

Sun Safety in the Sunshine State



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visit - www.sunsafetyqld.com.au

Skin Cancer Statistics - It's time to Act

Statistics show Australia has the highest rate of skin cancer in the world which claims over 1000 lives each year.

Melanoma, one of the most dangerous types of skin cancer, is the most common life threatening cancer in men and women between the ages of 15 – 25 years.

In fact in Queensland the cumulative risk of developing a melanoma up to the age of 75 is **1 in 17 for males** and **1 in 25 for females** (figures for 2003, personal communication from the Queensland Cancer Fund).

The cost of treatment of skin cancer is also substantial. For non melanoma skin cancer, Australia spent \$264 million for treatment in 2000-01. This cost is likely to escalate as our rates of skin cancer continue to increase.

In previous generations people did not know about the dangers of sun exposure but we can no longer use that excuse.

We need to remember that sun damage is cumulative and spending a lot of time in the sun increases our risk of getting skin cancer. This is particularly important in Queensland as we experience significant ultraviolet radiation all year round, with extremes in our summer months. Many have made a lifestyle choice to move here, but once we are here, we all need to take up the challenge of adapting to this environment.

We all need to examine our outdoor activities, when they are scheduled and the protection we undertake, for work, leisure and school time.

In Queensland, if we are to decrease skin cancer rates, we need a cultural shift in how we are continuing to behave when outdoors.

Ultraviolet Radiation and its effects

Energy from the sun is made up of UVA, UVB and UVC. Most of the UVC is absorbed by the ozone layer in the atmosphere.

Long term chronic exposure to UVA and UVB radiation can increase the risk of damage to the skin and may result in skin cancer. Other changes seen include pigmentation and freckles, wrinkling and "leathering". Ultraviolet radiation can also affect the eyes and contribute to the formation of cataracts.

Acute overexposure of the skin to UV can be seen as sunburn. It can take less than 15 minutes for unprotected skin to develop sunburn on a fine January day in Australia (Sunsmart website www.sunsmart.com.au/).

Getting sunburnt increases the risk of developing a melanoma. More than 5 burns, especially if blistering increase the risk significantly.






It is predicted that ozone depletion will result in an increase in skin cancers and cataracts hence it is very important we address as a society how to improve the infrastructure in terms of available shade and how we behave outdoors in the sun (World Health Organisation website Global UV Index publication).

Unfortunately surveys continue to show a large number of people are regularly still getting sunburnt and continue sun worshipping, complacent to the damage they may be sustaining.



Many people also wrongly perceive heat or high temperatures as an indication of high ultraviolet levels. UVR however can still be significant in cool temperatures and on cloudy days.

70 year old man's forearm showing marked sparing of sun damage under a watch band.

UV INFORMATION			
UV-Index Level	Exposure Category	Colour Code	Precautions
2 or less	Low		You can safely stay outdoors with minimal protection.
3 to 5	Moderate		Wear a hat, sunscreen, sunglasses, seek shady areas.
6 to 7	High		Wear a hat, sunscreen, sunglasses, seek shady areas. Stay indoors between 10am and 2pm (11-3 daylight saving time).
8 to 10	Very High		Stay indoors as much as possible, otherwise use all precautions above.
11 or higher	Extreme		Same as above.

The UV Index – What’s it all about.

The amount of ultraviolet radiation is rated according to standardized categories, which are colour coded for easy recognition. Advice accompanies according to the amount of exposure.

The World Health Organisation, The Cancer Council of Australia and The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) recommend appropriate protection when the UV index is 3 or above. Note when the UV index is High to Extreme it is recommended to remain indoors.






















In Brisbane we can access LIVE realtime UV readings via the internet posted by the Australian Sun and Health Research Laboratory at Queensland University of Technology on www.uv.hlth.qut.edu.au. This can allow prospective timetabling of outdoor activities.






















ARPANSA now also post realtime UV graphs via www.arpansa.gov.au/uvindex/realtime/ausrealtime.htm for the major cities in Australia. There are also charts for the months or past years available on www.arpansa.gov.au/uvindex/daily/ausuvindex.htm for comparison.

UV alerts predicting the expected UV graph are also located in the daily newspaper and on weather reports on television and radio.



