King Saud University

Collage of Nursing

Medical Surgical Nursing depart

Application of Health Assessment

NUR 225

Module Two

Physical examination of the skin, hair and nail

Functions of the Skin

- Protection of underlying organ from external environment
- Water balance
- Sensory function
- Thermoregulation function
- Immunological function
- Circulatory function
- Vitamin D production
- Aesthetic function

1- Health History Taking:

I- Chief complain :

- Rash, lesion, abrasions, pigmented spots
- Change in mole (color, size, shape, sudden appearance of tenderness, bleeding, itching) ,
- Excessive dryness or moisture and Pruritus (skin itching)
- Hair changes (loss ,excessive growth, changes in texture)
- Change in nails (shape, color, brittleness

2-Past history of skin disease : Congenital skin disorders .

3-Family history of skin disease.

4-Known allergies; (food, insect, animal)

5-Medications

6-Environmental or occupational hazards

- Amount of sun exposure
- Recently bite by insect (bee, tick, mosquito), plants or animals
- New or increased life stress·
- Possible relation of problems to season of year

7-Self care behaviors (use of cosmetics, detergents, chemicals, skin self-examination).

2- Physical Examination of Skin, hair and nail.

Terminologies.

- Albinism (total loss of color)
- Vitiligo-patchy depigmentation
- Erythema(intense redness and warmth)
- Cyanosis (dusky blue)
- Carotenemia-yellow orange
- Jaundice-yellow

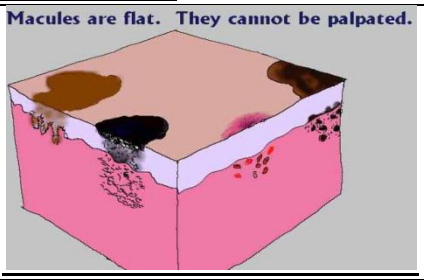
Types of Skin Lesion.

Primary lesion :
lesion developed on previously unaltered skin.

1- **Circumscribed, flat, nonpalpable, change in skin color**

- ***Macule***:

A flat, circumscribed area of color with no elevation of surface; 1 mm to 1 cm
e.g Freckles, flat nevi

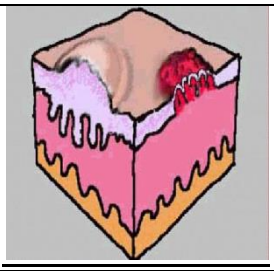


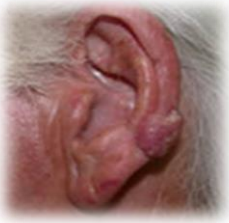
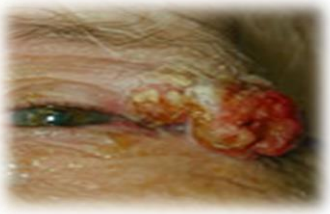
- ***Patch***: Larger than macule e.g vetiligo

2- Palpable elevated solid mass

- ***Papule:***

A circumscribed solid elevation of skin; less than 1 cm
e.g Warts, acne, pimples, flat nevi



➢ ***Nodule***: A solid mass extending deeper into dermis and firmer than a papule e.g Pigmented nevi	
➢ ***Tumor***: A solid mass larger than a nodule e.g.Epitheliomas	
➢ ***Cyst:*** An encapsulated, fluid filled mass in dermis or subcutaneous tissue. e.g. epidermoid cyst	
➢ ***Wheal***: A relatively reddened, flat, localized collection of edema fluid. e.g. Mosquito bites,	
3- *Circumscribed superficial elevation of the skin formed by free fluid in a cavity within the skin layers*	
➢ ***vesicle*** : A circumscribed elevation (up to 0.5 cm) containing serous fluid or blood e.g. Herpes ,Chicken pox	
➢ ***Bulla*** : A larger serous fluid-filled vesicle e.g. Second degree burns	
➢ ***Pustule*** : A vesicle or bulla filled with pus e.g. Acne vulgaris.	

