

Common Moles, Dysplastic Nevi, and Risk of Melanoma

Key Points

- A common mole (nevus) is a small growth on the skin that is usually pink, tan, or brown and has a distinct edge. People who have more than 50 common moles have a greater chance than others of developing a dangerous type of skin cancer known as melanoma. Most common moles do not turn into melanoma.
- A dysplastic nevus is an unusual mole that is often large and flat and does not have a symmetric round or oval shape. The edge is often indistinct. It may have a mixture of pink, tan, or brown shades. People who have many dysplastic nevi have a greater chance than others of developing melanoma, but most dysplastic nevi do not turn into melanoma.
- If the color, size, shape, or height of a mole changes or if it starts to itch, bleed, or ooze, people should tell their doctor. People should also tell their doctor if they see a new mole that doesn't look like their other moles.
- The only way to diagnose melanoma is to remove tissue and check it for cancer cells.

1. What is a common mole?

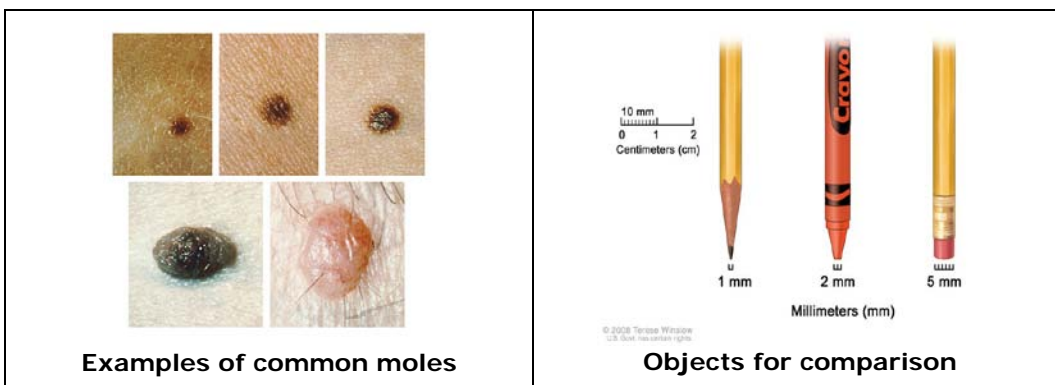
A common mole is a growth on the skin that develops when pigment cells (melanocytes) grow in clusters. Most adults have between 10 and 40 common moles. These growths are usually found above the waist on areas exposed to the sun. They are seldom found on the scalp, breast, or buttocks.

Although common moles may be present at birth, they usually appear later in childhood. Most people continue to develop new moles until about age 40. In older people, common moles tend to fade away.

Another name for a mole is a nevus. The plural is nevi.

2. What does a common mole look like?

A common mole is usually smaller than about 5 millimeters wide (about 1/4 inch, the width of a pencil eraser). It is round or oval, has a smooth surface with a distinct edge, and is often dome-shaped. A common mole usually has an even color of pink, tan, or brown. People who have dark skin or hair tend to have darker moles than people with fair skin or blonde hair. Several photos of common moles are shown here, and more photos are available on NCI's *What Does a Mole Look Like?* page at <http://www.cancer.gov/cancertopics/prevention/skin/molephotos/>.



The photos show common moles of different sizes. For example, the mole at the upper left is 1 millimeter in diameter (the width of the tip of a sharpened pencil), and the other moles in the upper row are 2 millimeters in diameter (the width of the tip of a new crayon). The moles in the second row are slightly larger (up to 5 millimeters in diameter, which is the width of a new pencil eraser). The colors in the photos range from brown to pink, but the individual moles have a relatively even color. All are round or oval with a distinct edge. The picture at the right shows the tips of a pencil, a crayon, and a pencil eraser for comparison.

3. Can a common mole turn into melanoma?

Yes, but a common mole rarely turns into melanoma, which is the most serious type of skin cancer. (See Questions 8 and 9 for a description of melanoma.)

