

# **Assessment of the Skin, Hair, and Nails**

NUR 206

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Chapter 6

# Anatomy and Physiology

- **Major function of skin is to keep the body in homeostasis**
  - **Major sensory organ:** perception & Communication
  - **Protect tissues** from microorganisms (**pathogens**), harmful substances and radiation
  - Provides boundaries for body fluid: **protection from dehydration.**
  - **Wound repair**
  - **Absorption and excretion**
  - Modulates body **Temperature**
  - **Synthesizes Vit. D**

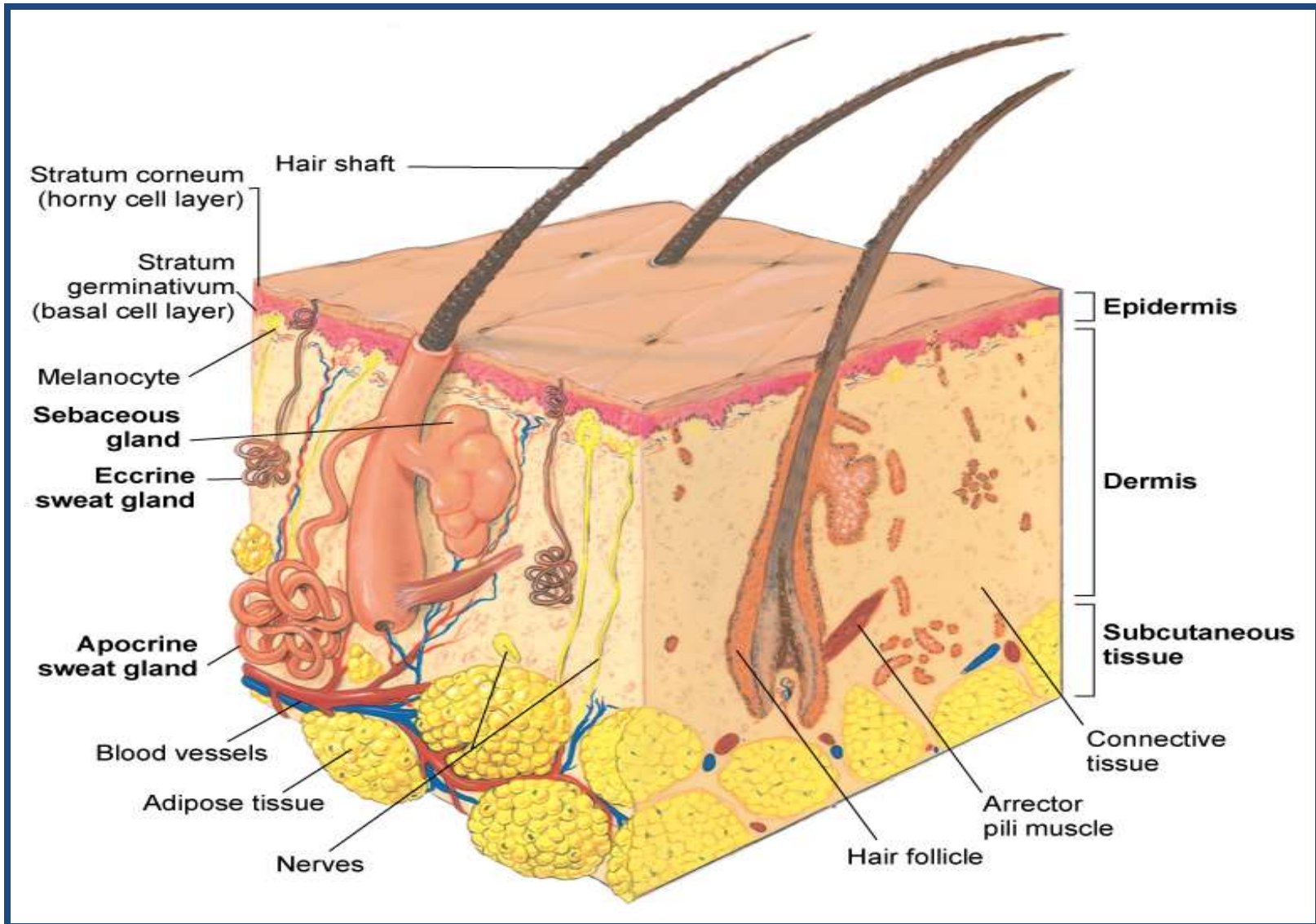
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- **Heaviest single organ in body**
  - Skin accounts for 16 % of the body's weight.
- **The largest organ**
- Covering an area from 1.2 to 2.3 meters squared
- Composed of 3 distinct layers.
  - Epidermis,
  - Dermis,
  - Subcutaneous tissues
- Composed of the skin, sweat and oil glands, hair, and nails.

# Structure & Function

- Skin
  - Epidermis
  - Dermis
  - SC tissue
- Appendages
  - hair
  - Sebaceous glands
  - Sweat glands
  - Nails
- Function

# Anatomy of skin



# The Dermis

- Made mostly of **connective tissue**.
- The hide of the human body.
- Richly **innervated and vascularized**.
- Contains the **sebaceous glands, hair follicles, sweat glands, oil glands, lymphatic vessels, and many sensory receptors**.

Subcutaneous tissues or adipose tissue/ fat

•

- Skin color—determined by **melanin, carotene, and oxyhemoglobin and deoxyhemoglobin**.
- Why do different people have different skin colors?
- Role of **melanin/ brownish** pigment of the skin
- Role of **carotene/ yellow** pigment in **subcutaneous fat & in keratinized areas e.g. palms, soles**
- **hemoglobin**: carry oxygen, exist in 2 forms:  
oxyhemoglobin and deoxyhemoglobin ( increased concentration lead to **cyanosis**)

# Appendages

- **Sweat glands**
  - **Eccrine sweat glands:** widely distributed, open directly onto skin surface, help control body temp;
  - **Apocrine glands:** in axilla and groin, stimulated by emotional stress, bacteria causes body odor.
- **Sebaceous glands:** present in all surfaces except palms/soles; produce a fatty substance (sebum) secreted onto skin surface through hair follicles stimulated by hormones
- **Hair**
  - **Vellus hair** – short, fine, less pigmentation
  - **Terminal hair** – coarser, pigmented (scalp/eyebrows)
- **Nails:** protect distal ends of fingers/toes)



# Health History

- Always get history first before you examine the patient. **Subjective data** includes HX, PMH, HPI, FH, SH, Habits.
- Common or concerning symptoms
  - Hair loss
  - Rash
  - Moles
- Ask the patient
  - “Have you noticed any changes in your skin or your hair?”
  - “Have you noticed any moles that have changed size, shape, color, or sensation?”
  - “Have you noticed any new moles?”

