

Building The Case for Shade

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Introduction

Australia has one of the highest rates of skin cancer in the world with two in three Australians developing some form of skin cancer before the age of 70.¹ More than 1700 Australians die from skin cancer every year, which is more than the national road toll.²

SunSmart is a nationally and internationally renowned ultraviolet (UV) radiation protection and prevention program with aiming:

- to prevent and minimise the adverse effects of UV radiation through effective skin cancer prevention initiatives; and
- promote and improve awareness of a balanced approach to UV exposure and the link with vitamin D

SunSmart is an integrated program focused on influencing both individual UV protection behaviours and broader population health through media and communications, advocating for political, environmental and legislative change, and implementing capacity building activities. The program is underpinned and influenced by research and evaluation, which is responsive to an ever-changing environment.

UV radiation and the SunSmart UV alert

UV radiation is both the major source of skin cancer the best natural source of Vitamin D.³

The UV Index indicates the amount of the sun's UV radiation that reaches the earth's surface. The higher the UV Index level, the greater the potential for damage to the skin and eyes. The UV Index is divided into categories which correspond to the level of risk; this ranges from low (1-2) to extreme (11+). The SunSmart UV Alert is a tool people can use to find out daily UV Index levels for their local area. It is available in the weather section of the daily newspaper, at sunsmart.com.au or www.bom.gov.au/weather/uv.

When UV Index levels reach three and above, sun protection is needed. At this level UV can damage skin and eyes and lead to skin cancer.⁴ In northern parts of Australia UV levels are consistently above three throughout the entire year. In southern areas, the UV level is more variable. For example, in Victoria average UV Index levels reach three and above from the beginning of September through to the end of April - this is when sun protection is required⁵. During these times, SunSmart recommends that people: *Slip* on sun-protective clothing; *Slap* on SPF30+, broad spectrum sunscreen; *Slap* on a hat; *Seek* shade; and *Slide* on sunglasses.

When average daily UV levels are above three, most people can maintain their vitamin D with a few minutes of sun exposure to the face, arms and hands (or equivalent area of skin) in the morning or afternoon on most days of the week. Individuals with very dark skin need 3-6 times this level of exposure^{6,7}

When UV levels are below three, for example in Victoria from May to August, sun protection is not required unless in alpine regions or near highly reflective surfaces such as snow or water. When UV levels are below three, two to three hours of UV exposure to the face, arms and hands each week is usually needed to maintain vitamin D levels.^{8,9,10} Again, people with naturally very dark skin need 3 – 6 times these exposure levels.¹¹

The rationale for shade

Shade alone can reduce overall exposure to UV radiation by up to 75%.¹² SunSmart has a strong focus on working with local government to advocate for broad structural strategies such as shade planning, and provision to support individual behaviour change strategies.

In a survey conducted in 2007, 45% of Victorian adults believed adequate shade was hard to find at their local park or playground. Adequate shade was reported to be even more difficult to find at sports grounds, with non-metropolitan residents finding it harder than those in metropolitan areas.^{13,14} Additionally, adults living in higher socioeconomic status (SES) areas report being more likely to use sunscreen and access shade. Victorian research shows that public open spaces in lower SES areas are less likely to have shade than those living in higher SES areas.¹⁵

Adolescence and childhood are critical periods during which sun exposure is more likely to contribute to skin cancer in later life.^{16,17} International research of early childhood environments showed that providing suitably shaded areas resulted in a decrease in UV exposure of over 40% compared to unshaded areas. It also increased children's outdoor activity levels by approximately a 20%.¹⁸ The 2006–07 sun survey results suggest that adolescents and young adults require an increased focus as a priority for skin cancer prevention messages because of their low compliance with sun protective measures and higher sunburn incidence on summer weekends.^{19,20}

Building shade is an effective, practical option for protecting adolescent students against UV radiation during lunch times. A recent Cancer Council study examined whether students use or avoid newly shaded areas created by shade-sails installed at schools. The shade-sail intervention, purpose-built, was shown to increase students' use of newly shaded areas at schools.²¹ Further, the students did not avoid the shaded areas. Extending the data in this study to daily use during a typical spring and summer term, potentially up to one third of the student enrolment would have a reduced level of exposure to UV radiation by using newly shaded areas. The installation of shade at secondary schools has the added advantage over educational interventions for adolescents' sun protection, in that the benefits may be sustained over months and years, with small maintenance costs.

The 2006–07 sun survey results also identified a number of activities and settings where sunburn is common. A high proportion of people were sunburnt during aquatic related activities, sport and passive recreation.²² It is therefore important to support environmental change in these settings such as ensuring shade audits are conducted, providing portable shade and signage to encourage sun protection.

Temperature is a strong determinant of sunburn for adults and adolescents. Next century global warming of 1.1– 6.4°C is predicted.²³ Early data shows that for each 1°C increase there are estimated increases in the incidence of basal cell carcinoma and squamous cell carcinoma of 3% and 6%, respectively.²⁴ Ensuring various settings are prepared and able to respond to these changes including the provision of well-shaded outdoor spaces for both active and passive recreation will be crucial in the future.

New SunSmart resources for planning shade

Two new resources that are being developed by SunSmart are based shade recommendations and practices research and feedback from a range of key stakeholders including shade manufacturers, architects, planners, the Australian Canvas and Synthetic Products Association, Archicentre, the Australian Radiation Protection and Nuclear Safety Agency and the Planning Institute of Australia. The resources will include:

- **A shade audit tool-** a step by step guide for assessing existing shade and planning and developing new shade that will be fit for purpose.
- **Good practice guidelines-** a concise information resource that describes the essential elements in the process of planning and developing effective shade.

The essential elements of planning and developing quality shade will be covered in these resources including:

1. Identifying when and where shade is needed
2. Identifying what the shade will be used for
3. Considering built or natural shade

These new resources will compliment the current range of SunSmart shade resources including

- Shade for everyone: a practical guide for shade development booklet
- Portable shade: tips for purchase and use flyer
- Shade for beaches, foreshore reserves and other waterside recreation areas flyer
- Shade for early childhood centres flyer
- Shade for parks and reserves flyer
- Shade for playgrounds flyer
- Shade for public swimming pools flyer
- Shade for sports grounds and facilities flyer

For further information SunSmart's activities and shade information please contact:

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⁴ World Health Organization (WHO). *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*. Geneva, Switzerland: WHO, 2002 2002.

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