

Health & Fitness Tips

Skin Cancer

- Rebecca Codey - RAAFsafe - Spring 2008

With much of Australia's population beginning to shake off the confines of winter and rediscover the joys of an outdoor lifestyle, we thought it timely to take another look at skin cancer — the most common form of cancer in Australia, with 400,000 people diagnosed each year — and how we can give ourselves a fighting chance.



Our “national cancer”, receives its fair share of media attention, so you may think you’ve heard it all before, that you know everything there is to know about skin cancer, or frighteningly, that it’s too late after decades spent outdoors, unprotected from the sun’s harsh rays. Think again.

The renowned “slip slop slap” campaign of the ’80s may have had a dramatic impact on our sun protection attitudes and behaviours, but has it resulted in a highly-educated public, religiously practicing sun-safety to combat this preventable disease?

In Australia in 2003, skin cancer caused more than 1500 deaths; and each year, Australians are four times more likely to develop skin cancer than any other form of cancer, according to Australian Institute of Health and Welfare & Australasian Association of Cancer Registries (2007) *Cancer in Australia: An overview 2006*.

Current Government-sponsored sun protection media campaigns highlight the dangers of cumulative sun damage through everyday activities and social events; and the need to protect yourself in five ways, with a hat, clothing, shade, sunglasses and sunscreen.

The advertising campaigns over the years — and the sad stories of those who succumbed to the disease — have worked on me. I’m a stickler for sun safety. When it comes to sunscreen, anyone standing still in our house is lathered with the oily stuff before venturing outside, hat ... the wider the brim the better ... the list goes on.

I admit that, having researched the subject for this feature, I’m relieved that I’ve taken sun safety so seriously. But I am also somewhat overwhelmed. There is more to it than even I imagined. The bottom line is, any amount of time you expose your skin to ultraviolet radiation (UVR) you are doing yourself damage; and the longer and more often you do so, the worse the result — wrinkles, age spots and dreaded skin cancers.

So what was I to tell you? Cover yourself from head to toe and don’t step foot outside while the sun is shining ... ever. Believe me, I was tempted, but of course this is not possible, or even healthy. And if we applied the same risk avoidance to every other aspect of our lives we couldn’t function.

With the benefit of some time and a lot of thought, I decided to find a middle ground. Obviously, what I’m saying is not ground-breaking, nor is it original. The Government and other reputable organisations advocating sun safety have said it first. I’m simply going to present you with facts and advice directly from the experts so you can live your life to its fullest (even in the sunshine) but in doing so, be armed with the knowledge to protect yourselves and your families as best you can.

On the following pages I’ve included information from those reputable organisations that I — in my role as a wife and mother — have found most relevant.

FAQs

What is skin cancer?

Skin cancer is the most common form of cancer in Australia. It is a disease of the body’s skin cells caused mainly by cumulative exposure to ultraviolet radiation (UVR) from the sun.

Cancer is a group of diseases in which cells grow and divide without respect to normal limits, invade and destroy adjacent tissues, and sometimes spread to other locations in the body.

Skin cancer is normally divided into two categories: melanoma and non-melanoma skin cancers.

What is a non-melanoma skin cancer?

There are two main types of non-melanoma skin cancer (NMSC): basal cell carcinoma (BCC) and squamous cell carcinoma (SCC).

BCC is the most common form of skin cancer. It usually develops as a small, round, raised, red, pale or pearly-coloured spot, and it may become ulcerated like a sore that will not heal. SCC is the second most common form of skin cancer and normally appears as a thickened red, scaly spot that may later bleed easily or ulcerate.

Both types of NMSC mainly develop on areas of the body that are exposed to UVR and are usually able to be treated if detected early.

What is a melanoma?

Melanoma is the least common form of skin cancer, but the most deadly. If left untreated, melanoma can spread to other parts of the body.

Melanoma appears as a new or existing spot, freckle or mole that changes in colour, size or shape. It usually has an irregular or smudgy outline and can be more than one colour. A melanoma can grow over weeks to months, and can appear anywhere on the body, including areas of the body that aren't exposed to UVR from the sun.

What is ultraviolet radiation (UVR)?

UVR is the part of sunlight that causes sunburn and skin damage leading to premature ageing and skin cancer. Damage to the skin occurs as soon as skin is exposed to UVR and sunburn is the extreme form of this damage. **The effects of UVR on the skin are cumulative so the damage is building up even without burning.**

UVR cannot be felt or seen. It is not related to, or indicated by, heat, high temperatures or light, and therefore can be present even on a cloudy day. Light-coloured and shiny surfaces, such as sand, snow, concrete and water, all reflect UVR.

