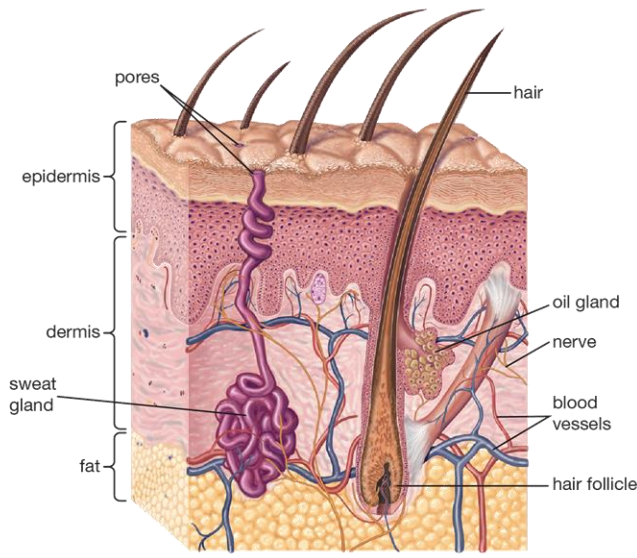


Human Body - Part I

Section I: The Skin



© 2013 Encyclopædia Britannica, Inc.

The body's largest organ is the **skin**, also called the integumentary system. Its thickness varies depending on its location on the body. The skin plays a vital role in protecting the body from injury, infection, and water loss. The skin forms a barrier to keep disease-causing microorganisms and harmful substances out. It stops water from entering your body and keeps it in as well. Skin also helps your body maintain its temperature. It's composed of many blood vessels that can expand to allow more blood

flow. In addition, the skin has special nerve endings that help detect when something is hot or cold.

Skin is made up of two main layers of tissue called the **epidermis** and **dermis**. The epidermis is the thin outer layer of skin that does not contain nerves or blood vessels. This layer is made of flat, dead, flaky skin cells. The cells produce **melanin**, a pigment that gives skin its color. Melanin also acts as a layer of protection from the sun by absorbing ultraviolet rays. The **dermis** is the inner layer of skin between the epidermis and a layer of fat. It is thicker than the epidermis and contains blood vessels, sweat glands, oil glands, and hair follicles. Strands of hair grow in **hair follicles**, which regulate hair growth. Sweat glands also help regulate temperature. Sweat glands produce perspiration that leaves through pores to cool your skin. **Perspiration** contains dissolved wastes from the breakdown of proteins.

Skin is the body's first line of defense against injury. It's able to produce new cells and repair itself when injured. When you get a cut, a scab forms to prevent bacteria from entering the bloodstream. The skin cells beneath the scab multiply to fill the gap of the torn skin and keep harmful microorganisms out. In cases of severe damage, skin grafts are used. This is where pieces of skin are used from other parts of the body to replace the damaged skin.

Review:

1. What are three functions of the skin?
2. Describe characteristics of the epidermis.
3. What is perspiration?