

Integumentary System-Skin and Body Coverings

List the four types of epithelial or connective membranes.

The epithelial cutaneous includes your _____ and is exposed to the _____. Its function is to....

An example is..

The epithelial mucous membrane lines the body's _____ and are open to the _____. These include the

These are considered _____ or _____ membranes and are adapted for _____.

The epithelial serous membrane lines areas that are _____ to the external environment. The organs are suspended in a clear fluid called _____ fluid. Examples include....

The connective synovial membrane lines the _____ and cushions organs during _____.

What are the five properties of the skin?

List five appendages of the skin.

PROTECTION

- Keeps _____ in or out depending on the situation- _____
- _____ and _____ the body
- Protects against _____ / _____ damage as well as _____

FUNCTIONS

- _____ regulates the body temperature
- Synthesizes vitamin _____
- Contains _____, _____ and _____ receptors.

STRUCTURE

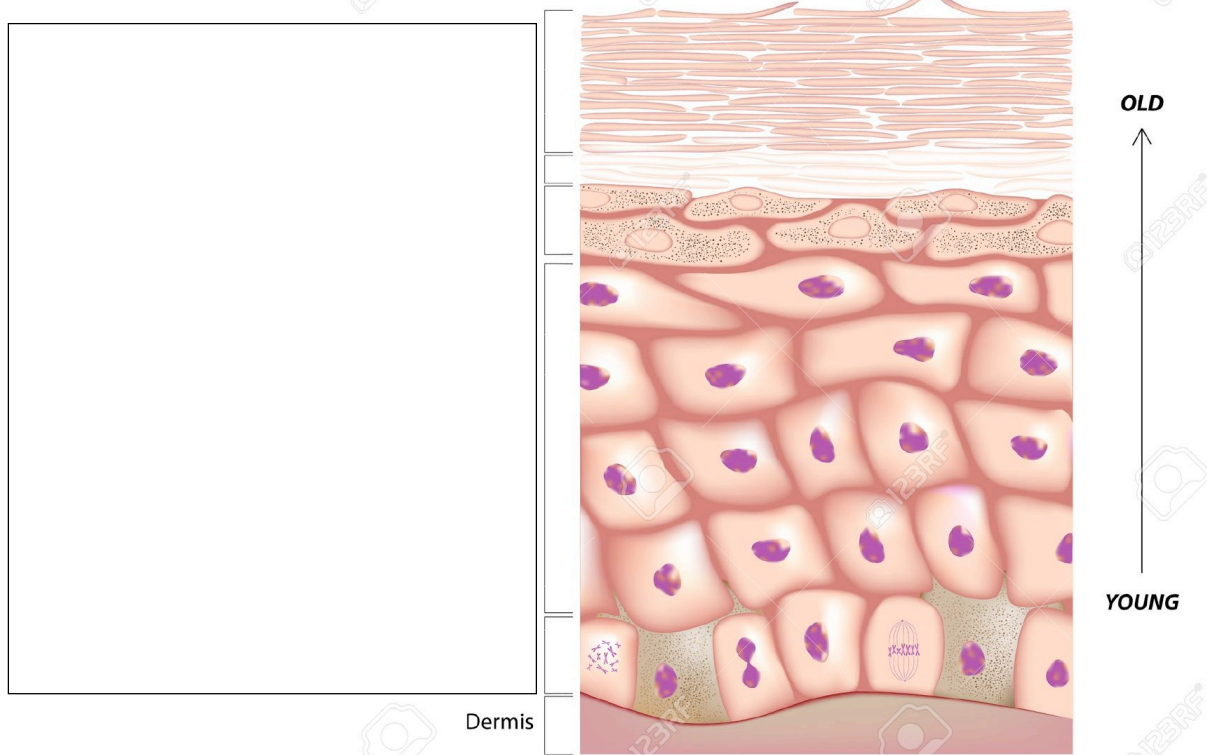
- The outer layer is called the _____ and the underlying layer is called the _____
- It is tightly connected but can come undone by friction - _____
- The _____ is found below the dermis and is composed of _____ tissue.

EPIDERMIS

It is composed of ____ layers with no _____ supply of its own. It contains a tough protein called _____ as well as _____ (skin color) produced by special cells called _____. As the cells divide, the older cells move farther from the _____ and die off because they cannot absorb _____.

The regeneration of the skin takes _____ weeks and are controlled by the action of skin producing cells called _____.

Structure of the Epidermis



Stratum corneum - corneocytes are surrounded by a _____ envelope and filled with water-retaining _____ proteins.

Stratum lucidum-Only found on the _____ and _____ of the feet

Stratum granulosum - _____ lose their nuclei and their cytoplasm appears granular. Lipids, contained in these keratinocytes are released into the extracellular space to form a lipid barrier.