# Focused History

- Previous history of skin disease
- Change in pigmentation (size or color)
- **Change in mole:**  
overgrowth of skin's pigment cells
- Excessive dryness/moisture
- Pruritus
- Excess bruising
- **Rash or lesion**
- Medications
- **Hair loss**
- Change in nails
- Environmental or occupational hazards
- Self-care behaviors

# Past Medical History

- **Chronic skin problems**
- Prior diagnosis of **skin problems**
- Previous **treatment** of skin problems
- **Infectious diseases**
- **Exposures** (bad sunburn in childhood)
- **Medicine** (prescribed, herbal or nutritional supplements)
- **Allergic reactions** or known **sensitivities**
- **Cardiac, respiratory, liver, endocrine or other systemic disease**

# Family, Personal and Social History

- **Family hx** of skin diseases or disorders associated with skin problems
- **Skin care habits** (cleansing routine, cosmetics, sunscreen)
- **Occupational** (exposure, friction )
- **Daily living Recreational activities** (sun/heat, cold, sports)
- **Dietary habits** (new foods)
- Use of **alcohol or drugs**

# Techniques of Examination

- Examination of the skin, hair, and nails begins with the **general survey** of the patient
- Make sure the patient **wears a gown**
  - **Drape** appropriately to facilitate close inspection of hair, anterior and posterior surfaces of body, palms and soles.
- Inspect entire skin surface in **good light**
  - Preferably in **natural light** (or artificial light that resembles natural)
    - o Artificial light often distorts colors

# Objective Data— The Physical Exam

- Inspection and palpation of the skin

- **Note characteristics of:**

1. **Color**

2. **Moisture**

3. **Temperature**

4. **Texture**

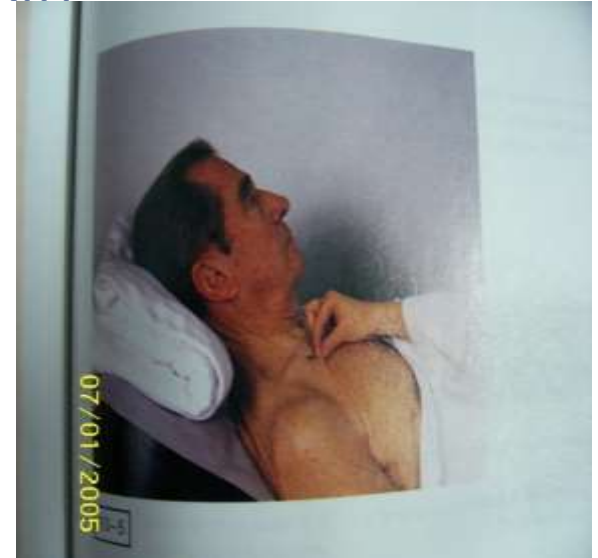
5. **Mobility & turgor**

6. **Lesions** (color, elevation, pattern/shape, size, location, distribution, exudates)

7. **Thickness**

8. **Edema**

9. **Vascularity and bruising**



# Techniques of Examination

- **Color/Changes**

- Patients often notice change in color before physician
- Look for **General pigmentation**: **increased pigmentation, loss of pigmentation**
- Look for **redness, erythema, pallor, cyanosis, & yellowing**
  - o **Red color** of oxyhemoglobin best assessed at fingertips, lips, and mucous membranes
    - In **dark-skinned people, palms and soles**
  - o For **central cyanosis**: look in **lips, oral mucosa, & tongue**  
*Cyanosis of the nails, hands and feet may be central or peripheral*
  - o **Jaundice – sclera,** Palpebral conjunctiva, lips , hard palate, under-surface of the tongue, tympanic membrane and skin.



**Pallor**

SSR  
Skin



**Cyanosis**



**Erythema**



**Jaundice**



# Techniques of Examination

- Moisture
  - Dryness, sweating, and oiliness: Diaphoresis, Dehydration
- Temperature
  - Use back of fingertips
  - Identify warmth or coolness of skin: Hypothermia, Hyperthermia
- Texture
  - Roughness or smoothness
- Mobility and turgor: Lift fold of skin
  - Note ease with which it lifts up (mobility) and speed with which it returns to place (turgor)
    - Decrease mobility in edema
    - Decrease turgor in dehydration

# Objective Data— The Physical Exam (cont.)

- Skin—**Inspect and palpate** (cont.)
- **Lesions**: superficial growth or patch of the skin that does not resemble the area surrounding it.
- **Note characteristics**
  1. **Location and distribution on body**
  2. **Pattern or shape (Configuration, arrangement)**
  3. **Type of lesion (macules, papules, nevi, vesicles)**
  4. **Color**
  5. **Size**
  6. **Elevation**
  7. **Exudates (color, odor, amount , consistency)**

# 1. Distribution



localized



generalized



symmetric



assymmetric



discrete



grouped



coalescing



cleavage plane

# Lesions

## 2. Patterns & Shapes (Configuration)

- Annular , arciform (**ringworm**)
- Clustered: Grouped (**herpes simplex**)
- Linear (**scratch**)
- Geographic (**Mycosis fungoides**)
- Serpiginous (**Tinea corporis** )
- See more in book .....

# Skin Lesions: Patterns & Shapes

**Annular or  
arciform**



**Serpiginous**



**Linear**



**Discrete**



**Clustered**



# Common Shapes & Configuration



Table 10-3 COMMON SHAPES AND CONFIGURATIONS OF LESIONS



**ANNULAR**, or circular, begins in center and spreads to periphery, e.g., tinea corporis or ringworm, tinea versicolor, pityriasis rosea.



**CONFLUENT**, lesions run together, e.g., urticaria (hives).



**DISCRETE**, distinct, individual lesions that remain separate, e.g., molluscum.

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**GROUPED**, clusters of lesions, e.g., vesicles of contact dermatitis.



**GYRATE**, twisted, coiled spiral, snakelike.



**TARGET**, or iris, resembles iris of eye, concentric rings of color in the lesions, e.g., erythema multiforme.

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**GYRATE**, twisted, coiled spiral, snakelike.



