Being SunSmart in Victoria



The sun's ultraviolet (UV) radiation is both a major cause of skin cancer and the best natural source of vitamin D. 1 Cancer Council Victoria recommends five steps to protect against sun damage from September to April when the average daily UV is 3 and above:

- 1. **Slip** on some sun-protective clothing that covers as much skin as possible.
- 2. **Slop** on SPF30+ sunscreen make sure it is broad spectrum and water resistant. Put it on 20 minutes before you go outdoors and reapply every two hours. Sunscreen should never be used to extend the time you spend in the sun.
- 3. **Slap** on a hat that protects your face, head, neck and ears.
- 4. Seek shade.
- 5. **Slide** on some sunglasses make sure they meet Australian Standards.

From May to August the UV is generally below 3 and sun protection is not needed unless outside for extended periods of time or near highly reflective surfaces such as snow.

Skin cancer

Skin cancers form when skin cells are damaged by UV radiation penetrating the skin.

In Australia, sunburn can occur in as little as 11 minutes on a fine January day.² All types of sunburn, whether serious or mild, can cause permanent and irreversible skin damage and can lay the groundwork for skin cancer to develop later in life. Both tanning and sunburn increase your risk of skin cancer.³

Statistics

- In 2009 1837 Australians, including 401 Victorians, died from skin cancer, more than the national and Victorian road toll (respectively).⁴
- Skin cancer treatment in Australia costs around \$300 million each year. It is the most expensive of all cancers.⁵
- At least two in three Australians will be diagnosed with skin cancer before the age of 70.⁶
- Skin cancers account for about 80% of all cancers diagnosed in Australia.
- Each year, Australians are four times more likely to develop a common skin cancer than any other form of cancer.
- Melanoma incidence rates in Australia and New Zealand are between two and five times as high as those found in Canada, the United States and the United Kingdom.
- Australian adolescents have by far the highest incidence of melanoma in the world, compared with adolescents in other countries.⁹
- Melanoma can develop early in life and the risk increases as you get older so sun protection matters, whether six, 16 or 60 years old.
- Melanoma is the most diagnosed cancer each year for people aged 15 to 44.¹⁰
- In Victoria, the highest rates of melanoma occur on the trunk in men and on the legs in women.

Vitamin D

Vitamin D is a hormone that controls calcium levels in the blood. It is needed for the development and maintenance of healthy bones, muscles and teeth and it is also important for general health. ^{12,13} Vitamin D is made in our bodies through a series of processes that start when our skin is exposed to UV radiation.

Some foods, such as oily fish and eggs, contain small amounts of vitamin D, while margarine and some types of milk have added vitamin D. However it is difficult to get enough vitamin D from diet alone.

How do you know when sun protection is required?

In Victoria from September to April, when the UV Index is 3 and above, most people need sun protection. Particular care should be taken during the middle of the day when UV Index levels are most intense. 14 During these

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months, most Victorians can maintain adequate vitamin D by exposing their face, arms and hands for a few minutes either early in the morning or late in the afternoon on most days.

Using sunscreen when the UV is above 3 will not prevent vitamin D production. When sunscreen is tested in lab conditions it blocks vitamin D production, however regular use in real life has been shown to have little effect on vitamin D levels as people who use more sunscreen spend more time in the sun, so naturally they will have higher vitamin D levels.

From **May to August**, UV Index levels in Victoria are usually low (below 3).² Sun protection is not needed unless near highly reflective surfaces such as snow or outside for prolonged periods of time. To help maintain vitamin D levels, most people in Victoria need two to three hours of sunlight to the face, arms and hands (or an equivalent area of the skin), spread over a week. Sunscreen is not required when the UV is below three.

People with naturally very dark skin may need three to six times the recommended exposure levels and supplementation may be required. ¹⁵

UV, **not heat, is what to beat.** You can see sunlight and feel heat (infrared radiation), but you cannot see or feel UV radiation. UV radiation comes directly from the sun and can be damaging to skin even on cool, cloudy days as it can pass through light cloud. It can also be scattered in the air and reflected by surfaces such as buildings, concrete, sand, snow and water.