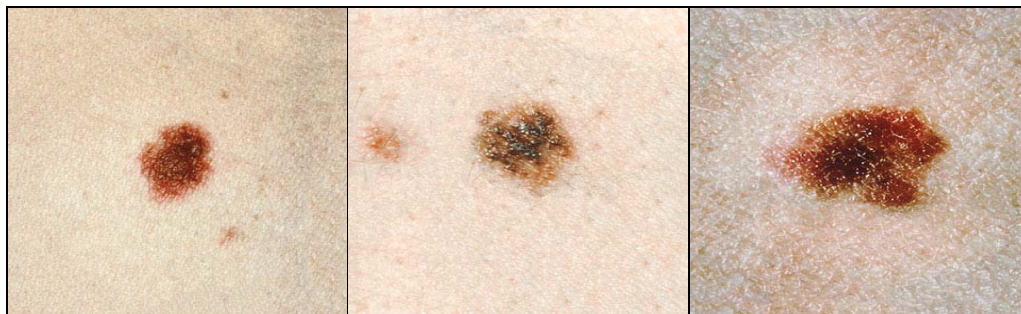
Although common moles are not cancerous, people who have more than 50 common moles have an increased chance of developing melanoma (1).

People should tell their doctor if they notice any of the following changes in a common mole (2):

- The color changes
- The mole gets unevenly smaller or bigger (unlike normal moles in children, which get evenly bigger)
- The mole changes in shape, texture, or height
- The skin on the surface becomes dry or scaly
- The mole becomes hard or feels lumpy
- It starts to itch
- It bleeds or oozes

4. What is a dysplastic nevus?

A dysplastic nevus is a type of mole that looks different from a common mole. (Some doctors use the term “atypical mole” to refer to a dysplastic nevus.) A dysplastic nevus may be bigger than a common mole, and its color, surface, and border may be different. It is usually more than 5 millimeters wide (1, 3). A dysplastic nevus can have a mixture of several colors, from pink to dark brown. Usually, it is flat with a smooth, slightly scaly, or pebbly surface, and it has an irregular edge that may fade into the surrounding skin. Some examples of dysplastic nevi are shown here. More examples are on NCI’s *What Does a Mole Look Like?* page at <http://www.cancer.gov/cancertopics/prevention/skin/molephotos/>.



Examples of dysplastic nevi

The dysplastic nevus in the photo at the left has a raised area at the center that doctors may call a “fried egg” appearance. The edge around the raised area has an irregular, indistinct border that is slightly pink. The mole in the photo in the middle is more than 5 millimeters in diameter. The raised surface is dark brown and has a pebbly texture. The edge around the raised area is tan and has an irregular and indistinct border, and the surface is flatter than it is in the center. The mole in the photo at the right is more than 10 millimeters wide (a little less than 1/2 inch). It has an irregular scalloped border that fades into the skin. The mixture of colors includes tan, brown, and pink.

A dysplastic nevus may occur anywhere on the body, but it is usually seen in areas exposed to the sun, such as on the back. A dysplastic nevus may also appear in areas not exposed to the sun, such as the scalp, breasts, and areas below the waist (1, 3). Some people have only a couple of dysplastic nevi, but other people have more than 10. People who have dysplastic nevi usually also have an increased number of common moles.

5. Can a dysplastic nevus turn into melanoma?

Yes, but most dysplastic nevi do not turn into melanoma (1, 3). Most remain stable over time. Researchers estimate that the chance of melanoma is about ten times greater for someone with more than five dysplastic nevi than for someone who has none, and the more dysplastic nevi a person has, the greater the chance of developing melanoma (1, 3).

6. What should people do if they have a dysplastic nevus?

Everyone should protect their skin from the sun and stay away from sunlamps and tanning booths, but for people who have dysplastic nevi, it is even more important to protect the skin and avoid getting a suntan or sunburn.

In addition, many doctors recommend that people with dysplastic nevi check their skin once a month (2, 4). People should tell their doctor if they see any of the following changes in a dysplastic nevus (2):

- The color changes
- It gets smaller or bigger
- It changes in shape, texture, or height
- The skin on the surface becomes dry or scaly
- It becomes hard or feels lumpy
- It starts to itch
- It bleeds or oozes

Question 12 describes how to examine the skin.

Another thing that people with dysplastic nevi should do is get their skin examined by a doctor (2, 4). Sometimes people or their doctors take photographs of dysplastic nevi so changes over time are easier to see (2). For people with many (more than five) dysplastic nevi, doctors may conduct a skin exam once or twice a year because of the moderately increased chance of melanoma. For people who also have a family history of melanoma, doctors may suggest a more frequent skin exam, such as every 3 to 6 months (3).

