

Occupational UVR Exposure

Cancer Council ACT recommends that all outdoor workplaces adopt an ultraviolet radiation (UVR) protection program. The program should include a comprehensive policy and strategies for the early detection and prevention of skin cancer in the workplace.

Skin cancer and the workplace

- Australia has the highest rate of skin cancer in the world, over 1700 Australians die each year from the disease. Suspected skin cancers are removed from around 420,000 Australians every year. Skin cancer costs the health system over \$300 million annually¹.
- Skin cancer is mostly caused by overexposure to UV radiation. UV radiation may also cause skin damage, ageing, wrinkling and eye damage².
- UV radiation comes directly from the sun, but it is also scattered and reflected by surfaces such as concrete, glass, roofing iron, sand, snow and water. UV radiation is invisible; it is not warm and can pass through light cloud, so sunburn can occur on cool or cloudy days. UV radiation protection is recommended in Canberra from August through to the end of May for part of or most of each day. Particular care should always be taken between 10am to 2pm (11am to 3pm during daylight saving).
- Outdoor workers can be exposed to 5 to 10 times more UV radiation than indoor workers putting them at high risk of skin cancer, particularly basal cell carcinoma (BCC) and squamous cell carcinoma (SCC)—the two most common forms of skin cancer.
- Indoor workers are also susceptible to skin cancers including melanoma due to their “intermittent” sun exposure patterns (exposure to the sun every now and then on the weekends and holidays).

Substances that increase sensitivity to UV radiation

- A number of medications can increase susceptibility to skin damage from UV radiation. These include some antibiotics, drugs for high blood pressure, some antidepressants, immunosuppressants and non-steroidal anti-inflammatory drugs. Workers exposed to high levels of UV radiation should check with their doctor about any medicines they are prescribed.
- Exposure to certain substances can cause some people to develop photosensitivity to UV radiation. This is an abnormal reaction in the skin or eyes caused by ingestion, inhalation or skin contact with certain plants, coal tar and derivatives, dyes or chlorinated hydrocarbons. Workplaces where these substances are present should provide protection for

workers both from the substances and from exposure to UV radiation.

The legal position

- The Work Safe Act of 2008 requires employers to provide a safe working environment for workers. Over-exposure to UVR radiation has been identified as a major hazard in the workplace, and employers have a ‘duty of care’ to protect workers as much as practicably possible from any foreseeable harm including over-exposure to UVR by implementing effective safety measures and policy. Workers are also required to comply with these measures. Self-employed workers also need to protect themselves from any foreseeable harm. For more information contact **The Office of Regulatory Services** on 6205 0200 for further information.

Developing a comprehensive UV protection program in the workplace

- Effective workplace UV protection programs are developed in consultation with workers and their representatives. Programs should include processes for monitoring compliance as well as training for all workers, supervisors and managers. Training should cover the effects of UV radiation, the importance of the protection strategies and the benefits of early detection and skin self-examination.
- SunSmart can provide a workplace educator to present this information in the workplace. For more information visit www.actcancer.org or call 6257 9999.

Minimising outdoor work at peak UV radiation times

- Outdoor jobs should be structured so that work can be done early in the morning, reserving indoor or sheltered jobs for peak UV radiation times in the middle of the day.

Sheltering outdoor workers in natural or built shade structures

- Where possible, outdoor work should be conducted in areas of natural shade, or built shade such as buildings or awnings. Portable shade such as shade umbrellas may also be an option.

Wearing sun protective clothing and hats

- Outdoor workers should cover as much skin as practicable with clothing. Long pants are recommended (knee length or longer shorts), and shirts with collars and sleeves that reach at least to the elbow. Hats with a brim of at least 7.5 cms should be worn to protect the face, ears and neck. If this type of hat is not practicable, a legionnaire style cap with flaps

at the back and sides or a bucket hat (min 6cm brim) or a hard hat extension will also offer good protection.

- Fabric rated above UPF (ultraviolet protection factor) 30 provides very good protection against UV radiation. Closely woven fabrics provide the best protection, and polyester, silk and wool have better UV radiation blocking properties than cotton or rayon.
- Car or truck windows, particularly laminated windscreens, filter out most UV radiation when closed, but workers who spend long periods in vehicles in the sun can still get sunburnt³. Drivers who have side windows down are at particular risk. Clothing and sunscreen protection are therefore recommended when driving for long periods.

Wearing sunglasses

- Repeated exposure of unprotected eyes to UV radiation can result in moderate to severe, short and long term eye damage. Protect the eyes by wearing sunglasses that comply with the Australian Standard AS 1067, preferably marked EPF (eye protection factor) 10, and always choose a wrap-around, close-fitting sunglasses for best protection.
- Safety glasses that meet AS 1337:1992 also offer good UV protection, but may require tinting for outdoor use to reduce glare.

Applying sunscreen

- Sunscreen does not block all UV radiation, and it should not be the first choice for skin protection, nor should sunscreen be used to extend the length of time in the sun. SPF (sun protection factor) 30+, broad spectrum, water resistant sunscreen offers the best protection. It should be applied liberally—one teaspoonful for the face, neck and ears and one teaspoonful for each arm or leg not covered by clothing—20 minutes before going outdoors and reapplied every two hours or more often if it has been wiped, rubbed or sweated off. Lips also need protection so SPF 30+ lip balm is recommended.

Early detection: checking for skin damage

- Cancer Council ACT strongly recommends that people (particularly over the age of 40) regularly check their own skin for spots that are new or have changed colour, size or shape. Details of what to check for are given in the Cancer Council leaflet *How to check for skin cancers- which can be download online or call **Cancer Council Helpline on 13 11 20***

Workplace screening

- Currently there is no evidence to support skin cancer screening in the workplace. Workplaces may offer medical skin checks for workers who work outdoors, but it is important that UV radiation protection and education is also provided so that workers do not rely simply on skin checks.

Further information and resources

- Cancer Council ACT offers **SunSmart Workplace Information Sessions** for indoor and outdoor workers. Contact the Council for more information or to book your workers a session.
- **SunSmart Workplace Outdoor Kit-** This comprehensive information kit has been developed to assist local workers *and* employers toward developing and implementing an effective sun protection program for your workplace. The kit cost just \$39.95 (inc GST) and includes handouts for ALL your workers, an employer's handbook, posters, Information Sheets, Position Statements and more. To order your kit visit us online at www.actcancer.org
- For further information on solar UV radiation exposure hazards in the workplace or the above resources contact TCCACT today on 6257 9999 or visit us at Fairbairn or online at www.actcancer.org.
- Visit **Safe Work Australia's** Index of National Standards, Codes of Practice and related Guideline Notes- **Protection of workers from UVR radiation**(2008)
- Contact the **Office of Regulatory Services - WorkCover**.

References

- ¹ The Cancer Council Australia, *National Cancer Prevention Policy* 2004–2007.
- ² Armstrong BK, Kricger A & English DR. Sun exposure & skin cancer. *Australasian J of Dermatology* 1997; 38(Supp), S1–S6.
- ³ Gies HP, Roy CR & Wand Z, Ultraviolet radiation protection factors for clear & tinted automobile windscreens, *Radiation Protection in Australia* 1992 10(4) 91–4.
- ⁴ Marks R. The use of sunscreens in the prevention of skin cancer. *Cancer Forum* 1996 20: 211–5.

The Cancer Council ACT acknowledges The Cancer Council Victoria for the original preparation of this information sheet.

November 2009