

Ultraviolet Radiation

Description:

Ultraviolet radiation (UVR) is the part of the 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, with sunburn being the result of extreme damage. The effects of UVR on skin are cumulative, so damage builds up even without burning.

There are three types of UVR:

- UVA - responsible for causing sunburn and skin damage like wrinkles and discolouration.
- UVB - responsible for causing sunburn and skin cancer.
- UVC - does not reach the earth's surface but can be produced artificially (eg. by arc welding equipment).

UVR is measured by the 'UV Index', which uses a numerical scale of 0 to 10+ to rate the strength of the sun's UV rays. The higher the UV Index level, the greater the strength of the sun's UV rays and the faster the skin will burn. The UV Index was developed by the World Health Organisation, to provide a consistent and international measure of the sun's UV strength.

Some facts you may not know about UVR:

- UVR can not be seen, as it is not related to light
- UVR can not be felt, as it is not related to temperature.
- high levels of UVR are present all year in Queensland, including winter.
- UVR is present on a cloudy day - heavy cloud does decrease UVR but scattered cloud has little or no effect on UV levels.
- UVR is reflected by light and shiny surfaces (eg. sand, snow, concrete and water), which means more UVR reaches your skin.

Helpful Hints

- Protect yourself from UVR while outdoors, even on cloudy days, by staying out of the sun, seeking shade, wearing sun protective clothing, wearing a broad brimmed hat, wearing sunglasses and using sunscreen.
- Check the UV Index to help minimise exposure to high levels of UVR.

Practical Advice

UV Index

The UV Index is reported by the media in Australia to inform people about the maximum daily level of UVR. It is forecasted by considering the time of day, date, latitude, amount of cloud, altitude, presence of haze and ozone concentration. The UV Index (forecast or live) provides useful information for minimising overexposure to UVR, especially when planning outdoor activities. Live UV Index information, specific to certain locations, can be found on the Internet.

- 1 to 2 = No protection required
- 3 to 7 = Protection required
- 8 to 11+ = Extra protection required

How to use the UV Index

- UV Index value: 0-2 = Low Category = Green media graphic colour = No protection required, except if you have very fair skin or there is snow on the ground. Use sunglasses and sunscreen.
- UV Index value 3-5 = Moderate Category = Yellow media graphic colour = Wear sunglasses, use sunscreen, cover the body with clothing and a wide-brim hat. Seek shade and reduce time in the sun.
- UV Index value 6-7 = High Category = Orange media graphic colour = Wear sunglasses, use sunscreen

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with SPF 30, cover the body with sun protective clothing and a wide-brim hat. Reduce time in the sun and avoid peak hour sun.

- UV Index value 8-10 = Very High Category = Dark red media graphic colour = Same precautions as above, but take extra care - unprotected skin can burn quickly.
- UV Index value 11+ = Extreme Category = Violet media graphic colour = Take all precautions. Wear sunglasses and use sunscreen, cover the body with a long-sleeve shirt and pants, wear a wide-brim hat and avoid peak hour sun.

World Health Organisation

During summer, the UV index can approach 20 in some Australian locations, in these conditions many Australians begin to burn in less than five minutes.

Other Resources

- Visit Queensland Health's [Sun safety](#) website
- Visit [Cancer Council Queensland](#) website
- View the forecast UV Index for most Australian cities and towns by visiting the [Bureau of Meteorology](#) website
- View the live [UV Index for Brisbane](#) (on the Australian Sun and Health Research Lab site)

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