

## **Melanoma - Risk Factors and Prevention** [1]

This section has been reviewed and approved by the [Cancer.Net Editorial Board](#) [2], 06/2014

**ON THIS PAGE:** You will find out more about the factors that increase the chance of developing 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 to your doctor may help you make more informed lifestyle and health care choices.

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

**Sun exposure.** Exposure to ultraviolet (UV) radiation from the sun can cause melanoma. Exposure to ultraviolet B (UVB) radiation from the sun appears more closely associated with melanoma, but newer information suggests that ultraviolet A (UVA) may also play a role in the development of melanoma, as well as the development of [basal and squamous cell skin cancers](#) [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.

People who live in areas with bright sunlight year-round 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. The risk of developing melanoma may also be higher in people who have had multiple, severe, blistering sunburns, particularly in childhood. However, there has been some debate about this. Melanoma has also been linked to recreational exposure to intermittent UV, whether from the sun or from indoor tanning facilities. For ways to protect your skin from the sun, see the [Prevention](#) section below.

**Artificial tanning.** People who use tanning beds, tanning parlors, or sun lamps have an increased risk of developing melanoma and other types of skin cancer. Recreational sun tanning should also be avoided to reduce the risk of skin cancer.

**Moles.** People with many moles or unusual moles called dysplastic nevi or atypical moles have a higher risk of developing melanoma. Dysplastic nevi are flat, large moles that have irregular color and shape. A doctor may recommend photography of the skin to monitor people with many

moles.

**Fair skin.** People with fair complexion, blond or red hair, blue eyes, and freckles are at increased risk for developing melanoma, as are people whose skin has a tendency to burn rather than tan.

**Family history.** Approximately 10% of people with melanoma have a family history of the disease. If a person has a close relative (parent, brother, sister, or child) who has been diagnosed with melanoma, his or her risk of developing melanoma is two to three times higher than the average risk. This risk increases if several family members that live in different locations have been diagnosed with melanoma. Therefore, it is recommended that close relatives of a person with melanoma routinely have their skin examined

Although changes called mutations in specific genes, such as *CDKN2A*, *CDK4*, and *MITF*, have been identified that may lead to melanoma, these are rare and only a very small number of families with a history of melanoma actually have these genetic mutations. Scientists are looking for other genes and environmental factors that might also affect a person's risk of developing melanoma, as well as other cancers. Learn more about [familial melanoma](#) [4].

**Other inherited conditions.** People with specific genetic conditions, including [xeroderma pigmentosum](#) [5], [retinoblastoma](#) [6], [Li-Fraumeni syndrome](#), [7] [Werner syndrome](#) [8], and [hereditary breast and ovarian cancer syndrome](#) [9], have an increased risk of developing melanoma.

**Personal history of skin cancer.** People who have had one melanoma have an increased risk of developing other new melanomas. People who have had [basal cell or squamous cell skin cancer](#) [3] also have an increased risk of developing melanoma.

**Race or ethnicity.** Melanoma rates are about 24 times higher in white people than black people; however, it is important to note that melanoma can occur in a person of any race or ethnicity. In fact, the rates of melanoma among Hispanics are rising.

**Immune system function.** People who have weakened immune systems or use certain medications that suppress immune function have a higher risk of developing skin cancer, including melanoma.

## Prevention

Research continues to look into what factors cause melanoma and what people can do to lower their personal risk. There is no proven way to completely prevent this disease, but there may be steps you can take to lower your skin cancer risk. Talk with your doctor if you have concerns about your personal risk of developing this type of cancer.

Reducing exposure to UV radiation, particularly by reducing sun exposure, lowers the risk of developing melanoma. This is important for people of all ages and is especially important for people who have other risk factors for melanoma (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 melanoma:

- 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 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 with a sun protection factor (SPF) of at least 30 throughout the year. 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.
- Regularly check your skin for irregular moles and other signs of melanoma and have skin examinations by a health care professional. Learn more about the [signs and symptoms of melanoma](#) [10].
- Avoiding use of sun lamps, tanning beds, and tanning salons.

Learn more about [protecting your skin from the sun](#) [11] 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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**Links:**

[1] <http://www.cancer.net/cancer-types/melanoma/risk-factors-and-prevention>

[2] <http://www.cancer.net/about-us>

[3] <http://www.cancer.net/node/19618>

[4] <http://www.cancer.net/node/18853>

[5] <http://www.cancer.net/node/19727>

[6] <http://www.cancer.net/node/19576>

[7] <http://www.cancer.net/node/19133>

[8] <http://www.cancer.net/node/19726>

[9] <http://www.cancer.net/node/18922>

[10] <http://www.cancer.net/node/19255>

[11] <http://www.cancer.net/node/24659>