Skin, Hair, and Nails Assessment

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Structure of the Integument

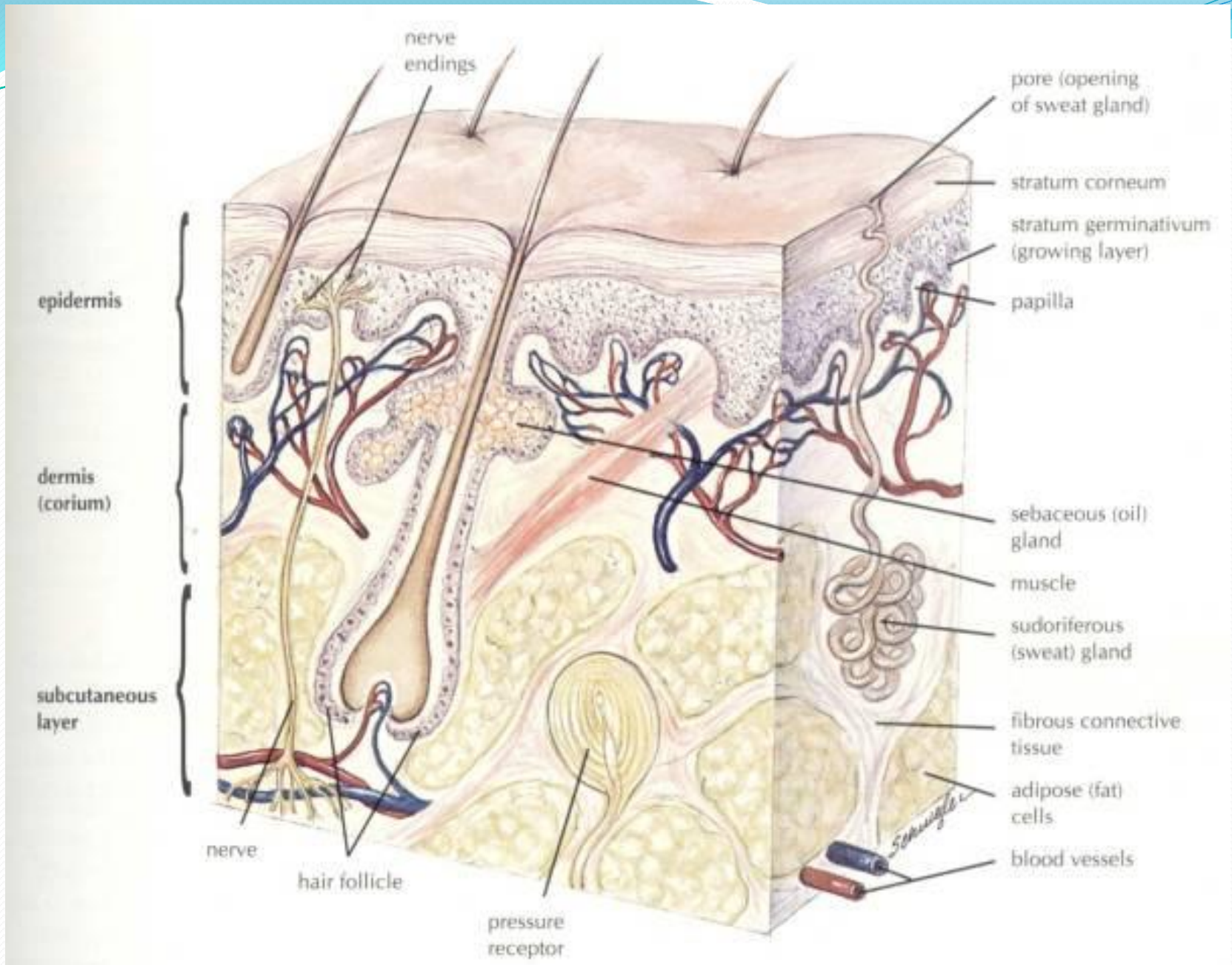
- The skin is the largest organ of the body comprising 15 percent of total body weight.
- Layers of the skin

A. Epidermis B. Dermis C. Subcutaneous tissue

Epidermal appendages

- Hair
- Nails
- Glands: two types of skin glands:

1. Sweat Gland
2. Sebaceous glands: Produce sebum(oily secretion)


nerve endings
pore (opening of sweat gland)
stratum corneum
stratum germinativum (growing layer)
papilla
epidermis
dermis (corium)
subcutaneous layer
sebaceous (oil) gland
muscle
sudoriferous (sweat) gland
fibrous connective tissue
adipose (fat) cells
blood vessels
nerve
hair follicle
pressure receptor

Function of the skin

1. **Protection-** protection of underlying structures from invasion by bacteria, noxious chemicals and foreign matter.
2. **Sensory perception-** transmits pain, touch, pressure, temperature, itching, etc
3. **Fluid balance (excretion)**- absorption of fluids and evaporation of excess.
4. **Temperature regulation-** produced heat released through skin by radiation, conduction
5. **Vitamin synthesis-** skin exposed to ultra violet light can convert substances necessary for synthesizing vitamin D_3 (cholecalciferol).
6. **Aesthetic-** provides beautiness and appearance
7. **Homeostasis**

SUBJECTIVE DATA

1. Past history of skin disease (allergies, hives, psoriasis, eczema)
2. Change in pigmentation
3. Change in mole (size or color)
4. Excessive dryness or moisture
5. Pruritus
6. Excessive bruising
7. Rash or lesion
8. Medications (any that cause allergic skin response, increased sunlight sensitivity)
9. Hair loss
10. Change in nails
11. Environmental or occupational hazards (sun exposure, toxic chemicals, insect bites)
12. Self-care behaviors (daily hygiene; use of soaps, cosmetics, or chemicals)

