

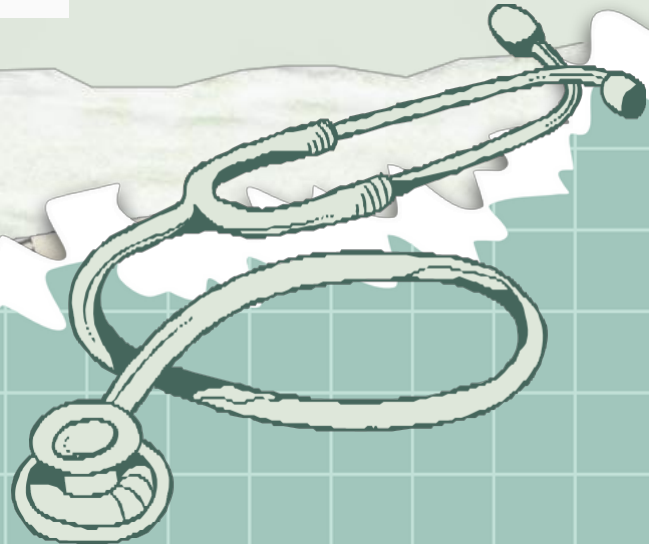


Clinical Skills 1

Title: Physical Examination

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Clinical Skills 1

What steps must you take when you see a patient?

First: Introduce yourself (handshake) and gain consent from the patient. Then we must start from the history (subjective part) where the patient states what is going on from the patient's perspective. After the history you can form your differential diagnosis, which guides you to the physical exam you must do (for example, a history of cough should guide you to do a respiratory exam).

Important Note:

History is from the patient's perspective (subjective).
Physical examination is from the doctor's perspective (objective). It starts **AS SOON AS YOU SEE THE PATIENT** using our 5 senses (we see how the patient walks and if he has a particular smell).

When does physical examination fit in the consultation?

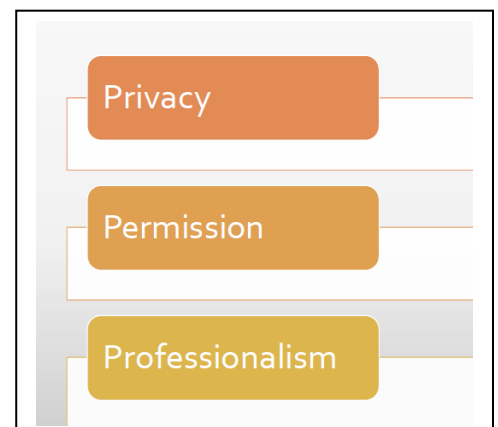
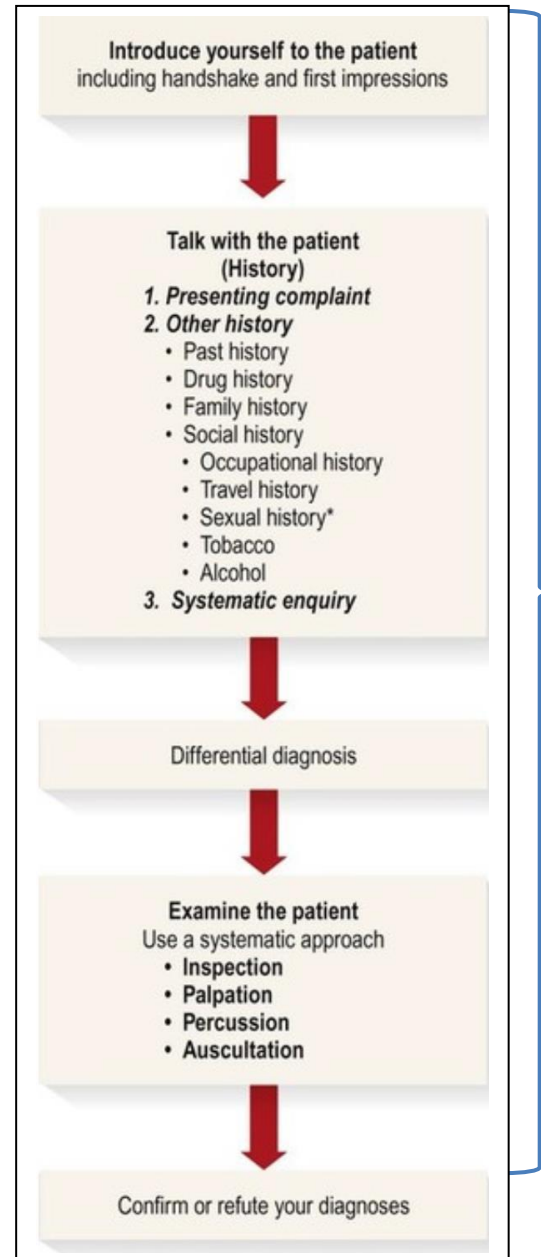
GENERALLY it comes after history.

