

Protective: It provides a physical barrier against thermal and mechanical insults such as friction and against most potential pathogens and other material. Microorganisms that do penetrate skin alert resident lymphocytes and antigen-presenting cells (APCs) in skin and an immune response is mounted. The dark pigment melanin in the epidermis protects cell nuclei from ultraviolet (UV) radiation. Skin is also a permeability barrier against excessive loss or uptake of water, which has allowed for terrestrial life. Skin's selective permeability allows some lipophilic drugs such as certain steroid hormones and medications to be administered via skin patches.