TERMINOLOGY

Primary Skin Lesions

1. **Macule:** Flat, circumscribed ,discolored, <1 cm diameter
2. **Patch** Flat, circumscribed, discolored, >1 cm diameter
3. **Papule** Raised, defined, any color, <1 cm diameter
4. **Plaque:** Raised, defined, any color, >1 cm diameter
5. **Wheal:** Raised, flesh-colored or red edematous papules or plaques, vary in size and shape
6. **Nodule:** Solid, palpable >1 cm diameter, often with some depth
7. **Vesicle:** Fluid-filled, <1 cm diameter
8. **Bulla:** Fluid-filled, >1 cm diameter
9. **Pustule:** Purulent, fluid-filled, raised to any size
10. **Cyst:** Distinct and walled-off, containing fluid or semisolid material, varied in size

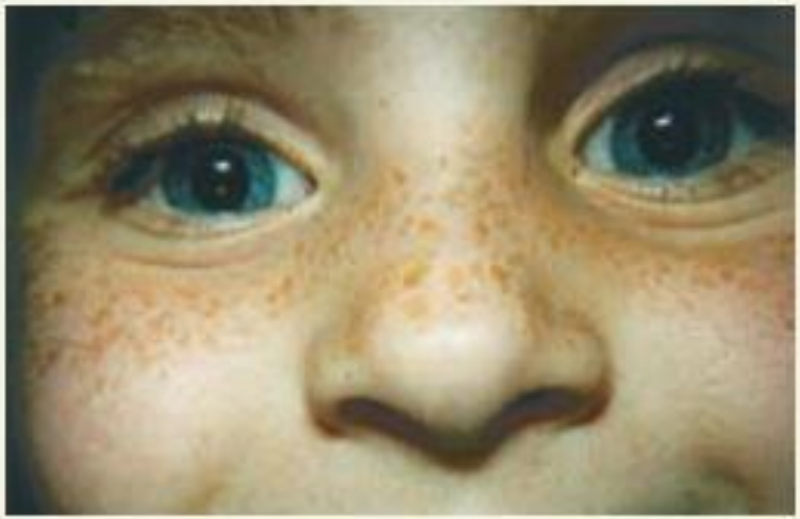
Secondary Skin Lesions

- **1. Scar:** Fibrous replacement of lost skin structure
- **2. Fissure:** Linear break in skin surface, not related to trauma
- **3.Excoriation:** Lesion resulting from scratching or excessive rubbing of skin
- **4.Erosion:** Loss of epidermal layer, usually not extending into dermis orsubcutaneous layer

Skin Tumors and Growths

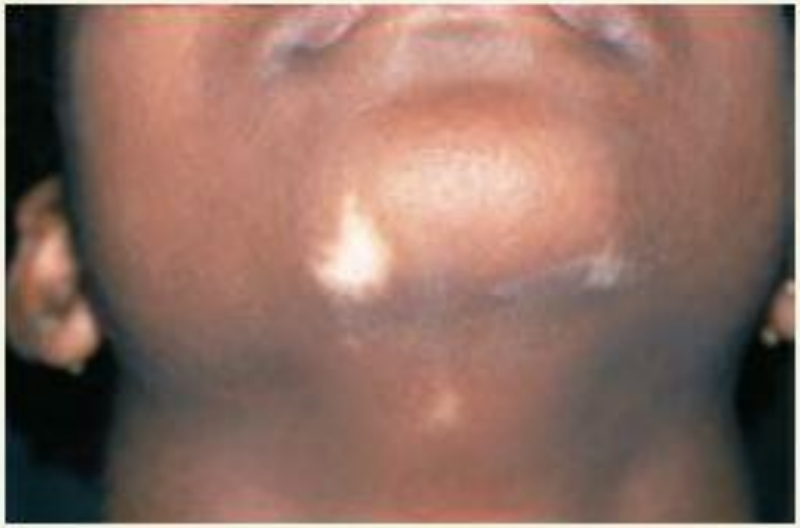
- **Moles or Nevi**: These normal variants can be macular or papular and distributed anywhere. *Congenital nevi* ("birthmarks") exist from birth. *Acquired nevi* usually develop in childhood and adolescence.

Macule



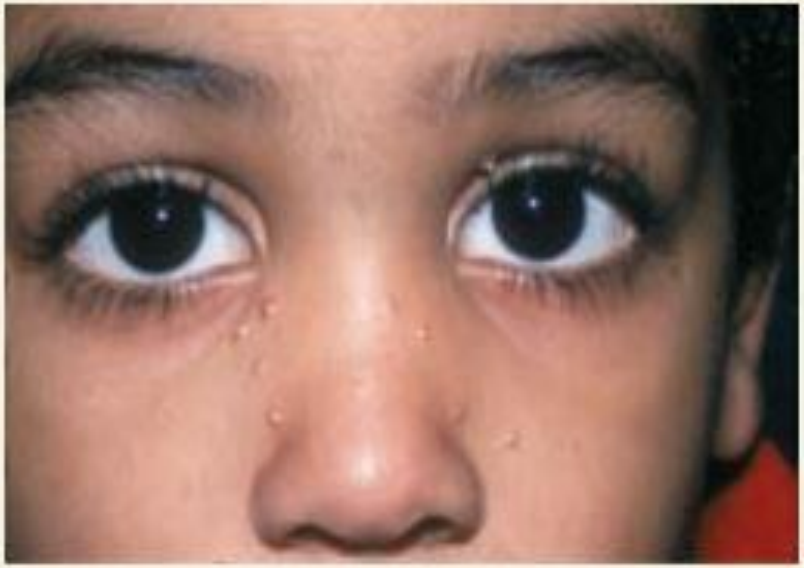
Flat, circumscribed, discolored, <1 cm diameter

