

- **Integumentary System** → • largest Organ of the body
  - first line of defense from outside world.
  - barrier from elements.
  - \* skin, Nails, hair, sweat glands, sebaceous glands.
- **Skin** → • 20% of body weight
  - regulates body temperature
  - Allows for touch, heat, & cold sensations.
- **Integumentary system synthesizes Vitamin D**
  - ↳ UV light hits the skin, strikes molecule converting to Vitamin D<sub>3</sub>. then converted by the kidneys to calcitriol.

## Skin

- **epidermis** → most superficial
  - **dermis** → deeper
  - **subcutaneous fat layer (hypodermis)** → deepest
- } **Layers of skin**
- **epidermis** →
    - closely packed epithelial cells
    - waterproof
    - generates new cells to replace dead ones
    - Houses friendly bacteria, "Normal flora"
    - Contains Melanocytes; produces melanin to protect from sun
  - **dermis** →
    - dense, irregular connective tissue
    - Houses blood vessels, hair follicles, sweat glands, and other accessory organs.
    - Nerve fibers for skin sensation are located here

## Accessory organs

- **finger nails** →
  - accessory organs of skin
  - Keratinized epithelial cells
  - actively growing part of the nails is Nail matrix (bed).
- **hair** →
  - hair follicle generates hair
  - accessory organ
  - Located in dermis; made of epithelial tissue.
  - growth phase → hair is generated
  - resting cycle → hair might fall out.

- **Sweat glands** →
  - sudoriferous glands or exocrine glands
  - temperature regulation
  - sweat → sodium chloride & water
  - Activated in dermis by heat, nerves, & anxiety
  - eccrine → All over; apocrine → pubic & axillary regions
  - \* Some medications exit body through sweat glands and can cause irritation.
- **Sebaceous glands** →
  - located in dermis
  - produce sebum which keeps skin & hair lubricated and soft; protects from water loss.
- **Mucous membranes** →
  - Lubricated surfaces of the skin, which line the cavities that open to the exterior of body.
  - extend to respiratory, digestive, urinary, & reproductive systems.
  - epithelial cells that secrete mucus.

## Physical & mental status

- Patients might physically lack energy for self-care
- surgeries might limit ability to shower
- limited mobility might limit ability
- IV, catheters, or other med devices can hinder mobility.
- Patients w/ sensory deficits might have difficulty.
- People w/ pain
- Analgesics can cause drowsiness

**Socioeconomic status** → economic resources available will affect people for their self-care.

## Developmental stages

- **Infants & toddlers** →
  - need full assistance
  - skin is fragile, so nurse should handle w/ care during bathing & hygiene care.
- **Children & Adolescents** →
  - school-age children are accident-prone.
  - Adolescents are prone to acne as sweat glands become more active.
- **Adults** →
  - hospitalized adults will need help based on their abilities.
- **Older Adult** →
  - skin has lost elasticity so more fragile; subject to bruising & tearing.
  - Dry & itchy skin, so nurses need to have lotion.

## • Cultural variables

- may not be acceptable for a nurse to clean perineal areas of the opposite gender
- frequency of bathing varies
- beard on men might mean something
- female may choose to not shave legs & axillae
- African descent may not need hair washed as frequently.
- people differ in sensitivity to body odor.
- certain religions dictate strict modesty.

## • Gender →

- male patients may need help shaving
- females may need help regarding menstruation.
- gender & perineal areas should be handled w/ care.
- females have higher chance of UTIs from Anatomy.

## • body morphology →

- obese patients may have skin touching skin, moisture can cause infections.
- limited mobility & positioning can be an issue.

## • Preference →

- timing of hygiene care
- showers v. bath
- preference on product