When does physical examination begin and end?

It starts from the top when we introduce ourselves, from the moment we see the patient we start observing. This is true from the beginning of the consultation till the end of the consultation.

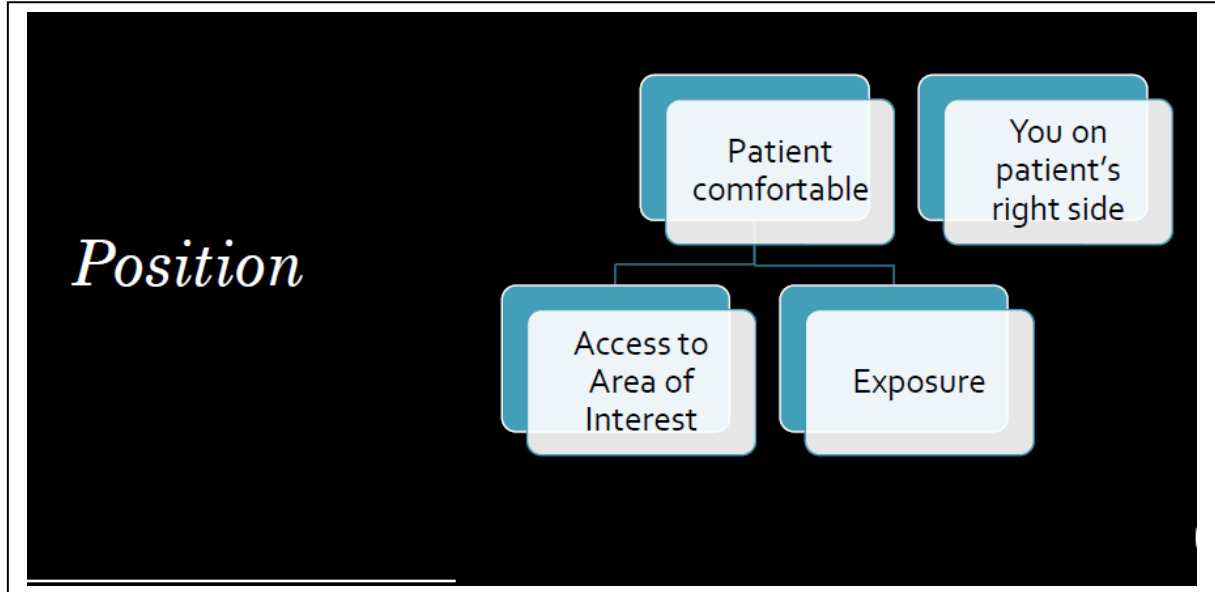
What are three important things to have when going through physical examination?

- 1) **Privacy:** ensure screens or curtains are fully closed around a ward bed; where possible, use a separate private room to avoid being overheard – we need to expose different parts of the body so we want our patients to be comfortable.
- 2) **Permission:** Consent is important to make the exam easier, explain what you will do. Offer a chaperone where appropriate to prevent misunderstandings and to provide support and encouragement for the patient.
- 3) **Professionalism:** we are doing what the patient needs not what we like or how we feel about it. Always **introduce yourself** to the patient, **shake hands** and **seek permission** to conduct the consultation.





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When you do any physical exam you should first comment on the appropriate position of the patient for that exam. For example, the position for lymph node examination is "the patient must be in a sitting position with the neck at the level of the physician hands".