Patch



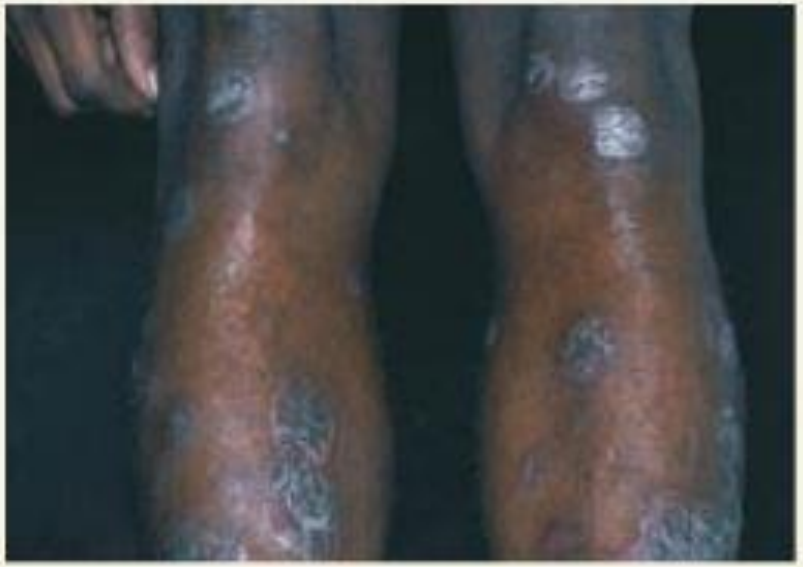
Flat, circumscribed, discolored, >1 cm diameter

Papule



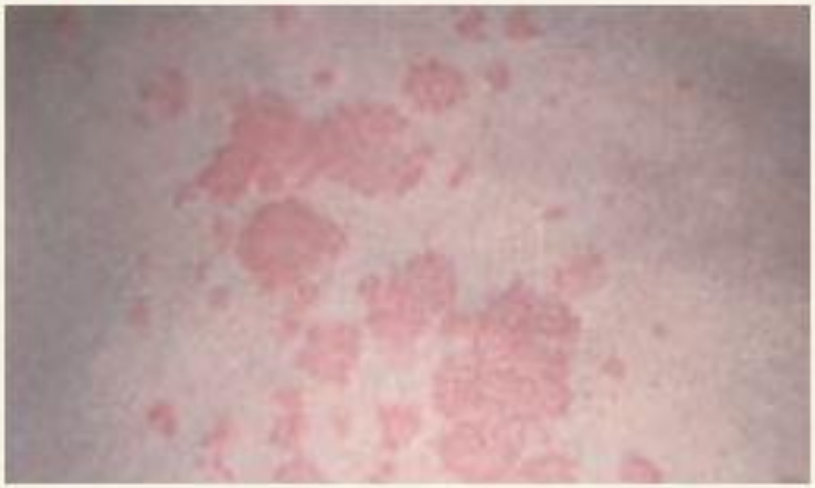
Raised, defined, any color, <1 cm diameter

Plaque



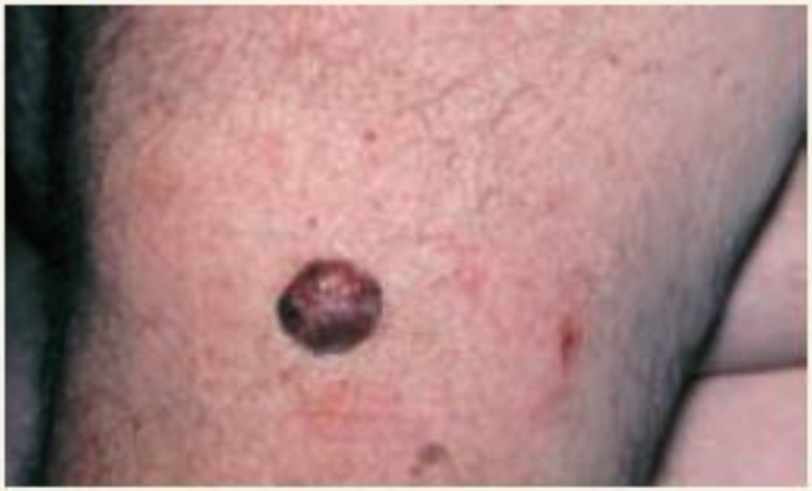
Raised, defined, any color, >1 cm diameter

Wheal



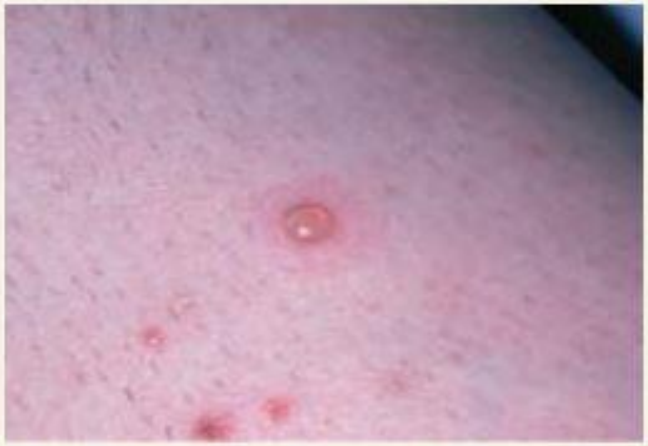
Raised, flesh-colored or red edematous papules or plaques, vary in size and shape

Nodule



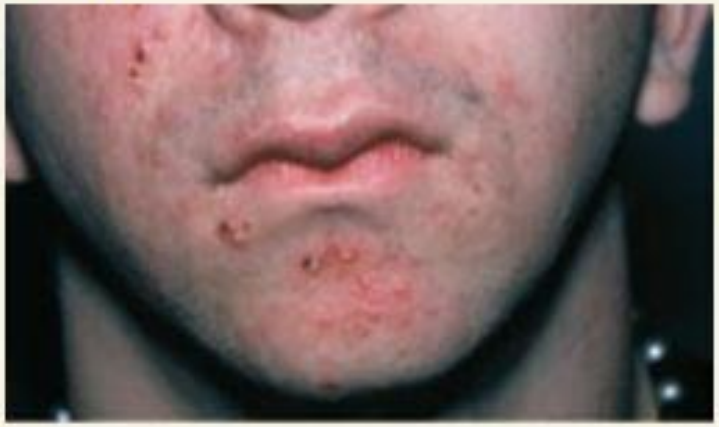
Solid, palpable >1 cm diameter, often with some depth

