

protection because UV rays can still bounce off sand, water, and porch decks. Remember, UV rays are invisible.

### Effects of the Sun

**Sunburn** — Your chances of developing a sunburn are greatest between 10 am and 4 pm, when the sun’s rays are strongest. It’s easier to burn on a hot day, because heat increases the effects of UV rays, but you can get burned on overcast days as well.

Sun protection is also important in the winter. Snow reflects up to 80 percent of the sun’s rays, causing sunburn and damage to uncovered skin. Winter sports in the mountains increase the risk of sunburn because there is less atmosphere at high altitudes to block the sun’s rays.

If skin is exposed to sunlight too long, redness may develop and increase for up to 24 hours. A severe sunburn causes skin tenderness, pain, swelling, and blistering. Additional symptoms like fever, chills, upset stomach, and confusion indicate a serious sunburn and require immediate medical attention. If you develop a severe sunburn or begin to develop a fever, your dermatologist may suggest medicine to reduce swelling, pain, and prevent infection.

Unfortunately, there is no quick cure for minor sunburn. Cool, wet compresses, baths, and soothing lotions may provide some relief.

**Tanning** — A tan is often mistaken as a sign of good health. Dermatologists know better. A suntan is actually the result of skin injury. Tanning occurs when UV rays enter the skin and it protects itself by producing more pigment or melanin.

Indoor tanning is just as bad for your skin as

sunlight. Most tanning salons use ultraviolet-A bulbs. Studies have shown that UVA rays go deeper into the skin and contribute to premature wrinkling and skin cancer.

**Aging** — People who work outdoors or sun bathe without sun protection can develop tough, leathery skin, making them look older than they are. The sun can also cause large freckles called “age spots,” and scaly growths (actinic



**Wrinkling of the skin from years of sun exposure.**

keratoses), that may develop into skin cancer. These skin changes are caused by years of sun exposure. Protecting children from the sun is especially important, since most of our lifetime exposure occurs before the age of 20.

**Wrinkles** — Wrinkles are directly related to sun exposure. They can be intensified by smoking. Your dermatologist and dermatologic surgeon can treat these with a variety of surgical methods including chemical peels, laser surgery, dermabrasion, and soft tissue fillers.

**Skin Cancer** — More than 90 percent of all skin cancers occur on sun-exposed skin. The face, neck, ears, forearms, and hands are the most common places it appears.



**Basal cell carcinoma Malignant melanoma**

The three most common types of skin cancer are basal cell carcinoma, squamous cell carcinoma, and melanoma.

Basal cell carcinoma usually develops on the face, ears, nose, and around the mouth of fair-skinned individuals. It can start as a red patch or shiny bump that is pink, red, or white. It may be crusty or have an open sore that does not heal, or heals only temporarily. This type of cancer can be cured easily if treated early.

Squamous cell carcinoma usually appears as a scaly patch or raised, warty growth. It also has a high cure rate when found and treated early. In rare cases, if not treated, it can be deadly.

Melanoma is the most dangerous form of skin cancer. It usually looks like a dark brown or black mole-like patch with irregular edges. Sometimes it is multicolored with shades of red, blue, or white. This type of skin cancer can occur anywhere on the body and when found early, can be cured. If ignored, it spreads throughout the body and can be fatal.

**Allergic Reactions** — Some people develop allergic reactions to the sun. These reactions may



**Photoallergic dermatitis**

show up after only a short time in the sun. Bumps, hives, blisters, or red blotches are the most common symptoms of a sun allergy. Sometimes these reactions are due to cosmetics, perfumes, plants, topical medications, or sun preparations. Certain drugs, including birth control pills, antibiotics, blood pressure, arthritis, and depression medications can cause a skin rash with sun exposure. If this occurs, a dermatologist can help.

**Diseases** — Some diseases can be made worse by the sun, including cold sores, chickenpox, and a number of less common disorders such as lupus erythematosus. UV rays also can cause cataracts, a gradual clouding of the lens in the eye.

### Tips for Sun Protection

1. Use a broad-spectrum sunscreen with a SPF of at least 15 on all exposed skin, including the lips, even on cloudy days.
2. If exposed to water, either through swimming or sweating, a water-resistant sunscreen should be used.
3. Reapply sunscreen frequently.
4. Wear a broad-brimmed hat and sunglasses.

# The Sun and Your Skin

5. Sit in the shade whenever possible.
6. Wear protective, tightly-woven clothing.
7. Plan outdoor activities early or late in the day to avoid peak sunlight hours between 10 am and 4 pm.

Everyone should be able to enjoy sunny days. By using a little common sense, as well as the guidelines developed by the American Academy of Dermatology, you can safely work and play outdoors without worrying too much about skin cancer or wrinkles. But if either should occur, your dermatologist has specific expertise in treatment options.

Produced through an unrestricted educational grant from:



AAD Web site: [www.aad.org](http://www.aad.org)  
1-888-462-DERM x22  
© 2001 American Academy of Dermatology  
Revised 1994, 2001  
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P.O. Box 4014  
Schaumburg, IL 60168-4014  
PAM06-07/03

Printed on Recycled Paper

UVA/UVB

effects of the sun

sunscreen

protection

allergic reactions

aging

skin cancer

American Academy of Dermatology

Soaking up the sun's rays used to be considered healthy...before we learned about the dangers of ultraviolet rays.

Sunlight can be used to treat some skin diseases, but we all need to avoid overexposure to the sun. Too much sun can cause sunburn, wrinkles, freckles, skin texture changes, dilated blood vessels, and skin cancers. It may also cause rash problems.

## The Sun's Rays

The sun produces both visible and invisible rays. The invisible rays, known as ultraviolet-A (UVA) and ultraviolet-B (UVB), cause most of the problems. Both cause suntan, sunburn, and sun damage. There is no "safe" UV light.

Harmful UV rays are more intense in the summer, at higher altitudes, and closer to the equator. For example, Florida receives 150% more UV than Maine. The sun's harmful effects are also increased by wind and reflections from water, sand, and snow. Even on cloudy days UV radiation reaches the earth and can cause skin damage. The UV index is a prediction of ultraviolet intensity in a given location. It can be found in the weather section of most large daily newspapers and some television weather forecasts.

## Protection from the Sun

Using sun protection will help prevent skin damage and reduce the risk of cancer. Sun protection should always start with avoiding peak sun hours and dressing sensibly. Most clothing absorbs or reflects UV rays, but white fabric like loose-knit cotton, and wet clothes that cling to your skin, do not offer much protection. The tighter the weave, the more sun protection it will offer. The American

Academy of Dermatology recommends that you avoid deliberate sunbathing, wear a wide-brimmed hat, sunglasses, and protective clothing. If you must be in the sun, use a sunscreen with a sun protection factor (SPF) of at least 15, even on cloudy days.

Sunscreens work by absorbing, reflecting, or scattering the sun's rays on the skin. They are available in many forms, including ointments, creams, gels, lotions, sprays, and wax sticks. All are labeled with SPF numbers. The higher the SPF, the greater the protection from sunburn, caused mostly by UVB rays. Some sunscreens, called "broad spectrum," block out both UVA and UVB rays. These do a better job of protecting skin from other effects of the sun. However, sunscreens are not perfect.



**Sunscreens protect the skin from burning rays.**

Sunscreens should be applied about 20 minutes before going outdoors. Even water-resistant sunscreens should be reapplied about every two hours, after swimming, or after strenuous activities.

Beach umbrellas and other kinds of shade are a good idea, but they do not provide full