

# Occupational Exposure to Sunlight Guideline

## Section 1 - Purpose and Scope

(1) Exposure to the sun is known to increase the risk of sunburn, skin cancer, eye damage and premature ageing of the skin. This Guideline provides information about limiting occupational exposure to the sun, as far as reasonably practicable, for workers and students at The University of Queensland (UQ) and in so doing comply with its 'duty of care' prescribed by the Queensland [Work Health and Safety Act 2011](#) (the Act). This Guideline does not deal with heat related illnesses such as 'heat stress' or 'heat stroke'.

(2) Workers at UQ whose job requires them to perform tasks outdoors may be at risk of excessive exposure to sunlight. This Guideline provides information about the measures that should be taken to reduce occupational sunlight exposure as far as reasonably practicable.

## Section 2 - Controls to Minimise Occupational Exposure to the Sun

(3) Ultraviolet (UV) radiation is an invisible hazard from the sun that cannot be seen or felt. UV radiation can be high even on cool and overcast days. This means clear skies or high temperatures cannot be relied on to determine when protection from the sun is required. The more UV a person is exposed to, the greater risk of skin cancer and damage to the eyes. It is extremely important for outdoor workers to protect their skin and eyes year-round. Even low UV levels can be harmful to a person when they are exposed for long periods of time.

(4) The UV Index is a scale from one to 14 and provides a good indication of how strong the UV light is in an area on any given day. The higher the number means a greater risk of exposure to UV rays and a higher chance of sunburn and skin damage that could ultimately lead to skin cancer and eye damage. The UV Index is reported daily by the Bureau of Meteorology.

### Risk Assessment

(5) Examples of hierarchal controls starting with avoiding sun exposure, then engineering controls followed by administrative and protective equipment are provided below. A risk assessment should still be completed for tasks/activities that include working outdoors as part of normal duties. This risk assessment should follow the requirements of the [Health and Safety Risk Assessment Procedure](#) and use the hierarchy of controls when minimising the risks of sun exposure.

### Avoid Working in the Sun

(6) Where reasonably practicable, limit exposure to the sun when the UV index is three or more. This may necessitate rearranging of work practices wherever possible.

(7) However, it is recommended sun protection controls are used when the UV Index is below three for the following individuals:

- a. outdoor workers who spend extended periods of time outdoors;

- b. those who work in alpine regions (e.g., in the case of field work); and
- c. those who work near highly reflective surfaces (e.g., boating and diving).

## Minimising Sun Exposure

(8) Sunburn starts with an erythema (type of skin rash or inflamed blood capillaries) followed by tanning or pigment darkening. To minimise sun exposure, workers should:

- a. Always wear sunscreen on exposed skin.
- b. Take precautions and set limits during periods when the UV Index is three or higher. Reorganise work schedules so that outdoor tasks are performed early in the morning or late in the day.
- c. Rotate or job-share tasks that involve direct sun exposure.
- d. Drive with vehicle windows up (while maintaining adequate ventilation and cooling) between 10 am and 2pm.
- e. Plan the work around the movement of the sun. For example, complete outdoor work on the western and northern side of a building in the morning, and work on the eastern and southern sides in the afternoon.
- f. Use trees, buildings and temporary shelters (such as awnings or tarps) to shade work and rest areas. However, be aware of UV radiation reflected off nearby surfaces.
- g. Plan and design work to incorporate the use of portable shelters.
- h. Insulate plant and equipment to reduce radiant heat emissions.
- i. Where possible, fit a shade to equipment and machinery (such as tractors, small earthmovers, boats etc). Do not remove sun protection shielding that is provided on plant or equipment.
- j. Provide laminated windscreens and tinted side windows to trucks or vehicles.
- k. Take rest or meal breaks in shady areas.
- l. Follow doctor's advice before working in hot conditions if you are on medications such as sedatives, tranquillisers, antidepressants, amphetamines, antispasmodics, diuretics or medication for blood pressure. Medical advice may also be required for other medications such as antibiotics and some acne treatments as they can increase an individual's sensitivity to sunlight.
- m. Have a plan in place for treating heat-affected workers.
- n. Wear personal protection.

## Personal Protective Equipment (PPE) for the Skin and Eyes

(9) Where a risk assessment demonstrates that a worker will be occupationally exposed to sunlight because of the inherent requirements of the role, PPE may be considered as a control. The provision of protective clothing, sunglasses, hats and sunscreens should not be considered as an alternative to limiting exposure to sunlight. Instead, PPE should be considered as a backup to other controls as a combination of all measures will be most effective.

- a. Protective Clothing - Long sleeves, collar and long loose trousers will increase the sun protection. Dark coloured fabrics such as greens, blues and reds inhibit UV light penetration along with close weave fabrics which provide the best form of sun protection, as they block out most of the ultra-violet radiation (UVR). Clothing purchased for this purpose should comply with the [AS 4399:2020 Sun Protective Clothing - Evaluation and Classification](#) which outlines the requirements for high ultraviolet protection factor (UPF). A fabric's UPF rating is based on how much UVR is transmitted through the fabric e.g., 50+ is excellent protection.
- b. Sunglasses - A wraparound style will reduce UVR entering the eye from the side of the face. Sunglasses must conform to [AS 1067.1:2016 Eye and Face Protection - Sunglasses and Fashion Spectacles - Part 1: Requirements](#); the [Australian Radiation Protection and Nuclear Safety Agency website](#) provides further information on lens protection categories. Some workers may need extra eye protection from flying objects or glare. In this case, choose specialist safety sunglasses to meet [AS/NZS 1337.1:2010 Personal Eye-protection - Part 1: Eye and Face Protectors for Occupational Applications](#). Safety glasses still provide good solar UV

protection but will require tinting for use outdoors. Prescription glasses — either clear or tinted — are not tested against [AS 1067.1:2016 Eye and Face Protection - Sunglasses and Fashion Spectacles - Part 1: Requirements](#) but may still provide protection against solar UVR. Fit overs are recommended for prescription glasses. (access to standards via [Standards Databases through UQ Library](#))

