Cancer Council WA | SunSmart

Fact Sheet

Choosing and using sunscreen

Why use sunscreen?

Australia has the highest rate of skin cancer in the world, mostly due to overexposure to ultraviolet (UV) radiation from the sun. Each year there are more than one million treatments for non-melanoma skin cancers in Australia, and around 16,000 melanomas are diagnosed. More than 2,000 people die from skin cancer each year.

Used alongside other sun protection measures, sunscreen can reduce skin damage caused by overexposure to UV radiation from the sun.

There is evidence that regular use of sunscreen reduces the risk of melanoma and squamous cell carcinoma (SCC).

How sunscreens work

Sunscreens work by filtering out most of the UV radiation from sunlight reaching the skin. This occurs in two ways - by scattering and/or absorbing ultraviolet (UV) radiation.

Some sunscreens include both absorbing and scattering ingredients. Examples of scattering ingredients include Zinc Oxide and Titanium Oxide. UV absorbers use ingredients such as Oxybenzone, Octocrylene, 4-Methylbenzylidene camphor and Butyl methoxy dibenzoylmethane.

Ingredients in sunscreen

Many sunscreens combine a mixture of ingredients to provide a high level of protection against both types of UV radiation that reach the earth's surface, UVA and UVB. Such sunscreens are labelled 'broad-spectrum'.

The active ingredients (and maximum concentrations) permitted in sunscreens are regulated in Australia by the Therapeutic Goods Administration (TGA).

Sunscreens also contain preservatives and various other substances such as moisturisers, water, oils, emulsifiers and fragrances.

Sunscreen safety and testing

Current evidence shows that the health benefits to be gained from the appropriate use of sunscreen considerably outweigh any potential risk.

In Australia, sunscreens with a sun protection factor (SPF) rating of 4 or above must be listed on the Australian Register of the TGA. Products can only be listed on the register if they are tested in accordance, and comply with, the Australian/New Zealand Standard AS/NZS 2604: 2021 'Sunscreen Products - Evaluation and Classification'. SPF 50+ is the maximum sun protection sunscreen available in Australia.

For the majority of people, sunscreens can be used without any problems. Some people may experience short-term skin irritation, stinging or development of a rash. Occasionally people become allergic to one or more of the ingredients of sunscreen. If you react to one sunscreen, try another with different ingredients (such as a sensitive skin formulation).

Cancer Council WA | SunSmart

Fact Sheet

Nanoparticles in sunscreen

A sunscreen that has nanoparticles means that the zinc oxide or titanium oxide particles in the sunscreen have been fragmented into an extremely small size – a nanometre is 0.000001 millimetre in size. Sunscreen with nanoparticles has become very popular in recent years because the smaller particles make the sunscreen less visible on the skin and easier to apply and provide good protection from UV radiation. To date there is no evidence that nanoparticles in sunscreen are harmful to health.

Sun Protection Factor (SPF) ratings

Sunscreens do not filter 100% of UV radiation. All sunscreens will let some UV radiation through at varying rates indicated by the sun protection factor (SPF) number.

The SPF number is a guide to the protection a sunscreen provides against UV radiation. In simple terms, the higher the SPF the more protection offered. Following strict laboratory testing a sunscreen is given an SPF number (between 4 and 50+ in Australia). The SPF number represents the fraction of the total UV that passes through the sunscreen. Therefore an SPF of 50 allows 1/50th or 2% of the ambient UV radiation to pass through to your skin. This compares to an SPF of 30 allowing 1/30th or 3.3% of the ambient UV radiation through to your skin.

It is important to note that most people do not apply enough sunscreen to achieve the level of protection stated on the SPF factor label (around 7 teaspoons for the entire body).

Choosing a sunscreen

For the best protection choose a sunscreen that:

- Has a sun protection factor (SPF) of 30 or higher.
- Is 'broad-spectrum' meaning it will filter both UVA and UVB radiation.
- Is water-resistant, and therefore less likely to be removed by sweating, swimming or other water-based activities.
- Is labelled 'AS/NZS 2604:2021' signifying that it has been tested to the Australian Standard.
- Has a valid expiry date.

Cancer Council recommends using a cream or lotion sunscreen as they provide a more reliable way of ensuring adequate coverage. Use of aerosol sunscreens isn't advised as they are difficult to apply at the recommended dosage, and a significant proportion of product may be lost to wind before adhering to the skin

Recommended use of sunscreen

Sunscreen is recommended as a means of reducing the risk of skin damage from UV radiation when exposure to the sun is unavoidable.

Sunscreens should not be relied upon as the sole form of protecting the skin, but rather used in conjunction with other methods of sun protection including limiting time in the sun when UV radiation is most intense, seeking shade, and wearing sun protective clothing, hats and sunglasses.

We recommend using sunscreen every day when the UV index is forecast to be 3 or above. Sunscreen should be incorporated into your daily morning routine on these days.

If you are planning to be outdoors when UV levels are 3 or above, cover as much skin as possible with sun protective clothing. Apply sunscreen to clean, dry skin 20 minutes before going out in the sun so that the sunscreen has time to adhere to the skin. For maximum protection apply sunscreen generously to the skin and layer it on, don't rub in. Sunscreen should be reapplied at least every two hours.

For information about using sunscreen on children and babies, please see the *Sun Protection and Children* fact sheet.

For more information call us on 13 11 20