The intensity of UVR can be measured by the Ultraviolet (UV) Index — the higher the index value, the greater the potential for damage to your skin and the risk of developing skin cancer. The UV Alert, which is issued when the UV Index forecast reaches three or higher, shows the time of the day when it is essential to protect yourself and can assist you in taking action to minimise your exposure to the sun's rays.

The daily UV Index forecast and UV Alert can be found in the weather pages of local papers, and on the websites of the [Australian Bureau of Meteorology](#) and the [Australian Radiation Protection and Nuclear Safety Agency](#).

What are the main risk factors for skin cancer?

Anyone in Australia can develop skin cancer but risk is increased for people who:

- are exposed to UVR during childhood and adolescence;
- have repeated exposure to UVR over their lifetime;
- have episodes of severe sunburn;
- have a light complexion (red or fair hair; blue or green eyes; skin that burns easily, freckles and doesn't tan);
- are older;
- have had a previous non-melanoma skin cancer (NMSC);
- have a personal or family history of melanoma;
- have a large number of moles;
- have unusual types of moles (for example, dysplastic naevus);
- are immunosuppressed (including organ transplant recipients).

Is it possible to develop skin cancer if your skin does not burn?



"New research suggests that while cells are often damaged in childhood, it may be sun exposure in adulthood that triggers cells to turn cancerous."

Cancer Council NSW

Yes. Anyone can develop skin cancer regardless of whether or not their skin burns. Although people with fair skin are at a greater risk of developing skin cancer, people with tanned skin are also at risk of developing skin cancer if they do not protect their skin when going outdoors.

Does a tan provide protection against developing skin cancer?

No. Any form of a tan that has been obtained from exposure to UVR (from natural or artificial sources) increases your chances of premature ageing and developing skin cancer. People with naturally tanned or darker skin have very limited protection to UVR (roughly equivalent to SPF2 sunscreen) and will still need to protect their skin when going outdoors. Fake tanning products do not offer protection against the risk of developing skin cancer. Some fake tanning products do contain sunscreen, but this will at most only offer protection for a few hours after application of the product.

Is it possible to safely obtain a tan from exposure to ultraviolet radiation?

No. Any form of a tan from UVR (whether from the sun or artificial devices such as solaria) will damage your skin and increase your risk of developing skin cancer.

Are solaria or sunbeds a safe way to tan?

No. Solaria and sunbeds emit UVR and increase your risk of developing skin cancer.

Do you only need to protect yourself from the sun when it is hot and sunny?

No. UVR, which causes sunburn and skin damage, cannot be felt or seen. It is not related to, or indicated by heat, high temperatures or light, and therefore can be present days when it is not hot and sunny (such as cloudy, hazy or breezy days).

Can you only be harmed by the sun during the middle of the day?

No. You can be harmed by the sun anytime during the day (especially when the UVR is high). In general, the most dangerous times to be out in the sun are 10 am to 2 pm (or 11 am to 3 pm during daylight savings), when the UVR level is at its highest.

Is it only older people that need to look for changes in their skin?

No. People of all ages need to regularly check their skin for changes as skin cancer does not affect only old people. **In fact, melanoma is the most common cancer for the 15 to 24 year age group.**

How much sun exposure is required to maintain healthy levels of vitamin D?

Vitamin D is essential for good bone health and may have other health benefits. Most vitamin D is produced in the skin by the action of UVB from the sun. A small amount of vitamin D is obtained from the diet. Foods which contain vitamin D include fatty fish (salmon, herring and mackerel), liver, eggs and foods that have been fortified (had vitamin D added), such as margarines and some milks.

Only a limited amount of sun exposure is needed to maintain adequate vitamin D levels and most people achieve this through their normal day-to-day activities. It has been estimated that fair skinned people can achieve adequate vitamin D levels in summer by exposing the face, arms and hands or the equivalent area of skin to a few minutes of sunlight on either side of the peak UV periods on most days of the week. In winter, in the southern regions of Australia where UVR levels are less intense, maintenance of vitamin D levels may require 2 to 3 hours of sunlight exposure to the face, arms and hands or equivalent area of skin over a week.

Sensible sun protection behaviour should not put you at risk of developing vitamin D deficiency. This means protecting yourself (wear a broad-brimmed hat, sun-protective clothing that covers as much of the body as possible, wrap-around sunglasses, and SPF 30+ sunscreen and seek shade) whenever there is a risk of skin damage from UVR exposure. It is not recommended to use solaria to boost vitamin D levels.