Vesicle



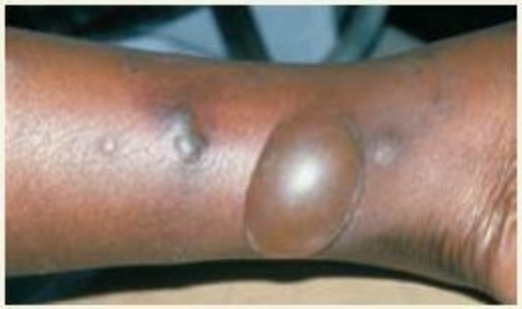
Fluid-filled, <1 cm diameter

Pustule



Purulent, fluid-filled, raised to any size

Bulla



Fluid-filled, >1 cm diameter

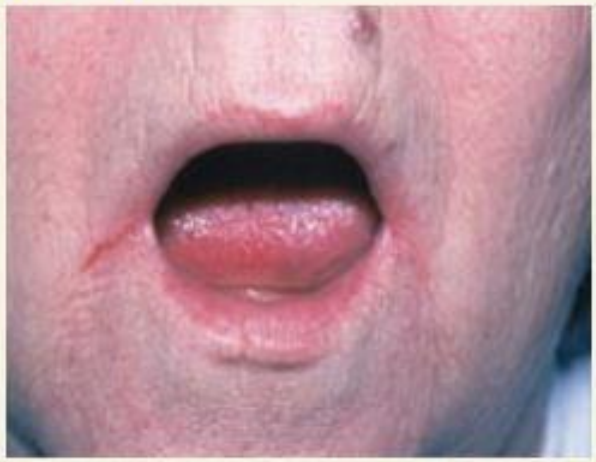
Cyst

Distinct and walled-off, containing fluid or semisolid material, varied in size

Scar

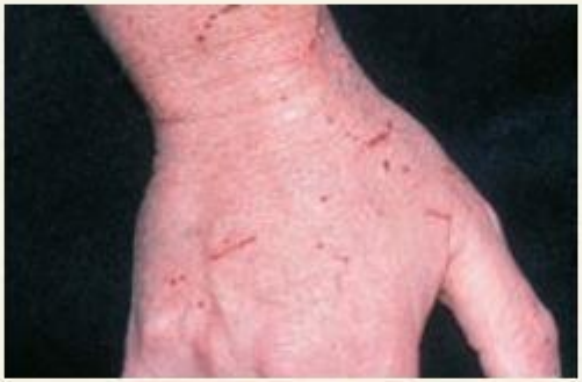
Fibrous replacement of lost skin structure

Fissure



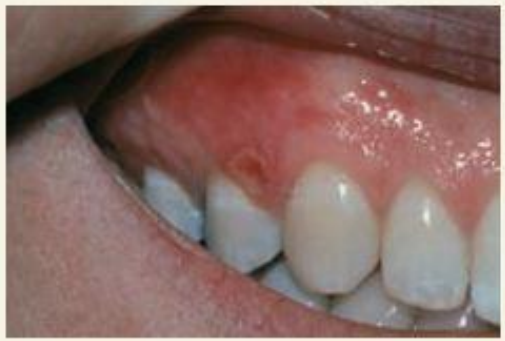
Linear break in skin surface, not related to trauma

Excoriation



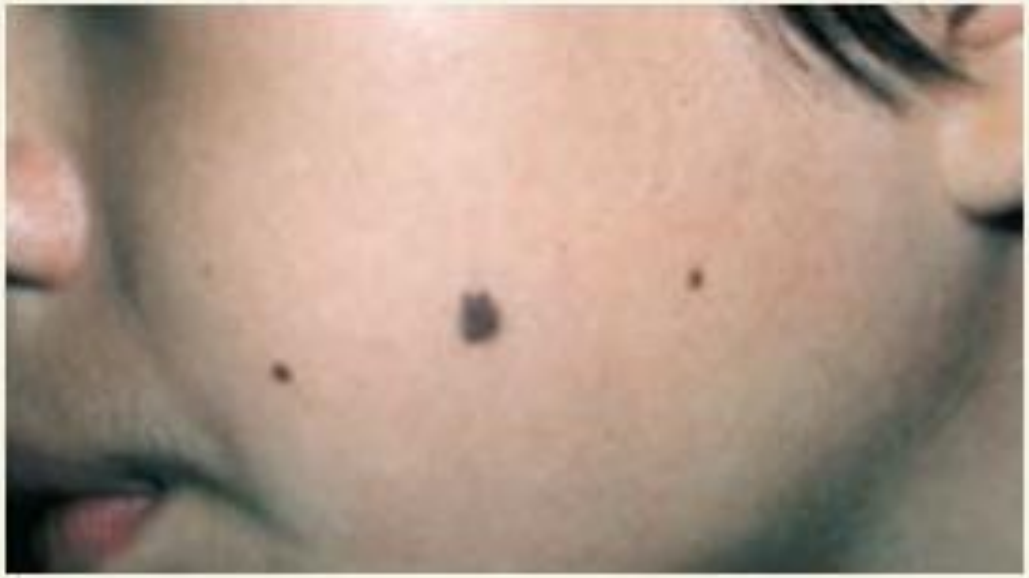
Lesion resulting from scratching or excessive rubbing of skin

Erosion



Loss of epidermal layer, usually not extending into dermis or subcutaneous layer

Moles or Nevi



These normal variants can be macular or papular and distributed anywhere. *Congenital nevi* ("birthmarks") exist from birth. *Acquired nevi* usually develop in childhood and adolescence.

