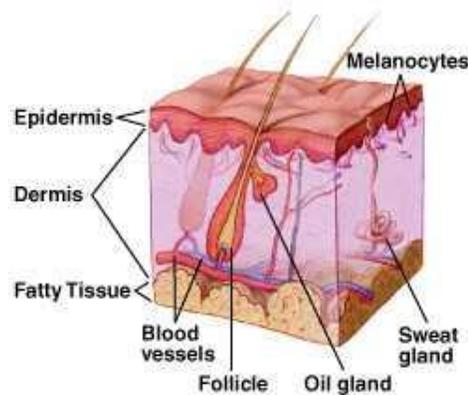


## May is National Melanoma/Skin Cancer Detection and Prevention Month

### What is Melanoma?

Melanoma is a type of skin cancer. It begins in the cells of the skin (melanocytes). To understand melanoma, it is helpful to know about the skin and about melanocytes—what they do, how they grow, and what happens when they become cancerous.



The **skin** is the body's largest organ. It protects against heat, sunlight, injury, and infection. It helps control body temperature, stores water and fat, and produces vitamin D. It has two main layers: the outer epidermis and the inner dermis.

The **epidermis** is mostly made up of flat, scale-like cells called squamous cells. Round cells called basal cells lie under the squamous cells in the epidermis. The lower part of the epidermis also contains melanocytes. The dermis contains blood vessels, lymph vessels, hair follicles, and glands. Some of these glands produce sweat, which helps control body temperature. Other glands produce oils that help keep the skin from drying out. Sweat and oils reach the skin's surface through tiny openings called pores.

**Melanocytes** produce melanin, the pigment that gives skin its natural color. When skin is exposed to the sun, melanocytes produce more pigment, causing the skin to tan, or darken. Sometimes, clusters of melanocytes and surrounding tissue form non-cancerous growths called moles or nevi. Moles are very common. Most people have between 10 and 40 moles. Moles may be pink, tan, brown, or a color that is very close to the person's normal skin tone. People who have dark skin tend to have dark moles. Moles can be flat or raised. They are usually round or oval and smaller than a pencil eraser. They may be present at birth or may appear later on—usually before age 40. They tend to fade away in older people. When moles are surgically removed, they normally do not return.

## What are the Key Statistics about Melanoma?

- Cancer of the skin is the most common of all cancers.
- More than 1 million cases of basal cell or squamous cell cancers occur every year. Most of these forms of skin cancer are curable.
- It is estimated that there will be about 108,420 new cases of skin cancer (excluding basal & squamous) in this country in 2020. 100,350 of these cases will be melanoma.
- About 7,230 people will die of melanoma this year.

## Who's at Risk for Melanoma?

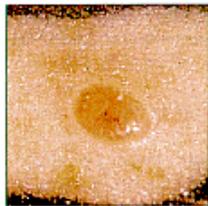
Research has shown that people with certain risk factors are more likely to develop melanoma. The risk factors for melanoma are:

- **Dysplastic nevi.** These are larger than normal moles that have irregular borders. They are usually flat but part of the mole is raised above the skin surface. The risk of melanoma is greatest for people who have a large number of dysplastic nevi. The risk is especially high for people with a family history of both dysplastic nevi and melanoma.
- **Many (more than 50) ordinary moles.** Having many moles increases the risk of developing melanoma.
- **Fair skin.** Melanoma occurs more frequently in people who have fair skin that burns or freckles easily (these people also usually have red or blond hair and blue eyes) than in people with dark skin.
- **Personal history of melanoma or skin cancer.** People who have been treated for melanoma have a high risk of a second melanoma. Some people develop more than two melanomas. People who had one or more of the common skin cancers are at increased risk of melanoma.
- **Family history of melanoma.** Melanoma sometimes runs in families. Having two or more close relatives who have had this disease is a risk factor. About 10 percent of all patients with melanoma have a family member with this disease. When melanoma runs in a family, all family members should have their skin checked regularly.
- **Weakened immune system.** People whose immune system is weakened by certain cancers, by drugs given following organ transplants, or by HIV are at an increased risk of developing melanoma.
- **Severe, blistering sunburns.** People who have had at least one blistering sunburn as a child or teenager are at increased risk of melanoma. Because of this, doctors advise that parents protect children's skin from the sun. Such protection may reduce the risk of melanoma later in life. Sunburns in adulthood are also a risk factor for melanoma.
- **Ultraviolet (UV) radiation.** Experts believe that much of the worldwide increase in melanoma is related to an increase in the amount of time people spend in the sun. This disease is also more common in people who live in areas that get large amounts of UV radiation from the sun. In the United States, for example, melanoma is more common in Texas than in Minnesota, where the sun

is not as strong. UV radiation from the sun causes premature aging of the skin and skin damage that can lead to melanoma.

Artificial sources of UV radiation, such as sunlamps and tanning booths, also can cause skin damage and increase the risk of melanoma. Doctors encourage people to limit their exposure to natural UV radiation and to avoid artificial sources.

## What are Signs and Symptoms of Melanoma?



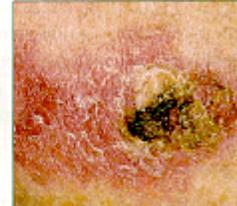
Small, smooth, shiny, pale, or waxy lump



Firm, red lump



A flat, red spot that is rough, dry or scaly



A lump that bleeds or develops a crust

Photos courtesy of NCI's Dermatology Branch

The most common warning sign of skin cancer is a change on the skin, especially a new growth or a sore that doesn't heal. Skin cancers don't all look the same. For example, the cancer may start as a small, smooth, shiny, pale, or waxy lump. It can also appear as a firm red lump. Sometimes, the lump bleeds or develops a crust. Skin cancer can also start as a flat, red spot that is rough, dry, or scaly. Both basal and squamous cell cancers are found mainly on areas of the skin that are exposed to the sun -- the head, face, neck, hands, and arms. However, skin cancer can occur anywhere. Actinic keratosis, which appears as rough, red or brown scaly patches on the skin, is known as a pre-cancerous condition because it sometimes develops into squamous cell cancer. Like skin cancer, it usually appears on sun-exposed areas but can be found elsewhere. Changes in the skin are not sure signs of cancer. It is important to see a doctor if any symptom lasts longer than 2 weeks. Don't wait for the area to hurt -- skin cancers seldom cause pain.