General features for position:

- 1) The patient must be comfortable – to do the exam easily.
- 2) We need access to the area of interest
- 3) Expose the area of interest – we
- 4) Examine the patient from the patient's right side using our right hand.

When you examine any part of the body, you need to do the following sequence of events to ensure a full examination:

- 1) Inspection: we inspect with our eyes.
- 2) Palpate: We feel –sense of touch.
- 3) Percussion: Tap on the organ (notice the video)
- 4) Auscultation: listen – sense of hearing.

Percussion:

We use the middle finger of our non-dominant hand and put it on the area of interest, next we "swing" our arm to hit the middle finger. A sound is released.

If the organ is hollow (has air): the sound is

Resonant

If the organ is full of material: the sound is **Dull**





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Summary

- Starting well is important
- Physical examination generally starts after taking history
- Make there is privacy (chaperone as needed)
- Make sure you have patient's permission
- Position the patient correctly and expose the area of the examination
- Proceed through:
 - Inspection (Look)
 - Palpation (Touch)
 - Percussion (Tap)
 - Auscultation (Listen)



Clinical Skills 1

GENERAL EXAMINATION 2

FIRST IMPRESSIONS

-The physical examination starts as soon as you see the patient.

-Initial observations →

1) Hand Shakes : see the (3.1) box , NOTES :

A) Anxiety

B) Raynaud's phenomenon : in which the spasm of small arteries causes episodes of reduced blood flow to end arterioles. (primary or secondary)

-C) Hyperthyroidism : **Hyperthyroidism** is the condition that occurs due to excessive production of thyroid hormones by the thyroid gland

-D) Acromegaly : is a disorder that results in excess growth of certain parts of the human body. It is caused by excess growth hormone

-E) Hypothyroidism : is a disorder of the endocrine system in which the thyroid gland does not produce enough thyroid hormone.

-F) Myotonic dystrophy : is a type of muscular dystrophy, a group of genetic disorders that cause progressive muscle loss and weakness.¹¹ In DM, muscles are often unable to relax after contraction

-G) Rheumatoid arthritis : is a long-term autoimmune disorder that primarily affects joints.

-H) Dupuytren's contracture : is a condition in which one or more fingers become permanently bent in a flexed position .

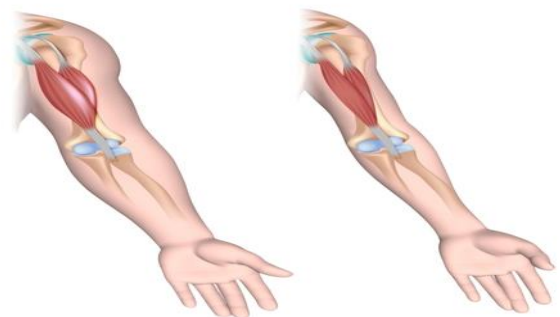
3.1 Information gleaned from a **handshake**

Features	Diagnosis
Cold, sweaty hands	Anxiety
Cold, dry hands	Raynaud's phenomenon
Hot, sweaty hands	Hyperthyroidism
Large, fleshy, sweaty hands	Acromegaly
Dry, coarse skin	Regular water exposure Manual occupation Hypothyroidism
Delayed relaxation of grip	Myotonic dystrophy
Deformed hands/fingers	Trauma Rheumatoid arthritis Dupuytren's contracture



Normal biceps

Muscular dystrophy





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-2) Clothing:

→Clothing gives clues about personality, state of mind and social circumstances, as well as a patient's physical state.

→Patients with recent weight loss may be wearing clothes that look very baggy and loose.

→Are there signs of self-neglect (which may be underpinned by other factors such as cognitive impairment, immobility or drug or alcohol dependence) or inappropriate attire?

→-For example, a patient with thyrotoxicosis may come to see you dressed for summer in the depths of winter due to heat intolerance.