UV Readings and Peak Times

Date	UV Index	Peak time	Colour Code
1/1/06	11	11:40	
2/1/06	10	11:50	
3/1/06	11	12:00	
4/1/06	12	11:50	
5/1/06	11	11:10	
6/1/06	13	11:40	
7/1/06	10	13:40	
8/1/06	11	11:50	
9/1/06	9	10:40	
10/1/06	14	11:10	
11/1/06	13	11:40	
12/1/06	13	12:10	
13/1/06	13	12:50	
14/1/06	13	11:40	
15/1/06	13	12:30	
16/1/06	14	11:30	
17/1/06	14	12:00	
18/1/06	12	11:00	
19/1/06	8	12:00	
20/1/06	13	12:50	
21/1/06	11	10:10	

Date	UV Index	Peak time	Colour Code
25/1/06	13	11:50	
26/1/06	13	12:00	
27/1/06	12	11:40	
28/1/06	13	11:10	
29/1/06	13	12:10	
30/1/06	12	13:00	
31/1/06	13	11:50	
1/2/06	13	11:50	
2/2/06	13	12:10	
3/2/06	13	12:00	
6/2/06	11	11:10	
7/2/06	10	10:30	
8/2/06	13	12:30	
9/2/06	12	12:10	
10/2/06	12	11:40	
11/2/06	11	11:30	
12/2/06	9	10:20	
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14/2/06	12	12:20	
15/2/06	10	13:20	
16/2/06	11	13:30	

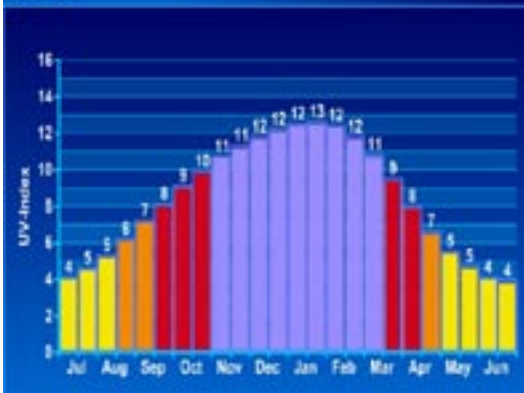
It is interesting to see the pattern of colour that emerges when we chart the daily UV index for example in summer in Brisbane. It is also interesting to note at what time of the day the peak UV occurs.

It is very apparent that in Brisbane we experience **daily Very High to Extreme UV** in the **summer months**, and that on some days the peak UV may occur **as early as 10 am**, and as late as **1.30** on other days for example.

By having a **LIVE link** to the actual realtime UV, rather than a reading by the end of the day, it is hoped people will be better able to plan outdoor activities for when the sun is less intense or if they have to be outdoors, understand the reason for all the personal sunprotection precautions.

In recognition of the need to protect students from the harmful effects of the sun, **Queensland's Department of Education Sunsafety Guidelines for Secondary Schools** recommend among other steps a review of timetables for outdoor activities and reduce scheduling schoolchildren in the sun between 10 - 2, when the sun is most intense. Guidelines for Junior schools are being considered.

Monthly Average UV-Index Brisbane



The tendency to Very High to Extreme daily UV peaks occurs in Brisbane between November to February each year. Even in the winter months in Brisbane the UV peaks in the Moderate range meaning sunsmart protection is also important in our winter.

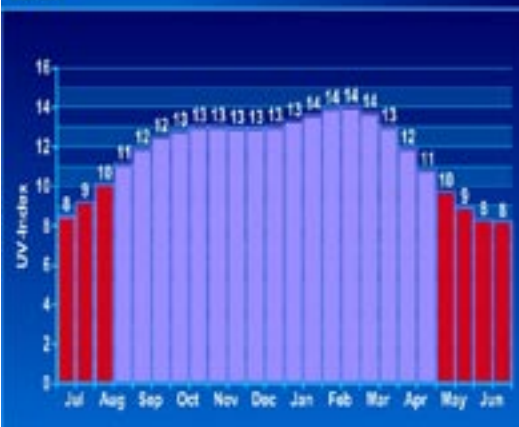
This is different to the conditions experienced in winter in Melbourne when sunprotection may be unnecessary.

Monthly Average UV-Index Melbourne



We can compare our UV measurements with those of other cities around Australia by looking at the ARPANSA website. It is interesting to see in Melbourne on average the Extreme peak UV is usually experienced during the days of January, whereas Darwin has such conditions during most of their year.

Monthly Average UV-Index Darwin



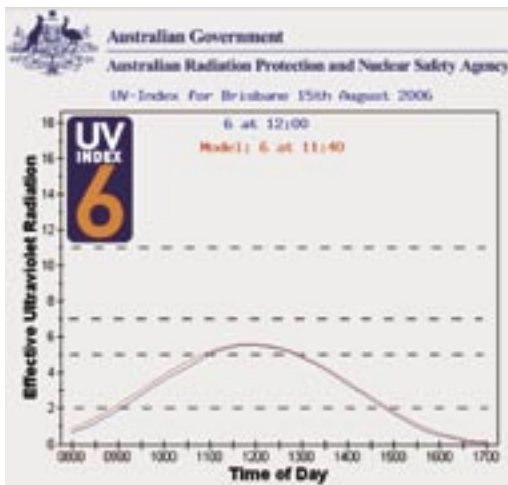
In addition to knowing when the peak UV occurs, it is also important to know how much time is spent over the course of the day exposed to these intensities. Lets look at a UV index graph.