Objective data

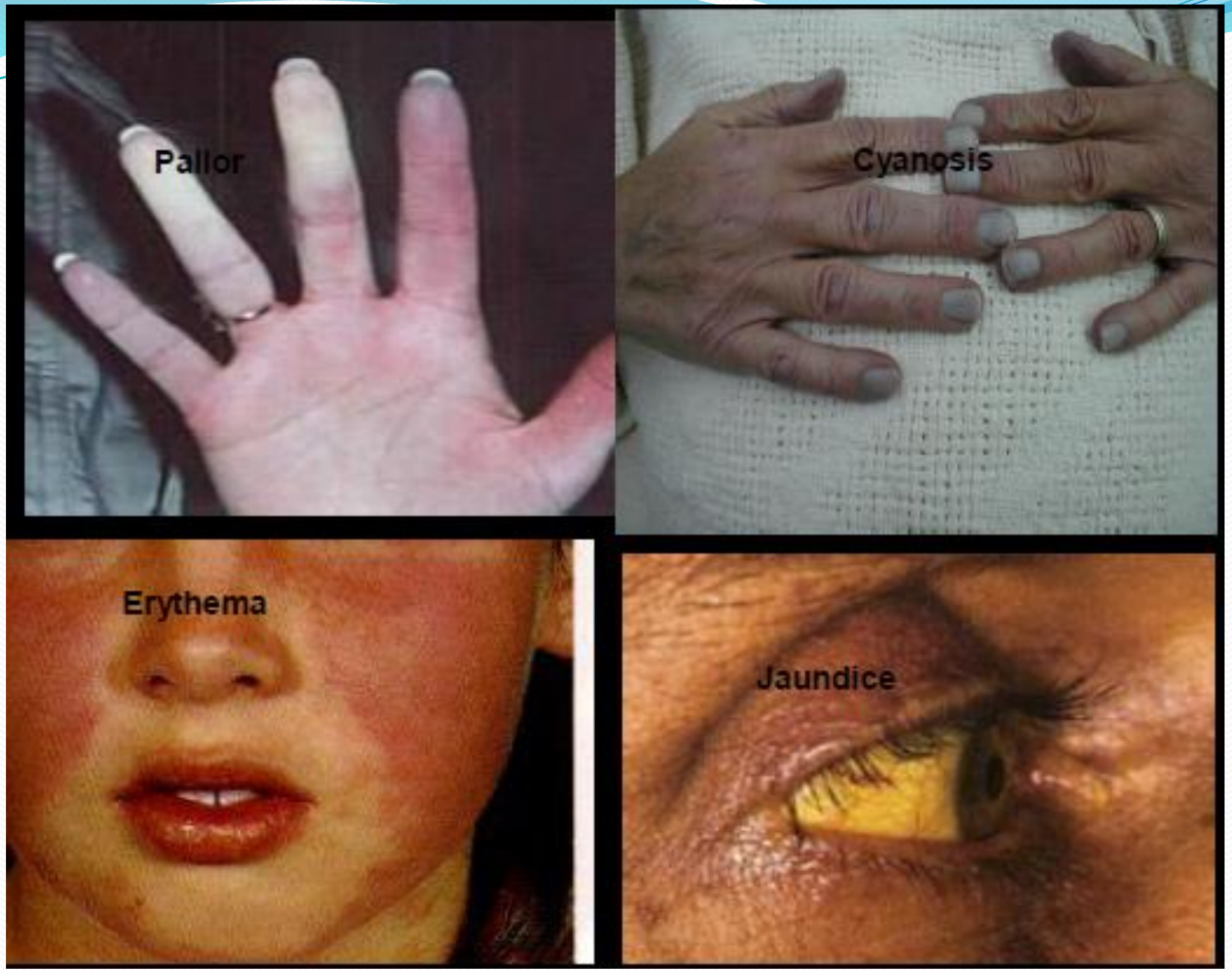
Inspect and palpate the skin

1. Color

Skin color varies from body part to body part and from person to person.

A. Widespread color change

- Erythema : Intense redness of the skin due to excess blood in the dilated superficial capillaries
- Cyanosis : Bluish mottled color that signifies decreased perfusion
- Pallor : Absence of red-pink tones from the oxygenated hemoglobin in blood
- Jaundice : Increase in bilirubin in the blood causing a yellow color in the skin


Pallor
Cyanosis
Erythema
Jaundice

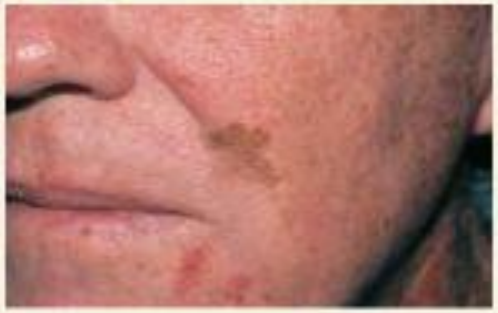
B. Pigmentation Changes

DANGER SIGNS ABCDE

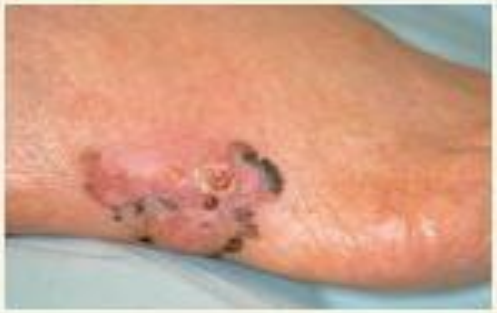
- **Abnormal Characteristics of Pigmented lesions**
  1. **A**symmetry of a pigmented lesion
  2. **B**order irregularity
  3. **C**olor variation
  4. **D**iameter greater than 6mm
  5. **E**levation
  6. **E**nlargement

Table 6.1 ABCDEs for Assessment for Melanoma

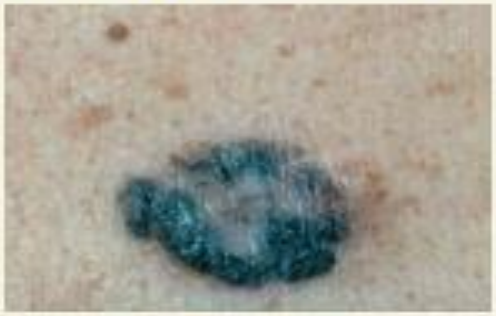
A: Asymmetry
Does one half look like the other half?



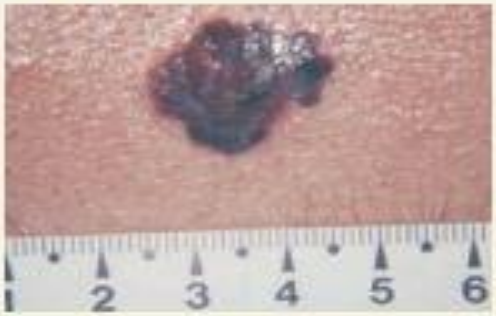
B: Border irregularity
Is the border ragged or notched?