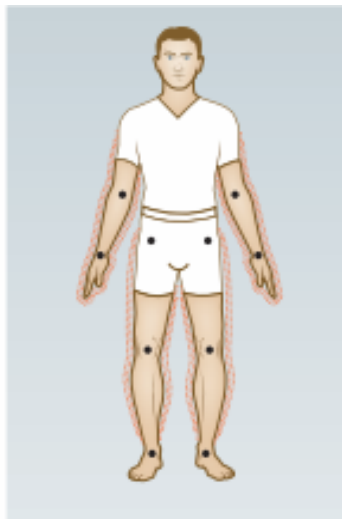
-3) Gait and posture:



A Spastic hemiparesis
One arm held immobile and close to the side with elbow, wrist and fingers flexed
Leg extended with plantar flexion of the foot
On walking, the foot is dragged, scraping the toe in a circle (circumduction)
Caused by upper motor neurone lesion, e.g. stroke



B Steppage gait
Foot is dragged or lifted high and slapped on to the floor
Unable to walk on the heels
Caused by foot drop owing to lower motor neurone lesion



C Sensory or cerebellar ataxia
Gait is unsteady and wide-based. Feet are thrown forward and outward and brought down on the heels
In sensory ataxia, patients watch the ground. With their eyes closed, they cannot stand steadily (positive Romberg sign)
In cerebellar ataxia, turns are difficult and patients cannot stand steadily with feet together whether eyes are open or closed
Caused by polyneuropathy or posterior column damage, e.g. syphilis



D Parkinsonian gait
Posture is stooped with head and neck forwards
Arms are flexed at elbows and wrists. Little arm swing
Steps are short and shuffling and patient is slow in getting started (festinant gait)
Caused by lesions in the basal ganglia



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-4. Facial expression and speech:

3.3 Facial expression as a guide to diagnosis

Features	Diagnosis
Poverty of expression	Parkinsonism
Startled expression	Hyperthyroidism
Apathy, with poverty of expression and poor eye contact	Depression
Apathy, with pale and puffy skin	Hypothyroidism
Agitated expression	Anxiety, hyperthyroidism, hypomania

• Colour:

-1. Pallor:

- Pallor can result from anaemia, in which there is a reduction in circulating oxyhaemoglobin.
- The best sites to assess for the pallor of anaemia are the conjunctiva:

or he could have a Colon Cancer

very white tired anemic fatigued
 (فَرْهَف)



-Absence of pallor does not exclude anaemia.

-Conversely, facial plethora is caused by raised hemoglobin concentration .





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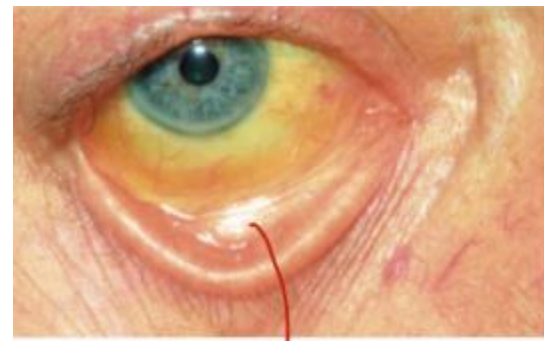
-2. Cyanosis:

- Cyanosis is a blue discoloration of the skin and mucous membranes that occurs when the absolute concentration of deoxygenated hemoglobin is increased.
- It is most easily seen where the vessels are close to the skin surface, as in the lips, mucous membranes, nose, cheeks, ears, hands and feet.



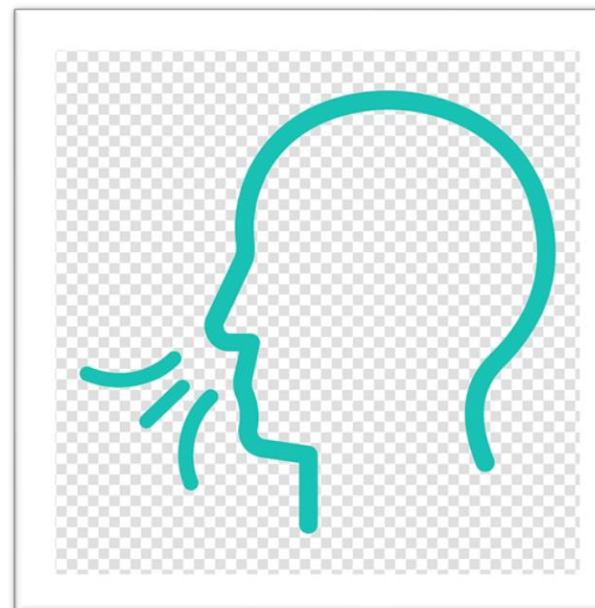
-3. Jaundice:

- Jaundice is an abnormal yellow discoloration of the **skin, sclera and mucous membranes.**



-Odours

- Odours can provide clues to a patient's social or behavioral habits.
- Acetone – Diabetic ketoacidosis
- Mousy smell – Hepatic Failure (volatile amine dimethylsulphide)
- Fishy odor – Uremia (kidney failure)
- Foul smell – Gastric outlet obstruction





SPOT DIAGNOSES (vip)

1. Blue sclera (eyes):

-Osteogenesis imperfecta is an autosomal dominant condition causing fragile and brittle bones; the sclerae are blue due to abnormal collagen formation.

2. Telangiectasia (spider veins) on and around lips:

-Hereditary haemorrhagic telangiectasia.

3. Tight skin constricting mouth, 'beaking' of nose, loss of nasolabial folds:

-In systemic sclerosis the skin is thickened and tight, causing loss of the normal wrinkles and skin folds, 'beaking' of the nose, and narrowing and puckering of the mouth

4. Myotonic dystrophy is an autosomal dominant condition with characteristic features of frontal balding and **bilateral ptosis**.

5. Kyphosis:

-is an abnormally excessive convex curvature of the spine as it occurs in the thoracic and sacral regions

6. Palmar erythema:

-Palmar erythema is a rare skin condition where the palms of both hands become reddish

7. Down syndrom -> Trisomy 21

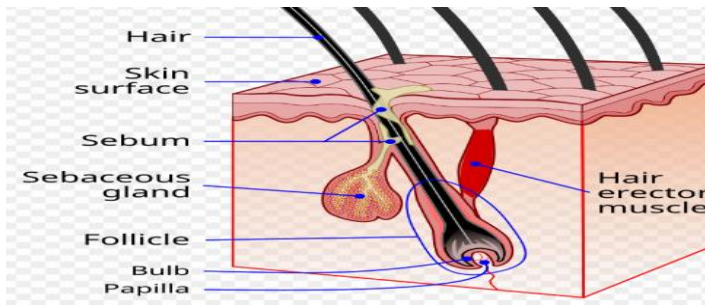


8. Thyroid goitre :

-A **goitre**, or **goiter**, is a swelling in the neck resulting from an enlarged thyroid gland. A goitre can be associated with a thyroid that is not functioning properly.



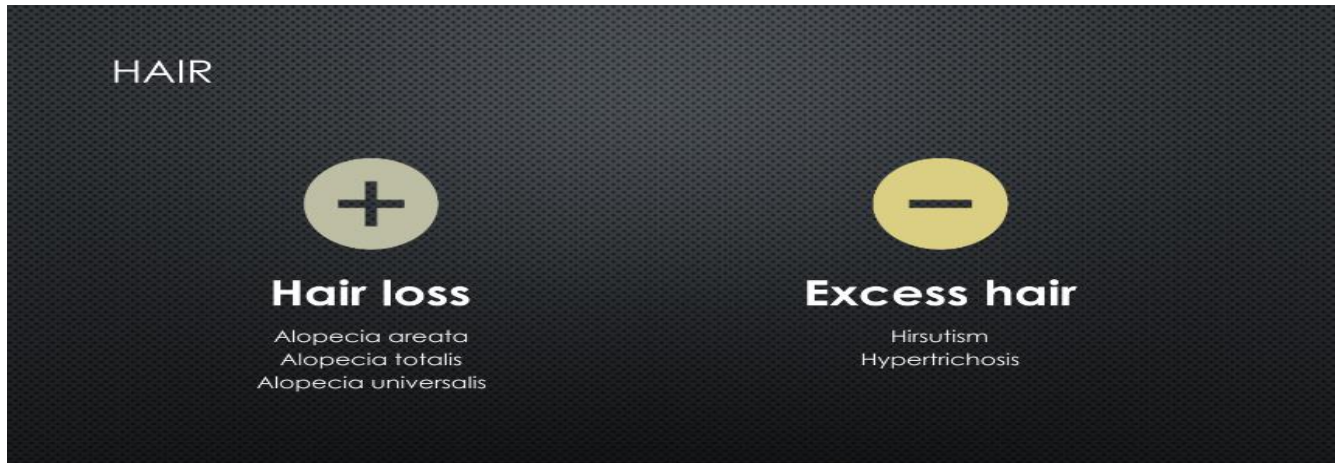
-9. Sebaceous cyst, squamous cell carcinoma and lipoma





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- Hair Loss



-1. Alopecia areata:

- Discrete, coin-sized areas of hair loss, with small 'exclamation mark' hairs at the periphery.