7. Should people have a doctor remove a dysplastic nevus or a common mole to prevent it from changing into melanoma?

No. Normally, people do not need to have a dysplastic nevus or common mole removed. One reason is that very few dysplastic nevi or common moles turn into melanoma (1, 3). Another reason is that even removing all of the moles on the skin would not prevent the development of melanoma because melanoma can develop as a new colored area on the skin (2). That is why doctors usually remove only a mole that changes or a new colored area on the skin.

8. What is melanoma?

Melanoma is a type of skin cancer that begins in melanocytes. It is potentially dangerous because it can invade nearby tissues and spread to other parts of the body, such as the lung, liver, bone, or brain. The earlier that melanoma is detected and removed, the more likely that treatment will be successful.

Most melanocytes are in the skin, and melanoma can occur on any skin surface. It can develop from a common mole or dysplastic nevus, and it can also develop in an area of apparently normal skin. In addition, melanoma can also develop in the eye, the digestive tract, and other areas of the body.

When melanoma develops in men, it is often found on the head, neck, or back. When melanoma develops in women, it is often found on the back or on the lower legs.

People with dark skin are much less likely than people with fair skin to develop melanoma. When it does develop in people with dark skin, it is often found under the fingernails, under the toenails, on the palms of the hands, or on the soles of the feet.

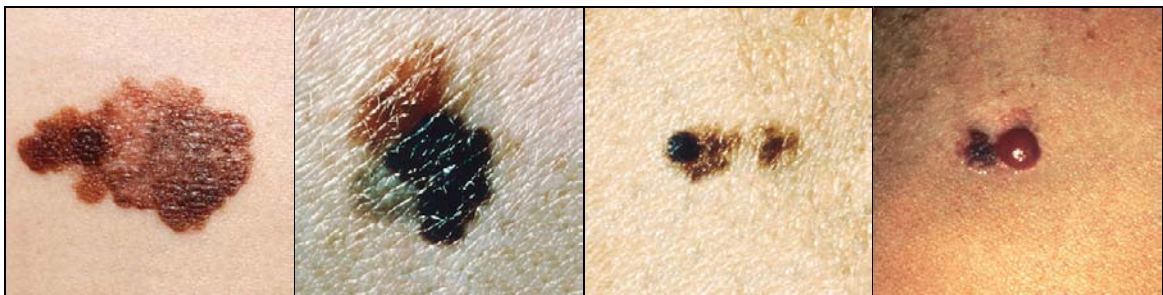
9. What does melanoma look like?

Often the first sign of melanoma is a change in the shape, color, size, or feel of an existing mole. Melanoma may also appear as a new colored area on the skin.

The “ABCDE” rule describes the features of early melanoma (2, 5):

- **Asymmetry.** The shape of one half does not match the other half.
- **Border that is irregular.** The edges are often ragged, notched, or blurred in outline. The pigment may spread into the surrounding skin.
- **Color that is uneven.** Shades of black, brown, and tan may be present. Areas of white, gray, red, pink, or blue may also be seen.
- **Diameter.** There is a change in size, usually an increase. Melanomas can be tiny, but most are larger than 6 millimeters wide (about 1/4 inch wide).
- **Evolving.** The mole has changed over the past few weeks or months.

Melanomas can vary greatly in how they look. Many show all of the ABCDE features. However, some may show only one or two of the ABCDE features (5). Several photos of melanomas are shown here. More photos are on NCI’s *What Does Melanoma Look Like?* page at <http://www.cancer.gov/cancertopics/prevention/skin/melanomaphotos>.



Examples of melanoma

The first photo (far left) shows an uneven (asymmetric) melanoma with an irregular but distinct border. The color varies from pink-tan to dark brown. The melanoma is more than 20 millimeters wide (about the size of a postage stamp). The second photo shows a blue-black melanoma that has irregular and scalloped borders. It has arisen from a dysplastic nevus (the pink-tan region at the upper left). The melanoma is about 12 millimeters wide (nearly 1/2 inch). The third photo shows a dysplastic nevus with a black bump that was not there 18 months earlier. The black bump is a melanoma that is about 3 millimeters wide (about 1/8 inch). The fourth photo shows a melanoma with three parts—a dark brown or black area on the left, a red bump on the right, and an area that is lighter than the skin at the top. The top border is blurred. The melanoma is about 15 millimeters wide, or about as wide as a tube of lip balm.

