



Is a Suntan Worth Your Life?

Although a suntan may look great when you are in your twenties, the effects it will have on your skin in just a few short years are not pretty, or healthy. A suntan, which seems to be the badge of good health and vitality, is in fact the opposite. A tan is the body's desperate attempt to protect itself from the sun's harmful rays. The sun's rays can kill you.

The sun's rays, which are called ultraviolet A and ultraviolet B rays (UVA and UVB rays) damage your skin. This leads to **early wrinkles**, **cataracts** (UV rays have been found to be associated with various eye conditions, such as cataracts), **skin cancer**, and other **skin problems**. Being in the sun often, over time, even if you don't burn, can lead to skin cancer. It does not matter if you acquired the tan under the sun or at a tanning salon; either way, the UV rays are still bad for your skin.

Sunlight is the leading cause of skin cancer. Skin cancer is the most commonly occurring cancer in the United States and accounts for about 2% of all cancer deaths¹. In 2004, about 55,100 individuals in the United States are expected to develop melanoma and approximately 7,910 will die of it¹. There are three main types of skin cancer: **basal cell carcinoma**, **squamous cell carcinoma** (together referred to as non-melanoma skin cancer), and **melanoma**. Basal cell carcinoma and squamous cell carcinoma are the most common forms of skin cancer. If left untreated, they can cause substantial illness and cause considerable damage and disfigurement. However, if they are detected and treated early they have a cure rate of more than 90%. Malignant melanoma causes more than 75% of all deaths from skin cancer. This disease can spread to other organs, most commonly the lungs and liver. Malignant melanoma diagnosed at an early stage usually can be cured, but melanoma diagnosed at a late stage is more likely to spread and cause death. The incidence of melanoma and non-melanoma skin cancer appears to be increasing^{2,3}.

Who is at Risk?

Although anyone can get skin cancer, individuals with the following traits are at higher risk:

- Lighter natural skin color, skin types I and II (see figure 1)
- Family History of skin cancer
- Personal history of skin cancer
- Constant exposure to the sun through work and play
- A history of sunburns and a lot of sun exposure early in life
- Skin that burns, freckles, gets red easily, or becomes painful in the sun
- Blue or green eyes
- Blond or red hair
- Having many moles (see figure 2)



Type 1



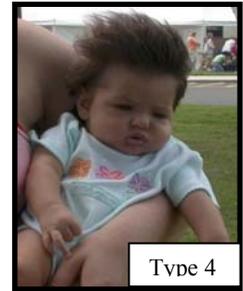
Type 2



Type 3

Figure 1

Skin Type	Tanning and Sun Burning History
I	Always burns, never tans, sensitive to sun exposure
II	Burns easily, tans minimally
III	Burns moderately, tans gradually to light brown
IV	Burns minimally, always tans well to moderately brown
V	Rarely burns, tans profusely to dark
VI	Never burns, deeply pigmented, least sensitive



Type 4



Type 5



Type 6

Can Skin Cancer be Prevented?

Minimizing exposure to the sun will help decrease a person's chance of getting skin cancer. Studies have consistently shown that increased cumulative sun exposure is a risk factor for skin cancer^{1,2}. Everyone, especially individuals with skin that tans poorly or burns easily, should use sunscreen with an SPF of 15 or higher when they must be in the sun¹.

According to the Food and Drug Administration (FDA), sunscreen is an important sun protection strategy, but **sunscreen alone will not prevent all of the harmful effects of sun exposure**. You need to use a total sun protection program to reduce the sun's harmful effects.

- Generously apply a sunscreen with an SPF of 15 or higher.
- Reapply sunscreen every two hours according to the directions on the label.
- Reapply sunscreen as needed after swimming, sweating or towel drying.
- Use sunscreen even on cloudy days. 60% to 80% of the sun's rays can get through clouds and can reach swimmers at least one foot below the surface of the water. Sunrays can also reflect off water, snow and white sand.
- Avoid the sun between 10 a.m. and 4 p.m., when the atmosphere absorbs less of the harmful UV rays of sunlight than earlier or later in the day.

- Seek shade under a tree, beach umbrella, tent, or other shelter.
- Cover up with a shirt, beach cover-up, pants, or other clothing to protect exposed skin --- the tighter the fabric weave, the better.
- Wear a wide-brimmed hat to shade the face, ears, scalp, and neck.
- Wear sunglasses that block both UVA and UVB rays to protect eyes and prevent future cataracts.
- Check your skin yourself every month for signs of skin cancer.
- Never leave children exposed to the sun without adequate protection. Because of the long time it takes for cancer to develop, studies suggest that over-exposure early in life may lead to skin cancers later in life.



Where is skin cancer most likely to occur?

Most skin cancers occur on parts of the body that are repeatedly exposed to the sun. These areas include the head, neck, face, tips of the ears, hands, forearms, shoulders, back, chests of men, and the back and lower legs of women.

What are the Signs of Skin Cancer?

Basal Cell Carcinoma

Basal cell carcinoma is the most common form of skin cancer, affecting nearly one million Americans each year. One out of every three new cancers is a skin cancer, the vast majority of which are basal cell carcinomas.

Basal cell carcinoma usually appears as slow-growing, translucent, raised, pearly nodules, which, if untreated, may crust, ulcerate, and sometimes bleed. If detected and treated early, there is a greater than 95 percent cure rate.