Note: More information on Vitamin D and sun exposure can be found on the Australian and New Zealand Bone and Mineral Society website: www.anzbms.org.au

Source: [Department of Health and Ageing](#)

Protect yourself in 5 ways

When you spend time in the sun without protection, you're increasing your risk of skin cancer. It doesn't matter whether you're at the beach, at the park or simply in the backyard — it all adds up. So always protect yourself in five ways with a hat, clothing, shade, sunglasses and sunscreen

Hat

Put on a broad-brimmed hat that shades your face and neck. Hats that provide the best sun protection are:

- broad-brimmed hat with a brim of at least 7.5 cm,
- legionnaire-style hat with the side flap and front peak meeting to provide protection to the side of the face,
- bucket or surfie style hat that sits low on the head and has a deep crown — the brim should be at least 6 cm.

A baseball cap is not recommended as it leaves the cheeks, ears and back of the neck exposed.

Clothing

Wear sun protective clothing that covers as much of your body as possible. Clothing creates a barrier between the skin and the sun's harmful ultraviolet rays and can provide the most effective protection.

Loose fitting clothing, such as shirts with long sleeves and collars and long trousers and skirts, are best.

But not all clothing fabric is equal. Clothing with a high ultraviolet protection factor (UPF) rating will maximise protection. The effectiveness of clothing in protecting against UVR is dependant on clothing design, the type and structure of the fabric, its colour and tightness and whether the garment is wet or dry.

- Less UVR passes through tightly woven or knitted fabrics.
- Darker colours usually block more UVR.
- Heavier weight fabrics usually block more UVR than lighter fabrics of the same type.
- Garments that are over-stretched, wet or worn out may lose some of their UVR protection properties

Shade

Shade provides good protection from the sun and can be easy for people to use. Staying in the shade and out of the direct sun can reduce the amount of solar ultraviolet radiation (UVR) you receive by 75 per cent or more.

Seek shade particularly during the two hours either side of solar noon, which is when the sun is highest in the sky and the UVR is most intense. In Australia, solar noon occurs at midday (noon) or at 1 pm during daylight saving. Shade is most important from 10 am to 2 pm and from 11 am to 3 pm during daylight savings.

Sunglasses

Wear wrap-around sunglasses. Eyes, like skin, can be damaged by exposure to UVR. Repeated exposure of unprotected eyes increases the risk of cataracts, pterygium and cancer of the conjunctiva and the skin around the eyes.

When purchasing sunglasses look for:

- sunglasses that carry a label indicating they comply with or exceed the requirements of AS/NZS 1067:2003 and are category 2, 3 or 4;
- sunglasses that absorb more than 95 per cent UVR (or transmit less than 5 per cent UVR);
- sunglasses rated EPF 10;
- a frame that fits closely to your face;
- wrap around style of sunglasses.

Always use sunglasses in combination with other sun protection measures: shade, clothing, hats and sunscreen.

Sunscreen

Apply SPF30+ broad spectrum water resistant sunscreen every two hours to protect exposed skin from harmful ultraviolet radiation UVR. No sunscreen gives 100 per cent

protection from the sun.

Look for sunscreen that is water resistant and check the 'use by' date on the bottle. Look for a product labelled broadspectrum, which means that it protects against both UVA and UVB rays. Choose a sunscreen with SPF30+.

Zinc cream, which contains zinc oxide, is an example of a sunscreen that scatters or reflects UVR from the skin. It is generally used to provide additional protection to sensitive areas such as the lips, nose and ears.

Use sunscreen on any skin that can't be covered by clothing. Apply sunscreen generously to clean, dry skin 20 minutes before you go into the sun. Reapply sunscreen every two hours, or more frequently if washed, rubbed, or sweated off.

Don't use sunscreen as the only form of protection and don't use it to increase the amount of time you spend in the sun.

Source: [Department of Health and Ageing](#)

[National Skin Cancer Awareness Campaign](#)

Skin Cancer Myths

A tan provides protection from the harmful effects of the sun.

Only sunburn is a cause for concern.

You need plenty of sun to avoid a vitamin D deficiency.

You only need sun protection when it is hot and sunny.

The sun is only harmful in the middle of the day.

You only need protection if you are going to be outdoors for an hour or more.

Sunscreen is adequate protection on its own.

Olive and darker-skinned people cannot get burnt/skin cancer.

Only exposure as a child really matters. Exposure as an adult is not so important as the damage is already done.

Only older people need to look for skin changes.

Only those with extreme tans are at risk of premature ageing.

Solaria are a safe way to tan.