

WRITTEN BY STEVEN E. PARNELL . PHOTO BY JEFF SILKER

have never met a woman who wanted a face full of wrinkles when she got older. I've never seen ladies boast of their rough leathery skin, or wish they had more brown age spots. Most of what we commonly think of as aging skin doesn't come from aging at all, but from years of sun exposure causing damage to the cellular DNA of our skin. This means that for many women, these changes may be preventable.

Summer and sunburn often go hand in hand. Whether you spend time at the beach, go fishing, work in your garden, or are just outside enjoying our wonderful warm weather, almost every one has been sunburned at some point in their life. Usually after several days of minor skin redness and irritation, we don't think much of it. This is a mistake because sunburns are not just painful, they are dangerous. Severe cases can be life threatening, but the real problem comes from chronic over exposure and multiple burns throughout your lifetime. This leads to premature aging of the skin, severe wrinkling, and the development of multiple age spots that do not come from age at all, but from over exposure to the sun. More importantly it can cause a variety of malignant (cancerous) skin tumors. A single episode of a blistering sunburn before age eighteen doubles one's lifetime risk for developing malignant melanoma, the most serious type of skin cancer.

Sunburn is literally a burn of your skin from the ultraviolet (UV) radiation of the sun. Ultraviolet A and ultraviolet B refer to different strengths of the solar radiation. UV B is more damaging to the skin and a proven cause of skin cancer. Both UV A and UV B contribute to premature aging of the skin which causes the skin to thin, wrinkle, and get brown spots and other discolorations. Travel to the southern United States and countries along the equator increases the amount of UV rays received at the surface of the earth. The risk also increases at higher altitudes. While there may be ten to 20 percent less UV irradiation on cloudy days, unprotected skin can still get a nasty burn and should always be protected. Ultraviolet rays reflect off of water and sand, intensifying the suns burning rays.

Skin types are divided into six classes from the fair, pale skin to the deep, dark skin. Sunburn in a very light skinned person can occur in less than fifteen minutes of midday sun, whereas a dark skinned person may tolerate the same exposure for hours.

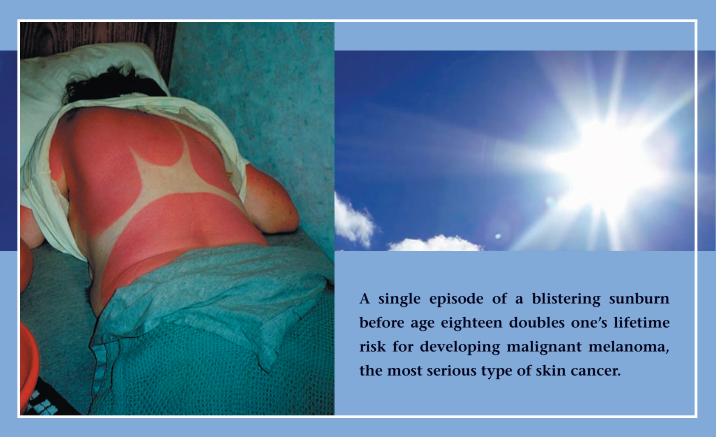
For a person of average skin tone, injury can start within thirty minutes of exposure when the skin is unprotected. Unlike a burn from a hot stove, the pain is not immediate. By the time the skin starts to become painful and red, the damage has been done. The skin turns red in approximately two to six hours and feels irritated. The pain is worst between six and forty-eight hours. You can expect to feel better in four to seven days. You may see peeling skin as a result of the blisters that form. This is often associated with severe itching, especially at night or after sweating or taking a hot shower. Severe cases can be associated with chills and fever from toxins released by the injured skin. Nausea and vomiting may also occur. You should consider seeing your doctor or going to the emergency room if there is severe pain or blistering, headache, confused thinking, or fainting as these may be signs of sunstroke or heat exhaustion.

