural Space) (Emphysema, Iatrogenic, Trauma, Spontaneous, etc)	Similar Presentation to Pulmonary Embolism: - Sudden, Severe Dyspnoea - Pleuritic Chest Pain - (+/- Syncope)	Vitals: - Tachycardia, Tachypnoea, Hypotension (Mediastinal Compression), Other: - Cyanosis, Dyspnoea, Anxiety, Respiratory Distress, - Peripheral Shutdown (↑CRT, Cool Pale Peripheries, Peripheral Cyanosis, Low-Vol Tachycardia) - Tracheal Deviation AWAY from Affected Side (If Tension Ptx), - @Site of Pneumothorax: ↓Chest Expansion, ↓Tactile Fremitus, Hyperresonant Percussion, Absent Breath Sounds, Absent Vocal Resonance. - (IF KINKING OF GREAT VESSELS → Syncope, Negative Abdojugular Reflux) Signs of Causes: - Signs of Trauma, Signs of Smoking (Emphysema), Mechanical Ventilation,
<u>Atelectasis:</u> <u>(Collapsed Lung):</u> (Due to Airway Obstruction by Foreign Object or Cancer)	- Dyspnoea - Chest Pain (May Quickly → Pneumonia)	Vitals: - Tachypnoea Other: - Dyspnoea, - Tracheal Deviation TOWARDS the Affected Side. - @Site of Atelectasis: ↓Chest Expansion, ↑Tactile Fremitus, Dull Percussion, Bronchial Breath Sounds, ↑Vocal Resonance Signs of Causes: - Mucous (Asthma, Cystic Fibrosis), Foreign Body Aspiration, Bronchial Ca (Cachexia)
<u>Pleural Effusion:</u>	- Sudden Severe Pleuritic Chest Pain (Worse on Inspiration) - Dyspnoea - Dry Cough	Vitals: - Fever, Tachypnoea, Tachycardia, Other: - Tracheal Deviation AWAY from Effusion - Displaced Apex Beat AWAY from Effusion - @ Site of Effusion: ↓Chest Expansion, ↓Tactile Fremitus, STONY DULLNESS, ↓Breath Sounds, ↓Vocal Resonance Signs of Causes: - NB: ALWAYS Suspect Mesothelioma - Portal Hypertension, Hypoalbuminaemia (CLD, Nephrotic Synd), Congestive L-Heart Failure, Lung Injury, Lung Infection.

Disorders of the Pulmonary Interstitium:

Remember the 3x 'Cs' = Cough, Clubbing, Crackles!!!

Interstitial Lung Diseases: ("Pneumoconioses") (Inhaled Dusts: Anthracosis, Asbestosis, Silicosis)	<i>(On a Background of Occupational Exposure)</i> - Chronic Cough (+/- Productive) - Dyspnoea (+/- Cyanosis)	Vitals: - Tachypnoea Other: - Clubbing, Dyspnoea, Cyanosis, Cachexia, Accessory Muscle Usage, Intercostal Recession, Tracheal Tug. - Cough - ↓Chest Expansion, - Fine Pan-Inspiratory Crackles - + Restrictive Pulmonary Function Tests. Signs of Causes: - Signs of Connective Tissue Diseases (Rheumatoid Arthritis, SLE, Scleroderma, Sjogren's)
Idiopathic Pulmonary Fibrosis: <i>(Idiopathic)</i>	Gradual Onset of Symptoms - Progressive Dyspnoea - Dry Cough (Very Poor Prognosis – 3yrs – No Treatment)	Vitals: - Tachypnoea Other: - Hypoxia/Cyanosis → Clubbing - Dry, Velcro-like inspiratory crackles Signs of Causes: - Restrictive Pattern on Pulmonary Function Tests (↓VC, ↓TLC)
Sarcoidosis: (iIdiopathic Immune → Non-Caseating Granulomas)	Systemic Disease – (Lungs, Eyes, Skin, LNs, Liver & Spleen) - General: Fatigue, Weight Loss, - Lungs: Dyspnoea, Dry Hacking Cough - Eyes: Uveitis - Skin: Erythema Nodosum (Nodules on Shins), Lupus Pernio (Red plaques), Hypertrophic Scars - LNs: Lymphadenopathy - Liver/Spleen: Organomegaly - MSK: Arthralgia, Finger Swelling - Heart: Heart Block, Syncope, Cor pulmonale	Vitals: - Tachypnoea Other: - Dyspnoea, Cyanosis, Cachexia, Accessory Muscle Usage, Intercostal Recession, Tracheal Tug. - Cough - ↓Chest Expansion, - Fine Pan-Inspiratory Crackles - + Restrictive Pulmonary Function Tests.
Wegener's Granulomatosis: (Autoimmune)	- Many Non-Specific Symptoms (Arthralgia, Myalgia, Night Sweats, Weight Loss, Red Eyes, URTI, Chronic Ear Infections, Fever) - BUT Relevant as it can → Pneumonia: ○ Dyspnoea ○ Cough (+/- Haemoptysis)	Vitals: - Fever, Tachycardia, Tachypnoea, Other: - Cachexia, Epistaxis, Nasal Sores, Various Skin Lesions, Haematuria, Conjunctivitis, Chest Pain, Cough (+/- Haemoptysis), Dyspnoea, Weakness, Wheezing.