2. Alopecia totalis:

- is the loss of all hair on the head and face. Its causes are unclear, but believed to be autoimmune



3. Alopecia universalis:

- is a medical condition involving the loss of all body hair, including eyebrows, eyelashes, chest hair, armpit hair, and pubic hair.

It is the most severe form of alopecia areata.

People with the disease are usually healthy and have no other symptoms and a normal life expectancy.

-This is normal hair distribution , baldness due to the affect Of Testosterone hormone_





-Excess Hair

1. Hirsutism:

-Hirsutism is a condition in **women** that results in excessive growth of dark or coarse hair in a male-like pattern — face, chest and back



2. Hypertrichosis:

- Hypertrichosis is excessive hair growth over and above the normal for the age, sex and race of an individual.

Caused by some drugs Ex: Phenytoin



- Tongue

1. Macroglossia:

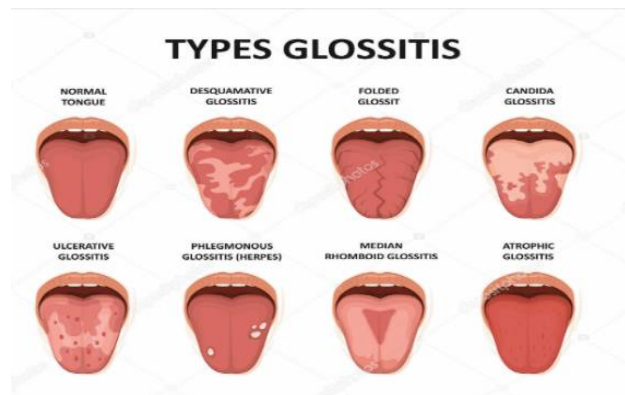
-is the medical term for an unusually large tongue.
Severe enlargement of the tongue can cause cosmetic and functional difficulties in speaking, eating, swallowing and sleeping. Macroglossia is uncommon, and usually occurs in children. There are many causes. Treatment depends upon the exact cause.



2. Glossitis:

- Glossitis is a problem in which the tongue is swollen and inflamed. This often makes the surface of the tongue appear smooth.

Iron-deficiency anemia is mainly caused by blood loss, such as may occur during menses or gastrointestinal hemorrhage, and Vit B1 deficiency



- 3. Furry appearance

-in Smokers



4. Oral thrush — also called oral candidiasis

is a condition in which the fungus *Candida albicans* accumulates on the lining of your mouth. *Candida* is a normal organism in your mouth, but sometimes it can overgrow and cause symptoms.

-this appear when the patient is **immunocompromised** .

Ex : HIV infection



6. Leukoplakia:

-Leukoplakia is a condition in which thick, white or greyish patches form usually inside your mouth. Smoking is the most common cause.



- 7. Fasciculation:

-Fasciculation, or muscle twitch, is a spontaneous, involuntary muscle contraction and relaxation, involving fine muscle fibres.



