

Some skin and sun basics

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What is skin?

Skin, the body's largest organ, is its protective covering that receives external sensory stimuli. It consists of the outer layer, or epidermis, over a thicker layer, the dermis.

Epidermis is made of cells that include immune defenses, sensory receptors, pigments cells and keratin producing cells. Keratin producing cells migrate to the surface and form a dead, relatively dry outer layer that continuously sloughs off.

Dermis contains sensory nerves and blood vessels within connective tissue. Fibers of collagen and elastin make skin tough yet elastic.

Is a suntan, as opposed to sunburn, good for you?

No, because there is no safe way to tan. Melanin is the body's substance that gives pigmentation to skin and helps protect the skin from sun. A tan is a telltale sign of skin damage. When ultraviolet rays penetrate the epidermis, the skin's outer layer, the body produces more melanin in response to the injury.

With each tan, damage accumulates. It increases your risk for all types of skin cancer. The U.S. Department of Health and Human Services and International Agency for Research on Cancer panel have declared ultraviolet radiation from the sun and from artificial sources, such as tanning beds and sunlamps, to be a known carcinogen (cancer-causing substance).

Ultraviolet light damage also accelerates the aging process. Chronic exposure to ultraviolet light, both natural and artificial, changes the skin's texture, causing wrinkles and age spots.

What in ultraviolet light causes the damage?

Ultraviolet A and ultraviolet B rays can each cause harm.

UVA rays penetrate deeper into the dermis, the thickest layer of the skin. UVA rays can cause suppression of the immune system, making it harder for your body to protect against development and spread of skin cancer. UVA rays also lead to premature aging of the skin through wrinkling and age spots.

UVB rays are the burning rays. They are the primary cause of sunburn.

How do you treat sunburn?

It can take up to 24 hours for all of the effects of sunburn to show.

The two most common types are first-degree and second-degree burns.

First-degree sunburns cause redness, but will heal, sometimes with peeling, within a few days. Cool baths, moisturizers and over-the-counter hydrocortisone creams can help.

Avoid "caine" products, such as benzocaine, as they might cause sensitivity to broad range of chemicals. Anti-inflammatories, such as aspirin or ibuprofen, can help ease the pain.

Second-degree sunburns cause blisters. Such burns can be considered an emergency, if a large area of skin is affected. Don't break the blisters because it can delay healing and lead to infection. A layer of gauze may be used to cover the area until healed.

If severe sunburn is accompanied by headache, chills or fever, seek medical help immediately.

What about sun and vitamin D?

Sun exposure prompts vitamin D production in the skin.

Wearing sunscreen does decrease the production of vitamin D. Those who worry about not getting enough vitamin D should talk to their doctors about getting sufficient vitamin D from food and vitamin supplements.

Sources: American Academy of Dermatology, www.aad.org; Medline Plus, www.nlm.nih.gov/medlineplus; Encyclopedia Britannica, www.britannica.com

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