



*Skin Cancer:*  
Who's at Risk?

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**S**kin cancer is the most prevalent form of cancer in the U.S., and the number of cases continues to rise. There are three main types of skin cancer: basal cell carcinoma, squamous cell carcinoma, and melanoma. Basal cell and squamous cell cancers are less-serious types and make up 95% of all skin cancers. Also referred to as non-melanoma skin cancers, they are highly curable when treated early. Melanoma, made up of abnormal skin-pigment cells called melanocytes, is the most serious form of skin cancer and causes 75% of all skin cancer deaths. Left untreated, it can spread to other organs and is difficult to control. What are the risk factors for skin cancer?

### Sun Exposed

Overexposure to ultraviolet (UV) radiation from the sun or sunbeds is the main cause of skin cancer. Three sunburns can increase the risk of melanoma by 40%! More than eight in 10 cases of melanoma could be prevented through enjoying the sun safely and avoiding sunburn.

There are two main types of UV rays that damage skin. Both types can cause skin cancer:

- UVB is responsible for the majority of sunburns.
- UVA penetrates deeper into the skin. It ages the skin, but contributes much less towards sunburn.

Tanning-bed bulbs give off UVA and UVB, but the mixture of the two is usually different than natural sunlight and the UV is often much stronger. Sunburn is a clear sign that the DNA in skin cells has been damaged by too much UV radiation. Getting painful sunburn just once every two years can triple your risk of melanoma skin cancer. Sunburn doesn't have to be raw, peeling, or blistering. If your skin has gone pink or red in the sun, it's sunburned. Sunburn is caused by UV from the sun. You can't feel UV rays — the heat from the sun comes from infrared rays, which can't burn you. This is why people can still burn on cool days.

### Dysplastic (Nevi) Moles

Dysplastic or atypical moles are unusual, benign moles that may resemble melanoma. People who have them are at increased risk of developing single or multiple melanomas. The higher the number of these moles someone has, the higher the risk; those who have 10 or more have 12 times the risk of developing melanoma

compared to the general population. Dysplastic nevi are found significantly more often in melanoma patients than in the general population.

### Genetically Predisposed

A person with a primary family member that has been diagnosed with malignant melanoma — like a sibling, parent, or child — will have a 50% higher risk of developing a melanoma. Fair-skinned individuals with lighter skin, blond or red hair, and light eyes are at higher risk for all types of skin cancer. Individuals who "cannot tan" or have many freckles should avoid excessive sun exposure.

### Many (Nevi) Moles

Individuals with more than 51 to 100 moles on their body have 3.7 times the risk of developing melanoma than the general population. This is because melanoma often arises in existing moles and having numerous moles increases the risk. Individuals with more than 100 moles are at 7.6 times the risk of developing melanoma than the general population. Some gene mutations within tumors are being studied, and there is an indicator gene that can be tested, but this testing is not specific and is currently reserved for very high-risk individuals.

### Pregnant Women

Researchers estimate that nearly one-third of cases of melanoma are diagnosed in women during their childbearing years. Since many women now are delaying pregnancy until their 30s or 40s, coupled with the fact that melanoma is the most common form of cancer for young adults 25 to 29 years old, more women could be faced with developing melanoma before or during pregnancy. What's more, women diagnosed with melanoma during or shortly after pregnancy are significantly more likely to have tumors spread to other organs and tissues and are also much more likely to have the cancer recur after treatment, a recent study in the *Journal of the American Academy of Dermatology* found. Close monitoring for new or changing moles during pregnancy is very important.

### Men who Take Viagra

A study published in *JAMA Internal Medicine* found that men who used the erection-enhancing drug sildenafil (Viagra) were 84% more likely (almost twice as likely) to develop melanoma over a period of 10 years. The jury is out as to whether

this is a lifestyle correlation or a true effect of the drug.

### Parkinson's Disease

Individuals with this condition have a four-fold risk of being diagnosed with malignant melanoma. Studies are underway to elucidate why this is the case.

### Immunosuppressed/Stressed

Transplant patients are given drugs to suppress their immune system so that it will not attack the donated organ as a foreign invader; the drugs enable the body to accept the organ. Unfortunately, immune-suppressed people, including recipients of all major solid organs, have a much higher risk of skin cancers than people in the general population. Squamous cell carcinoma, the second most common skin cancer, is the most frequent problem, occurring 65 to 250 times more often in transplant patients, but melanoma also occurs six to eight times more frequently. Stress and illness can also depress the immune system and prevent it from effectively inhibiting the growth and spread of unwanted cells.

This is a sobering — and by no means comprehensive — summary of the factors that predispose us to skin cancer. It is a bit frightening, as it should be. We are fortunate to have control over some aspects of these risks. Remember that sun (UV) exposure is the main cause of skin cancer, and we can do something about it. Sunscreen and sun avoidance, as well as performing regular body self-exams, are important. We are empowered by the understanding of our risk factors. We should not let them ruin our peace of mind but use them in order to be proactive about our health. ■

*The statements in this article are for general informational purposes only and do not substitute for individual medical advice.*