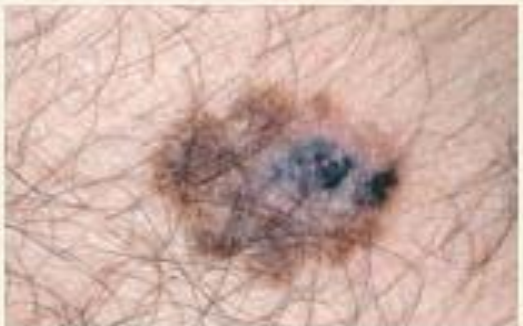
C: Color
Does the mole have a variety of shades or different colors?



D: Diameter
Is the diameter >6 mm (pencil eraser)?



E: Evolution
Has the lesion evolved or changed over time?



Palpation of Temperature

- Palpation of skin with dorsum of the hand.
- Temperature of skin depends on the amount of blood circulating through dermis.
- Generalized warmth: (Fever, Hyperthyroidism)
- Local warmth: (Inflammation)
- Coolness: (Hypothyroidism, Frost bite, Hypothermia, Shock, Low cardiac output)
- Assessment of skin is critical point in some conditions such as: after cast application, or after vascular surgery.

Palpation moisture of skin

- Skin is normally smooth and dry.
- Skin folds e.g. axillae are normally moist.
- In presence of lesions or ooze fluid, nurse must wear gloves to prevent exposure to infections drainage
- **Moisture indicates:**

1- Degree of client's hydration

2- Condition of the outer lipid layer of the skin surface

Dry (xerosis): Vitamin A def. and Myxedema

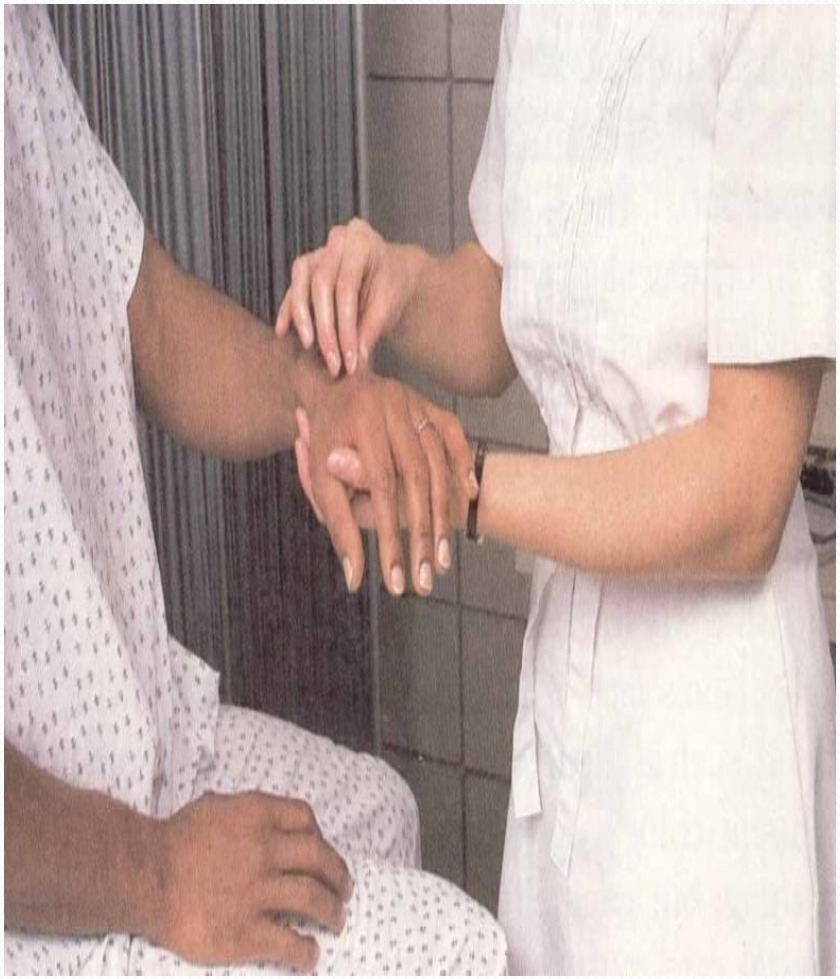
Oily: Acne

Palpation of Texture

- Texture of skin normally smooth, soft and flexible
- If any abnormalities in texture found you must ask the client is he exposed to any recent injury to the skin?
- Nurse determines whether the client's skin is smooth or rough, thin or thick, tight or supple (flexible).
- Very Soft: (Thyrotoxicosis)
- Tight: (Scleroderma = hard skin)
- Rough: (Hypothyroidism)

Palpation of Turgor

- Turgor: is the skin elasticity diminished by edema or dehydration.
- Assessment of turgor done by pinching skin between the thumb and forefinger and released.
- Normally skin return immediately to its position.
- Failure of this process means dehydration.
- Decrease in turgor predisposes the client to skin breakdown.



