



## Sun damage: The true price of tanning

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The warm golden cast of the sun is very alluring. And many people can't resist spending hours beneath its glow.

But not all of the sun's rays are pleasing. Ultraviolet (UV) light, the invisible but intense rays of the sun, damages your skin. Some of those harmful effects — such as suntan or sunburn — are visible right away. But other skin changes, including liver spots or deep wrinkles, appear and worsen over time. With repeated sun exposure, the skin damage can even progress into cancerous tumors.

From the first clue that your skin has undergone a change to the development of cancer, here's how the sun damages your skin and what you can do about it.

You're likely familiar with two of the more common sun-induced changes to your skin: suntan and sunburn. But you may not know that the darkening and reddening of your skin are the first signs of skin damage.

### **Suntan**

A suntan is the result of injury to the epidermis, the top layer of your skin. A tan develops when UV light accelerates the production of melanin. Melanin is the dark pigment in the epidermis that gives your skin its normal color. The extra melanin — produced to protect the deeper layers of your skin — creates the darker color of a "tan." A suntan is your body's way of blocking out the ultraviolet rays to prevent further injury to the skin, but the protection only goes so far.

### **Sunburn**

Eventually, ultraviolet light causes the skin to burn, bringing pain, redness and swelling. Depending on the severity of the burn, the dead, damaged skin may peel away to make room for new skin cells. Though the symptoms of sunburn may fade after several days, the damage to your skin remains. Sun exposure that is intense enough to cause a burn can also damage the DNA of skin cells. This damage sometimes leads to skin cancer.

People with darker skin pigment are less likely to burn because of the protective action of the melanocytes, which produce melanin. However, even those with darker skin types can burn with repeated exposures to UV light. This intense exposure can produce negative effects in the skin, including dry, rough patches, wrinkling and other skin disorders. So even though people with darker skin can tan and tolerate longer periods of sun exposure without "burning," the sun can still cause skin damage.

Photoaging: Looking older than you are

Over the years, your skin naturally begins to show signs of aging. For example, you may notice more wrinkles and thinner, more fragile skin. Exposure to UV light can accelerate these changes and make you appear older than you are. Skin changes caused by the sun are called photoaging.

The results of photoaging include:

- Weakening of connective tissues, which reduces the skin's strength and elasticity
- Thinner, more translucent-looking skin
- Deep wrinkles
- Dry, rough skin
- Fine red veins on your cheeks, nose and ears
- Freckles, mostly on your face and shoulders
- Large brown lesions (macules) on your face, back of hands, arms, chest and upper back (solar lentigines, or liver spots)
- White macules on the lower legs and arms

Serious skin damage: Noncancerous and cancerous skin tumors

Extended and repeated exposure to UV light can cause noncancerous (benign) and cancerous skin tumors:

- **Seborrheic keratoses.** The precise cause isn't known, but these lesions are seen in aging skin. These tan, brown or black growths have a wart-like or waxy, pasted-on appearance and range in size from very small to more than 1 inch (2.5 centimeters) across. Typically, seborrheic keratoses don't become cancerous, but they can resemble skin cancer.
- **Actinic keratoses.** Also known as solar keratoses, actinic keratoses appear as rough, scaly areas in sun-exposed areas. They vary in color from whitish, pink or flesh-colored to brown-to-dark-brown patches. They're most commonly found on the face, ears, lower arms and hands of fair-skinned people whose skin has been damaged by the sun. Many doctors consider actinic keratoses to be precancerous because they may develop into skin cancer.
- **Skin cancer.** Skin cancer develops mainly on areas of skin exposed to a lot of sun, including your scalp, face, lips, ears, neck, chest, arms and hands, and on the legs in women. Some types of skin cancer appear as a small growth or as a sore that bleeds, crusts over, heals and then reopens. In the case of melanoma, an existing mole may change or a new, suspicious-looking mole may develop. Other types of melanoma develop in areas of long-term sun exposure and start as dark flat spots that slowly darken and enlarge, known as lentigo maligna. See your doctor if you notice a new skin growth, a bothersome change in your skin, a change in the appearance or texture of a mole, or a sore that doesn't heal within two weeks.

Bottom line: Keep your skin healthy

All people, regardless of age, should take the necessary steps to protect their skin. For the most complete sun protection, use all three of these methods — in order of importance:

1. **Avoid the sun during high-intensity hours.** The sun's rays are most damaging from 10 a.m. to 4 p.m. Reduce the time you spend outdoors during these hours.

2. **Wear protective clothing.** Cover your skin with clothing, such as long-sleeved shirts, long pants and wide-brimmed hats. Also, keep in mind that certain clothing styles and fabrics offer better protection from the sun than do others. For example, long-sleeved shirts offer better protection than short-sleeved shirts do just as tighter fabrics are better than those that are loose.
3. **Use sunscreen.** Apply sunscreen liberally 30 minutes before going outdoors so that your skin has time to absorb the sunscreen. Then reapply according to the directions on the label — usually about every hour.

You don't need to hide away indoors to protect your skin. Just be smart about your sun exposure and take precautions to keep your skin healthy for years to come.

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