

The Skin as a Barrier

The skin of human beings is almost waterproof. This function resides within the epidermis and particularly the outer dead layer called the stratum corneum. Mixed in with the stratum corneum are special oils or lipids, which act to prevent the evaporation of water.

If the epidermis is removed the dermis is completely permeable. This is partly why grazes and burns 'weep' where the epidermis is removed. The barrier of the skin also acts to prevent infections from entering the body. Sweat and sebum contain substances that inhibit the growth of bacteria on the skin surface.

In addition to this the skin acts as a physical barrier to injury. Although flexible skin is quite strong and protective.

Some of the protection is provided by the epidermis and subcutaneous fat but most is provided by the dermis. Within the dermis are fibres, which give flexibility, called elastic fibers and others, which give strength called collagen fibers.

As one ages the amount of collagen in the skin decreases which may partly explain greater fragility of skin in the elderly.

