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Skin Cancer (Non-Melanoma) - Risk Factors and Prevention

[1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board \[2\]](#), 12/2013

ON THIS PAGE: You will find out more about what factors increase the chance of this type of cancer. To see other pages, use the menu on the side of your screen.

A risk factor is anything that increases a person's chance of developing cancer. Although risk factors can influence the development of cancer, most do not directly cause cancer. Some people with several risk factors never develop cancer, while others with no known risk factors do. However, knowing your risk factors and talking about them with your doctor may help you make more informed lifestyle and health care choices.

The following factors may raise a person's risk of developing skin cancer:

Sun exposure. Exposure to ultraviolet (UV) radiation from the sun plays a role in the development of skin cancer. Exposure to ultraviolet B (UVB) radiation from the sun appears more closely associated with skin cancer, but newer information suggests that ultraviolet A (UVA) may also play a role in the development of basal cell and squamous cell carcinoma and [melanoma \[3\]](#). Whereas UVB radiation causes sunburn and does not penetrate through glass (car windows, etc.), UVA is able to pass through glass and may cause aging and wrinkling of the skin in addition to skin cancer. Therefore, it is important to protect your skin from both UVA and UVB radiation (see Prevention below).

People who live in areas with bright sunlight year-round (which includes both UVA and UVB radiation) or at high altitudes have a higher risk of developing skin cancer, as do those who spend a lot of time outside during the midday hours. Skin cancer has also been linked to recreational exposure to intermittent UV, whether from the sun or from indoor tanning facilities (which emit mostly UVA radiation).

Artificial tanning. People who use tanning beds, tanning parlors, or sun lamps have an increased risk of all three types of skin cancer. Recreational sun tanning should be avoided to reduce the risk of skin cancer.

Fair skin. People with a fair complexion, blond or red hair, blue eyes, and freckles are at

increased risk for developing skin cancer, as are people whose skin has a tendency to burn rather than tan.

Gender. The number of older white men and younger women who have developed skin cancer in recent years has increased.

Age. Most basal cell and squamous cell carcinomas typically appear after age 50, but in recent years, the number of skin cancers in people age 65 and older has increased dramatically. Younger people can also develop non-melanoma skin cancer, especially if they have an inherited (genetic) syndrome that puts them at high risk, fair skin, or been exposed to significant amounts of radiation or UV radiation from the sun.

A history of sunburns or fragile skin. Skin that has been burned, sunburned, or injured from disease has a higher risk of skin cancer. Squamous cell and basal cell carcinoma occur more often in people with higher lifetime exposure to the sun or other sources of UV radiation.

Other medical conditions. People with weakened immune systems (due to a stem cell transplant or diseases such as HIV/AIDS and certain types of leukemia) or those who use certain medications (such as immunosuppressive drugs, certain steroids, and drugs that make the skin sensitive to light) have a higher risk of developing skin cancer, particularly squamous cell cancer. People with some rare genetic conditions, such as xeroderma pigmentosum [4], nevoid basal cell carcinoma syndrome [5], or albinism have a much higher risk of developing skin cancer.

Prior treatment with radiation therapy. People who have received radiation therapy for other types of cancer have a higher risk of developing basal cell carcinoma in the area that was exposed to the radiation.

Previous skin cancer. People who have had any form of skin cancer have a higher risk of developing another skin cancer. Thirty-five percent (35%) to 50% of people diagnosed with one basal cell carcinoma will develop a new skin cancer within five years. Therefore, people who have had one skin cancer need ongoing, follow-up care to watch for additional cancers. See the After Treatment [6] section for more information.

Precancerous skin conditions. Lesions called actinic keratoses (rough, red or brown scaly patches on the skin) or Bowen's disease are usually more common in areas exposed to the sun. Such areas can change into squamous cell cancers in a small minority of people. The more actinic keratoses a person has, the higher the risk that they will become a squamous cell carcinoma. Using a broad-spectrum sunscreen throughout the year that protects against both UVA and UVB radiation and has with a sun protection factor (SPF) of at least 30 helps decrease the risk of developing actinic keratoses. See the Prevention section below for more information about protecting your skin from the sun.

Human papillomavirus (HPV). Research indicates that infection with this virus is a risk factor for squamous cell carcinoma, particularly if the person's immune system becomes suppressed. HPV is most commonly passed from person to person during sexual activity. There are different types, or strains, of HPV, and some strains are more strongly associated with certain types of cancers.

Prevention

Research continues to look into what factors cause basal cell and squamous cell carcinoma and what people can do to lower their personal risk. There is no proven way to completely prevent non-melanoma skin cancer, but there are steps you can take to lower your skin cancer risk. Talk with your doctor if you have concerns about your personal risk of developing these types of skin cancer.

Reducing exposure to UV radiation, particularly by reducing sun exposure, lowers the risk of developing skin cancer. This is important for people of all ages and is especially important for people who have other risk factors for basal cell and squamous cell carcinoma (see above). Sun damage builds up over time, so it is important to take the following steps to reduce sun exposure, avoid sunburn, and help prevent skin cancer:

- Limiting or avoiding sun exposure between 10:00 AM and 4:00 PM, as well as avoiding recreational sunbathing.
- Wearing sun-protective clothing, including a wide-brimmed hat that shades the face, neck, and ears. Clothes made of fabric labeled with UPF (UV protection factor) may provide better protection. UV-protective sunglasses are also recommended.
- Using a broad spectrum sunscreen throughout the year that protects against both UVA and UVB radiation and has with a sun protection factor (SPF) of at least 30. Reapply at least one ounce of sunscreen to your entire body every two hours or every hour after heavy perspiration or being in the water.
- Examining the skin regularly (including examinations by a health care professional and self-examinations). Learn more about the [signs and symptoms of skin cancer](#) [7].
- Avoiding use of sun lamps, tanning beds, and tanning salons.

Learn more about [protecting your skin from the sun](#) [8] in this additional article on Cancer.Net.

Limiting your sun exposure may reduce your body's production of vitamin D, although some research suggests only brief exposure to sunlight (less than 15 minutes) may be enough for most people to produce an adequate amount of vitamin D. People with limited sun exposure should talk with their doctor about how to include good sources of vitamin D in their diet, including the use of supplements. Your levels of vitamin D can be checked through a simple blood test by your doctor.

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