

SKIN

The skin is an ever-changing organ that contains many specialized cells and structures. The skin functions as a protective barrier that **1.** _____ with a sometimes-hostile environment. It is also involved in maintaining the **2.** _____ temperature for the body to function well. It gathers sensory information from the environment, and plays an active role in the **3.** _____ system protecting us from disease. Understanding how the skin can function in these many **4.** _____ starts with understanding its structure.

The epidermis is the outer **5.** _____ of skin. The thickness of the epidermis varies in different types of skin. It is the thinnest on the eyelids at .05 mm and the thickest on the palms and soles at 1.5 mm. The epidermis contains 5 layers. The **6.** _____ layer, the stratum basale, has cells that are **7.** _____ like columns. In this layer the cells divide and push already formed cells into higher layers. As the cells move into the higher layers, they **8.** _____ and eventually die. The top layer of the epidermis, the stratum corneum, is made of dead, flat skin cells that **9.** _____ about every 2 weeks. There are three types of specialized cells in the epidermis: the melanocyte produces **10.** _____ (melanin), the Langerhans' cell is the frontline defence of the **11.** _____ system in the skin, and the Merkel's cells whose function is not **12.** _____ known.

The dermis also varies in thickness **13.** _____ on the location of the skin. It is .3 mm on the eyelid and 3.0 mm on the back. The dermis is **14.** _____ of three types of **15.** _____ that are present throughout - not in layers: collagen, elastic tissue and reticular fibres. The two layers of the dermis are the papillary and reticular layers. The **16.** _____, papillary layer, contains a thin arrangement of collagen fibres. The lower, reticular layer, is thicker and made of thick collagen fibres that are **17.** _____ parallel to the surface of the skin.

The dermis contains many specialized cells and structures. The hair follicles are situated here with the erector pili muscle that **18.** _____ to each follicle. Sebaceous glands and apocrine glands are associated with the follicle. This layer also contains eccrine sweat glands, but they **19.** _____ associated with hair follicles. Blood vessels and nerves course **20.** _____ this layer. The nerves transmit **21.** _____ of pain, itch, and temperature. There are also specialized nerve cells called Meissner's and Vater-Pacini corpuscles that transmit the sensations of touch and pressure.

The subcutaneous tissue is a layer of fat and **22.** _____ tissue that houses larger blood vessels and nerves. This layer is important in the regulation of **23.** _____ of the skin itself and the body. The size of this layer **24.** _____ throughout the body and from person to person.

The skin is a **25.** _____ structure with many functions. If any of the structures in the skin are not working properly, a rash or abnormal sensation is the result. The whole specialty of dermatology is devoted to understanding the skin, what can go wrong, and what to do if something does go wrong.

varies	are not	connective	complicated	through
proper	ways	shed	depending	upper
	bottom	immune (2x)	clearly	composed
shaped	pigment	tissue	arranged	sensations
	interfaces	layer	flatten	attaches
				temperature