



## Sunglasses

**To protect eyes from ultraviolet (UV) radiation, The Cancer Council Victoria recommends sunglasses that are:**

- **close fitting**
- **wrap-around and cover as much of the eye area as possible**
- **meet Australian Standard 1067: 2003 (Sunglasses: Category 2, 3 or 4), and**
- **are marked EPF (eye protection factor) 10.**

**Always use sunglasses in combination with other sun protection measures; shade, clothing, hats and sunscreen.**

### How does UV radiation affect the eyes?

Exposing the eyes to too much UV radiation can cause short-term complaints such as:

- mild irritations
- excessive blinking
- swelling
- difficulty looking at strong light<sup>1</sup>
- acute photokeratopathy, also known as sunburn of the cornea or snowblindness.

Exposure to UV radiation over long periods can lead to more serious damage to the eyes<sup>2-8</sup> such as:

- cataracts, or cloudiness of the lens
- cancer of the conjunctiva, the membrane covering the white part of the eye
- pterygium (pronounced tur-rig-i-um) – an overgrowth of the conjunctiva on to the cornea
- solar keratopathy, or cloudiness of the cornea
- skin cancer of the eyelids and around the eyes
- ocular melanoma<sup>9</sup>.

### How can I reduce UV radiation exposure to my eyes?

Sunglasses which meet Australian Standard AS 1067 (Sunglasses: Category 2, 3 or 4) and a broad-brimmed hat can reduce UV radiation exposure to the eyes by up to 98%<sup>10</sup>. Even wearing a hat with a brim that shades the eyes can reduce UV radiation to the eyes by 50%<sup>8</sup>.

The Australian Standard measures how much UV radiation goes through the lens, and defines lens width and height measurements for effective eye protection. The use of wrap-around, close fitting, large sunglasses, helps to reduce reflected UV radiation and glare which passes around the edge of the sunglasses and reaches the eyes.

Sunglasses labelled EPF10 (eye protection factor rating 10) exceed the requirements of the Australian Standard and may provide even greater protection<sup>11</sup>.

The colour or darkness of the lenses *does not* indicate the level of sun protection: you will need to check the label. To reduce glare you may require a darker tinted sunglass lens or polarised lenses.

Swimming goggles with EPF10 are available.

If you wear prescription glasses, consider adding a UV-protective coating, buying prescription sunglasses or buying protective shades that can be worn over your glasses. You can also buy photochromatic (transition) lenses with UV radiation protection; these will change colour when you are in bright sunlight and stay clear indoors or at night. It is important to note, transition lenses work less effectively in cars because of UV radiation absorption by windscreens and to a lesser extent, the side windows. There are lower levels of UV radiation inside cars and this will affect the lenses.

Some contact lenses have built-in UV radiation protection. However it is recommended that you still wear sunglasses over the top to protect the rest of the eye.

Sunglasses should not be worn at night as your vision will be reduced.

### **Children and sunglasses**

Since eye damage from UV radiation builds over time, it is important to protect the eyes of children.

Sunglasses designed for babies and toddlers have soft elastic to keep them in place. It is important to choose a style that stays on securely so that the arms don't become a safety hazard.

Toy or fashion labeled glasses do not meet the requirements for sunglasses under the Australian Standard<sup>10,12</sup> and therefore should not be used to provide sun protection.

Some young children may be reluctant to wear sunglasses. You can still protect their eyes by avoiding peak UV radiation times, putting on a hat and staying in the shade.

### **Eye protection for outdoor workers**

Some outdoor workers need protection from flying particles, dust, splashing materials and harmful gases. They should wear sunglasses that comply with both the Australian Standard 1067 and the Australian/New Zealand Standard 1337 (eye protectors for industrial applications)<sup>13</sup>.

### **Eye protection in solariums**

Eye goggles should always be worn in a solarium. If the eyes are exposed to UVA radiation from a solarium, the cornea and the conjunctiva may be briefly inflamed, and sight can sometimes be permanently damaged.

Solariums emit harmful levels of UV radiation that can be up to five times as strong as the midday summer sun. This is the equivalent of the UV Index being 80. (The highest UV Index level in Australia is 16.) The more your skin is exposed to UV radiation from any source, the greater your risk of skin cancer.

### **Eye protection in sport**

A variety of sports sunglasses that are designed to suit specific sports including golf, cycling, cricket and sailing are available.

### **Further information and resources**

Please also refer to the information sheet *Being SunSmart in Australia*.

Speak to your optometrist, ophthalmologist or GP about how to protect your eyes from UV radiation.

For further information and advice visit the SunSmart website at [www.sunsmart.com.au](http://www.sunsmart.com.au) or contact the Cancer Council Helpline on 13 11 20.

For more tips on saving your sight, please visit Vision 2020 Australia's [www.saveyoursight.org.au](http://www.saveyoursight.org.au).

*UV protective clothing and accessories can be purchased at The Cancer Council Victoria's Carlton shop or online at [www.cancervic.org.au](http://www.cancervic.org.au), click on 'Shop'.*

**This information can be photocopied for distribution.**

### **References**

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