**TARGET**, or iris, resembles iris of eye, concentric rings of color in the lesions, e.g., erythema multiforme.



**LINEAR**, a scratch, streak, line, or stripe.



**POLYCYCLIC**, annular lesions grow together, e.g., lichen planus, psoriasis.

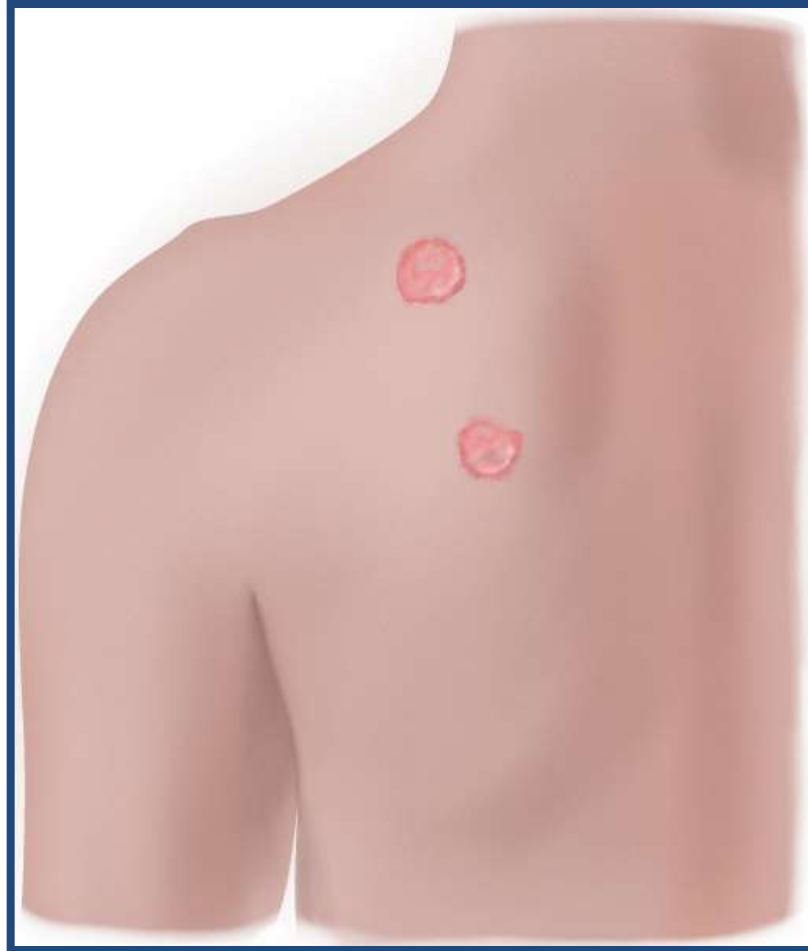


**ZOSTERIFORM**, linear arrangement along a nerve route, e.g., herpes zoster.

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# Annular or Circular



# Confluent



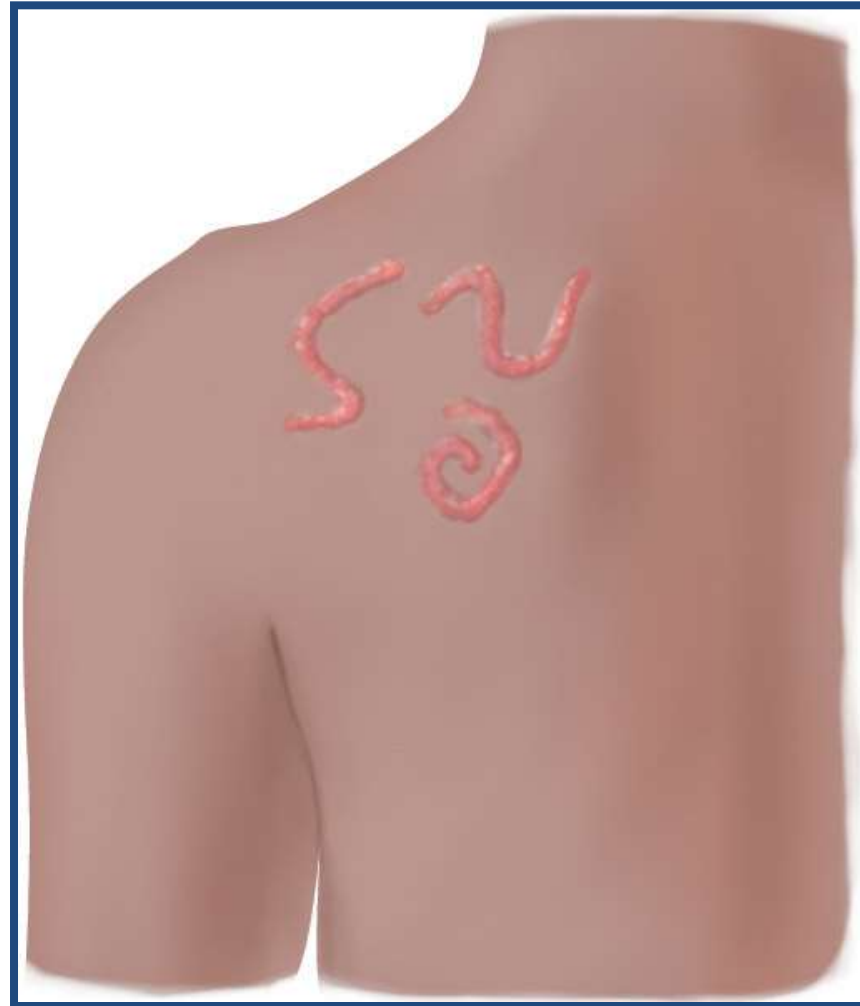
# Discrete



# Grouped



# Gyrate



# Target



# Linear



# Polycyclic





# Zosteriform



# CONFIGURATION



SHARP



ILL-DEFINED



CIRCINATE



ARCIFORM

↖ MARGIN ↗



ANNULAR



IRIS



SERPIGINOUS



GYRATE



LINEAR



ZOSTERIFORM

# Examination of Lesions

## – **Note characteristics**

- o Patterns and shapes
- o Anatomic location and distribution
- o Type of lesion (macules, papules, nevi, vesicles)
- o **Color**



## Normal Range of Findings

General pigmentation is darker in sun-exposed areas. Common (benign) pigmented areas also occur:

- **Freckles** (ephelides)—small, flat macules of brown melanin pigment that occur on sun-exposed skin (Fig. 10-4A).