Stratum spinosum- _____-active cells are located in the middle of this layer.

Stratum basale- composed mainly of proliferating and non-proliferating keratinocytes, attached to the basement membrane. _____ (skin coloration cells) are present in this layer. Merkel cells are also found in the stratum basale.

Merkel cells- _____ receptor cells found in the skin of vertebrates that have synaptic contacts with somatosensory afferents. They are associated with the sense of light _____, discrimination of _____, and _____.

What is a sunburn?

A sunburn is the skin's response to extreme _____ exposure and indicates severe damage. In as little as _____ minutes of intense UV exposure, the skin sets into motion a system of defense against this enemy. The face, neck, and trunk are two to _____ times more sensitive than the limbs.

What is a sun tan?

Following the initial sunburn and redness, the skin responds by producing _____, which gives the appearance of a tan. This is a protective function to help prevent UV damage to the DNA of your cells. Imagine your skin making little pigment umbrellas that sit over the cell nucleus and that's a tan. The process dramatically increases _____. Sun exposure also alerts the body to create more cells, which can cause increased breakout activity; tumors, follicles can get plugged and _____ production will increase in an attempt to nourish a dehydrated surface.

How does sunscreen work?

Sunscreen helps filter out UV radiation using a combination of _____ and _____ ingredients. _____ and _____ form a barrier reflecting or scattering the UV waves. Organic ingredients _____ the UV radiation and release the energy as heat.

What does SPF stand for and what does it mean?

SPF stands for Sun Protection Factor and refers to the theoretical amount of time you can stay in the sun without getting _____. For example, an SPF of 15 would allow you to stay in the sun _____ times longer than you could without protection