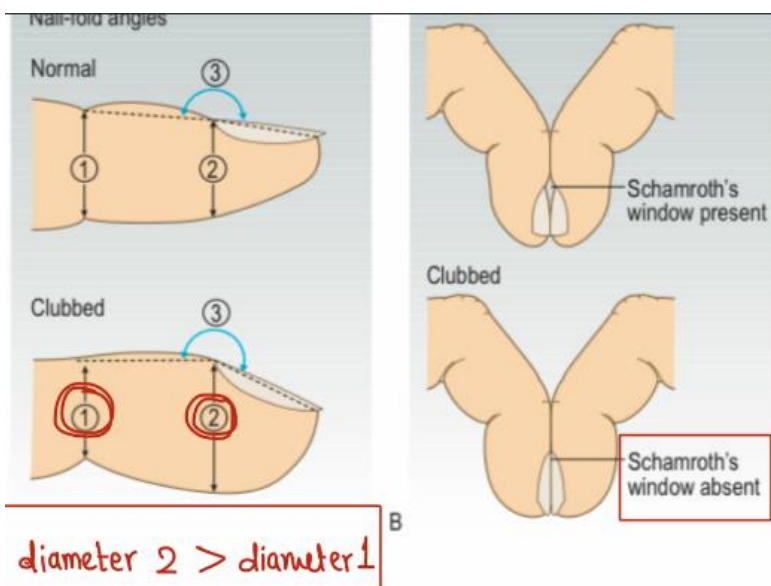
-Hands

- For what are you looking?

- Color
- Skin changes
- Deformity (ex : Dupuytren's contracture), muscle wasting
- Nail changes, clubbing

- 1. Clubbing:

- Finger clubbing describes painless soft tissue swelling of the terminal phalanges and increased convexity of the nail . Clubbing usually affects the fingers symmetrically. It may also involve the toes and can be unilateral if caused by a proximal vascular condition, such as arteriovenous shunts for dialysis. It is sometimes congenital but in over 90% of patients it heralds a serious underlying disorder. Clubbing may recede if the underlying condition resolves



3.5 Causes of clubbing

Congenital or familial (5–10%)

Acquired

- Thoracic (~70%):
 - Lung cancer
 - Chronic suppurative conditions: pulmonary tuberculosis, bronchiectasis, lung abscess, empyema, cystic fibrosis
 - Mesothelioma
 - Fibroma
 - Pulmonary fibrosis
- Cardiovascular:
 - Cyanotic congenital heart disease
 - Infective endocarditis
 - Arteriovenous shunts and aneurysms
- Gastrointestinal:
 - Cirrhosis
 - Inflammatory bowel disease
 - Coeliac disease
- Others:
 - Thyrotoxicosis (thyroid acropachy)
 - Primary hypertrophic osteoarthropathy



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-The nails in systemic disease

3.4 The nails in systemic disease

Nail changes	Description of nail	Differential diagnosis
Beau's lines	Transverse grooves (see Fig. 3.7B)	Sequella of any severe systemic illness that affects growth of the nail matrix
Clubbing	Loss of angle between nail fold and nail plate (see Fig. 3.8)	Serious cardiac, respiratory or gastrointestinal disease (see Box 3.5)
Leuconychia	White spots, ridges or complete discoloration of nail (see Fig. 3.7C)	Trauma, infection, poisoning, chemotherapy, vitamin deficiency
Lindsay's nails	White/brown 'half-and-half' nails (see Fig. 12.7)	Chronic kidney disease
Koilonychia	Spoon-shaped depression of nail plate (see Fig. 3.7D)	Iron deficiency anaemia, lichen planus, repeated exposure to detergents
Muehrcke's lines	Narrow, white transverse lines (see Fig. 12.6)	Decreased protein synthesis or protein loss
Nail-fold telangiectasia	Dilated capillaries and erythema at nail fold (see Fig. 14.13B)	Connective tissue disorders, including systemic sclerosis, systemic lupus erythematosus, dermatomyositis
Onycholysis	Nail separates from nail bed (see Fig. 3.7A)	Psoriasis, fungal infection, trauma, thyrotoxicosis, tetracyclines (photo-onycholysis)
Onychomycosis	Thickening of nail plate with white, yellow or brown discoloration	Fungal infection
Pitting	Fine or coarse pits in nail (see Fig. 3.7A)	Psoriasis (onycholysis, thickening and ridging may also be present), eczema, alopecia areata, lichen planus
Splinter haemorrhages	Small red streaks that lie longitudinally in nail plate (see Fig. 4.5B)	Trauma, infective endocarditis
Yellow nails	Yellow discoloration and thickening (see Fig. 14.13C)	Yellow nail syndrome

- 2. Beau's lines:



- 3. Leuconychia

- White spots, ridges or complete discolouration of nail



- 4. Koilonychia:

Spoon-shaped depression of nail plate.