10-4A

**Freckles**



10-4B

**Junctional nevus**



10-4C

**Compound nevus**

- **Mole (nevus)**—a proliferation of melanocytes, tan to brown color, flat or

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# Skin Cancers

- **Basal cell carcinoma**
  - Comprises 80% of skin cancers
  - **Shiny and translucent**, they *grow slowly* and rarely metastasize
- **Squamous cell carcinoma**
  - Comprises 16% of skin cancers
  - **Crusted, scaly, and ulcerated**, they can metastasize
- **Melanoma:** Melanoma: arising from pigment producing melanocytes in the epidermis that gives the skin its colour
  - Comprises 4% of skin cancers
  - **Rapidly increasing** in frequency, they spread rapidly

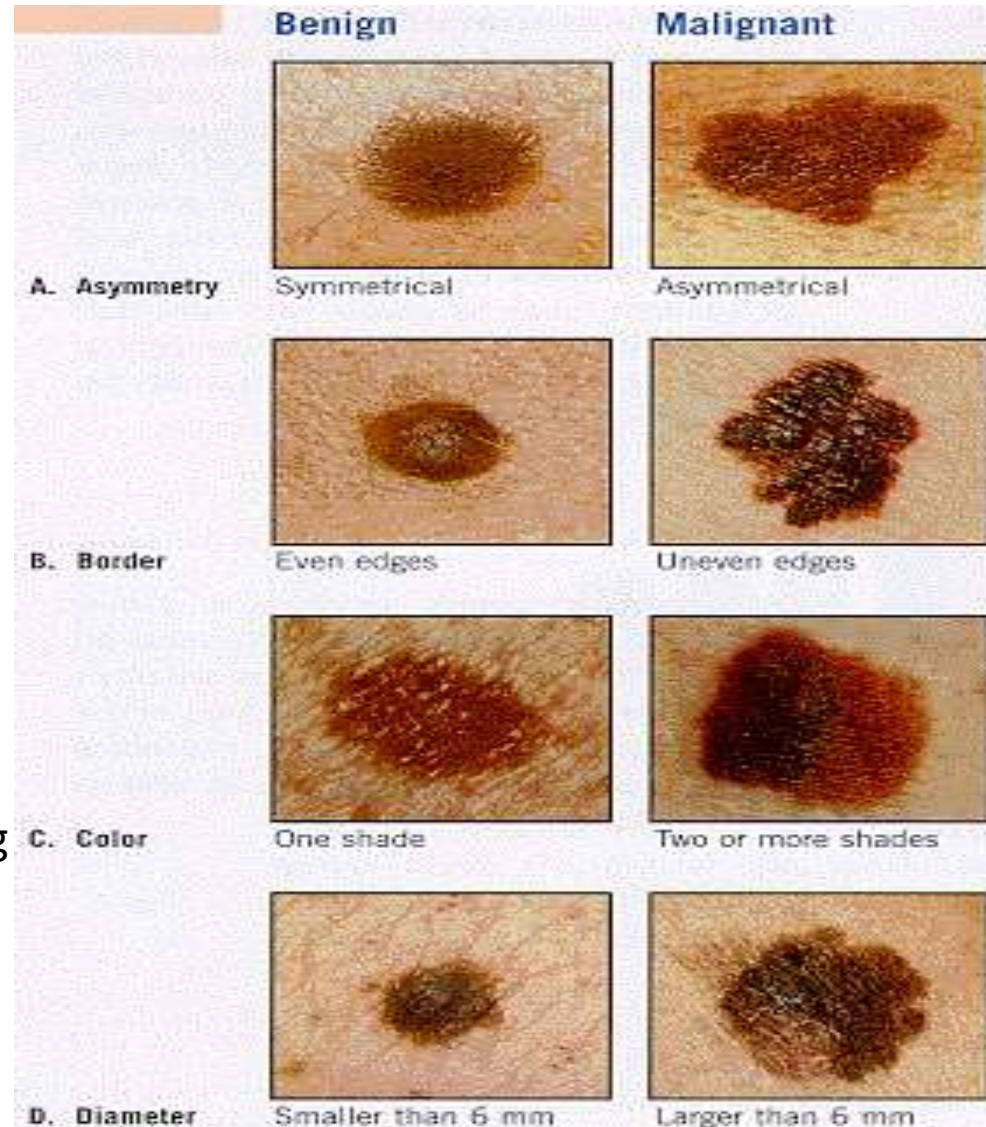
## Skin Lesions –Cont.

# Abnormal Characteristics of a Pigmented Lesion

## ABCDE: Screening Moles for Possible Melanoma

### DANGER SIGNS: ABCDE

- Asymmetry
- Border irregularity: ragged, notched, or blurred
- Color variation: blue or black
- Diameter  $\geq 6\text{mm}$ : or different: changing, itching, or bleeding
- Elevation and Enlargement



# HARMM Risk Factors for Melanoma

- Skin cancer **HARMM** Melanoma risk model
  - **H**istory of previous melanoma
  - **A**ge > 50 years
  - **R**egular dermatologist absent
  - **M**ole changing
  - **M**ale gender
- Teaching skin self exam
  - Preventive strategies such as **reducing sun exposure & using sunscreen.**
  - Frequency
  - Technique

# Additional Risk Factors for Melanoma

- $\geq 50$  common moles
- $\geq 1-4$  atypical or unusual moles (especially if dysplastic)
- **Red or light hair**
- Actinic lentigines, macular brown or tan spots (usually on sun exposed areas)
- Heavy sun exposure (especially severe childhood sunburns)
- **Light eye or skin color** (especially freckles/burns easily)
- Family history of melanoma



# Health Promotion and Counseling

- Clinicians play an important role in educating patients
  - **Early detection** of suspicious moles
  - **Protective measures** for skin care
  - **Hazards of excessive sun exposure**
- Skin cancers are most common cancers in the U.S.
  - Most prevalent on **hands, neck, and head**

# Skin Examination

## Lesions:

### 4. types of skin lesions

- **Primary**: when initially appears in reaction to external or internal environment . **The lesion develops on previously unaltered skin**
- **Secondary**: when a lesion changes over time or changes because of factors such as scratching or infection . Those changes in the skin that result from primary skin lesions,

# Primary Skin lesions table 6-4, p. 187

- **Flat, nonpalpable lesions with changes in skin color.**

-**Macule**: small flat spot, up to 1.0 cm

e.g:

- hemangioma, Vitiligo
- Small pox
- Purpura

-**Patch** : flat spot, flat spot, 1.0 cm or larger

e.g:

- café-au-lait spot
- Measles
- Flat moles
- Freckles



# Primary Skin lesions *table 6-4, p. 188*

- **Palpable elevations: Solid masses**

- Papule:** *up to 1.0 cm. e.g: psoriasis, wart, elevated nevus (mole, lichen planus)*

- Plaque:** *elevated superficial lesion 1.0 cm or larger. E.g: psoriasis, lichen planus*

- Nodule:** *deep & firm > 0.5-2cm. E.g: dermatofibroma, intradermal nevi*

- Cyst:** *nodule filled with expressible material, liquid or semisolid.*

- E.g: epidermal inclusion cyst*

- Wheal:** *irregular, transient & superficial. E.g: mosquito bite, urticaria*



**PSORIASIS**



**urticaria**

# Papule

- A solid elevated skin lesion less than 1 cm across. Lesions are rough in texture and usually color pink, red and brown. This lesion is associated with psoriasis, skin cancer..