In advanced melanoma, the texture of the mole may change. The skin on the surface may break down and look scraped. It may become hard or lumpy. The surface may ooze or bleed. Sometimes the melanoma is itchy, tender, or painful.

10. How is melanoma diagnosed?

The only way to diagnose melanoma is to remove tissue and check it for cancer cells. The doctor will remove all or part of the skin that looks abnormal. Usually, this procedure takes only a few minutes and can be done in a doctor’s office, clinic, or hospital. The sample will be sent to a lab and a pathologist will look at the tissue under a microscope to check for melanoma.

11. What are the differences between a common mole, a dysplastic nevus, and a melanoma?

A common mole, a dysplastic nevus, and a melanoma vary by size, color, shape, and surface texture. The table below displays some differences between moles and cancer. Another important difference is that a common mole or dysplastic nevus will not return after it is removed by a full excisional biopsy from the skin, but melanoma sometimes grows back. Also, melanoma can spread to other parts of the body.

| Questions | Common Mole (Nevus) | Dysplastic Nevus | Melanoma |
|------------------------------|---|--|---|
| Is it cancer? | Not cancer. (Common moles rarely become cancer.) | Not cancer. (Most do not become cancer, but a dysplastic nevus is more likely than a common mole to become cancer.) | Cancer. |
| How common? | Most American adults—about 300 million people—have common moles. | About 1 in 10 American adults—about 30 million people—have at least one dysplastic nevus (3, 4, 6, 7). | Every year, about 2 in 10,000 Americans—more than 70,000 people—develop melanoma. More than 800,000 Americans alive today have been diagnosed with melanoma of the skin (8, 9). |
| How big? | Usually less than 5 millimeters wide or about ¼ inch (not as wide as a new pencil eraser). | Often wider than 5 millimeters (wider than a new pencil eraser). | Usually wider than 6 millimeters (wider than a new pencil eraser). |
| What color? | <ul style="list-style-type: none"> Usually has an even color. May be pink, tan, brown, black (in deeply pigmented individuals), or a color that is very close to a person’s normal skin tone. | <ul style="list-style-type: none"> May have a mixture of tan, brown, and red or pink shades. | <ul style="list-style-type: none"> Usually has an uneven color. May have shades of black, brown, and tan. May also have areas of white, gray, red, pink, or blue. |
| What shape? | <ul style="list-style-type: none"> Is usually round or oval. Has a distinct edge that separates it from the rest of the skin. | <ul style="list-style-type: none"> Has an irregular, sometimes notched edge. May fade into the rest of the skin (borders are not easy to see). | <ul style="list-style-type: none"> Often has an irregular shape that is asymmetrical (the shape of one half does not match the other half). Has ragged, notched, or blurred edges. May fade into the rest of the skin. |
| What surface texture? | <ul style="list-style-type: none"> Begins as a flat, smooth spot on the skin. May become raised and form a smooth bump. | <ul style="list-style-type: none"> May have a smooth, slightly scaly, or rough, irregular, and pebbly appearance. | <ul style="list-style-type: none"> May break down and look scraped. May become hard or lumpy. May ooze or bleed. |

12. How can people check their skin for melanoma?

The steps for doing a skin self-exam are on NCI's *How to Check Your Skin for Skin Cancer* page at <http://www.cancer.gov/cancertopics/prevention/skin/selfexam>. Doctors suggest that people check the skin on all surfaces of the body for a change in a mole or for a new colored area on the skin. In addition to suggesting self-exams, a doctor may want to check the person's skin every 3 months, every 6 months, every year, or on some other schedule depending on a person's chance of developing melanoma (see Question 14 about the factors that increase the chance of melanoma) (3, 5).

13. What should people do if a mole changes, or they find a new mole or some other change on their skin?

People should tell their doctor if they find a new mole or a change in an existing mole. A family doctor may refer people with an unusual mole or other concerns about their skin to a dermatologist. A dermatologist is a doctor who specializes in diseases of the skin. Also, some plastic surgeons, general surgeons, internists, cancer specialists, and family doctors have special training in moles and melanoma.

