



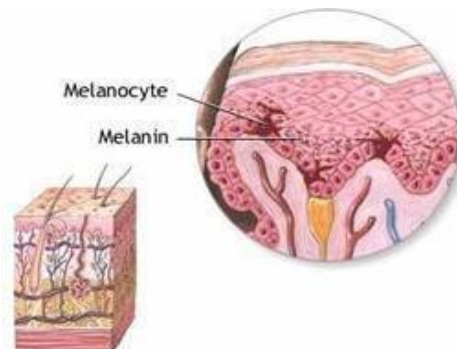
## CAMPAIGN FOR PREVENTION OF SKIN CANCER – MELANOMA

### What is melanoma?

Melanoma is the most serious and most malignant type of skin and mucosal cancer. It spreads very quickly through the lymphatic system and bloodstream to other parts of the body, making treatment more difficult, and the outcome can even be fatal. It may also appear in other locations of the body.

Melanoma originates from melanocytes, the cells that produce melanin — the pigment that gives color to the skin, hair, and eyes. In the skin, melanocytes are located between the basal cells, on the basement membrane, where they produce protective melanin.

Most melanomas are brown or black in color, but sometimes they may be skin-colored, red, pinkish, blue, or white.



Melanomas most commonly develop from pre-existing moles, and less frequently arise directly from the skin. There is also a risk of melanoma developing from so-called common moles if they are repeatedly traumatized, especially when located in areas constantly exposed to friction (bra straps, buttons, belts, clothing edges, during shaving, etc.). There are four subtypes of melanoma: superficial spreading melanoma, nodular melanoma, lentigo maligna melanoma, and acral lentiginous melanoma.

Melanoma can appear on any part of the body, both on areas constantly exposed to the sun and on areas protected by clothing. In men, melanoma most commonly appears on the trunk, while in women it most often occurs on the back and legs. The subtype of the malignancy may influence where the tumor develops: lentigo maligna melanoma is more common on the face, while acral lentiginous melanoma is more common on the palms, soles, or under the nails.



## Prevalence of Melanoma

The number of people diagnosed with melanoma is constantly increasing, and it is one of the cancers with the fastest growth in recent years. The annual increase in the number of cases is 4–5%, which means that the number of affected individuals doubles every 10–15 years.

In Europe, 10–15 people per 100,000 inhabitants are diagnosed with melanoma each year. During the last five years, melanoma has been among the most common malignant diseases. Men are affected more often than women; however, among people under the age of 50, the incidence rate is higher in women than in men. Numerous studies show that women diagnosed with melanoma have a better survival rate than men. The most likely reason is that women pay greater attention to their appearance, notice skin changes earlier, and seek medical attention sooner. From this, it can be concluded that early detection of melanoma is the key factor for a good prognosis.

Melanoma most commonly develops in people in their fifties, except for lentigo maligna melanoma — a type of melanoma that mainly occurs in the seventh decade of life, most often on skin that has been exposed to the sun for long periods (face, hands). In recent years, melanoma has increasingly appeared in younger people between the ages of 25 and 44, while it is very rare during puberty.

Melanoma mainly occurs in the white population, whereas it is quite rare among black and Asian populations. It is most widespread in Australia and in countries with high levels of sun exposure.

People who have had melanoma are at greater risk of developing another primary melanoma compared to the general population. Likewise, individuals who have previously had another malignant skin tumor have a higher likelihood of developing melanoma.

In the Republic of Macedonia, in 2023, the total number of newly diagnosed melanoma cases was 49, with an incidence rate of 2.7 per 100,000 inhabitants. Of these, 27 were men, with an incidence rate of 3.0 per 100,000 men, while 22 were women, with an incidence rate of 2.4 per 100,000 women. In 2024, 28 people died from melanoma, with a mortality rate of 1.5 per 100,000 inhabitants. Of these, 16 were men and 12 were women. The mortality rate among men was 1.8 per 100,000 men, while among women it was 1.3 per 100,000 women.

## Sun Exposure

Although there are numerous risk factors, skin cancer is usually caused by ultraviolet (UV) rays from the sun. Excessive exposure to this radiation is the most common cause of all forms of skin cancer.

Two main types of UV rays that we are exposed to penetrate the skin at different depths. Limited exposure to sunlight is beneficial for everyone. UV-B rays stimulate the production of vitamin D3, which is important for good health, proper growth, and strong bones. However, only a small amount of daily sun exposure is necessary.

Excessive exposure to sunlight begins to damage the DNA and tissue of the skin. In the best-case scenario, this causes premature aging and wrinkles. In the worst-case scenario, it leads to permanent skin damage and eventually to skin cancer.

While, on the one hand, the sun makes us feel good (hence the popularity of sunbathing), on the other hand, the damage caused by the sun to the skin and body outweighs the short-term benefits such as improved mood.