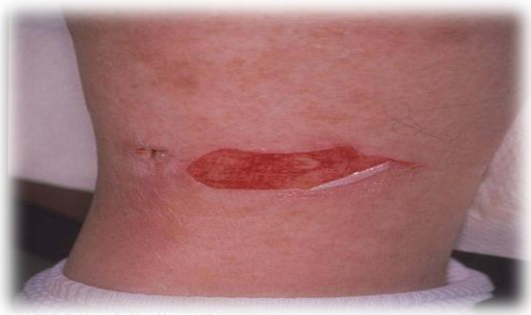
Secondary Lesion :

lesions that changed over time or changed because of a factor such scratching or infection.

1- Loss of skin surface :

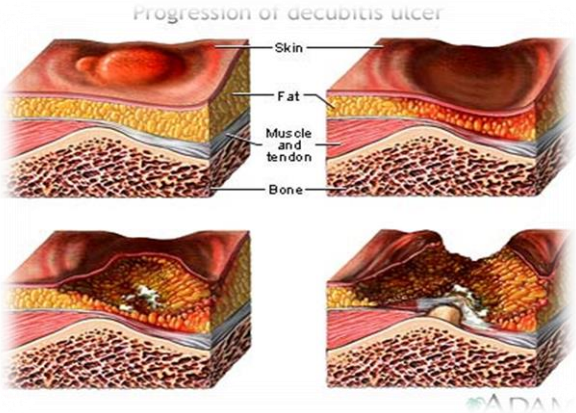
- **Erosion**:

Loss of epidermis that does not extend deeper; surface is moist but does not bleed e.g. Moist area after the rupture of a vesicle



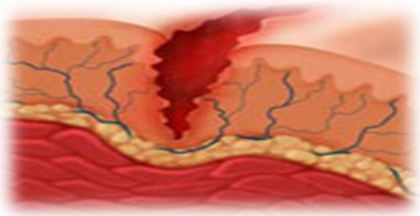
- **Ulcer**:

A deeper loss of skin surface extending into the dermis or below; may bleed and scar e.g. Stasis ulcer



- **Fissure** :

A linear crack in the skin e.g.Athlete's foot



Physical examination of the skin, hair and nail

A .Prepare Equipment:

1. strong direct light
2. small centimeter ruler
3. penlight
4. magnifying glass
5. gloves
6. tongue depressor

B. Patient and environment preparation:

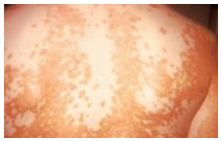
- Explain procedure to patient
- Ask patient to undress and drape him / her appropriately
- Make sure the room is warm, quiet , and adequately lighting
- Ensure patient privacy
- Wash hands

C. Obtain Health History.

D. Conduct physical examination

1. Begin by examining hands and fingernails to accustom the client for touching.
2. Pay attention for areas with skin folds.
3. Stand back to get an overall impression and notice patterns of lesion.

A. SKIN

Procedure	Rationale	Normal Findings	Abnormal Findings	Findings
A. SKIN **1. INSPECTION** **Technique** Inspect Skin for: a. Color b. Uniformity c. Thickness d. Symmetry e. Bruises, scars, scratches, wounds, unusual marks, f. Lesions f.1. location and distribution on body f.2. size f.3. color f.4 mobility f.5 edge f.6 depth f.7 elevation f.8 consistency	**1.Inspection is the main Skill used in general survey.** **Observing** the client in a close, focused manner using **vision, and smell** senses. *It **begins** during the First contact with client and continues throughout the assessment. *It **requires** good lighting and sometimes equipments to enhance vision or examine hidden areas of the body. *It provides information about body parts': color, size, location, movement, texture, symmetry, odor, and etc.	**Color:** Pink, Brown, Black , Sun exposed areas are darker . **Hygiene:** clean & odorless	**Color:** ❖ Pallor (yellowish/white)(dark people: yellowish brown / gray) ❖ Albinism (total loss of color) ❖ Vitiligo (patchy depigmentation).  **Vitiligo on the back** ❖ Erythema(intense redness and warmth) ❖ Cyanosis (dusky blue) ❖ Bruises ❖ Carotenemia (yellow orange) ❖ Jaundice(yellow) **Hygiene:** dirty and smelly	