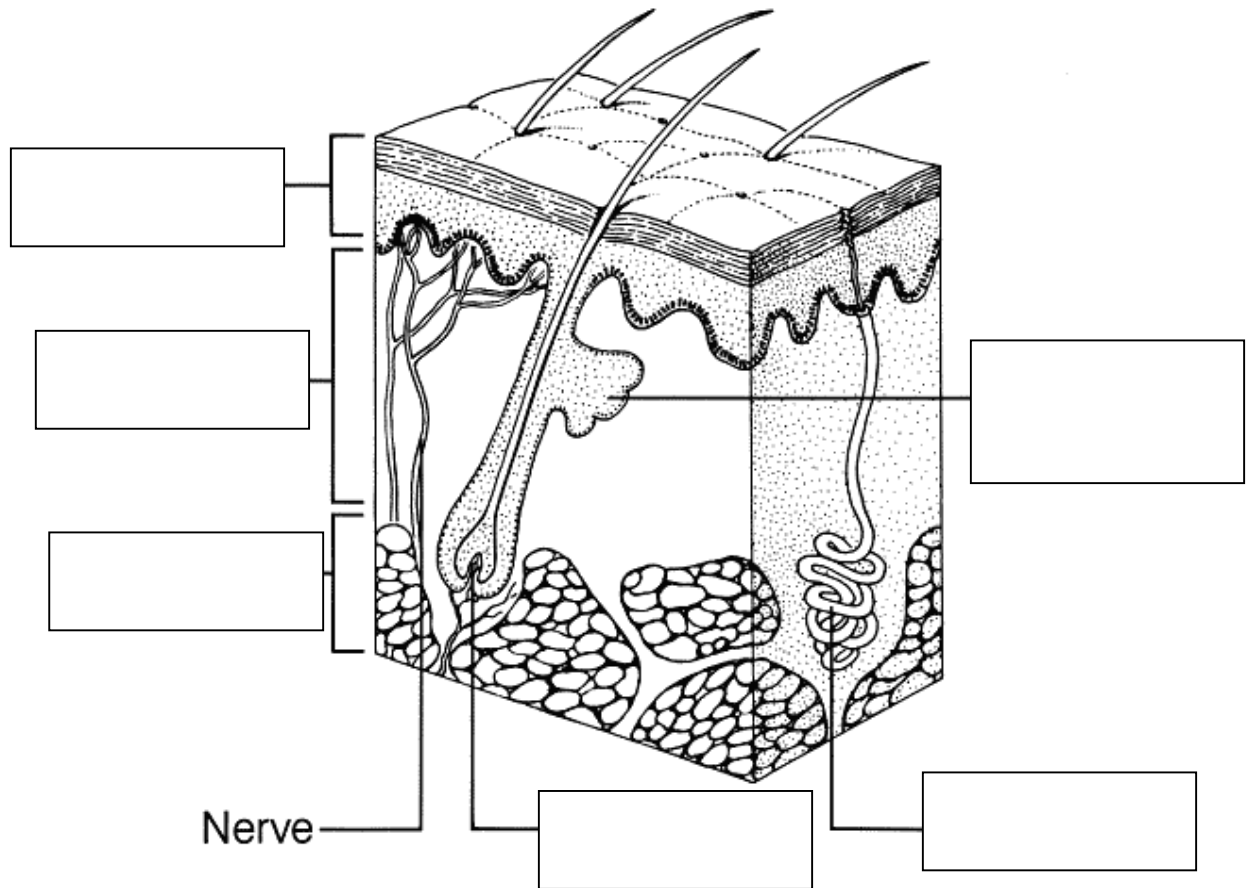
DERMIS

The dermis is called the “_____” and is composed of dense fibrous _____ tissue. It is thicker in the _____ and _____ and thinnest in the _____.

The dermis contains _____ glands, _____ glands and _____ roots with a _____ supply. This layer _____ regenerate like the epidermis. _____ originate here and _____ from a tattoo may remain here for many years.

Why do we turn red when we are hot?

Cutaneous glands of the skin include...



SEBACEOUS GLANDS-found throughout the skin except on the _____ and _____ of the feet. The duct empties into the _____ follicle or directly on the skin surface. This _____ the skin to help keep it soft and avoid becoming _____. In addition, some _____ will be killed on the surface and infections called _____ occur is dirt or oil deposits develop.

ECCRINE SWEAT GLANDS-found all over the body. A person may have _____ million sweat glands. A _____ water solution is produced and its function is to regulate _____ temperature. They become more active after _____.

APOCRINE SWEAT GLANDS- Larger versions found in the _____ region and favor bacterial growth and may have an _____. These also become more active after puberty.

These glands are also found in the _____ glands and produce _____, found in the ear canals and produce _____ as well as in your _____.

How are the locations of the eccrine and apocrine glands different?

HAIR-A minor protective function (_____) and are produced by a _____. The sheath is composed of a combination of _____ and _____ tissue. If you are cold or scarred the hair may stand up creating _____ via a muscle called _____. Hair is found all over the body except the palms of the hands and the soles of the feet. They consist of dead _____ cells.

NAILS-a _____ like modification of the epidermis. They are nearly transparent but may appear _____ from the rich _____ supply.

INFECTIONS and ALLERGIES

Cold Sore- Usually a small group of small blisters near the _____. These are often _____, _____ and _____ and leak a clear liquid. They will scab after a few _____ but could take _____ weeks to heal.

These are caused by the _____ virus. List some ways they can spread to others.

Athlete's Foot- A common contagious _____ causing scaling, flaking and _____. Typically transmitted in _____ areas. List some places to wear sandals.

Boils-A deep infection of the _____ follicle caused by a _____ infection. If individual boils cluster, they are called _____.

Contact Dermatitis- Localized rash caused by contact with a _____ substance. It could lead to itching and burning and may take _____ to _____ to heal.

Impetigo-Most commonly found in _____, usually producing _____ or _____ on the face, neck and diaper area. This is contagious caused by two strands of bacteria. Children are more likely to develop impetigo if they already have other skin problems such as...

Psoriasis-An " _____" affecting _____% of the population characterized by

BURNS

Tissue damage/cell death caused by

They are dangerous because _____ seeps from the burn and can cause _____ and can lead to the _____ shutting down.

Doctors use the rule of nines to determine fluid loss. (_____ areas representing _____% of the body) This will allow doctors to estimate fluid loss.

The burned skin will remain sterile for _____ hours, after that, _____ invade the body and the _____ system becomes depressed. Burns are categorized as first , second or third degree.

FIRST-DEGREE-Only the _____ is damaged and will heal in a _____ days. Examples include _____ and _____

SECOND-DEGREE-Damage to the _____ and upper _____. It will be _____ and _____ blisters. If you are careful no scarring will occur because regeneration is _____.

THIRD-DEGREE-Destroys the entire thickness of the _____. The burn area is _____ to _____. This is _____ painful and regeneration is _____ possible.

CONDITION CRITICAL

_____ % of the body second degree burns

_____ % of the body third degree burns

Third degree burns on the _____, _____ or _____

SKIN CANCER

- Most blemishes are _____ and do not spread.
- _____ tumors can spread and lead to _____

BASAL CELL CARCINOMA-Cells of the lowest level of the _____ invade the dermis. Exposed areas will develop an ulcer and are _____ to metastasize.

SQUAMOUS CELL CARCINOMA-Epithelial cells are _____ in contact with the basement membrane and _____ will develop and metastasize.

MALIGNANT MELANOMA-Cancer of the _____ producing cells.

ABCD RULE

A

B

C

D