# Nodule

- A solid elevated lesion that has edges and area 0.5 to 2 cm. Physician describes this as "palpable," where hard mass is felt from the tissue surrounding it. the other term is tumor malignant melanoma..



# Primary Skin lesions table 6-4, p. 188-9

- Palpable elevations with **fluid filled cavities**
  - Vesicle**: up to 1.0 cm; filled with **serous fluid**. E.g: herpes simplex, herpes zoster
  - Bulla**: insect bite, burn
  - Pustule**: filled with pus. E.g: Acne, small pox
  - Burrow**: a minute slightly raised tunnel **scabies**



**ACNE VULGARIS**

# Vesicle

- raised lesion that is up to 1.0 cm across. Lesions are round or oval in shape with thin mass filled with serous blood or clear fluid. Herpes simplex, burn blister



Smallpox

Herpes paronychioid



# DERMATOMAL DISTRIBUTION



CAN YOU GUESS WHAT  
DERMATOME? **Vesicle:** Herpes Zoster

# Secondary Skin Lesions table 6-5, p. 190

- **Scale:** dead exfoliated epidermis. E.g: *ichthyosis vulgaris, dry skin, eczema, psoriasis*
- **Crust:** dried skin exudates such as serum, pus, or blood. E.g: *impetigo*
- **Lichenification:** Thickening & roughening of the epidermis which may be caused by *chronic rubbing*

- **IMPETIGO**



# Secondary Skin Lesions *table 6-5, p. 191*

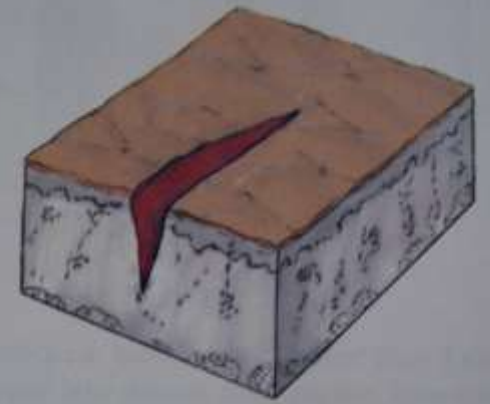
- **Scars:** Connective tissue that arises from injury or disease. E.g: hypertrophic scar
- **Keloids:** hypertrophic scarring. E.g: keloid ear lobe
- **Erosion:** non scarring loss of the superficial epidermis. E.g: Aphthous stomatitis
- **Excoriation:** cat scratches
- **Fissure:** Linear crack in the skin. athlete's foot
- **Ulcer:** A deeper loss of epidermis & dermis; , bleed or scar. E.g: stasis ulcer may



**Ulcer**

Deeper depression extending into dermis, irregular shape; may bleed; leaves scar when heals. Examples: stasis ulcer, pressure sore, chancre.

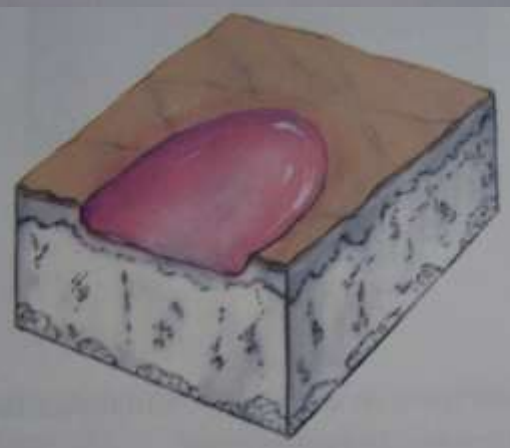
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**Fissure**

Linear crack with abrupt edges, extends into dermis, dry or moist. Examples: cheilosis—at corners of mouth due to excess moisture; athlete's foot.

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**Erosion**

Scooped out but shallow depression. Superficial; epidermis lost; moist but no bleeding; heals without scar because erosion does not extend into dermis.

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**Scale**

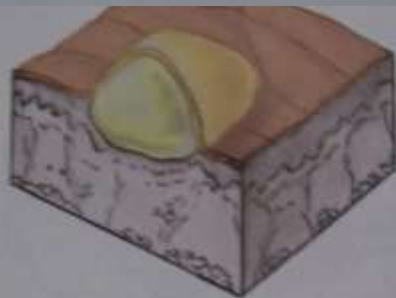
Compact, desiccated flakes of skin, dry or greasy, silvery or white, from shedding of dead excess keratin cells. Examples: following scarlet fever or drug reaction (laminated sheets), psoriasis (silver, mica-like), seborrheic dermatitis (yellow, greasy), eczema, ichthyosis (large, adherent, laminated), dry skin.

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**Crust**

The thickened, dried-out exudate left when vesicles/pustules burst or dry up. Color can be red-brown, honey, or yellow, depending on the fluid's ingredients (blood, serum, pus). Examples: impetigo (dry, honey-colored), weeping eczematous dermatitis, scab following abrasion.



**Pustule**

Turbid fluid (pus) in the cavity. Circumscribed and elevated. Examples: impetigo, acne.

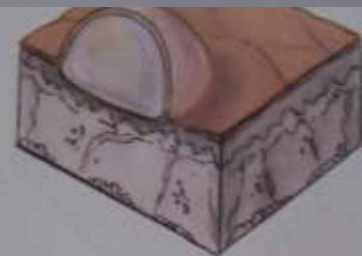
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**Cyst**

Encapsulated, fluid-filled cavity in dermis or subcutaneous layer, tensely elevating skin. Examples: sebaceous cyst, wen.

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**Vesicle**

Elevated cavity containing free fluid, up to 1 cm. Clear serum flows if wall is ruptured. Examples: herpes simplex, early varicella (chickenpox), herpes zoster (shingles), contact dermatitis.

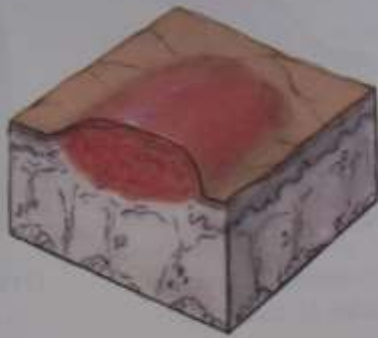
**Bulla**

Larger than 1 cm diameter; usually single chambered (unilocular); superficial in epidermis; it is thin walled, so it ruptures easily. Examples: friction blister, burns, contact dermatitis.

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**Cyst**

Encapsulated, fluid-filled cavity in dermis or subcutaneous layer, tensely elevating skin. Examples: sebaceous cyst, wen.