Bruises, scars, scratches, wounds, unusual marks, lesions Describe location, size , color, mobility, edge ,depth , elevation, and consistency . **<u>Note type of skin lesion</u>** **-Examination of skin lesion;** **<u>A- Inspect lesion for (use penlight or magnifying glass</u>)** ➢ **Color** ➢ **Elevation:** flat, raised, or pendunculated. ➢ **Size (in centimeters):** use a ruler to measure dimensions. ➢ **Content:** solid mass or fluid exudates (note its color or odor). ➢ **Border:** regular or irregular. ➢ **Palpability:** Palpable or nonpalpable. ➢ **distribution on body:** generalized or localized to area of a specific irritant; around jewellery, watchband, around eyes.			<u>Generalized rash</u> – consider allergic reaction <u>Generalized change in skin color</u> (jaundice, cyanosis, pallor) suggests systemic illness <u>Localized skin changes</u> – hypo pigmentation – change in color Macule, patch , papule , nodule, tumor , vesicle, pustule, fissure, scale , crust.	

2.PALPATION
Technique

Palpate skin for:
a. Moisture
b. Temperature
c. Texture
d. Turgor
e. Mobility

* **Palpation means: Touching the body with different parts of the hand, using varying degree of pressure.**
* **It provides information about body organs': size, shape, moisture, temperature, pulsation, vibrations, position, consistency, and tenderness.**
* **It confirms findings of inspection.**

a. Moisture: Dry , Moderate amount of perspiration in face hands axillae, skin folds

b.**Temperature:**-
* Cool /warm & equally bilaterally.
***** Use dorsal part of hand to assess temperature bilaterally.

a.Moisture:
- ❖ Diaphoresis (overly moist)
- ❖ Dehydration (overly dry)

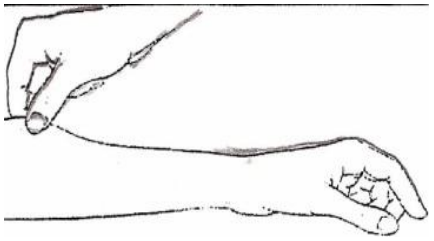
b.Temperature*:*
- ❖ Hypothermia (cold) generalized or localized
- ❖ Hyperthermia(hot) generalized or localized.

A marked difference in temperature of upper and lower extremities can indicate decreased perfusion and cardiac output

c.Texture:
*****Smooth, Firm intact.

c.Texture:
- ❖ Rough ,dry& flaky, Velvet (very soft &very smooth) Non-intact.

d. Turgor / texture (Tenting test)
- Pinch up a large fold of skin on the interior chest (over sternum or under the clavicle) or forearm and release, inspect for ease of skin rising and time to return to place.



d. Turgor is an excellent indicator of adequate hydration and nutrition .

(skins' ease of rising) and (skin's ability to return to place promptly when released).

d.Turgor:
***Moderately mobile,**
*** (smooth and elastic; returns to place and original shape in less than 30seconds)**

d.Turgor:
***Tight or stretched and difficult to move.**
*** Poor turgor; Wrinkled, (returns to place in more than 30 seconds)**

e. thickness:
*** Uniformly thin**

e.thickness:
***Very thin, shiny, Callus (thickening over pressure areas)**

<u>Palpate skin lesions</u>: ➢ Wear gloves if you anticipate contact with blood, mucosa, any body fluid, of skin lesion. ➢ Roll a nodule between the thumb and index finger to assess depth. ➢ Gently scrape a scale to see if it comes off. ➢ Note the nature of its base or if it bleeds when the scale comes off ➢ Note the surrounding skin temperature .	**-Protection for both the nurse and patient.** **-Wearing gloves prevents hand contamination and infection.**			

