The Sun and Your Skin

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. However, overexposure causes wrinkles, freckles, skin texture changes, dilated blood vessels and skin cancers.

The Sun’s Rays

The sun produces both visible and invisible rays. The invisible rays, that cause most of the skin problems are ultraviolet-A (UVA) and ultraviolet-B (UVB). 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 rays reach the earth and can cause damage.

Protection from the Sun

Using sun protection will help prevent skin damage and reduce the risk of cancer. Avoid deliberate sunbathing, and wear a wide-brimmed hat, sunglasses and protective clothing when possible. And if you must be in the sun, use a broad-spectrum sunscreen with a sun protection factor (SPF) of at least 50, 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 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, including rashes. However, sunscreens are not perfect. So, sun protection should always start with avoiding peak sun hours and dressing sensibly.

Sunscreens should be applied about 20 minutes before going outdoors. Even water-resistant sunscreens should be reapplied about every two hours and directly after swimming or strenuous activities. The amount needed to properly cover the entire body is one ounce, or approximately the size of a golf ball. The average 4-8 ounce bottle of sunscreen should last no longer than two days of outdoor activity with proper reapplication.

Beach umbrellas and other kinds of shade are a good idea, but do not provide full protection. Ultraviolet (UV) rays can still bounce off sand, water and porch decks, concrete, and even grass.

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. In general the tighter the weave, the more sun protection it will offer.

Avoid the Most Intense Rays

The chance of developing sunburn is greatest between 10 am and 4 pm, when the sun’s rays are strongest. It’s also easier to burn on a hot day, because heat increases the effects of UV light.

Sun protection is also important in the winter. Snow reflects more than 80 percent of the sun’s rays, causing sunburn and damage to uncovered skin. Plus at high altitudes, more of the sun’s rays enter the thinner atmosphere.

Sunburn Signs

If skin is exposed to sunlight too long, redness may develop and increase for up to 24 hours. Severe sunburn causes skin tenderness, pain, swelling and blistering. Other symptoms like fever, chills, upset stomach and confusion indicate serious sunburn and require immediate medical attention. Unfortunately, there is no quick cure for minor sunburn. Wet compresses, cool tub baths and lotions provide some relief. But, it takes time for your body to heal from sunburn.

Tanning

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

Indoor tanning is worse than natural light, and its cancer-causing rays have been compared to tobacco smoking by the World Health Organization. Most tanning salons use ultraviolet-A bulbs, and studies have shown that UVA rays go deeper into the skin and contribute to premature wrinkling and skin cancer.

In fact, just four trips to a tanning salon in a year will increase the risk of developing non-melanoma skin cancer by 15% and melanoma by 11%. But since many people visit tanning salons more often, the overall risk of developing melanoma is 75% among indoor tanners.
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Aging

People who work outdoors or sun bathe without sun protection can develop tough, leathery skin, making them look older. The sun can also cause acne that is difficult to treat, large freckles known as solar lentigo or “age spots,” and scaly growths known as actinic keratoses or “pre-cancers.” These skin changes are caused by years of sun exposure. The time between the sun injury and these changes can be as long as 20-50 years, but is often much shorter than that.

Protecting children from the sun is especially important, since most of our lifetime exposure occurs before the age of 20, and 1 in 5 children will develop skin cancer as an adult.

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.

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, lips 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

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. But, if ignored, it spreads throughout the body and can be fatal.

Diseases Made Worse by the Sun

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 that gradually cloud the lens of the eye.

Allergic Reactions

Occasionally, people develop allergic reactions to the sun. These reactions may show up after only a short time in the sun. Bumps, hives, blister, 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, and blood pressure, arthritis and depression medications can cause a skin rash with sun exposure.

What about Vitamin D?

When exposed to UV rays, the skin synthesizes Vitamin D. Vitamin D is necessary to build strong bones and prevent infections and cancers. Despite the increase in skin cancer rates, hypovitaminosis D (low Vitamin D) rates are also increasing. Diligent sun protection contributes to this increase in some individuals. The safest way to prevent hypovitaminosis D is not to lay out in the sun or to tan. The safest way is to take Vitamin D supplements by mouth.

The current Vitamin D Recommended Daily Allowance guidelines are:

- 400 IU for children under 1 year old
- 600 IU for anyone 1 to 69 years old
- 800 IU for adults 70 years old and up

Tips for Sun Protection

1. Use a broad-spectrum sunscreen with an SPF of at least 50 on all exposed skin, including the lips, even on cloudy days. Remember one ounce (or golf ball size) is needed to cover the entire body.

2. Reapply sunscreen frequently: every 2 hours and more frequently after swimming and strenuous exercise.

3. Wear a broad-brimmed hat and sunglasses.

4. Sit in the shade whenever possible.

5. Wear protective, tightly-woven clothing.

6. Avoid the peak sunlight hours between 10 am and 4 pm by planning outdoor activities early or late in the day.

With proper sun safety and a little common sense, everyone should be able to enjoy the outdoors without worrying too much about skin cancer or wrinkles.