

Sunburn

Sunburn is the skin's reaction to the ultraviolet radiation (UV) in sunlight. You can see sunlight and feel heat (infrared radiation), but you can't see or feel UV radiation. It can damage your skin even on cool, cloudy days.

In Victoria's summer months, the signs of sunburn can start to appear in less than 15 minutes and can take days or weeks to heal depending on the severity. Mild sunburn can be treated at home, but severe and blistered burns require prompt medical attention.

The long-term effects of repeated bouts of sunburn include premature wrinkling and increased risk of skin cancer, including melanoma (a type of skin cancer). Once skin damage occurs, it is impossible to reverse. This is why prevention is much better than cure.

Use sun protection whenever the UV index level reaches 3 and above. In Victoria, this is from the start of September to the end of April. From May to August, when the UV Index is generally below 3, sun protection is not required unless you are near highly reflective surfaces such as snow, are outside for extended periods or the UV reaches 3 and above.

Reducing the risk of sunburn

Use a combination of the five sun protection measures to reduce your sunburn 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. Apply 20 minutes before you go outdoors and reapply every two hours.
- **Slap** – on a hat that protects your face, head, neck and ears.
- **Seek** – shade.
- **Slide** – on sunglasses. Make sure they meet Australian Standard AS1067.

Symptoms of sunburn

The symptoms of sunburn include:

- Change in skin colour, ranging from pink to red and even purple. Skin will change colour within two to six hours of being burnt and the colour change will continue to develop for up to seventy-two hours.
- Skin feels hot to the touch
- Pain and/or itching
- Swelling
- Fluid-filled blisters that may itch and eventually pop or break
- Broken blisters peel to reveal even more tender skin beneath.

Australians and sunburn

In Australia, sunburn can occur in as little as 15 minutes on a summer's day. All types of sunburn, whether serious or mild, can cause permanent and irreversible skin damage. This could lay the groundwork for skin cancers to develop. Further sunburn only increases your risk of skin cancer. Every year over 1,800 Australians die from skin cancer.

According to a national sun protection survey, the number of adults reporting sunburn dropped by almost one-third between 2004 and 2007. Yet there was no change among adolescents – one in four teenagers are still getting burnt. This is not because they are deliberately trying to get a tan, but because they are forgetting to protect themselves. Boys are more likely to get sunburnt than girls, as more boys spend time outside in peak UV times and are less likely to use sunscreen.

It is important to remember tanning without burning can still cause skin damage, premature skin ageing and skin cancer. Both sunburn and tanning are signs of your skin cells in trauma. A tan is not a sign of good health but rather a sign that your skin is trying to protect itself from the sun's UV rays.

UV radiation and its effects

In addition to light and heat, the sun gives out invisible ultraviolet radiation. UV radiation can pass through sparse cloud. It can also be scattered in the air and reflected by surfaces such as buildings, concrete, sand and snow. The three types of ultraviolet (UV) radiation, based on their wavelength, are UVA, UVB and UVC. The earth's atmosphere absorbs nearly all of the most dangerous type – UVC – before it reaches the ground.

UVA and UVB radiation are both involved in sunburn, but skin reacts differently to each one:

- **UVA** – penetrates into the deeper skin layers and damages the site where new skin cells are generated. Too much UVA radiation leads to roughening, dryness, blotchiness, wrinkling and sagging of the skin. High doses of UVA radiation can also cause sunburn, DNA damage in the skin and skin cancer.
- **UVB** – is even more dangerous than UVA radiation and also causes skin damage and skin cancer. It affects the surface skin layer. The skin responds by releasing chemicals that dilate blood vessels. This causes fluid leakage and inflammation – better known as sunburn.

UV and vitamin D

The sun's ultraviolet (UV) radiation is the major cause of skin cancer and the best natural source of vitamin D. Vitamin D is a hormone that controls calcium levels in the blood. It is needed for healthy bones and muscles and for general health. Vitamin D is made in our bodies through a series of processes that start when our skin is exposed to UV. It is important to take a balanced UV approach to help with vitamin D levels while minimising the risk of skin cancer with appropriate sun protection measures.

In Victoria, sun protection is required from September to April when the UV index level is 3 and above. During these months, most Victorians need a few minutes a day of sun exposure, (to face, arms and hands or equivalent area) outside of peak UV times, to help with vitamin D levels. People with naturally very dark skin may need three to six times this exposure.

Using sunscreen when the UV is above three will not prevent vitamin D production. When sunscreen is tested in lab conditions it blocks vitamin D production. However, regular use of sunscreen by people has been shown to have little effect on vitamin D levels. People who use more sunscreen spend more time in the sun, so naturally they will have higher vitamin D levels.

