

Skin cancer - risk factors

Anyone can develop skin cancer, but risk factors include skin type, having moles and freckles, sun exposure and solarium use. Australia has one of the highest rates of skin cancer in the world. Two in three Australians will develop some form of skin cancer before they reach the age of 70 and over 1,800 people die each year. Yet skin cancer is one of Australia's most preventable cancers.

Protecting your skin can help reduce your risk of skin cancer. A healthy amount of ultraviolet (UV) radiation from the sun is important for vitamin D, but too much UV can cause sunburn, skin and eye damage.

Every additional decade of high sun exposure or solarium use further increases the risk of melanoma (a form of skin cancer). By reducing recreational sun exposure at any age, the risk of melanoma is reduced.

Family history and hereditary factors also play an important part in your risk of developing skin cancer.

Skin cancer in Victoria

In Victoria, the rate of skin cancer continues to increase due to many years of us doing little to protect our skin. In the past, we did not know the importance of covering up or using sunscreen. As a result, many people are now developing skin cancers.

Over the past 30 years, skin cancer control programs like the SunSmart program have educated us about the importance of sun protection at any age and the need to check our skin regularly.

While the incidence of melanoma continues to rise, the rate at which this is increasing has slowed, particularly in younger age groups. Those who have been exposed to skin cancer control programs for a greater portion of their life are benefiting the most from lower rates of death (reduced morbidity) from melanoma.

Australians are exposed to more UV

UV radiation levels in Australia are higher than in Europe. During summer, the earth's orbit brings Australia closer to the sun than Europe during its summer, resulting in an additional seven per cent solar UV intensity. Combined with our clearer atmospheric conditions and some differences in ozone level, we are exposed to some of the strongest UV levels in the world.

UV radiation, tanning and sunburn

Skin cells in the top layer of skin (epidermis) produce a pigment called melanin that gives skin its natural colour. When skin is exposed to UV radiation, more melanin is produced, causing the skin to darken. This is what we call a 'tan'. A tan is a sign that the skin is getting UV radiation damage. It is not a sign of good health but rather of skin cells in trauma.

Tanning can contribute to DNA damage, premature skin ageing and skin cancer. Every time skin is exposed to the sun or a solarium, the total lifetime dose of UV radiation is increased. Over time, this damage adds up, even when no sunburn is experienced.

All types of sunburn, whether serious or mild, can cause permanent and irreversible skin damage and can lay the groundwork for skin cancer to develop later in life.

Hereditary factors are important

Family history and hereditary factors (particularly within your immediate family) play an important part in your risk of developing skin cancer. This is demonstrated by the increased incidence of skin cancer among Caucasians. If one or both of your parents have had a skin cancer, you could be at risk, especially as you are likely to have the same skin type as them.

In a rare inherited condition, people with xeroderma pigmentosum have a defect in their enzyme system, which is responsible for the repair of UV-damaged DNA. As a result, they develop signs of sun damage while very young and usually develop skin cancer before they turn ten.

Skin type

People with fair skin are at higher risk than people with naturally dark skin. Skin type is genetic. If your parents have fair skin, you will too and you will have a greater risk of skin damage due to exposure to the sun. Parents with fair skin should educate their children about the importance of sun protection and encourage them to develop good sun protection habits from an early age. This is the best way to help reduce their risk of skin damage and skin cancer in later life.

The melanin in naturally dark skin offers some protection against the damaging effects of UV radiation and the risk of skin cancer is lower. However, when skin cancer is detected in people with naturally dark skin, it is often found at a later, more dangerous stage when the risk of death is much higher. It is recommended that everyone check their skin regularly, at least every three months. Eye damage can occur regardless of skin type.

Moles and freckles

Most people have moles and freckles. However, if you have a great number of freckles or moles, you are at higher risk of skin cancer.

Moles or freckles that grow, change shape or colour, bleed or ulcerate, or any new spots that appear should be treated with suspicion. Have your doctor check out any unusual changes to your skin as soon as possible.

Solariums

Solariums tan the skin by radiating it with both UVA and UVB radiation, which are known to be dangerous to the skin. UV radiation from a solarium is also more intense than natural sunlight, giving out radiation up to three times as strong as the midday summer sun. Research shows that people who use a solarium before the age of 35 have a 75 per cent greater risk of melanoma than those who don't use a solarium.

In 2009, the International Agency for Research on Cancer (IARC) listed ultraviolet-emitting tanning beds in its highest cancer risk category and labelled them as 'carcinogenic to humans'.

Reducing your skin cancer risk

There is not much you can do about your hereditary risk factors, but you can take steps to reduce your risk of skin cancer from UV radiation and sun exposure.

Use a combination of the five sun protection measures to reduce your risk:

- **Slip** – on sun-protective clothing. Make sure it covers as much skin as possible.
- **Slop** – on SPF (sun protection factor) 30+ broad spectrum sunscreen. Reapply it every two hours or more frequently if swimming or perspiring.
- **Slap** – on a hat that protects your face, head, neck and ears.
- **Seek** – shade.
- **Slide** – on sunglasses. Make sure they meet Australian Standard AS1067.

Sun protection is needed whenever the UV Index reaches 3 and above. Above this level, UV radiation can damage your skin. Winter activities such as snow skiing or snowboarding also pose a high risk of skin damage and sunburn. UV radiation is more intense at high altitude than at sea level. This is because the air is clearer and there is less atmosphere to absorb harmful UV rays.

UV and vitamin D – a healthy balance

A balance of ultraviolet radiation exposure is important for health. Too much UV from the sun can cause skin and eye damage. Too little UV from the sun can lead to low vitamin D levels. Vitamin D is important to regulate calcium levels in the blood. It is also necessary for the development and maintenance of healthy bones, muscles and teeth.

To see what the forecast UV levels are for the day and when sun protection is needed, look for the SunSmart UV Alert in the weather section of your daily newspaper. You can also visit the Australian Bureau of Meteorology website or the SunSmart website. There is a SunSmart UV Alert for over 200 cities across Australia.

Where to get help

- Where to get help
- SunSmart
- The Cancer Council of Victoria Information and Support Line Tel. 13 11 20
- Multilingual Cancer Information Line, Victoria Tel. (03) 9209 0169
- Your doctor
- Your local community health centre.

Things to remember

- Australia has one of the highest rates of skin cancer in the world.
- Everyone, no matter what their skin type, is at risk of sun damage and skin cancer.
- Check your skin regularly and see your doctor if you have any unusual spots.
- Overexposure to the sun can cause skin damage that may lead to skin cancer. It's important to balance protecting yourself from skin cancer and getting enough sun to produce vitamin D.

This page has been produced in consultation with, and approved by:

SunSmart

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