Skin damage caused by the sun is permanent. Although sunburn may fade, the major skin changes remain. Each subsequent period of prolonged exposure causes additional damage to the already weakened local immune system and the genetic material of the skin.

There are three main types of UV rays from the sun. The most dangerous, UV-C rays, are completely absorbed by the ozone layer. The other two types, UV-A and UV-B rays, have different effects on the human body.

### UV Index

The UV Index is an international scientific measure of the level of ultraviolet radiation from the sun. It is used to describe the strength of the sun at a specific place and time. The index ranges from 1 to 11. The higher the level, the greater the risk of skin damage.



Source: World Health Organisation

### Who Is at Risk?

Risk factors for developing melanoma:

- excessive (uncontrolled) exposure to sunlight (through profession or hobbies)
- skin pigmentation, especially people with fair skin

- adults over 50 years of age
- people with more than 50 moles
- family history of melanoma
- personal history of melanoma
- sunburns
- intense sun exposure over a short period of time (during vacations), or “weekend” sunbathing
- use of tanning beds (solariums)
- radiation therapy
- weakened immune system: due to chemotherapy, after organ transplantation, or in people with HIV/AIDS

### How to Recognize the Danger and What Signs to Watch For

The risk of developing skin cancer is often related to genetics. All individuals who are aware of cases of skin cancer in their family and who have a skin type associated with a higher risk should take precautionary measures and undergo a dermatological examination once a year. Melanoma is often not recognized at first glance because it is difficult to distinguish from ordinary moles or other benign tumors.

	Младеж	Малигни меланом
<b>A</b> symmetry/асиметрија Каква е формата?	Во круг и симетрична	Асиметрична
<b>B</b> order/рабови Вид на работ?	Правилен и рамен	Неправилен и назабен
<b>C</b> olor/боја Колку бои има?	Една	Повеќе: од светло смеѓа до црна боја
<b>D</b> imension/дијаметар Колкава е големината?	Мала (<6 mm)	Голема (>6 mm)
<b>E</b> volution/развој Дали неодамна сте забележале промени согласно со горенаведените критериуми?	Промена во големина, боја и дебелина	

For the early diagnosis of melanoma, the A-B-C-D-E rule is used. A skin change is considered suspicious if it is asymmetrical (A), has irregular borders (B), changes color (C), or has a diameter greater than 6 mm (D). Evolution (E), also referred to as elevation, includes changes in color, size, shape, surface, elevation, and symptoms such as itching or bleeding, which are major signs of malignancy. In addition, the appearance of new skin changes on healthy skin in people over the age of 40 is considered suspicious, and in such cases a dermatologist should be consulted.

## Prevent Skin Cancer

Skin cancer can be prevented because it is visible, can be detected early, and its main risk factor — exposure to UV rays — can be reduced through safer behavior in the sun.

Wearing protective clothing, avoiding direct sun exposure between 11 a.m. and 4 p.m. during the summer (when UV radiation reaches its peak), staying in the shade, and regularly applying sunscreen are the main recommended measures for protection against UV rays.

People with blue eyes, red or blonde hair, freckles, and fair skin that burns easily in the sun are at the highest risk of developing skin cancer.

Special attention should be given to protecting children, because excessive sun exposure during childhood increases the lifetime risk of skin cancer.

**Primary prevention** means preventing the occurrence of the disease and mainly consists of limiting exposure to UV rays.

There are different types of sun exposure:

1. **Incidental sun exposure** – time spent outdoors on sunny days during routine daily activities.
2. **Recreational sun exposure** – time spent enjoying recreational or sports activities in the sun.
3. **Occupational sun exposure** – time spent working outdoors (farmers, fishermen, guards, postal workers, maintenance workers, etc.).
4. **Intentional sun exposure** – time spent outdoors with the purpose of getting a darker tan.

**Secondary prevention** means detecting skin cancer at its earliest stage, when it can be successfully treated. This includes regular self-examinations, awareness of personal risk factors, and regular visits to a dermatologist for skin examinations.

## Protecting the Skin

You cannot influence genetically determined risk factors for melanoma, such as fair skin, numerous moles, or a family history of melanoma. However, the risk of developing melanoma can be significantly reduced by following these basic rules:

### Sun exposure

You should definitely avoid sudden, intense, and direct exposure to the sun. The main goal is to prevent sunburn, i.e., redness of the skin after sun exposure. The most harmful sunburns are those that cause blisters or pain lasting at least 48 hours after exposure. Therefore, it is important to avoid prolonged direct exposure to sunlight, especially between 11 a.m. and 4 p.m.

### Sunscreen

Sunscreen should have the highest sun protection factor and provide equal protection against both UVA and UVB rays (only sunscreens with higher quality offer UVA protection). Sunscreen starts

working about 30 minutes after application and lasts for 2 to 3 hours. Therefore, apply it half an hour before going into the sun and reapply every two hours.