It is best to prevent sunburn in the first place. Avoid prolonged exposure during the time when the sun is directly overhead and the UV rays are strongest. This is generally from about 10 a.m. to 4 p.m. Other strategies include wearing a wide brimmed hat, long sleeved shirts, and long pants to protect the skin.

Very effective sunscreens have been developed that block the ultraviolet rays from harming the skin. Sun blocking agents are rated for their Sun Protection Factor or SPF. This number is a ratio of the time it takes to sustain an injury to the skin on protected versus unprotected skin. For instance with an SPF of 15, you should be able to stay out in the sun fifteen times longer than if you did not use the sun blocker. They rarely work as well as advertised, in part because people don't apply enough sunscreen and rarely reapply it. No sunscreens are completely waterproof so swimming and sweating diminishes their effectiveness.

A number of drugs and medications make a person taking them much more sensitive to the sun. Among the most common are antibiotics such as tetracycline or minocycline that are used for treating severe acne. Children under the age of six months should avoid using sun blockers with the compound PABA as this can cause skin irritation.

Unfortunately there is no way to get a "safe tan." Suntans are a sign of skin damage. Our skin cells react to the injury of the suns rays by producing melanin, the pigment in our skin that gives it the characteristic brown color. Tanning is the body's attempt to protect itself from further injury. If the UV rays exceed what can be blocked by your level of melanin, sunburn results. Suntans are viewed by many in the Western world as desirable. This has led to increases in sunburn as individuals attempt to tan. A 2003 study found that at least 36 percent of US adults have a sunburn at least once per year.



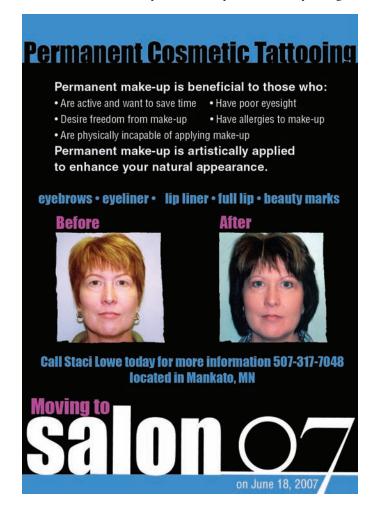
If you do get a sunburn, here are some tips to help care for yourself. Relief of the discomfort becomes important.

- Medications such as aspirin, ibuprofen, or naproxen are especially helpful if taken early before the inflammation in the skin has fully developed.
- Cool compresses are comforting for mild sunburn.
- Avoid bath salts, oils, and perfumes as these may be sensitizing to the irritated skin. Don't wash burned skin with harsh soap.
- · Use soft towels and gently dry the skin.
- A light fragrance free moisturizer may help. Dab don't rub it on the burned area. Aloe based lotions are soothing and contain active compounds that stop pain and help the skin to heal.
- Leave water blisters intact to speed healing and avoid infection. If they burst on their own, remove the skin fragments and apply an antibacterial cream.
- An antihistamine such as Benadryl (diphenhydramine) is helpful to reduce the intense itching than can occur.
- Drink plenty of fluids as sunburn dehydrates the body. Eating high protein food helps get proper nutrients to the tissue to repair itself.
- Finally, stay out of the sun while your skin is healing. Further burning occurs easily in the healing skin.

## Remember, an ounce of prevention is worth a pound of cure:

- Avoid sun exposure during hours of peak UV intensity
- Apply generous amounts of sunscreen with an SPF of at least 30.
- Apply sunscreen 30 minutes before exposure to allow penetration of the skin and reply every two hours you are outdoors.
- Pay special attention to your face, nose, ears, and shoulders as these are the areas most commonly burned.
- Wear a hat. Also sun protective clothing and swimwear is available.
- Wear sunglasses with UV protection. (UV radiation causes cataracts.)
- Use a lip balm with a sunscreen.

Summer is here for just a season, but you'll have to live with your skin for a lifetime. Protect your skin for years of healthy living. W



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