INTEGUMENTARY SYSTEM FOR FINAL EXAM

We will focus only on the items that are on the exam.

The skin is made up of three major layers, from outside to inside they are: epidermis, dermis and hypodermis.

The functions of the skin are: protection, elimination of waste, temperature control and metabolic reactions such as the production of vitamin D.

EPIDERMIS- made up of 4 or 5 layers depending on where the epidermis is. If it is on the soles of your feet or palms of your hands, there are 5 layers, elsewhere there are 4 layers.

The top layer of the epidermis is called the Stratum Corneum, it contains a lot of keratin which is a protein that is produced by skin cells that helps make it tough and protect the body. Finger nails are extensions of your epidermis with lots of keratin. The Corneum is what we shed throughout the day.

The bottom layer of the epidermis is the Stratum Basale. It is closest to the dermis and is able to receive nutrients through diffusion. This layer is where mitosis occurs producing new skin.

Melanocytes in the epidermis produce melanin which give pigmentation to our skin. All humans have the same number of melanocytes, however genes determine how many are expressed, thus the difference in skin color.

DERMIS – This is the “mechanics” of the skin. All the blood vessels, sweat glands, oil glands, hair follicles and nerve cells are found in this layer.

Since the blood vessels reside in the dermis it is involved in temperature regulation.

Suderiforous glands are sweat glands. There are two types.

1. Eccrine – these are active at birth and are responsible for temperature regulation. They are prominent on the palms of the hands, soles of the feet and forehead.
2. Apocrine glands – found in the armpit and groind area and are activated at puberty.

Sebaceous glands are oil glands. They are found at the base of hair follicles. Their purpose to keep the skin and hair soft and prevent drying. These glands are very active at puberty and are the major cause of acne.

Hair is produced by cells of the follicle which is found in the dermis. Hair helps maintain body temperature, block physical trauma and act as receptors to external stimuli.