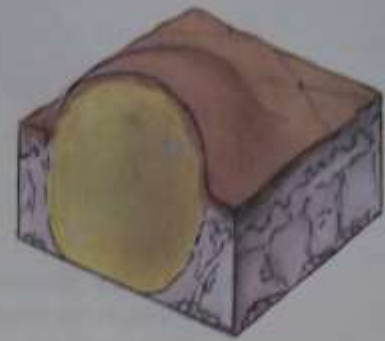
### Wheal

Superficial, raised, transient, and erythematous; slightly irregular shape due to edema (fluid held diffusely in the tissues). Examples: mosquito bite, allergic reaction, dermatographism.

### Urticaria (Hives)

Wheals coalesce to form extensive reaction, intensely pruritic.

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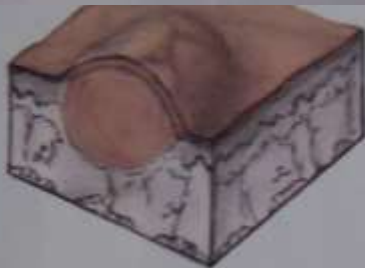
### Nodule

Solid, elevated, hard or soft, larger than 1 cm. May extend deeper into dermis than papule. Examples: xanthoma, fibroma, intradermal nevi.

### Tumor

Larger than a few centimeters in diameter, firm or soft, deeper into dermis; may be benign or malignant, although "tumor" implies "cancer" to most people. Examples: xanthoma, hemangioma.

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### Papule

Something you can feel, i.e., solid, elevated, circumscribed, less than 1 cm diameter, due to superficial thickening in the epidermis. Examples: elevated nevus (mole), lichen planus, molluscum, wart (verruca).

### Plaque

Papules coalesce to form surface elevation wider than 1 cm. A plateau-like, disc-shaped lesion. Examples: psoriasis, lichen planus.

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### Macule

Solely a color change, flat and circumscribed, of less than 1 cm. Examples: freckles, flat nevi, hypopigmentation, petechiae, measles, scarlet fever.

### Patch

Macules that are larger than 1 cm. Examples: mongolian spot, vitiligo, café au lait spot, chloasma, measles rash.

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### Plaque

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consists of mature capillaries... usually does not fade. The use of yellow light laser... makes photoablation of the lesion possible, with minimal adverse effects.



### ◀ Strawberry Mark (Immature Hemangioma)

A raised bright red area with well-defined borders about 2 to 3 cm in diameter. It does not blanch with pressure. It consists of immature capillaries, is present at birth or develops in the first few months, and usually disappears by age 5 to 7. Requires no treatment, although parental and peer pressure may prompt treatment.



### Keloid

A hypertrophic scar. The resulting skin level is elevated by excess scar tissue, which is invasive beyond the site of original injury. May increase long after healing occurs. Looks smooth, rubbery, "clawlike," and has a higher incidence among blacks.

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crying or coughing raises venous pressure.



### Echymosis (Bruise)

A large patch of capillary bleeding into tissues. Color... purple im-

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### ◀ Purpura

Confluent... moses, flat... orders such... in old age... minor trau

07/01/2005



**Psoriasis**

Scaly erythematous patch, with silvery scales. Usually on scalp, outside of elbows and knees, low back, and anogenital area.

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**Herpes Zoster (Shingles)**

Small grouped vesicles emerge along route of cutaneous sensory nerve, then pustules, then crusts. Caused by the varicella zoster virus (VZV), a reactivation of the dormant virus of chickenpox. Acute appearance, practically always unilateral, does not cross midline. Commonly on trunk, can be anywhere. If on ophthalmic

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people are more severely affected and potentially suffer a greater threat to their body image.



10-3B

**Vitiligo**

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**Texture.** Common variations occurring in the aging adult: **skin tags**, or "skin tags," which are overgrowths of normal skin that form polyplike (Fig. 10-23). They occur frequently on eyelids, chest, and axillae and trunk.



10-23

**Skin tags**

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**Sebaceous hyperplasia** consists of raised yellow papules that do not become cancerous. It is a common skin condition occurring over the



10-21

**Seborrheic keratosis**

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the chest, back, and shoulders. Acne may appear in children as early as 11 years of age; then the lesions increase in number and severity and are common by 16 years in girls and at 16 to 19 years in boys.



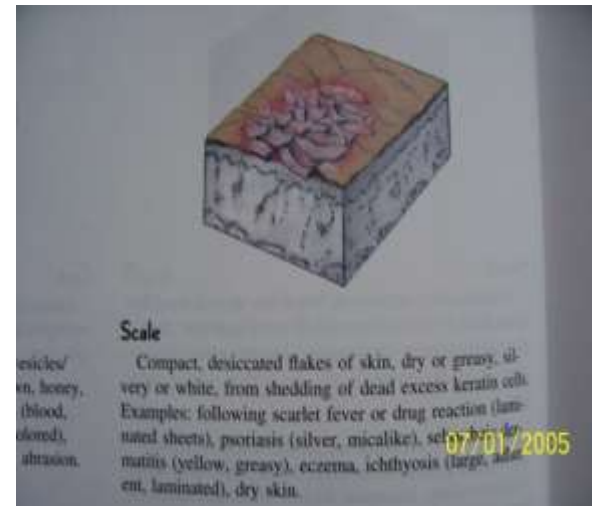
10-19

**Acne**

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# Scale

- Visible fragments of epidermal cells as it is shed from the skin.



## Scale

vesicles/  
en, honey,  
(blood,  
colored),  
ultrason.

Compact, desiccated flakes of skin, dry or greasy, sil-  
very or white, from shedding of dead excess keratin cells.  
Examples: following scarlet fever or drug reaction (lam-  
inated sheets), psoriasis (silver, mica-like), seborrheic dermati-  
tis (yellow, greasy), eczema, ichthyosis (large, lamina-  
ent, laminated), dry skin.

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# Crust -

- Varying colors of liquid debris (serum or pus) that has dried on the surface of the skin.



# Erosion

- - Loss of superficial layers of upper epidermis by wearing away as from friction or pressure.



# Fissure

- - Sharply-defined, linear or wedge-shaped tears in the epidermis with abrupt walls.



# Ulceration

- A localized defect in the skin of irregular size and shape where epidermis and some dermis have been lost.



# Atrophy

- A thinning in the epidermis/dermis which in turn leads to depression of the skin.



# Excoriation

- - Skin **abrasions**, usually superficial, due to scratching of the skin.





