Shade

Cancer Council Victoria recommends the use of shade for ultraviolet (UV) radiation protection. Shade alone can reduce overall exposure to UV radiation by about 75%. [1] Shade should be correctly designed to offer the greatest coverage during peak UV radiation times and peak periods of use.

For best protection, choose shade that has extensive overhead and side cover and is positioned away from highly reflective surfaces. Cancer Council Victoria recommends five steps to protect against sun damage when the UV Index is 3 and above:

1. **Slip** on some sun-protective clothing.

2. **Slop** on SPF30+ broad spectrum water-resistant sunscreen and re-apply every two hours.

3. **Sla**p 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.

Extra care should be taken between 10 am and 3 pm; this is when UV Index levels reach their peak.

To find out UV Index levels look for the SunSmart UV Alert in your daily newspaper's weather section or visit bom.gov.au/weather/uv or sunsmart.com.au

Live UV levels for Capital cities are available from arpansa.gov.au/uvindex/realtime

Planning effective shade
Good planning ensures effective shade. Whatever the scale of the project, planning should include:

- identifying where and when shade is needed
- understanding your shade options
- considering built shade
- considering natural shade.

What is the shaded area to be used for?
Is this area mainly used for passive activities, active play, sports, spectators or all of these? This will help determine the best type of shade structure to use.

Will the shade affect user comfort?
Shade areas must provide UV protection from September to April and cool spaces in summer. Adequate light and ventilation are also important. If the shaded area is permanent, it also needs to be warm and protected from the weather in winter so that people will still want to use it.

Shade options
Shade options include the use of trees, built structures (permanent or temporary) or a combination of both.

Built shade structures include:

- Permanent structures: these should be able to withstand harsh weather conditions and high winds. Regular maintenance is essential to ensure their long lifespan. The various parts making up your shade structure should be cheap and easy to replace.
- Temporary structures: are easy to set up and take down, these include portable structures such as large tents and marquees. These are good for a space that only needs shade occasionally or when temporary shade is needed.
- Adjustable systems: these are often very flexible, allowing for changes in shade as the sun moves during the day and at different times of the year.

Shade

- Shade sails: these usually require minimal support structures due to the combined effect of tension and the curved fabric used in the design. The curve of the fabric affects where the shade will fall. The design and construction of these structures is a specialised field; you will need to engage professionals to design and build this type of shade.
- Pre-made structures: are ready for installation on any site. They can offer a cost-effective, readily available shade solution. You will still need to ensure that it is safe and provides adequate shade in the right area at the right time.
- Portable shade: such as beach shelters. These are ideal for places where other shade is not available. They often provide a quick and cheap solution to shade problems but may not be effective in protecting people from indirect UV radiation.

Textile and shade cloth covered structures
The quality of the covering material will largely determine the effectiveness of the UV radiation protection. SunSmart recommends shade materials with a minimum of 94% UV radiation protection.

Textile or coated fabric such as canvas can provide up to 99% UV radiation protection. Features can include tight weave; coating to resist mildew, rot and light exposure; and water resistance. It often has a shorter lifespan than shade cloth.

Shade cloth may be either woven or knitted. It allows some light, air and water through and usually has a lifespan of up to 15 years, but only offers limited protection against UV radiation. Most shade cloth offers less than 94% UV radiation protection.

Natural shade
The most suitable trees for natural shade have large canopies, dense foliage and sufficient clearance beneath the canopy to allow access. A higher canopy usually provides less overall shade. Natural shade is particularly well suited to large recreational areas such as parks and reserves.

Trees must be carefully selected to ensure they are appropriate for the soil type and climate in the area. Try to select a shade tree that has:

- foliage only when needed (e.g. a deciduous tree drops its leaves in winter allowing sunlight in for light and warmth)
- broad, low and dense canopies (i.e. any visible open sky indicates UV radiation can penetrate the shade cover)
- no spiky branches, fruit or seed pods that could drop or attract bees.
- ensure the tree will cast shade where it is needed.

Further information and resources
Being SunSmart in Victoria information sheet and *Shade for Everyone: A Practical Guide for Shade Development booklet*.

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

Reference
1 Parsons PG, Neale R, Wolski P, Green A. The shady side of solar protection. *Medical Journal of Australia* 1998; 168(7): 327–30.

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

Latest update: August 2010

Cancer Council Victoria VicHealth