### Shade / temperature

Even in the shade, you can get sunburned due to reflected UV rays unless you use additional sun protection. It is important to remember reflection from surfaces such as snow, water, sand, concrete, and grass, as well as the fact that UV rays can penetrate clouds. Protective measures should also be used on cloudy days. UV rays do not produce a feeling of heat, so wind can create a false sense of safety during sun exposure.

### Clothing

Clothing provides the best protection against intense sunlight. Long-sleeved shirts are better than sleeveless clothing. Light-colored clothes provide better protection than dark-colored ones. The material should preferably be tightly woven. Wear a wide-brimmed hat and sunglasses that provide 99–100% protection against UVA and UVB rays. For children, choose clothing that offers proper sun protection.

### Cosmetics and medications

Certain medications increase sensitivity to light. This should be discussed with a doctor or pharmacist before sun exposure. Deodorants, cosmetics, and perfumes can cause unpleasant sun reactions or permanent pigmentation. Therefore, using such products should be avoided before sun exposure.

### Teenagers

It is a fact that teenagers are under pressure to look a certain way. Although they are often aware of the dangers of tanning, many teenagers use tanning beds to achieve a darker skin tone, exposing themselves to harmful UV radiation that can be up to 15 times stronger than sunlight.

Instead of tanning beds, self-tanning creams can be used as an alternative. This way, they can achieve the desired darker skin tone without exposure to dangerous UV rays.

Try to make sunscreen application part of their daily routine and keep bottles easily accessible at home or in their bag.

It is not easy to always get teenagers to wear hats or cover up when outdoors. The best strategy, if possible, is to let them choose their own clothing. Wearing sunglasses is usually not a problem, but encourage them to choose ones with proper UV protection.

### Babies and Children

The risk of developing skin cancer is established during childhood and early years of life.

Just one sunburn during childhood more than doubles the chance of developing melanoma later in life.

For babies and young children, the best approach is simply to keep them out of the sun. If this is not possible, try to ensure that the child is outdoors only when the sun is weaker, early in the morning or late in the afternoon.

Children and young people should use waterproof sunscreen with a sun protection factor of at least 30, which provides protection against both UVA and UVB rays. When outdoors in the sun, they should wear a T-shirt, a sun hat, and high-quality sunglasses with UV protection.

It is important to teach children from an early age how to behave properly when exposed to the sun.

### Recognize Your Skin Type

Your skin type is determined by different characteristics such as hair color and skin tone. There are four different skin types:

#### Skin Type 1:

- Very fair skin, often with freckles
- Blonde or red hair
- Blue or green eyes
- Extremely sensitive to the sun, always burns and never tans

#### Skin Type 2:

- Fair skin, slightly darker than type 1
- Blonde to dark blonde hair
- Blue eyes
- Also sensitive to the sun, tans slowly and is prone to sunburn

#### Skin Type 3:

- Medium skin tone
- Dark blonde to brown hair
- Various eye colors
- Slightly sensitive to the sun, tans easily and quickly, and the tan lasts longer

#### Skin Type 4:

- Light brown skin
- Dark brown or black hair
- Dark eyes
- Strong skin, tans quickly and deeply, and the tan lasts a long time

### Skin Self-Examination

Perform a self-examination of your skin once a month using a mirror.

Your check should cover the entire body, front and back, with special attention to sun-exposed areas.

Remember, sometimes symptoms of skin cancer are easier to feel than to see. Run your hands over your entire body to check for any changes.



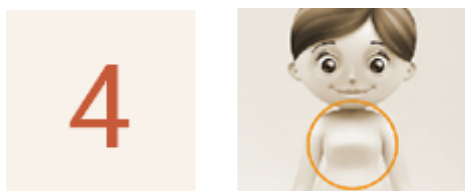
Examine your face, including the nose, lips, oral cavity, and ears.



Check the scalp, using a comb to part the hair into sections. If you do not have much hair, make sure to carefully examine the entire scalp.



Inspect the palms, both front and back, between the fingers, and the nails.



Then focus on the neck, abdomen, and chest (women should carefully examine the area under the breasts).



Raise your arm to check the upper arm and armpits.



Using a small mirror in front of a larger mirror, examine the back of the neck, shoulders, back, and the back of the thighs.



Check the buttocks and the back of the legs. Finish by examining the feet.

### Next Steps

If you notice a suspicious lesion, it is important that it is examined by a doctor, preferably a dermatologist, as soon as possible.

Skin cancer can be treated, and early diagnosis greatly increases the chances of full recovery. When treatment is delayed, the condition worsens and in some cases can lead to deformities, complications, and even death.

Do not allow postponing a doctor's visit to reduce your chances of a positive outcome.

### Golden rules:

- Do not ignore it, hoping it will go away.
- Do not wait to see how it develops or try to treat it yourself. Do not assume it is not serious.

- Do not think it is not a priority.
- And above all, do not be afraid to visit your doctor or dermatologist.