

Skin Cancer and Sun Safety

Learn the Facts about Skin Cancer Risk and the Ways You can Prevent It



The skin is the largest organ in the human body, and it protects your other organs and regulates body temperature. Exposure to ultraviolet radiation (invisible energy from sunlight and tanning beds) is the major risk factor for skin cancer.

It is estimated that more than 2 million people in the United States are diagnosed with skin cancer each year, and nearly 10,000 people die every year from skin cancer.

Source: National Cancer Institute; <http://www.cancer.gov/cancertopics/types/skin>.

HOW IS EXPOSURE TO THE SUN DANGEROUS?

People of all races can burn, and having a sunburn or tan are signs that your skin has been damaged by UV radiation. UV radiation breaks chemical bonds in your skin tissue and with over prolonged exposure, your skin may wrinkle or skin cancer may develop.

UVA rays cause skin to age and develop long-term effects like wrinkles. **UVB rays** cause sunburns and *most* skin cancers are attributed to UVB. However, both UVA and UVB rays are thought to damage cells' DNA, resulting in skin cancer.

WHAT IS SKIN CANCER?

Melanoma skin cancer forms in the pigment-making cells of the skin. Melanoma is not detected as frequently as other skin cancers, but it is serious and can be fatal.

Nonmelanoma is more common and not as serious as melanoma. Basal cell and squamous cell cancers are two of the most common nonmelanoma cancers.

WHO'S MOST AT RISK FOR GETTING SKIN CANCER?

Anyone can get skin cancer. Those most at risk have:

- Fair complexion and/or freckles and light hair
- Skin that burns easily
- A personal or family history of skin cancer
- Several moles on the body (so check yourself each month!)
- Lots of sun exposure, especially with blistering sunburns at a young age

ADDITIONAL RESOURCES

UNC Center for Environmental Health and Susceptibility: www.cehs.sph.unc.edu

Health Care Professionals in Your Community:
Visit your physician, a dermatologist or the local health department for information on diagnosis and treatment.

American Cancer Society: www.cancer.org

EPA SunWise: www.epa.gov/sunwise

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HOW CAN I PROTECT MYSELF AGAINST THE DAMAGING EFFECTS OF UV RADIATION?

- **Seek shade** during peak sun hours (10 am to 4 pm). UV rays can cause damage any season of the year.
- **Cover up.** When outdoors, wear a long-sleeved shirt and pants, a wide-brimmed hat to shade the ears, face, neck and eyes, and sunglasses to protect the skin around the eyes.
- **Use a sunscreen** with a sun protection factor (SPF) of 30 or higher — and reapply often, at least every 2 hours. The higher the SPF, the better. Reapply sunscreen after swimming and sweating. *Source: American Academy of Dermatology*
- **Check the UV index**, which predicts the next day's UV radiation levels on a 1–11+ scale, to help you plan sun-safe activities. To find out the UV Index for your area, visit the EPA SunWise UV Index website at www.epa.gov/sunwise/uvindex.html.
- **Avoid tanning beds**, which often release UVA and UVB rays, causing long-term skin damage and skin cancer.
- **Wear sunglasses.** Exposure to sunlight can cause cataracts and macular degeneration (destroying the retina, which we use for reading and driving). Wearing wraparound sunglasses that block out 100% UVA and UVB rays will help prevent the onset of eye disease.



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WHAT ARE SOME SIGNS AND SYMPTOMS OF SKIN CANCER?

During a self-exam of moles, use the ABCDEs of Melanoma. If any of these signs appear, make an appointment to see a dermatologist.

Remember to check each month!

- **Asymmetry** – one half of the mole doesn't look like the other half.
- **Border** – irregular, uneven, or scalloped edges.
- **Color** – varied from one area to another; shades of tan, brown, black, red, white, pink or blue might appear.
- **Diameter** – usually larger than 6mm (1/4 inch or the size of a pencil eraser); some can be smaller during early detection.
- **Evolving** – over time, there's a change in color, size or shape of a mole or lesion.

WHAT ARE UNC RESEARCHERS DISCOVERING ABOUT SKIN CANCER?

Researchers in the UNC Center for Environmental Health and Susceptibility are part of an international study of Genes, Environment and Melanoma (GEM), funded by the National Cancer Institute, to study how genes interact with sun exposure to increase the risk of melanoma. Over 3,700 people from the US, Canada, Italy and Australia were enrolled in the GEM study, with 316 participants coming from North Carolina.

Initial results indicate that some people may be at increased risk for melanoma because of differences in how they repair DNA that is damaged by UV exposure. As a result, those people are more susceptible to sunlight and should take special precautions to avoid sunburns when they are young. For more information, visit

http://cehs.sph.unc.edu/pdf/skincancer_research_article.pdf.