## Can Melanoma be Found Early?

The cure rate for skin cancer could be 100 percent if all skin cancers were brought to a doctor's attention before they had a chance to spread. Therefore, people should check themselves monthly for new growths or other changes in the skin. Any new, colored growths or any changes in growths that are already present should be reported to the doctor without delay. Also, people who have already had skin cancer should have regular exams so that the doctor can check the skin -- both the treated areas and other places where cancer may develop.

You can improve your chances of finding skin cancer early by performing a simple monthly skin self-exam. The best time to do this self-exam is after a shower or bath. You should check your skin in a well-lighted room using a full-length mirror and a hand-held mirror. It's best to begin by learning where your birthmarks, moles, and blemishes are and what they usually look like. Check for anything new -- a

change in the size, texture, or color of a mole, or a sore that does not heal. Check **all** areas, including the back, the scalp, between the buttocks, and the genital area:

- Look at the front and back of your body in the mirror, then raise your arms and look at the left and right sides.
- Bend your elbows and look carefully at your palms; forearms, including the undersides; and the upper arms.
- Examine the back and front of your legs. Also look between your buttocks and around your genital area.
- Sit and closely examine your feet, including the soles and the spaces between the toes.
- Look at your face, neck, and scalp. You may want to use a comb or a blow dryer to move hair so that you can see better.
- Most people's immune systems try to fight the cancer cells off. When a person's immune system tries to attack the melanoma, it sometimes attacks the normal skin cells called melanocytes, which are responsible for producing the pigment that makes our skin brown. When this happens, the person will develop white patches in their skin, called vitiligo. Sometimes vitiligo is a sign of an undiagnosed melanoma, so you should see a dermatologist if you have vitiligo.
- Suspicious moles or changing birthmarks should be evaluated

By checking your skin regularly, you will become familiar with what is normal. If you find anything unusual, see your doctor right away. Remember, the earlier skin cancer is found, the better the chance for cure.

## **Can Melanoma be Prevented?**

Below are some steps to help prevent and reduce the risk of melanoma caused by UV radiation:

- Avoid exposure to the midday sun (from 10 a.m. to 4 p.m.).
- Wear long sleeves, long pants, and a hat with a wide brim when outside.
- Protect yourself from UV rays that can penetrate light clothing, windshields, and windows.
- Protect yourself from UV rays reflected by sand, water, snow, and ice.
- Help protect your skin by using a lotion, cream, or gel that contains sunscreen. Many doctors believe sunscreens may help prevent melanoma, especially sunscreens that reflect, absorb, and/or scatter both types of UV rays. These sunscreen products will be labeled with "broad-spectrum coverage."
  - Sunscreens are rated in strength according to a sun protection factor (SPF). The higher the SPF, the more sunburn protection is provided. Sunscreens with a SPF value of 2 to 11 provide minimal protection against sunburns. Sunscreens with a SPF of 12 to 29 provide moderate protection. Those with a SPF of 30 or higher provide the most protection against sunburn. Make sure that the label states it blocks out both UVA and UVB rays. Both of these rays are harmful.
- Wear sunglasses that have UV-absorbing lenses. The label should specify that the lenses block at least 99 percent of UVA and UVB rays. Sunglasses can protect both the eyes and the skin around the eyes.

## **Cancer Prevention Trials at Rutgers Cancer Institute of New Jersey**

If you would like further information about clinical trials for preventing cancer, please call Rutgers Cancer Institute of New Jersey at 732-235-8675. For additional information about nationwide cancer prevention trials, you can call the National Cancer Institute at 1-800-4 CANCER or visit their Web site at [www.cancer.gov](http://www.cancer.gov).

## **Expert Advice from Rutgers Cancer Institute of New Jersey**

Dr. Janice Mehnert the Regional Phase I Clinical Program Director and a Medical Oncologist at the Cancer Institute of New Jersey. Here are her thoughts about melanoma:

“Expert consultation in skin cancers is a must. Be certain that your doctor has experience in the prevention and treatment of skin cancers. This is critical as new developments in clinical research are rapidly changing how these diseases are treated.”

### **Where Can I Find Further Information?**

The Resource and Learning Center

732-235-9639

[www.cinj.org/rlc](http://www.cinj.org/rlc)

Provides reliable, relevant and current information about all aspects of cancer.

The American Cancer Society

1-800-ACS-2345

[www.cancer.org](http://www.cancer.org)

American Institute for Cancer Research

1-800-843-8114

[www.aicr.org](http://www.aicr.org)

National Cancer Institute

1-800-4-CANCER

[www.cancer.gov](http://www.cancer.gov)

National Center for Chronic Disease Prevention and Health Promotion

800-232-4636

[www.cdc.gov/chronicdisease/index.htm](http://www.cdc.gov/chronicdisease/index.htm)

National Institute of Health

301-496-4000

[www.nih.gov](http://www.nih.gov)

The Melanoma Research Foundation

800-673-1290

[www.melanoma.org](http://www.melanoma.org)

Environmental Working Group

[ewg.org](http://ewg.org)



RLC website QR code. Scan with your smartphone or device.