B. Inspection and Palpation (Hair and Scalp)

Procedure	Rationale	Normal Findings	Abnormal Findings	Findings
Inspect and Palpate Hair for: **a. Color** **b. Distribution** **c. Quantity** **d. Hygiene** **e. Texture** **f. Scalp lesions**		**Inspect Hair** **Color**: Variable/shiny **Distributio**n :Even on scalp, eye brows, eye lashes **Quantity**: Uneven on body . **Hygiene** :clean **Palpate hair for** **Texture:** Pliant/smooth , fine/thick **Lesion:** No lesion	**Inspect Hair** **Color-** Dull/ gray **Distributio**n **-** hair absence ,abnormal configuration **Quantity**: **-**loss of hair (alopecia) ,Excess body hair (hirsutism) **Hygiene:** Nits/lice (white tiny ovals adherent to hair shaft and cause intense itching (Pediculosis) dandruff **Palpate hair for** **Texture**: Brittle/dry, excessive oiliness **Lesion** Multiple pustules with hair visible at the center with erythematous base (folliculitis) Rounded patchy hair loss on scalp with broken hairs pustules and scales on skin (tinea capitis) Thick hair needs close inspection **Alopecia** – a significant loss of hair **Hirsutism**- excessive hair If there is a reddish hue ask if henna has been used	

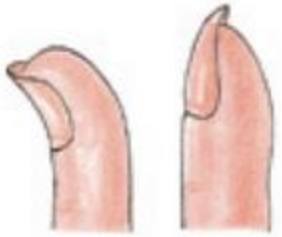
C. Inspect and palpate Nails

Procedure	Rationale	Normal Findings	Abnormal Findings	Findings
A. Inspect Nails for: **.1- Color** **.2 – Surface** **.3- Posterior and lateral nail folds** **.4- Hygiene** **B. Measure nail base angle (clubbing)** -Have the patient placed the first phalanges of the forefingers together.		**Color:** Clear /pink Dark people Brown to yellow **Surface:** Slightly curved or flat ,Convex curve **Posterior and lateral:** Smooth-round . **Hygiene:** Clean	**Color:** - Bluish -cyanosis , yellow-pallor White hairline linear marking . **Surface:** spoon **Posterior and lateral:** Smooth-round -Traumatized / bitten / cracked Inflamed (paronychia) **Hygiene:** Dirty **Note cyanosis, clubbing (base of nails becomes swollen and feels as if floating when touched)** **Clubbing appears with congenital chronic cyanotic heart disease, emphysema, chronic bronchitis** **Pits, grooves or lines may indicate nutrient deficiency or may accompany acute illness** **Nails are thickened with arterial insufficiency**	

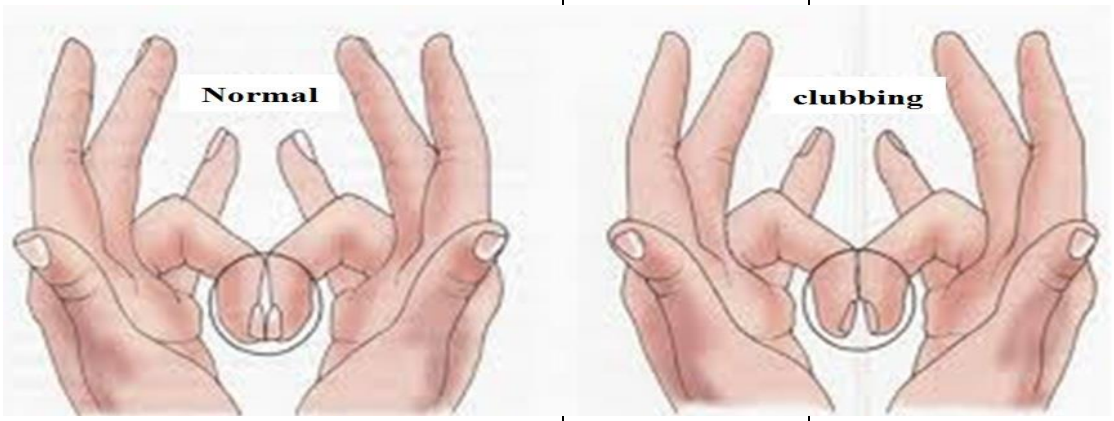
- Inspect the space between the opposing four fingers.