UV Index graph



During the day ultraviolet radiation increases to a peak and these measurements are graphed daily. The actual peak level reached depends on factors such as the ozone levels, cloud cover, water vapour and other particulate matter in the atmosphere.

The blue line represents actual readings taken by ARPANSA dataloggers and the red line reflects the predicted UV for a clear day. Such graphs help us to understand when the peak UV occurs, as well as appreciate that in our Queensland summer the UV remains over 3 for a large part of the day, during which we should be mindful of appropriate protection if outdoors. In Brisbane during the winter months the intensity of the UV is less but it is still important to be Sunsmart when the UV is over 3.



In contrast the Cancer Council of Victoria recommend the first of May means “hats off day” for Victorians to ensure people get enough sun exposure for vitamin D production in their skin in the Victorian winter. Even so, the Osteoporosis task force urge having sun exposure outside the 10 – 2 time frame when peak UV occurs to avoid exposure to those intensities.

After a recent skin cancer scare Australian cricketer Michael Clarke, 24, will wear a long sleeved lycra suit under his one day outfit and a wide brimmed hat for extended fielding stints.

“It has reminded me how dangerous the sun is and we’re obviously in it a lot.”



Sunsafety and You

The Australasian College of Dermatologists, Queensland Cancer Fund and the Australian Radiation Protection and Nuclear Safety Agency recommend we adopt a **range of behaviours** which assist in helping to minimize our risk of developing skin cancer. Remember the intensity of the UV peak as well as how much time you spend in the sun.

- 1) Avoid being in the sun between 10 – 2 (or in daylight saving time 11 – 3). This is because the UV levels are at their highest in this time and in summer in Queensland, this means in the moderate to extreme range.

Therefore think ahead when planning activities outdoors. Schools need to ensure sport lessons are held outside of peak UV times if they are outdoors in uncovered facilities. This may mean scheduling swimming or tennis lessons for the early morning or late afternoons if covered areas are unavailable. All day sports or swim carnivals should be split over a couple of mornings or held later in the afternoon, or in covered centres.

- 2) If outdoors, seek full shade and take into account reflected UV from surfaces. You can still get burnt under a beach umbrella if sitting for a prolonged period when the solar UV is high. Shade cloth is less effective at blocking ultraviolet than polycarbonate sheeting. As a general rule the more you can see the sun through the shade cloth, the more UVR that is getting through.
- 3) Wear adequate clothing that protects exposed skin. Check the weave or if available, the ultraviolet protection factor (UPF) for the clothes you choose. For swimming in an unshaded pool this may include a long sleeved swim shirt that complies with the Australian Standard for sun protective textiles. Check the clothing regularly for degradation and stretching which will change the UPF.
- 4) Wear a broad brimmed or legionnaires type hat. Sunscreen may further be needed for the nose and cheeks which may still be exposed to reflected UV when outdoors. Also check the material of the hat and for any holes from wear and tear.
- 5) Wear approved sunglasses that comply with the Australian Standard. Wrap around ones will reduce side access.
- 6) Make time to apply a visible layer of 30+ SPF broad spectrum sunscreen to exposed skin and to re-apply it after half an hour to make sure any missed spots are covered. Re-apply after swimming and towel drying. Do not use it as an excuse to spend longer outdoors. Sunscreen used for protection against excessive UV exposure is unlikely to result in Vitamin D deficiency. In Queensland most people receive sufficient sunlight from normal day to day activities to help produce Vitamin D in their skin. Supplements can be taken in special circumstances if necessary, so please discuss this with your doctor. For further information look at the Osteoporosis Task Force recommendations and vitamin D fact sheet.
- 7) Avoid using solariums and unsupervised home tanning beds as these increase the total ultraviolet your skin gets. Its just like getting more sun.
- 8) Avoid getting sunburnt. Do not get caught out – carry a fold up umbrella, extra sunscreen, hat or jacket to cover exposed skin.
- 9) Adults role model sunsmart behaviour consistently.
- 10) Get your skin checked regularly at least every 6 – 12 months by your doctor or dermatologist and seek prompt assistance if you notice a new or changing lesion. Don't ignore the "pimple" that won't go away.



Useful websites

1. <http://australia.gov.au/skincancer> - National campaign on skin cancer awareness
2. www.uv.hlth.qut.edu.au - weblink printed with permission from the Australian Sun and Health Research Laboratory connecting to the live UV index readings
3. www.arpansa.gov.au/uvindex/daily/ausuvindex.htm - UV index graphs and charts re-printed with permission by ARPANSA from this site
4. www.dermcoll.asn.au - Australasian College of Dermatologists website
5. www.sunsmart.com.au/ - Vicotrian Cancer Fund Sunsmart programme
6. www.education.qld.gov.au/schools/healthy/framework/docs/sun-safety-guidelines.pdf - Sun safety guidelines for secondary schools
7. <http://www.who.int/uv/publications/en/GlobalUVI.pdf> - World Health Organisation Global UV Index document