

The Integumentary System

Skin = Integument = Cutaneous Membrane

7 Functions:

- 1. Protective covering**
- 2. Regulates body temperature**
- 3. Manufactures Vitamin D**
- 4. Sensory function**
- 5. Temporary storage of fat, glucose, water and salts**
- 6. Screens out harmful ultraviolet radiation**
- 7. Absorbs certain drugs**

STRATUM CORNEUM

- ◆ Outermost layer
- ◆ In cells, cytoplasm replaced by KERATIN – making them waterproof.
- ◆ Flat and scale-like cells that flake off
- ◆ First line of defense against surface bacteria
- ◆ Thickest on palms of hands, soles of feet

STRATUM GERMINATIVUM

- ◆ Innermost epidermal layer
- ◆ Reproductive layer – cells form and push their way up, become keratinized, and replace the top layer
- ◆ Contains MELANOCYTES – cells that contain a pigment = MELANIN

Melanin

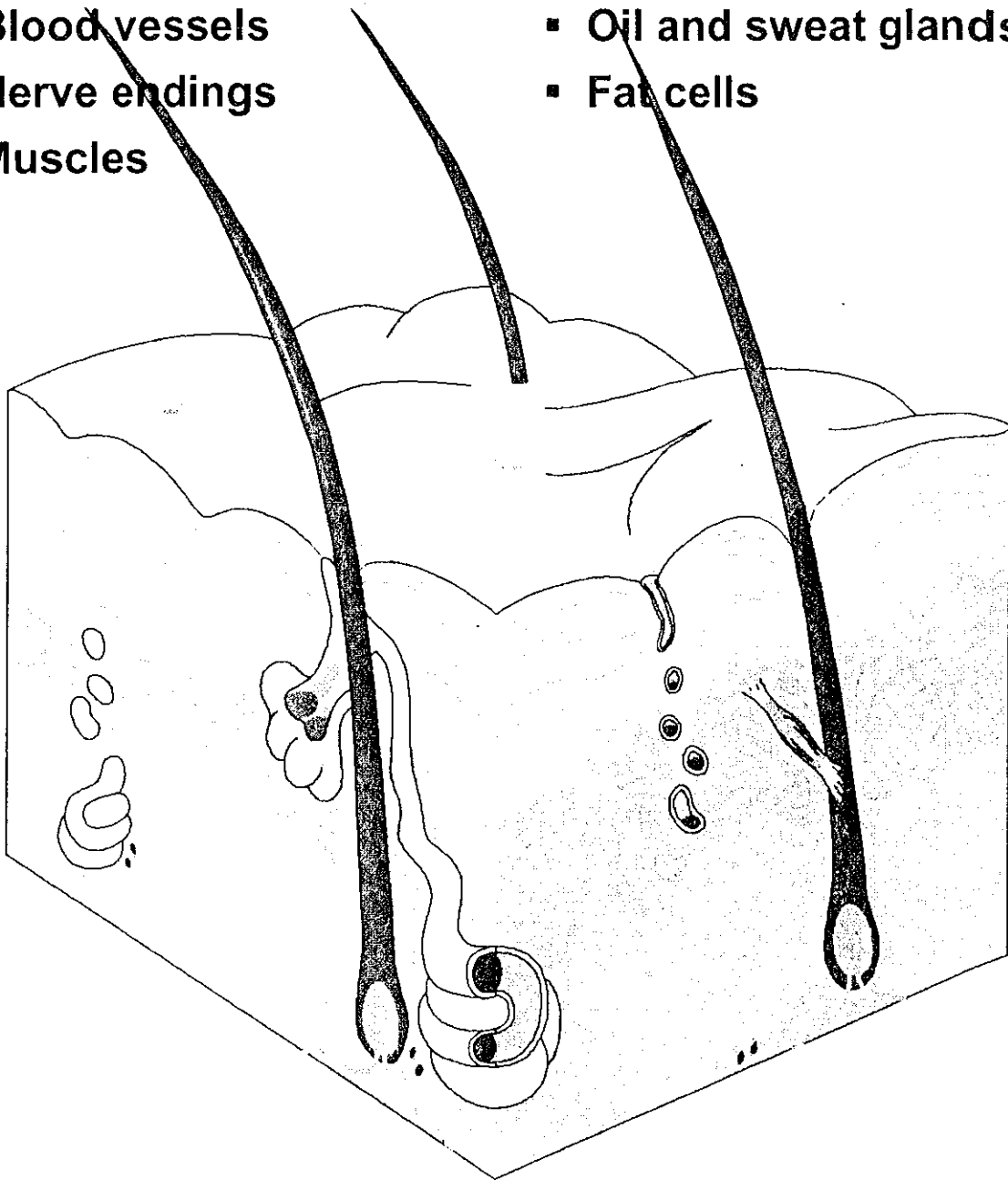
- ★ Black, brown, or has a yellow tint – depending on racial origin
- ★ The more melanin, the darker the skin
- ★ Caucasians don't have much melanin in their melanocytes.
- ★ Freckles = patches of melanin
- ★ Albinism = no melanin



DERMIS

Thicker inner layer that contains:

- Connective tissue
- Blood vessels
- Nerve endings
- Muscles
- Hair follicles
- Oil and sweat glands
- Fat cells



BURNS

- ◆ **Caused by radiation, sun, boiling water, chemicals, fire or electricity**
- ◆ **RULE OF NINES – Measures percent of body burned. Body divided into 11 area, each is 9% of body surface.**

FIRST DEGREE

- ◆ **Superficial**
- ◆ **Skin red and dry**
- ◆ **Involves only epidermis**
- ◆ **Rx – cold water**
- ◆ **Healing within one week**

SECOND DEGREE

- ◆ **Epidermis and dermis**
- ◆ **Pain, swelling, redness and blistering**
- ◆ **Skin may be exposed to infection**
- ◆ **Rx – pain medication, dry sterile dressing**
- ◆ **Healing within 2 weeks**

THIRD DEGREE

- ◆ **Epidermis, dermis and subcutaneous layers**
- ◆ **Symptoms – loss of skin, blackened skin**
- ◆ **May be life threatening**