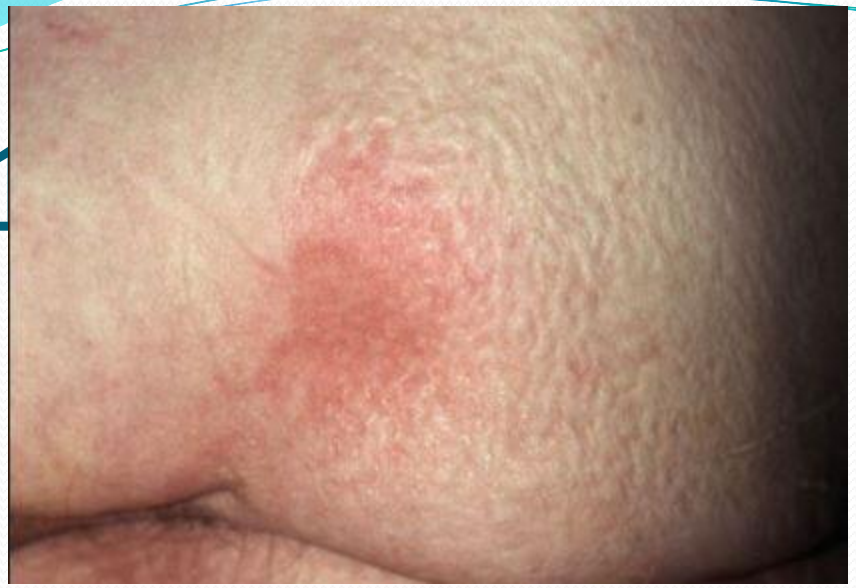
Inspection and Palpation of Lesions

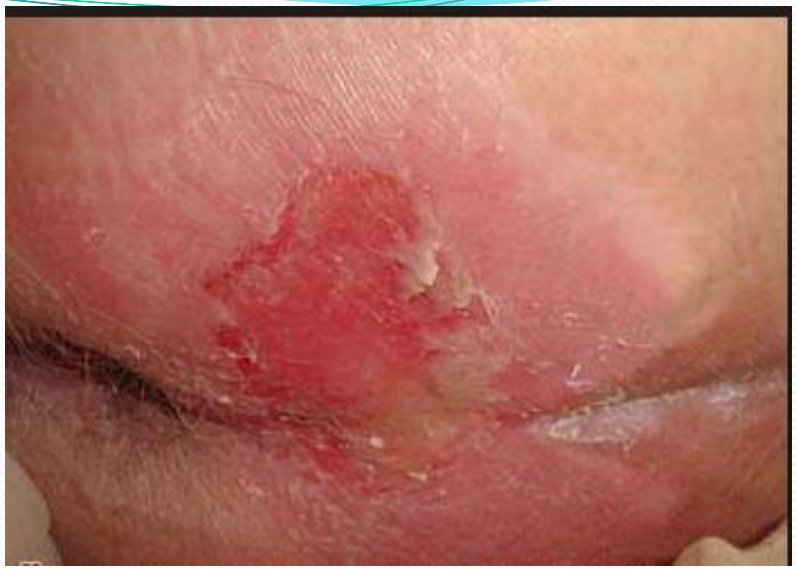
- 1. Color
- 2. Elevation : flat , raised , pedunculated
- 3. Pattern or shape : e.g. annular , grouped , linear.
- 4. Size ,in centimeters : use a ruler.
- 5. Location and distribution on body, generalized or localized
- 6. any Exudate : note its color or odor

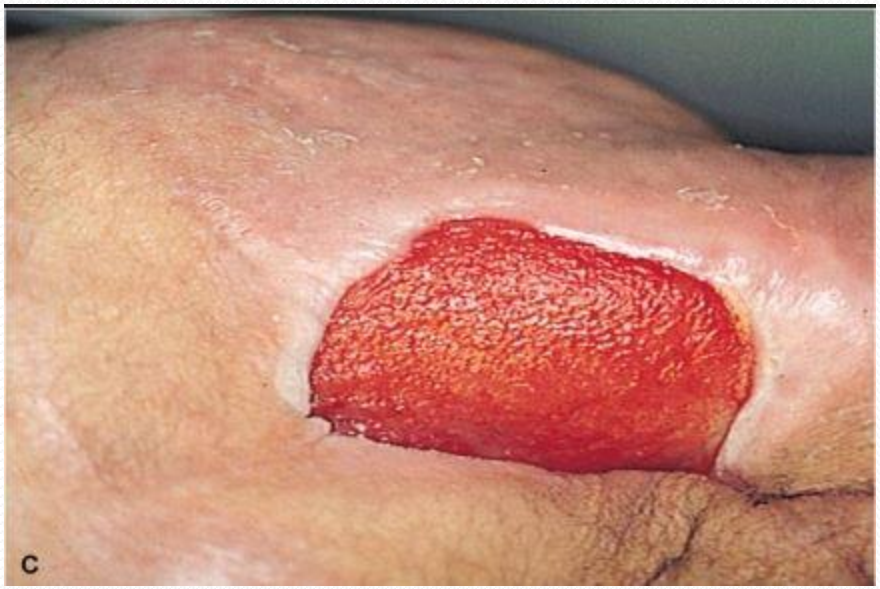
Pressure ulcers, bedsores and decubitus ulcers

- are localized injuries to the skin and/or underlying tissue that usually occur over a bony prominence as a result of pressure, or pressure in combination with shear and/or friction. The most common sites are the skin overlying the sacrum, coccyx, heels or the hips

1. Stage 1: Intact skin with nonblanchable redness of a localized area, usually over a bony prominence.
2. Stage 2: Partial thickness loss of dermis presenting as a shallow open ulcer with a red pink wound bed, without slough
3. Stage 3: Full-thickness tissue loss. Subcutaneous fat may be visible, but bone, tendon, or muscle is not exposed
4. Stage 4: Full-thickness tissue loss with exposed bone, tendon, or muscle
5. **Unstageable**: Full thickness tissue loss in which actual depth of the ulcer is completely obscured by slough.Until enough slough is removed to expose the base of the wound, the true depth, and therefore stage, can be determined



