

Today's Agenda: 10/2/14

1. Students will play Last Nerd Standing
2. Students will grade Skin: Integumentary Packet
3. **TO: Identify the anatomical structures of the integumentary system.**



Integumentary Practitioners

Dermatology – study of disease affecting skin/hair/nails

Plastic Surgeon – repairs damaged parts of the body scars

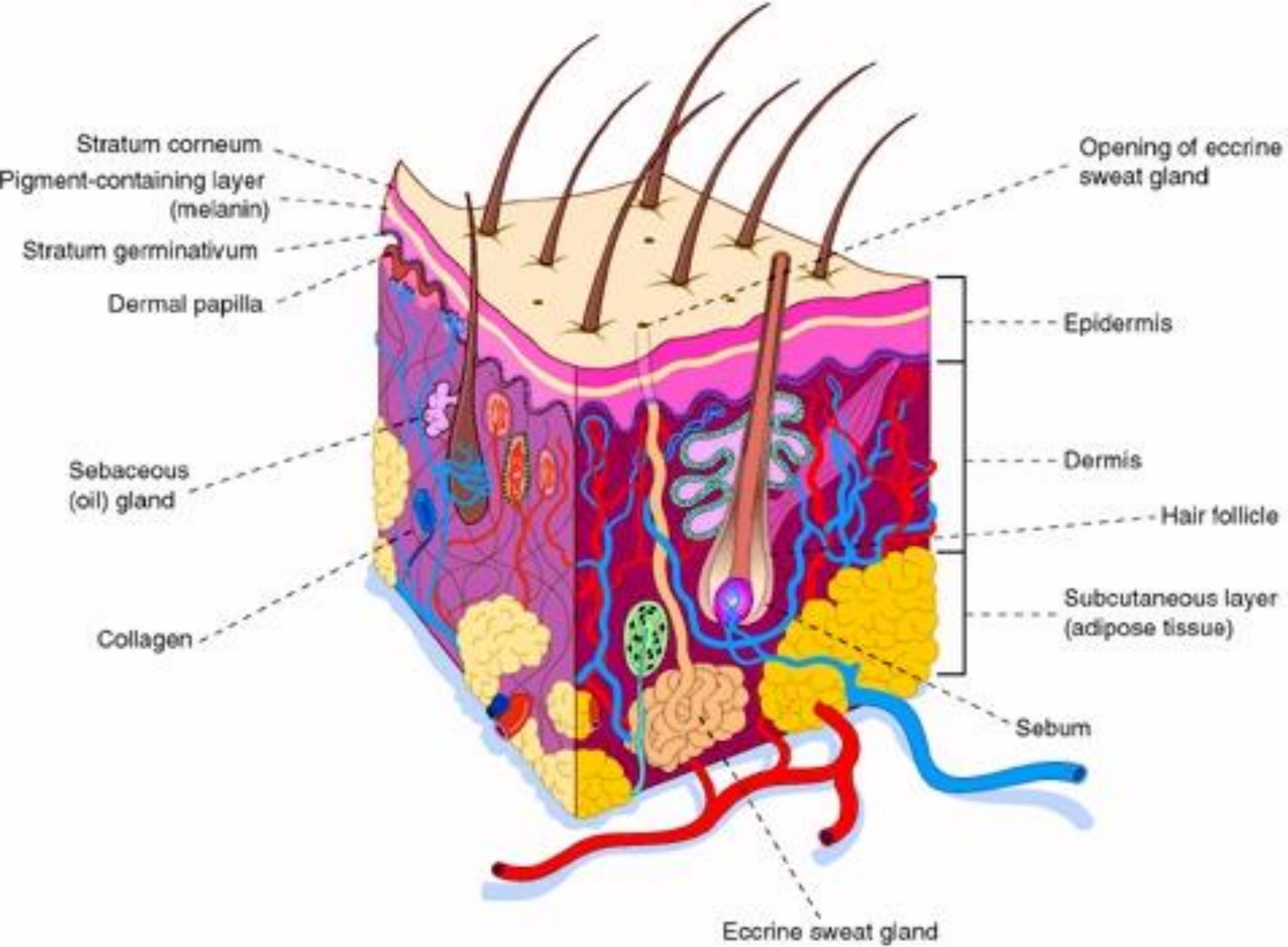


Three Layers of Skin:

1. Epidermis – outer layer
 - a. Stratum germinativum – basal cell layer forms new skin cells, has melanocytes (skin pigments)
 - b. Stratum corneum – composed of dead (keratinized) cells that are constantly shed but give our skin a waterproof ability.

- *We replace our skin about every 4 weeks!!
- *We shed a pound of skin a year!!





2. Dermis – inner supportive layer

- consists of connective tissue (collagen) that prevents the skin from tearing
- dermal papillae create our fingerprints
- contains nerves, sensory receptors, blood vessels, hair follicles, and glands



3. Subcutaneous layer

- adipose tissue stores fat for energy, provides temp control, and cushions the body.



Types of glands in the dermis:

1. Sebaceous glands
 - secretes an oily substance called sebum
 - makes the skin and hair soft and pliable.

2. Sweat glands
 - a. Eccrine – found all over the body, have ducts or pores that open directly on the surface of the skin.

 - b. Apocrine – found in the axilla and groin, become active during puberty by bacteria, causing an unpleasant odor.



Hair growth begins in a cluster of cells called the **hair papillae**. This occurs at the base of the hair follicle.

The visible part of the hair is the shaft.

*New hair will replace any hair that is removed as long as the cells in the papillae are alive.

The growth phase of hair is called **anagen**.

The resting phase of hair is called **telogen**.



About 80% of hair on the head is in the growing phase at any given time.

Hair does not grow back faster because it is cut or shaved. Growth occurs in the dermis.

A depilatory agent (cream) removes hair dissolves the protein in the hair shaft.



Muscles within the base of the dermal papillae are called **arrector pillae**.

They are smooth muscle.

They are attached to the side of the hair follicle and cause goose bumps by pulling the hair follicle straight up and down on the skin when a person is cold or scared.



Parts of Nail

- Nail bed – pink, highly vascular bed underneath nail
- Nail body – visible portion of nail
- Lunula – opaque white crescent shaped area at the proximal end of the nail that lies over the root
- Root – where new keratinized cells are formed
- Nail folds – overlap nail borders



