

Sunscreen is a useful tool in helping to protect your exposed skin from ultraviolet (UV) radiation from the sun. You should not rely on sunscreen as your only form of sun protection. Over exposure to UV radiation from the sun is the main cause of skin cancer, including melanoma.

Tips for Sunscreen use:

No sunscreen will completely shield you from the effects of ultraviolet radiation so also use other forms of sun protection.

- Minimise the time spent in the sun from 10.00am – 4.00pm during the daylight saving months
- Wear a hat and protective clothing
- Wear sunscreen on uncovered skin
- Wear sunglasses
- Stay in the shade whenever possible.

Sunscreen should be used to decrease exposure to UV radiation, not to increase the amount of time you spend in the sun. Molecheck recommends the use of broad spectrum SPF50+ sunscreen. Use water-resistant sunscreen if in the water. Apply adequate amounts of sunscreen 20 minutes before going outside, and re-apply every two hours. If swimming or perspiring (sweating), reapply hourly.

Ideally sunscreen should be used all year, except in the depth of winter, unless you have type 1 skin, where all year use is recommended.

How much protection does sunscreen give?

The protection a sunscreen offers is affected by its Sun Protection Factor (SPF) rating (see below), whether it is broad spectrum, how evenly and how thickly you apply it, and how long you spend in the sun. The longer the time spent in the sun the more UV radiation accumulates and the greater the potential for burning. Even if you are not very active, sunscreen tends to rub off gradually and therefore needs to be reapplied regularly. This applies particularly to children because they are active.

What is SPF?

The Sun Protection Factor (SPF) number is a ranking system that shows how much protection is being offered against UV radiation. The higher the SPF number, the more UV radiation is filtered out and the greater the protection. The amount of time it takes to be sunburnt depends on the level of UV radiation, and varies according to the time of day, the time of year, the weather, and the person's skin colour.

No matter how high the SPF rating, no sunscreen can screen out all UV radiation. All sunscreens are filters, allowing some UV radiation to pass through to the skin.

Does sunscreen prevent skin cancer?

When used correctly, sunscreen can protect against sunburn and DNA damage to skin from UV radiation exposure. Sunburn, especially in childhood, is a risk factor for melanoma. Preventing sunburn may help reduce skin cancer risk, skin damage, and the development of moles.

How does sunscreen work?

Sunscreens contain either chemical blockers that absorb UV radiation, dispersing it as heat before it can damage the cells; or physical blockers that reflect UV radiation away from the skin. Some sunscreens contain both.

Broad spectrum sunscreen:

UV radiation consists of UVA, UVB and UVC radiation. UVA penetrates deep into the skin, affecting the cells that lie deep under the skin's surface. UVA causes ageing of the skin, and long-term damage.

UVB radiation penetrates the skin's top layer, causing sunburn, and long-term damage. Skin cancer is mainly caused by UVB. Both UVA and UVB contribute to the development of skin cancer. Broad spectrum sunscreen gives extra protection because it filters out both UVA and UVB rays. UVC radiation is absorbed in the upper atmosphere and does not reach the Earth.

Is sunscreen safe?

To date, there is no scientific evidence showing long-term side effects following regular use of sunscreen.

Short-term side effects may include reactions, such as skin irritation, stinging or a rash. If these side effects occur, try another brand and look for products that are fragrance-free, or labelled as suitable for sensitive skin. Products containing titanium dioxide and zinc oxide may be the most suitable.

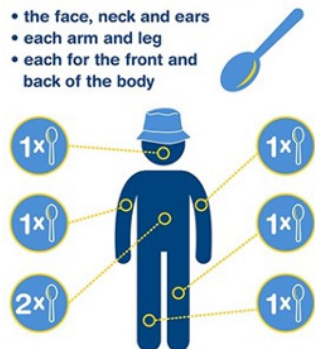
Healthy adults who are 'out and about' and physically active outdoors are unlikely to lack vitamin D. The majority of New Zealanders are at greater risk of skin damage and skin cancer, than not getting enough vitamin D. There is no evidence for significant vitamin D reduction with sunscreen use.

How to apply sunscreen:

The protective effect of sunscreen depends on correct application. Apply sunscreen 20 minutes before skin exposure to allow it time to dry and be absorbed by the skin. Use a generous amount of sunscreen. The average-sized adult should apply about 7 teaspoons (35ml) of sunscreen for one full body application.

Adults should use about 1 teaspoon for:

- the face, neck and ears
- each arm and leg
- each for the front and back of the body



People frequently only receive about 30% of the SPF protection level because they do not apply enough sunscreen. No matter what the sunscreen directions say, always reapply sunscreen every two hours when you are outdoors. Sunscreen can be easily wiped or perspired off, and you need to keep applying sunscreen to get the best protection.

How long can you keep sunscreen?

Most sunscreens last about two or three years and should be stored below 30°C. Check the expiry date and storage conditions on the label. If sunscreen is left in excessive heat (e.g. in the sun or glovebox) over time the sunscreen may deteriorate faster and may not give as much protection.

Choosing a sunscreen:

Choose a broad spectrum SPF50+ water-resistant sunscreen. Sunscreen can be bought as a cream, lotion, milk or gel. Choose the one that best suits your skin type and activity. If you do not want sunscreen residue left on your hands, a gel may work best for you. Price is not always an indication of quality.

If using sunscreen on a baby or toddler's skin, test it on a small area of their skin first and leave for 24 hours to check for a reaction. Stop use immediately if there is a reaction.

Reference:

When to Apply Sunscreen: A Consensus Statement for Australia and New Zealand, 2019.

<https://pubmed.ncbi.nlm.nih.gov/30681231/>