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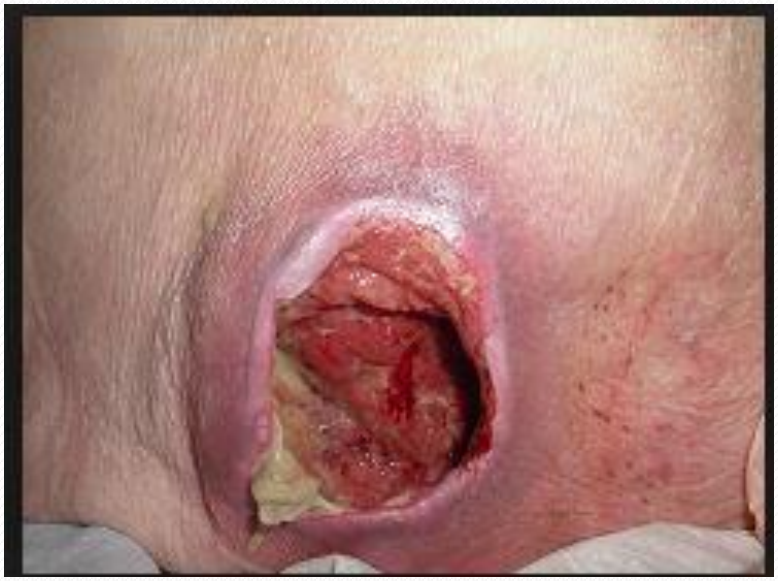
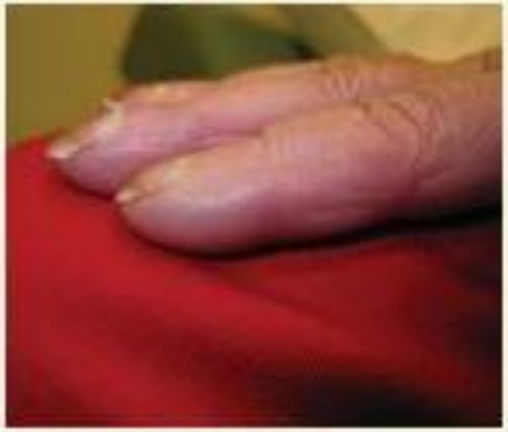


Nails- Inspection

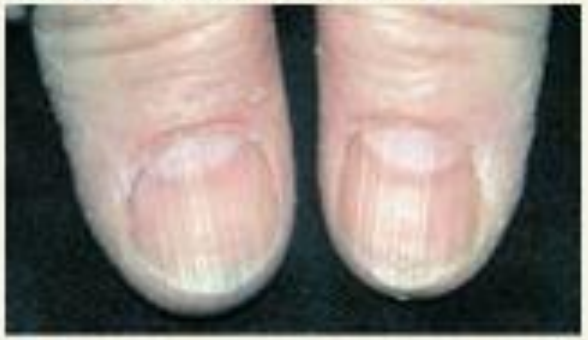
- **Capillary Refill**- Blanching of nail bed lasts 1-2 seconds. Longer may indicate cardiovascular or respiratory disorder
- **Shape and contour**
  - Clubbing-congenital or chronic CO_2 retention
  - Spooning-concave curves- Fe deficiency
  - Transverse grooves-nutrient deficiency
  - Longitudinal grooves- normal

Clubbing

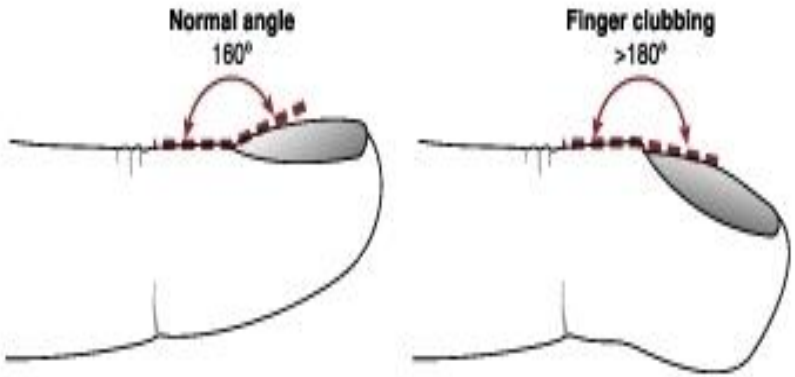


Results from chronic hypoxia to distal fingers, such as with emphysema or congestive heart failure

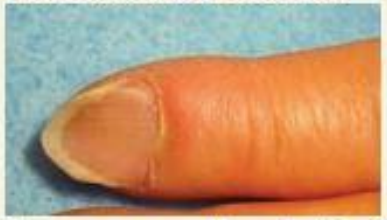
Longitudinal Ridging



Normal variation, especially in elderly

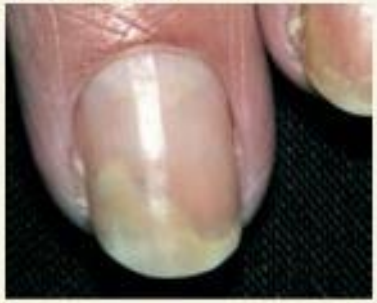


Koilonychia (Spoon Nails)



Transverse and longitudinal concavity of the nail, giving the appearance of a spoon. May be normal in infants. Other causes include trauma, iron-deficiency anemia, and hemochromatosis.

Onycholysis

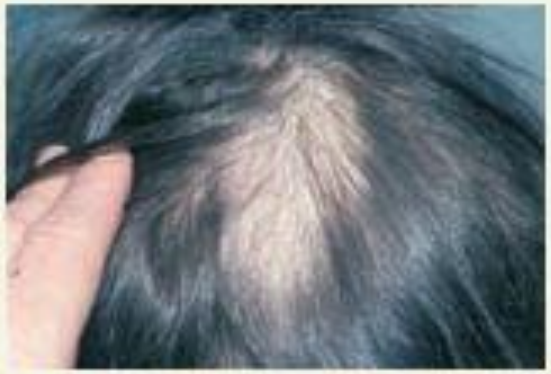


Separation of a portion of the nail plate from the nail bed; results in opaqueness to the affected part, appearing white to yellow to green; causes include trauma, fungal infections,

Hair Assessment - Inspection

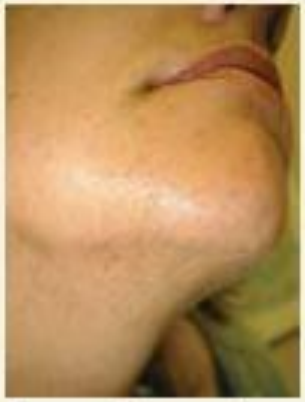
- **Hair Assessment**
  1. Color
  2. Texture
  3. Distribution- male v. female alopecia
  4. Lesions
  5. Hygiene
  6. Parasites

Alopecia Areata



This autoimmune disorder results in noninflammatory loss of hair in a circumscribed distribution.

Hirsutism



Excessive androgenic hormones in a female patient can cause masculine changes including hair in male distribution patterns.

Traction Alopecia

Tight hair braiding practices exert traction force on the hair bulb with subsequent hair loss.