# Lichenification

- Thickening of the epidermis which may be caused by chronic rubbing.
- Examples
- Eczema
- Contact dermatitis



# Techniques of Examination

- Hair
  - Inspect and palpate
  - Note **quantity, distribution, and texture**
- Inspection and palpation of the hair
  - **Color**
  - **Texture**
  - **Distribution**
  - **Lesions.**

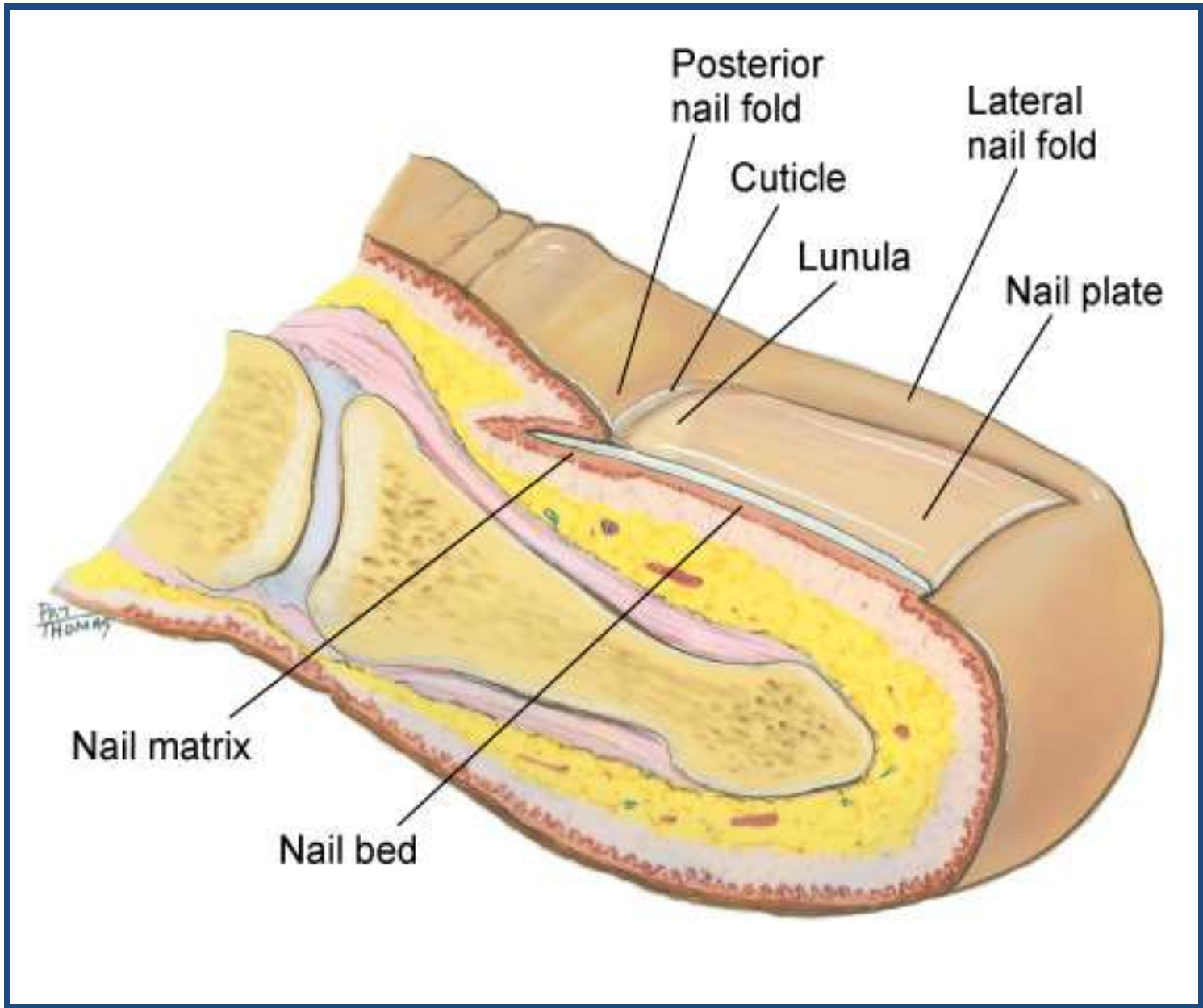
# Hair: abnormal findings



Alopecia



Scaling



# continued

- Nails
  - **Inspect and palpate** fingernails/toenails
  - Note **color and shape**
  - Note **lesions**
    - **Longitudinal bands of pigment** may be a normal finding in people with darker skin
- Inspection and palpation of the nails
  - **Shape and contour**
  - **Consistency**
  - **Color**
  - **Capillary refill**

# Nail Assessment



Normal Nails



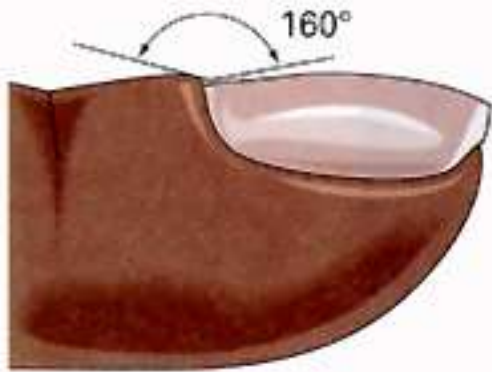
## Assess:

- Nail bed **color** (translucent with pink nail bed)
- **Texture** (smooth, , ridging , pitting)
- **Consistency** (firm, spongy)
- **Nail angle** (< 180 degrees-normal)
- **Surrounding tissues**
- **Note changes with aging: thicker, dull, splitting, longitudinal bands.**

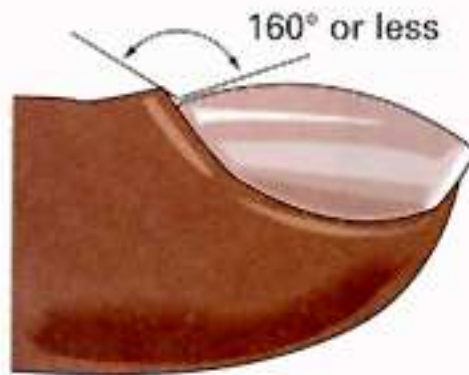
# Nail Assessment-Cont.