14. What factors increase the chance of melanoma?

People with the following risk factors have an increased chance of melanoma (1):

- **Having a dysplastic nevus** (see Questions 4–7)
- **Having more than 50 common moles** (see Question 3)
- **Sunlight:** Sunlight is a source of UV radiation, which causes skin damage that can lead to melanoma and other skin cancers.
 - **Severe, blistering sunburns:** People who have had at least one severe, blistering sunburn have an increased chance of melanoma. Although people who burn easily are more likely to have had sunburns as a child, sunburns during adulthood also increase the chance of melanoma.
 - **Lifetime sun exposure:** The greater the total amount of sun exposure over a lifetime, the greater the chance of melanoma.
 - **Tanning:** Although having skin that tans well lowers the risk of sunburn, even people who tan well without sunburning increase their chance of melanoma by spending time in the sun without protection.

Sunlight can be reflected by sand, water, snow, ice, and pavement. The sun's rays can get through clouds, windshields, windows, and light clothing.

In the United States, skin cancer is more common where the sun is strong. For example, a larger proportion of people in Texas than Minnesota get skin cancer. Also, the sun is strong at higher elevations, such as in the mountains.

Question 15 lists ways for people to protect their skin from the sun.

- **Sunlamps and tanning booths:** UV radiation from artificial sources, such as sunlamps and tanning booths, can cause skin damage and melanoma. Health care providers strongly encourage people, especially young people, to avoid using sunlamps and tanning booths. The risk of skin cancer is greatly increased by using sunlamps and tanning booths before age 30.
- **Personal history:** People who have had melanoma have an increased risk of developing other melanomas.
- **Family history:** Melanoma sometimes runs in families. People who have two or more close relatives (mother, father, sister, brother, or child) with melanoma have an increased chance of melanoma. In rare cases, members of a family will have an inherited disorder, such as xeroderma pigmentosum, that makes the skin extremely sensitive to the sun and greatly increases the chance of melanoma.
- **Skin that burns easily:** People who have fair (pale) skin that burns easily in the sun, blue or gray eyes, red or blond hair, or many freckles have an increased chance of melanoma.

- **Certain medical conditions or medicines:** Medical conditions or medicines (such as some antibiotics, hormones, or antidepressants) that make skin more sensitive to the sun or that suppress the immune system increase the chance of melanoma.

15. How can people protect their skin from the sun?

People can protect their skin from the sun by following the tips on NCI's *How to Protect Your Skin from Sunlight* page at <http://www.cancer.gov/cancertopics/prevention/skin/suntips>. The best way to prevent melanoma is to limit exposure to sunlight. Having a suntan or sunburn means that the skin has been damaged by the sun, and continued tanning or burning increases the chance of developing melanoma.

Selected References

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Related NCI materials and Web pages:

- *Anyone Can Get Skin Cancer*
(<http://www.cancer.gov/cancertopics/prevention/skin/anyone-can-get-skin-cancer>)
- *How to Check Your Skin for Skin Cancer*
(<http://www.cancer.gov/cancertopics/prevention/skin/selfexam>)
- *How to Protect Your Skin from Sunlight*
(<http://www.cancer.gov/cancertopics/prevention/skin/suntips>)
- *What Does a Mole Look Like?*
(<http://www.cancer.gov/cancertopics/prevention/skin/molephotos>)
- *What Does Melanoma Look Like?*
(<http://www.cancer.gov/cancertopics/prevention/skin/melanomaphotos>)

- *What You Need To Know About™ Melanoma and Other Skin Cancers*
(<http://www.cancer.gov/cancertopics/wyntk/skin>)
- Melanoma Home Page
(<http://www.cancer.gov/cancertopics/types/melanoma>)
- Skin Cancer Home Page
(<http://www.cancer.gov/cancertopics/types/skin>)
- Genetics of Skin Cancer (PDQ®)
(<http://www.cancer.gov/cancertopics/pdq/genetics/skin/HealthProfessional>)

How can we help?

We offer comprehensive research-based information for patients and their families, health professionals, cancer researchers, advocates, and the public.

- **Call** NCI's Cancer Information Service at 1-800-4-CANCER (1-800-422-6237)
- **Visit** us at <http://www.cancer.gov> or <http://www.cancer.gov/espanol>
- **Chat** using LiveHelp, NCI's instant messaging service, at <http://www.cancer.gov/livehelp>
- **E-mail** us at cancergovstaff@mail.nih.gov
- **Order** publications at <http://www.cancer.gov/publications> or by calling 1-800-4-CANCER
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