Until recently, those most often affected were older people, particularly men who had worked outdoors. Although the number of new cases each year has increased sharply in the last few decades, the average age of onset of the disease has steadily decreased. People are developing basal cell carcinomas at earlier ages and women are now getting it almost as often as men.

Squamous Cell Carcinoma

Squamous cell carcinoma is the second most common skin cancer after basal cell carcinoma, affecting more than 100,000 Americans each year.

Squamous cell carcinoma usually appears as nodules or red, scaly patches and can spread if untreated. While the cure rate is very high, squamous cell carcinoma results in at least 1,500 deaths each year.

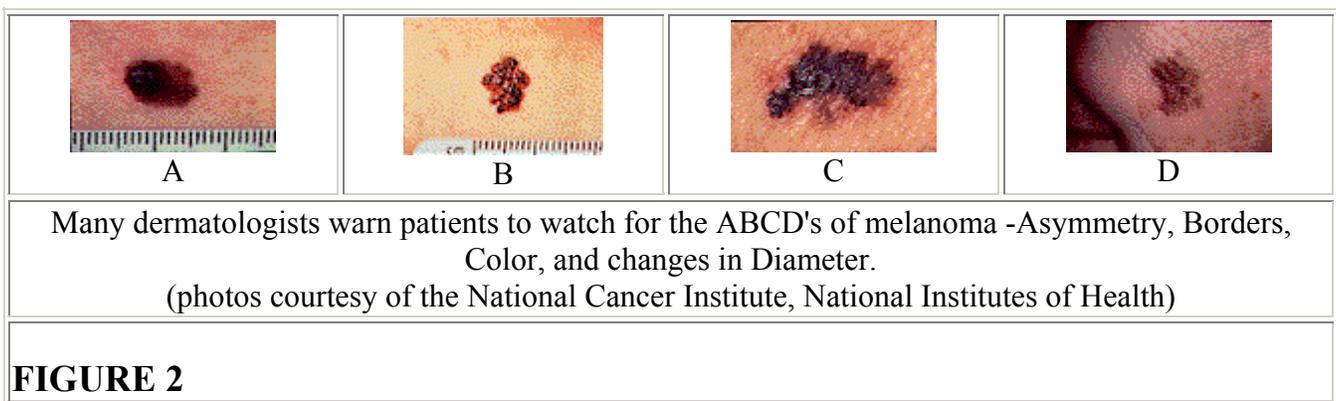
Melanoma

The most dangerous of all skin cancers, melanoma, is characterized by the uncontrolled growth of pigment-producing tanning cells called melanocytes. If detected in the early stages, melanoma can often be treated successfully, but in the later stages, it spreads to other organs and can result in death.

The main thing to look for is any change in a mole that you have or the appearance of a new mole. All moles should be watched carefully and brought to the attention of your family doctor.

What does a normal mole look like?

A normal mole is solid tan, brown, dark brown or flesh colored. Its edges are well-defined. It's usually smaller than 1/4 inch in diameter and has a round or oval shape. It should be flat or dome-like.



ABCDE's of melanoma:

A for asymmetry: A mole that, when divided in half, doesn't look the same on both sides

B for border: A mole with edges that are blurry or jagged

C for color: Changes in the color of a mole, including darkening, spread of color, loss of color, or the appearance of multiple colors such as blue, red, white, pink, purple or gray

D for diameter: A mole larger than 1/4 inch in diameter

E for elevation: A mole that is raised above the skin and has an uneven surface

Other signs include:

- A mole that bleeds
- A fast-growing mole
- A scaly or crusted growth on the skin
- A sore that won't heal
- A mole that itches

Self Examination

Your physician should examine your skin during routine physicals, but you should also examine your entire skin surface regularly at home. This will require the use of a mirror and multiple positions to evaluate the back, skin folds and creases. Always report new growths or changes in moles or skin marks to your physician for formal evaluation.

What is the Treatment?

Treatment may be one of the following:

1. Local excision
2. Radiation therapy
3. Systemic or intralesional chemotherapy
4. Chemotherapy plus radiation therapy

The UV Index

The UV Index was developed by the National Weather Service and the Environmental Protection Agency (EPA). It provides a forecast of the expected risk of overexposure to UV rays and indicates the degree of caution you should take when working, playing, or exercising outdoors.

The UV Index predicts exposure levels on a 0-10+ scale, where 0 indicates a low risk of overexposure and 10+ means a very high risk of overexposure. Calculated on a next-day basis for dozens of cities across the United States, the UV Index takes into account clouds and other local conditions that affect the amount of UV radiation reaching the ground.

The level of danger calculated for the basic categories of the index are for a person with type II skin. For a person with type II skin, for example, an Index value of 5 or 6 represents a moderate possibility of UV overexposure.

More information about the UV Index is available at the EPA Web site:

<http://www.epa.gov/sunwise/uvindex.html>. You can also call the Environmental Protection Agency (EPA) hotline at 1-800-296-1996 for more information on the UV Index.

References:

1. American Cancer Society.: Cancer Facts and Figures 2004. Atlanta, GA: American Cancer Society, 2004. [Also available online.](#) [[PUBMED Abstract](#)]
2. Koh HK: Cutaneous melanoma. New England Journal of Medicine 325 (3): 171-82, 1991. [[PUBMED Abstract](#)]
3. Preston DS, Stern RS: Nonmelanoma cancers of the skin. New England Journal of Medicine 327 (23): 1649-62, 1992. [[PUBMED Abstract](#)]