-Normal nail bases are concave & create a small, diamond- shaped space when the first phalanges are opposed

-Convex nail bases touch without leaving a space between the opposed phalanges

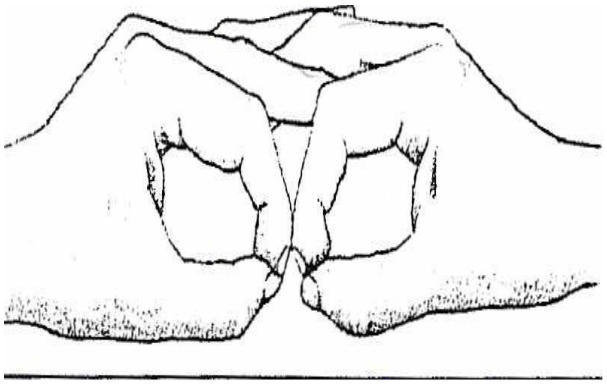


Concave Convex



greater than 2 seconds may indicate:

- Dehydration
- Shock
- Peripheral vascular disease (PVD)
- Hypothermia



C. Test Capillary Refill

- This test is to monitor dehydration and blood supply. Pressure is applied to the nail bed until it turns white, indicating that the blood has been forced from the tissue.
This is called blanching. Once the tissue has blanched, pressure is removed.

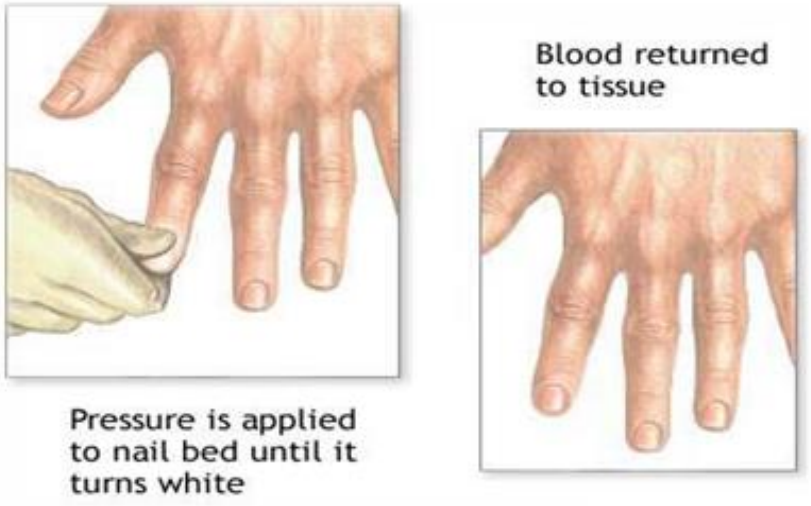
-While the patient holds their hand above their heart, the health care provider measures the time it takes for blood to return to the tissue.

- This test is to monitor dehydration

If there is good blood flow to the nail bed, a pink color should return in less than 2 seconds

What Abnormal Results Mean
Blanch times that are greater than 2 seconds may indicate:

- **Dehydration**
- **Shock**
- **Peripheral vascular disease (PVD)**
- **Hypothermia**



B. Palate nail for ;

a. Texture
b. Firmness
c. Thickness
d. Adherence to nail bed

Nails
Shape, contour, consistency, color
Nail beds should be pink.
Nails should be convex in shape, smooth and flexible, not brittle or thickening

Nails are thickened with arterial insufficiency