## Nail Angle

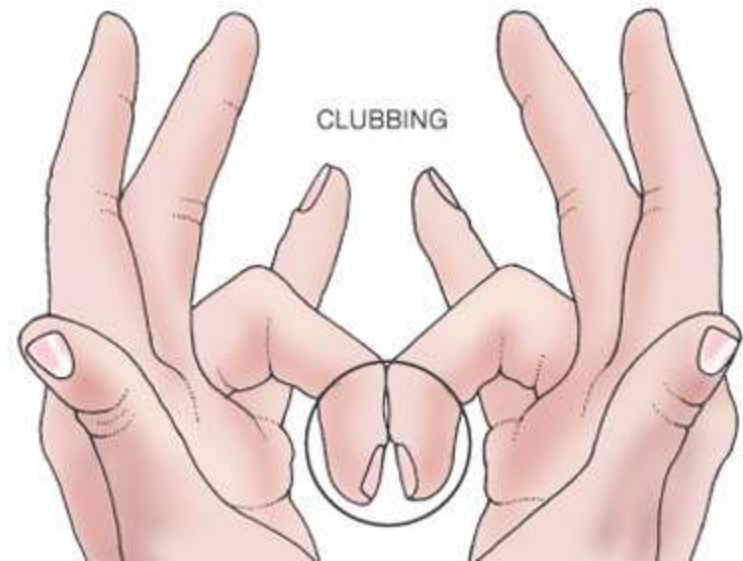
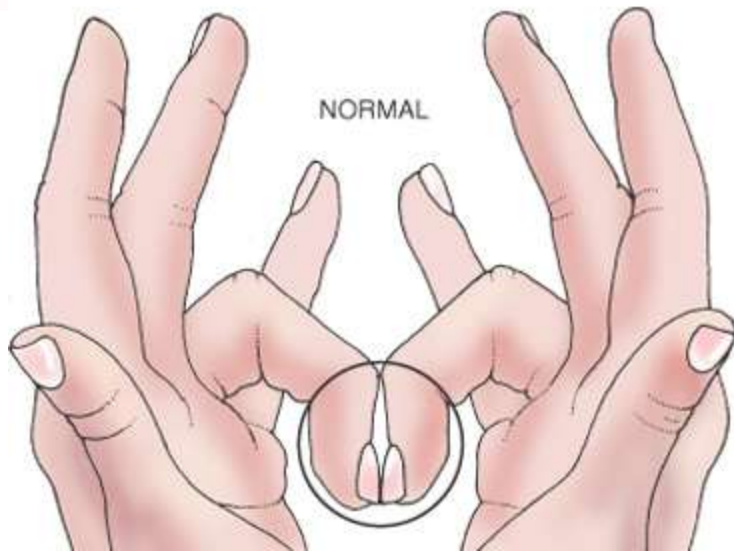
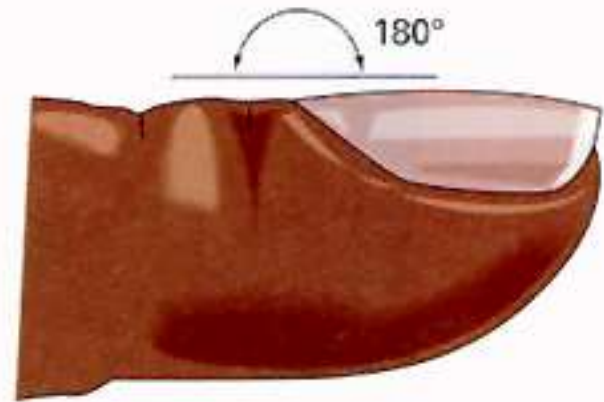
Normal nail angle



Curved nail  
variant  
of normal



Early clubbing





# Nail Assessment-Cont.

## Nail Angle: Clubbing



# Tuberculin Purified Protein Derivative (PPD)

- **is used for:** Detecting **tuberculosis (TB)** infection. (Which result from **Mycobacterium Tuberculosis**)
- Tuberculin **Purified Protein Derivative (PPD)** is **a diagnostic agent**.
- It works by causing a **mild, delayed allergic reaction** in patients infected with TB or who have had a past infection, which allows for detection of TB.

- **Route: ID**, usually on forearm
- Needle gauge ; 26 -27
- **Reading of test: 48-72 hours**

## **Diameter of indurations**

- **5 mm or more** ; significant?
  - **Significant reaction, active disease**
- **0-4** ; not significant
- **Negative test; no TB**



# Special consideration

- **Do NOT use Tuberculin Purified Protein Derivative (PPD) if:**

The patient has a history of **allergy** to any ingredient in Tuberculin Purified Protein Derivative (PPD) or you have previously had a **severe reaction** (eg, **sores, skin wasting**) to Tuberculin Purified Protein Derivative (PPD)

- if the patient is **pregnant**, planning to become pregnant, or are **breast-feeding**
- if the patient is taking any prescription or nonprescription **medicine, herbal preparation, or dietary supplement**
- if the patient has a **viral infection** (eg, HIV, chickenpox), known **TB infection** or a previous positive tuberculin skin test, another **bacterial infection** (eg, strep throat), **cancer, or severe protein deficiency** or have recently been given **a live vaccine** (eg, measles, flu)

**Some MEDICINES MAY INTERACT** with  
Tuberculin Purified Protein Derivative (PPD) .

- **Corticosteroids** (eg, prednisone),  
**immunosuppressives** (eg, certain cancer  
medicines, cyclosporine), or **live vaccines**  
(eg, measles) because the effectiveness of  
Tuberculin Purified Protein Derivative (PPD)  
may be decreased

# Scratch Test for Allergens

Skin prick or scratch test kit





# Indication for Scratch Test for Allergens

- Determining **allergic response** to various antigens
- to confirm **sensitivity to an antigen**

# Scratch Test for Allergens

- Allergy skin testing is widely **used to diagnose** allergic conditions such as:
- **Hay fever**
- **Allergic asthma**
- **Dermatitis (eczema)**
- **Food allergies**
- **Penicillin allergy**
- **Bee sting allergy**
- Skin testing can be used **for people of all ages**, including infants and older adults.

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- During an allergy skin test, patient skin is exposed directly to **allergy-causing substances (allergens)** and then is **observed for signs of a local allergic reaction.**
- **Contraindicated** if the patient about has
  - **anaphylaxis, a life-threatening allergic reaction,**
  - or have had **a serious reaction to a previous allergy test**

# How to perform the test

In **adults**, the test is done on the **forearm**;

The doctor uses a **needle to make small light scratches** in the skin under each **drop of the substance** that may cause allergy, to help the skin absorb the fluid.

The scratches aren't deep enough to cause bleeding.  
**Each drop contains proteins of a separate allergen** (a substance that triggers allergy symptoms).

The doctor notes where each drop of fluid was placed, either by **keeping a chart or by writing a code** on the area of skin being tested.

# Challenges while doing the procedure!

- Patients need to stay still long enough (usually about **20 minutes**) to give the skin time **to react**.
- The skin might **tickle or itch** during this time, but **patients should not be allowed to scratch it**.
- The doctor will examine each needle scratch for **redness or swelling**.
- the injection site is measured to look for **growth of wheal, a small swelling of the skin**.  
**(considered positive test)**.



