

# Information Sheet



## Sunscreen

### Key Points

1. Sunscreen provides protection against the damaging effects of ultraviolet (UV) radiation from the sun by reducing the amount of UV rays reaching the skin.
2. Sunscreen does not provide 100% protection against UV radiation.
3. Sunscreen should always be used in conjunction with other sun protection measures such as spending less time in the sun when UV radiation is highest, seeking shade, and wearing clothing and hats.
4. The Cancer Council NSW recommends using broad-spectrum SPF30+, water resistant sunscreen and reapplying at least every two hours.

### Why use sunscreen?

Australia has the highest rate of skin cancer in the world. Nearly all skin cancers are caused by ultraviolet (UV) radiation in sunlight. By taking steps to reduce exposure to UV radiation, you can reduce your risk of developing skin cancer.

Sunscreen reduces the amount of damaging UV radiation reaching your skin and the regular use of sunscreen can help reduce the risk of sunburn. Long-term exposure to UV radiation (as may be experienced by outdoor workers) and high levels of intermittent exposure (during outdoor recreation or on sunny holidays) and sunburn are significant risk factors for skin cancer.

### What is the best way to protect my skin?

- Spend less time in the sun, particularly at times when UV radiation is highest (10am-2pm or 11am-3pm during daylight saving time).
- When you are outdoors, seek shade.
- Wear protective clothing such as long sleeved shirts, a broad brimmed hat and sunglasses that meet the Australian Standard AS1067.
- Sunscreen can be used in addition to these methods, particularly to protect areas such as your face and hands.
- **Always** protect your skin when the UV Index is 3 (moderate) or above. You can find the SunSmart UV Alert on the weather page of most Australian daily newspapers or go to [www.cancercouncil.com.au/sunsmart](http://www.cancercouncil.com.au/sunsmart)

### How does sunscreen work?

Sunscreen works by filtering (NOT blocking) UV radiation with a chemical barrier that absorbs and/or reflects the UV rays away from your skin. No sunscreen product provides 100% protection against UV radiation. Some UV radiation will always reach the skin causing damage to the cells below. This damage will build up over time and can increase your risk of skin cancer.

### What's in sunscreen?

Sunscreen contains chemicals to filter UV radiation as well as other ingredients such as preservatives, moisturisers and fragrance. Not all sunscreens contain the same ingredients and different brands use varying amounts and combinations of chemicals. For this reason, one brand may suit your skin better than others.

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Chemicals in sunscreen are divided into two types:

- **Chemical filters** that work by absorbing UV radiation before it can damage the skin;
- **Physical filters** containing micro-fine particles that sit on the surface of the skin and act as a physical barrier.

Sunscreen can contain either chemical or physical filters and many contain both.

All chemicals have been tested and approved as being safe and there is no scientific evidence showing any health side effects from using sunscreen.

### What does 'broad-spectrum' mean?

UV radiation comes in different wavelengths called UVA and UVB. Both UVA and UVB contribute to sunburn, skin ageing, eye damage, melanoma and other skin cancers.

Sunscreens that are labelled '*broad-spectrum*' filter out some of the UVA as well as UVB radiation.

### What do the SPF numbers mean?

SPF stands for *sun protection factor*. The SPF protects against UVB radiation.

A sunscreen is given an SPF number (of between 4 and 30+) after strict laboratory testing. The testing compares the time it takes for patches of skin with sunscreen to show redness with the time it takes to produce the same amount of skin redness without sunscreen. The higher the SPF number, the more protection a sunscreen provides against sunburn.

The length of time it can take for skin to burn can depend on a lot of factors:

- Person's skin type
- Season and geographic location
- Time of day
- Amount of cloud cover
- Nearness to reflective surfaces (such as water, sand and snow)
- Correct application of sunscreen
- Contact with water, sand, sweat or clothing
- Whether the product is past its use by date

### Can sunscreen cause skin allergies?

Some people may develop an allergic reaction (such as a rash or a stinging sensation) after using sunscreen. Allergic reactions to sunscreen are usually caused by perfumes and/or preservatives in the product and not the chemicals that work to filter UV radiation.