Mediastinal & Lung Masses:		
<u>Mediastinal Compression:</u> (Lung Ca, Lymphoma, Retrosternal Goitre, Aortic Aneurysm)	- Facial Plethora - Suprclavicular Lymphadenopathy - Hoarseness - Horner's Syndrome - Dyspnoea	Vitals: - Depends Other: - SVC Obstruction: Facial Cyanosis, Facial Plethora, Positive Pemberton's, Periorbital Oedema, ↑ Non-Pulsatile JVP - Mechanical Compression: Stridor (Tracheal Compression), Tracheal Deviation, Hoarseness - Nerve Compression: - o Horner's Syndrome (Unilateral Ptosis, Anhidrosis, Miosis, Enophthalmos, Laryngeal Hoarseness) - o Unilateral Phrenic Nerve Paralysis → Unilateral Diaphragm Paralysis → Asymmetrical Chest Expansion. Signs of Causes: - ↑Thyroid Gland (Retrosternal Goitre) - Virchow's Node (R-Suprclavicular Lymphadenopathy) for Lung Cancer.
<u>Lung Cancers:</u>	Often Asymptomatic..But may → : - Fever, Night Sweats, Weight Loss, Fatigue - Dyspnoea - Cough (+/- Haemoptysis) (+/- Wheeze if Bronchial involvement) - (Don't Forget +/- Paraneoplastic Syndrome) - o Hypercalcaemia (↑PTH) - o Hyponatraemia (↑ADH) - o Cushing's (↑ACTH) - o Carcinoid Syndrome (↑Serotonin) - o Gynaecomastia (↑Gonadotrophins)	Vitals: - Fever, Tachypnoea (late stages) Other: - General Signs: - o Anorexia, Clubbing, HPOA (Wrist Tenderness), Intrinsic Hand Muscle Wasting, Virchow's Node (R-Suprclavicular Lymphadenopathy), Axillary Lymphadenopathy, Liver & Bony Tenderness (Metastases) - If Apical (Pancoaste) Tumour → - o SVC obstruction → Pemberton's Sign (Facial Plethora) - o Sympathetic Nerve Compression → Deficiency → Horner's Syndrome (Unilateral Ptosis, Anhidrosis, Miosis, Enophthalmos, Laryngeal Hoarseness) - If Mesothelioma → - o C8/T1 Nerve Lesion → Intrinsic Hand Muscle Weakness & Wasting - If Bronchocarcinoma → - o Pleuritic Chest Pain - o Pleural Effusion - o Tender Ribs - o Wheezing (Partial Bronchial Involvement) - o Atelectasis (Complete Bronchial Obstruction) - o Haemoptysis Signs of Causes: - Smoker, Miner, Sand-Blaster, Builder,

Summary of Important Points for OSCE:

Causes of Dysphagia:

- **Types of Dysphagia:**
 - **With Solids Only** = **Mechanical Obstruction** – (Hiatus Hernia/Strictures/Plummer Vinson Web from Iron Deficiency/Tumours)
 - **With Solids & Liquids** = **↓ Motility** – (Achalasia/Neural[Vagus Nv]/**Scleroderma**)
 - **With Liquids Only** = **Pharyngeal Disorders** – (Globus Pharyngeus)
- **Causes of Dysphagia:**
 - **Oesophagitis:** (Infection in Imm.comp Or Eosinophilic/Allergic)
 - **Achalasia:** (Oesophageal *Aperistalsis*)
 - **Mallory Weiss Syndrome Tear:** = Oesophageal laceration – (Gluttony, Coughing, Bulimia)
 - **Oesophageal Varices:** (Portal HTN, Cirrhosis)
 - **Hiatus Hernia:**
 - **GORD, Barrett's Oesophagus:** (Obesity, Pregnancy, Alcoholism)
 - **Oesophageal Cancer:** (Smoking, Alcoholism, Chronic GORD)

Causes of Epigastric Pain:

- **Gastritis:** (Alcoholism, Infection, Pernicious B12 Anaemia)
- **Peptic Ulcer Disease:** (NSAIDs, H.Pylori, or Gastrinoma/ZE-Synd)
- **Gastric & Duodenal Cancers:** (H.Pylori or Familial)
- **Acute Pancreatitis:** (50% - Gallstones, 40% - Alcohol)
- **Chronic Pancreatitis:** (**Alcohol Abuse)

Causes of Acute Abdomen:

- **Appendicitis:**
- **Diverticulosis/Diverticulitis:**
- **Acute Cholecystitis:** (AKA: "**Cholelithiasis**")
- **Acute Pancreatitis:** (50% - Gallstones, 40% - Alcohol)
- **Chronic Pancreatitis:** (**Alcohol Abuse)
- **Pseudomembranous Colitis:** (Clostridium Difficile Overgrowth due to Antibiotic → ↓ Gut Flora (C.Diff is Directly Cytotoxic))
- **Bowel Obstruction**

Causes of Jaundice:

Background Info on Jaundice:		
Disease:	TYPICAL Symptoms/Presentation:	
Unconjugated (Prehepatic/Haemolytic) Jaundice	Jaundice + Neonate	→ Physiological Neonatal Jaundice
	Jaundice + Dyspnoea + Fatigue	→ Haemolytic Anaemia
	Jaundice + Young + Family Hx of Jaundice	→ Gilbert's Disease.
	Jaundice + Young + Malaise	→ Hepatitis
	Jaundice Epidemic	→ Hep A Virus
	Jaundice + Recent Shellfish Consumption	→ Hep A Virus
	Jaundice + Hx of IVDU/Injections/Tattoos	→ Hep B/C Viruses
	Jaundice + Sodomy/Prostitution	→ Hep B Virus
	Jaundice + Elderly + Weight Loss	→ Carcinoma
Conjugated (Posthepatic) Jaundice	Jaundice + Elderly + Weight Loss	→ Carcinoma
	Jaundice + Abdo Pain	→ Biliary Obstruction (Gallstones)
	Jaundice + 50yr old Woman	→ Primary Biliary Cirrhosis
	Jaundice + Dyspepsia + Steatorrhoea	→ Head of Pancreas Tumour
	Jaundice + Fevers/Rigors	→ Cholangitis or Liver Abscess.
General Signs of Liver Disease:	Jaundice, Bruising, Scratchmarks, Ascites, Oedema, Hepatic Encephalopathy, Hepatic Flap, Leukonychia, Muercke's Lines, Xanthomata, Palmar Erythema, Xanthelasma, Feter Gynaecomastia, Spider Naevi, Testicular Atrophy, Nodular Liver, Hepato/Splenomegaly, Abdominal Distension, RUQ Tenderness, Caput Medusa, Ascites, Pedal oedema Signs of Causes: IVDU, Alcoholism, Tattoos, Skin Pigmentation (Haemochromatosis), Cachexia (Ca), Xanthelasma/mata (Chronic Biliary Obstruction)	

Inflammatory (Autoimmune) Bowel Diseases:

Inflammatory (Autoimmune) Bowel Diseases:		
Disease:	TYPICAL Symptoms/Presentation:	TYPICAL Clinical Signs:
<u>Crohn's Disease:</u> (Mouth → Anus) (Patchy)	- Typically Starts @ Ileocecal Valve (RIF) Common Symptoms (Both CD & UC): - **Abdominal Pain/Severe Internal Cramps - **Vomiting/Diarrhoea *(Porridge-like, Fatty) - **Rectal Bleeding (+ Fever, Weight Loss)	Vitals: - Fever, Other: - Clubbing - Mouth Ulcers & Anus Involvement, - GI Bleeding → Anaemia (Pale Nails, Koilonychia, Palmar/SC Pallor, Glossitis) Signs of Causes: - Autoimmune (Arthritis, Iritis, Pyoderma Gangrenosum, Primary Biliary Cirrhosis)
<u>Ulcerative Colitis:</u> (Typically affects Colon) (Continuous)	- Typically Starts @ Rectum (LIF) Common Symptoms (Both CD & UC): - **Abdominal Pain/Severe Internal Cramps - **Vomiting/Diarrhoea *(Bloody & Mucus – but NO Pus. {Not Dysentery}) - **Rectal Bleeding (+ Tenesmus)	Vitals: - Afebrile, Other: - Clubbing - No Mouth or Anus Involvement, - GI Bleeding → Anaemia (Pale Nails, Koilonychia, Palmar/SC Pallor, Glossitis) Signs of Causes: - Autoimmune (Arthritis, Iritis, Pyoderma Gangrenosum, Primary Biliary Cirrhosis)