The SunSmart UV Alert is issued by the Bureau of Meteorology (BOM) when the UV is forecast to reach 3 and above. It indicates what times of the day sun protection is needed. It is reported in daily newspapers, some weather forecasts and at sunsmart.com.au The BOM website also provides the SunSmart UV Alert for over 300 locations across Australia. Visit bom.gov.au/weather/uv

The SunSmart UV Alert is also available as a free iPhone app and widget that can be downloaded for free to any website. Live UV levels for capital cities are available from arpansa.gov.au/uvindex/realtime





Further information and resources

Visit sunsmart.com.au or contact the Cancer Council Helpline on 13 11 20. UV-protective clothing and accessories can be purchased at Cancer Council Victoria's shop or online at cancervic.org.au/store

References

 Calvo MS, Whiting SJ, Barton CN. Vitamin D fortification in the United States and Canada: Current status and data needs. American Journal of Clinical Nutrition 2004; 80 (6 Suppl): 1710S-1716S.
 Samanek AJ, Croager EJ, Gies P, Milne E, Prince R, McMichael AJ,

 Samanek AJ, Croager EJ, Gies P, Milne E, Prince R, McMichael AJ, Lucas RM, Slevin T. Estimates of beneficial and harmful sun exposure times during the year for major Australian population centres. Medical Journal of Australia 2006; 184 (7): 338-341.

3. Armstrong BK. How sun exposure causes skin cancer: An epidemiological perspective. In: Hill D, Elwood JM, English DR, (Eds). Prevention of Skin Cancer. Dordrecht, The Netherlands: Kluwer Academic Publishers, 2004: 89-116.

4. Australian Bureau of Statistics. Causes of death 2008. 3303.0. Commonwealth of Australia: Canberra, Australia 2010.

5. Australian Institute of Health and Welfare. Health system expenditures on cancer and other neoplasms in Australia, 2000-2001. AIHW cat.no. HWE 29. Australian Institute of Health and Welfare, : Canberra. Australia 2005.

Canberra, Australia 2005.
6. Staples MP, Elwood M, Burton RC, Williams JL, Marks R, Giles GG. Non-melanoma skin cancer in Australia: the 2002 national survey and trends since 1985. Medical Journal of Australia 2006; 184 (1): 6-10.
7. Australian Institute of Health and Welfare (AIHW) & Australasian Association of Cancer Registries (AACR). Cancer in Australia: an overview, 2006. AIHW cat.no. CAN 32. AIHW: Canberra 2007.
8. Ferlay J, Bray F, Pisani P, Parkin DM. GLOBOCAN 2002. Cancer incidence, mortality and prevalence worldwide. IARC CancerBase No. 5, version 2.0. IARCPress: Lyon, France 2004.

9. Stiller CA. International patterns of cancer incidence in adolescents. Cancer Treatment Reviews 2007; 33 (7): 631-645.

 Australian Institute of Health and Welfare, Australasian Association of Cancer Registries. Cancer age specific data cube 2005. AIHW 2010.
 Thursfield V, Giles G. Canstat No. 44: Skin cancer. The Cancer Council Victoria: Melbourne, Australia, November 2007.

12. Papadimitropoulos E, Wells G, Shea B, Gillespie W, Weaver B, Zytaruk N, Cranney A, Adachi J, Tugwell P, Josse R, Greenwood C, Guyatt G. VIII: Meta-analysis of the efficacy of Vitamin D treatment in preventing osteoporosis in postmenopausal women. Endocrine Reviews 2002; 23 (4): 560-569.

13. Trivedi DP, Doll R, Khaw KT. Effect of four monthly oral vitamin D3 (cholecalciferol) supplementation on fractures and mortality in men and women living in the community: Randomised double blind controlled trial. British Medical Journal 2003; 326 (7387): 469-475.

14. World Health Organization. Global Solar UV Index: A practical guide: A joint recommendation of the World Health Organization, World Meteorological Organization, United Nations Environment Programme, and the International Commission on non-ionizing radiation protection. WHO: Geneva, Switzerland, 2002.

15. Clemens TL, Adams JS, Henderson SL, Holick MF. Increased skin pigment reduces the capacity of skin to synthesise vitamin D3. Lancet 1982; 1 (8263): 74-76.

This information is based on current available evidence at the time of review. It can be photocopied for distribution.

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