- c. Sunscreen - Should display a protection factor of at least Sun Protection Factor (SPF) 30. It should be broad-spectrum (protecting against UVA and UVB), water resistant and should be applied to dry skin at least 20 minutes prior to sun exposure. The amount of [sunscreen](#) to apply for an average sized adult should be at least one teaspoon of sunscreen to each limb and half a teaspoon to face and neck. Sunscreen should be reapplied at least once every 2 hours. Zinc cream will provide extra protection for lips, ears and nose and gel-based or alcohol-based sunscreens should be chosen if handling tools. Sunscreen should be kept in a cool place below 30°C in easily accessible places like tearooms and site offices. Sunscreen has an expiry date, therefore stock should be checked regularly and replaced as required.
- d. Head Protection - A hat with a broad brim (10-12cm) and a close weave should be worn to shade both the face and back of the neck. Avoid hats lined with white fabrics as they reflect UVR. If a hardhat is required, it should include a flap and/or have a brim added. Legionnaire hats which have flap to cover the neck are more suitable when work involves a lot of bending. The flap should meet with the peak to protect the side of the face.

## Section 3 - People with Unusual Sensitivity to Sunlight

(10) Where employment may be offered to a person who is likely to be unusually sensitive to sunlight and who is likely to have significant occupational exposure to the sun, a medical assessment may be required to assess whether an offer of employment is in the mutual interest of UQ and the person.

## Section 4 - Skin Examination

(11) The [Cancer Council](#) advise that sun-exposed workers should perform regular self-examination of their skin, particularly those parts exposed to the sun e.g., face, neck, ears, shoulders, arms and hands. Such workers should consult their local doctor if they observe any new spots and changes to existing freckles or moles. Further information on skin self-examination is available from the [Cancer Council](#) and from a person's own general practitioner.

## Section 5 - Training and Education

(12) Workers or students required to work or perform research activities outdoors should be provided with information about the adverse health effects of excessive sun exposure and the relevant preventative measures that are recommended in this Guideline.

## Section 6 - Responsibilities and Accountabilities

### Heads of Organisational Units

(13) Heads of Organisational Units are responsible for ensuring a risk management system is in place so that the risks associated with workers being exposed to sunlight are managed effectively in their local areas.

(14) They are to provide the appropriate resources for staff and others to undertake their roles safely in relation to sun exposure.

## Supervisors and Managers

(15) Supervisors and Managers are responsible for undertaking risk assessments to ensure roles, projects or tasks that could expose workers to excessive sunlight are identified resulting risks eliminated or mitigated as low as practicable. Individuals that work in the area under their control understand the risks from excessive sun exposure and appropriate resources are supplied to these individuals in line with the risk assessment.

(16) Supervisors must ensure that the appropriate preventative measures as identified by a risk assessment are implemented, workers are aware of the risks and how to effectively mitigate them.

## Health, Safety and Wellness Division (HSW Division)

(17) The HSW Division are responsible for providing advice and assistance where required to minimise the exposure to sunlight of workers and others. They are also responsible for keeping this Guideline up to date and relevant.

## Health, Safety and Wellness Managers (HSW Managers) and Work Health and Safety Coordinators (WHSCs)

(18) The HSW Managers and WHSCs provide information and assistance to people in their areas of responsibility in meet the requirements for minimising exposure to sunlight.

## UQ Workers and Others

(19) People who participate in work or activities involving exposure to the sun must take reasonable care for their own health and comply with the safety recommendations implemented by their workplace and as described in this Guideline.

# Section 7 - Definitions

Terms	Definitions
Occupational	In relation to exposure to the sun includes teaching sessions, field trips and excursions which are part of the University's activities.
Reasonably practicable	In respect to control measures, should be determined in consultation with the Health, Safety and Wellness Division, considering: <ul style="list-style-type: none"><li>• the nature of the work;</li><li>• the severity of the potential harm to health and the degree of risk that exists;</li><li>• the availability and suitability of ways to prevent or mitigate the risk;</li><li>• whether the cost of preventing or mitigating the risk is prohibitive in the circumstances.</li></ul>
UQ workers	For the purposes of the Guideline includes: <ul style="list-style-type: none"><li>• staff - continuing, fixed-term, research (contingent funding) and casual staff members;</li><li>• contractors, subcontractors and consultants;</li><li>• visiting academics and researchers;</li><li>• title holders - visiting academics, emeritus professors, adjunct and honorary title holders, industry fellows and conjoint appointments;</li><li>• higher degree by research students; and</li><li>• volunteers and students undertaking work experience.</li></ul>
UV	Ultraviolet - electromagnetic radiation) having a wavelength shorter than that of the violet end of the visible spectrum but longer than that of X-rays.

## Status and Details

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<b>Enquiries Contact</b>	Health, Safety and Wellness Division