If you experience an allergic reaction to a sunscreen you should try another brand or speak to your doctor or a chemist about choosing another product with different ingredients.

Sunscreens containing titanium dioxide or zinc oxide as the main sunscreen agent are usually suitable for sensitive skin.

Sunscreens manufactured in Australia do not contain para amino benzoic acid (PABA) and Cancer Council sunscreen does not contain peanut or any tree nut oil. If you are concerned about nut or any other types of allergies it is recommended you contact the manufacturer to discuss any ingredients in the sunscreen you are planning to use. Current regulations only require that preservatives and active ingredients are listed on the label.

### Should I use sunscreen on my baby or child?

There is no evidence that sunscreen is harmful to babies or children but it is preferable to keep babies out of the sun.

When outdoors, protect your baby/child with clothing and hats and keep them in the shade. Sunscreen may be applied to any small areas of your baby's skin that cannot be protected by clothing. Reapply sunscreen regularly if children are swimming or sweating.

If your baby or child's skin reacts to your sunscreen, try another product or speak to your doctor.

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### How should sunscreen be applied?

- Always follow the manufacturer's instructions when applying sunscreen.
- To be effective, sunscreen must be applied generously, rubbed in lightly and used with other forms of sun protection.
- Most people apply too little sunscreen, getting significantly less protection than the SPF number on the label. The Cancer Council NSW recommends that adults use about half a teaspoon for the face, neck and ears, a teaspoon for each arm and leg and a teaspoon each for the front and back of the body.
- Apply 20 minutes before going in the sun, to allow it to bind to your skin for maximum effectiveness. Sunscreen should then be reapplied every two hours in case it has been wiped or washed off during activity such as exercising, swimming or towelling. Reapplying regularly also means you are more likely to cover any parts of the skin you may have missed.

### Why can't sunscreen be used to increase time spent in the sun?

An SPF30+, broad-spectrum sunscreen filters approximately 96.7% of UV radiation. This means that over 3% of UV radiation is still transmitting through to your skin. Even when sunscreen is regularly reapplied this small amount of UV is causing damage to your skin and increasing your risk of developing skin cancer in the future.

### Can you get sunburnt when using sunscreen?

Yes you can still get sunburnt using sunscreen by:

- Spending time in the sun in peak UV times or when the UV Index is 3 or above.
- Not using other sun protection measures such as seeking shade and wearing clothing and hats.
- Not reapplying sunscreen every two hours or when it has been washed or wiped off.
- Using insufficient sunscreen.
- Using sunscreen that is past its use by date.

### Do expensive sunscreens give the best protection?

Price is not always an indication of quality. Any broad-spectrum sunscreen with an SPF30+ rating, if applied correctly, will give good protection.

### Does sunscreen prevent vitamin D production?

Sunscreen filters out most but not all UV radiation. Regular use of sunscreen when the UV Index is 3 or above during normal daily activity should not stop you getting enough vitamin D.

If you have any concerns about vitamin D talk to your doctor.

### Are 'natural' sunscreens effective?

There are a number of sunscreen products available labelled as being 'natural' and/or 'chemical free'. There is no scientific evidence to support 'natural' sunscreen products as being any safer or more effective than sunscreen products that are not promoted as 'natural'.

To be sure that your sunscreen will provide effective protection against UV radiation **always** check on the label that the product complies with the Australian Standard AS/NZS 2604:1998 and has an AUSTL number.

### What is DEET?

DEET is an insect repellent. Sunscreens containing DEET are most appropriate for use in areas and/or times where there are a lot of mosquitoes or other insects (especially if there are mosquito borne diseases in the area).

Sunscreen containing DEET should be clearly labelled as such, as should the amount of DEET in the product. When using sunscreen containing DEET always follow the manufacturer's instructions. Speak to your doctor about using sunscreen containing DEET if you are pregnant or intend using it on young children.

### Does sunscreen have an expiry date?

All sunscreen must be labelled with an expiry date and storage instructions. As a general rule keep sunscreen out of the sun and stored at temperatures below 25°C as much as possible. If you keep sunscreen in the glove box of your car or sitting by the pool it may deteriorate more quickly.