From May to August, when Victoria's UV level drops below 3, most people need about two to three hours of sunlight to the face, arms, hands (or equivalent area), spread over each week. Seeking out the midday winter sun is the best way to achieve this. People with naturally very dark skin may need three to six times this exposure and supplements may be required. Sun protection is not required unless you are near highly reflective surfaces such as snow, are outside for extended periods or the UV level reaches 3 and above.

SunSmart daily UV alert

UV radiation levels vary depending on location, time of year, time of day, cloud coverage and the environment. Sun protection is recommended whenever the UV index level reaches 3 and above. At that level, UV radiation can damage skin and eyes. It may also cause skin cancer, including dangerous malignant melanoma.

To check the UV levels for the day, go to the SunSmart UV Alert, which is issued by the Bureau of Meteorology (BOM). UV levels for the day are also reported in newspapers, weather forecasts and the SunSmart website.

Self-help sunburn remedies

There is no cure for sunburn except time and patience. Treatment aims to help manage the symptoms while the body heals. Suggestions include:

- Drink plenty of water, because you're probably dehydrated as well as sunburnt.
- Gently apply cool or cold compresses. Alternatively, bathe the area in cool water.
- Avoid using soap, as this may irritate your skin.
- Do not apply butter to sunburnt skin.
- Talk to your local pharmacist about products that help soothe sunburn. Choose spray-on solutions rather than creams you apply by hand.
- Don't pop blisters. Consider covering itchy blisters with a wound dressing to reduce the risk of infection.
- Pain permitting, moisturise the skin. This won't stop the burnt skin from peeling off, but it will help boost the moisture content of the skin beneath.
- Take over-the-counter painkillers, if necessary.
- Keep out of the sun until every last sign of sunburn has gone.

Peeling sunburnt skin

There's no cream or lotion that will stop burnt skin from peeling off. This is part of the natural healing process. Suggestions include:

- Resist the temptation and don't pick at the skin. Allow the dead skin sheets to detach on their own.
- Remove detached skin carefully and slowly. Don't rip skin sheets off or you risk removing more skin than you intended.
- Apply antiseptic cream to the newly revealed skin to reduce the risk of infection.

Professional treatment for sunburn

You should see your doctor or seek treatment from your nearest hospital emergency department if you experience symptoms including:

- Severe sunburn with extensive blistering and pain
- Sunburn over a large area
- Headache
- Nausea and vomiting
- Fever
- Dizziness or altered states of consciousness.

Sunburn prevention is best

Always check the SunSmart UV Alert and use a combination of sun protection measures whenever the UV Index level is 3 and above. Cover up with clothing, apply SPF 30+ broad spectrum sunscreen, wear a broad-brimmed hat that covers the face, ears and neck, slide on some wrap around sunglasses and seek shade wherever possible.

Other suggestions on how to avoid getting sunburnt include:

- Don't assume that sunshine is 'safe' when it doesn't sting your skin – that sting or 'bite' you can feel is infrared radiation (heat), not UV radiation.
- UV radiation levels aren't linked to temperature. Don't rely on the temperature to gauge when you need sun protection. Check the UV level each day and when it's 3 and above, Slip! Slop! Slap! Seek! and Slide! .
- Many Australians get sunburnt around water, at the beach or pool. If there is no shade, you'll need to protect yourself in other ways.

- You can get sunburnt when you're relaxing and taking it easy, such as watching outdoor sports or picnicking at the park, as well as while playing sports.
- Winter activities, such as snow skiing and snow boarding, pose a high risk of sunburn because UV radiation is more severe in alpine regions than at sea level. Snow is also very efficient at reflecting UV radiation.
- What many people assume is windburn is actually sunburn. The wind doesn't burn the skin, UV radiation does.
- A tan offers a small amount of sunburn protection (around SPF 3), but doesn't protect against skin and eye damage or the risk of skin cancer.
- Babies under 12 months should not be exposed to direct UV and should be well protected from the sun. Always try to keep babies and children in the shade and use clothing to cover most of their body. Use small amounts of child-friendly sunscreen on uncovered areas such as the face and hands whenever your child is exposed to the sun.

Where to get help

- Your doctor
- Your local pharmacist
- Nurse-on-Call Tel. 1300 60 60 24 (24 hours, 7 days)
- Cancer Council Helpline Tel. 13 11 20
- SunSmart
- BOM website provides the SunSmart UV Alert for over 200 locations across Australia
- Multilingual Cancer Information Line, Victoria Tel. (03) 9209 0169
- Live UV levels for capital cities are available from the ARPANSA and SunSmart websites.

Things to remember

- Sunburn can occur in less than 11 minutes and depending on the severity can take a few days or weeks to heal.
- There is no cure for sunburn except time and patience.
- Mild sunburn can be treated at home, but severe and blistered burns need prompt medical attention.
- Excessive exposure to UV damages the skin permanently and may cause skin cancer, including dangerous malignant melanoma.

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SunSmart

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