

This document provides guidance to Managers and Supervisors in relation to their responsibility to reduce, as far as is practicable, the risks associated with hot working conditions in the activities and areas within their control. It assists Health and Safety Representatives and employees in maintaining healthy and safe working conditions.

This document aims to provide guidance and assistance by:

- defining the health and safety risks associated with heat in the workplace;
- describing the methods for assessing these risks; and
- recommending measures aimed at reducing these risks and heat discomfort.

These guidelines also contain recommended measures aimed at reducing heat discomfort, and apply to all occupational, educational, commercial, or University-endorsed activities, whatever their location.

DEFINITIONS

Supervisor and Manager: these terms cover any employee of the University who plans, organises or supervises the activities of other employees, contractors, students or visitors on behalf of the University.

Heat illness: covers a range of medical conditions that can arise when the body is unable to properly cope with working in heat. These conditions are generally grouped under the following three categories (listed here in order of decreasing severity):

- **Heat stroke:** is a life-threatening condition that requires *immediate* first aid and medical attention. Heat stroke is accompanied by a rapid rise in body core temperature and symptoms of disorientation, delirium, convulsions and hot dry skin. First aid treatment consists in returning the body core temperature to normal by immersion in cold water promoted by massaging limbs and body surfaces. Efforts to cool the body should stop when core temperature has returned to normal to avoid the onset of shock.
- **Heat exhaustion:** may be due to circulatory, water, salt, or sweat deficiencies. Symptoms include general tiredness, giddiness, nausea, cold feelings, sighing, yawning and shallow or irregular breathing, facial pallor or bluish tinge on the face. Recovery is usually rapid when the person is moved to a cooler environment and allowed to rest in a comfortable position.
- **Heat stress:** arises from an inability of the body to dissipate excess heat through sweating. If the condition is severe or prolonged, it can result in heat exhaustion or heat stroke. Risks are significantly increased in people who are dehydrated, unacclimatised, unfit, ill, obese or improperly clothed.

Heat discomfort: covers the feelings experienced when environmental conditions are hot. It is not a medical condition. In many cases where people experience considerable heat discomfort, they face no significant risk of succumbing to the serious health and safety problems of heat illness.

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GUIDELINE

University staff or students who experience hot working conditions and are concerned about possible risks to their health or safety should report the issue to their Supervisor, Manager or Teacher/Lecturer.

The Supervisor, Manager or Teacher/Lecturer should assess the risks and possible control measures in consultation with the relevant Health and Safety Representative and the staff or students concerned. The recommended method is:

Step 1: Assessing the Risks of Heat Illness

Determine which of the following risk factors apply:

- physical work or activity;
- employees or students have little or no control over the pace of their activities;
- high ambient temperatures;
- radiant heat, such as emitted by the sun (outdoor activities), ovens, furnaces or kilns, etc.;
- high humidity;
- limited air movement;
- many items of clothing (e.g. protective clothing) or "all over" clothing worn (e.g. some protective suits and overalls);
- employees or students unacclimatised to, and/or inexperienced in, working in heat;
- employees or students who abuse or are recovering from the abuse of alcohol and other toxicants;
- employees or students who are pregnant, overweight, physically unfit, feverish, dehydrated, have heart/circulatory/skin diseases, use certain medicines; and
- employees or students have suffered from heat illness in the past or are suffering at present.

If **several** risk factors apply, the risk of heat illness warrants the adoption of control measures. If an insufficient number of risk factors apply to create a risk of heat illness, the problems caused by heat discomfort may still need to be controlled (refer to *Step 3: Controlling Heat Discomfort*).

*Note 1: The risk of heat illness is dependent on the simultaneous action of **several** factors. Assessing only one factor is of limited use. A thorough assessment of risk must address ambient temperature, humidity, radiant heat, air movement, physical workload, clothing, work organisation, and relevant characteristics of the people exposed.*

Note 2: Whilst quantitative measurement methods exist to assess the risks of heat illness, they rely on the availability of instruments and trained personnel. Generally, in the University environment, the qualitative measures recommended will be adequate. Where Faculties/Directorates/Colleges/Centres feel they are experiencing long-term or special problems with work in heat, they should contact the Risk, Health and Safety Department.

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Step 2: Controlling the Risks of Heat Illness

Supervisors and Managers in charge of activities associated with a risk of heat illness should adopt control measures drawn from the following list, in consultation with their staff and/or students:

- scheduling heavier work during cooler times;
- providing rest breaks in a cool, well-ventilated place;
- providing shade for outdoor work;
- providing cool, clean and palatable water in sufficient quantities for employees and/or students to drink a cup of water every 15-20 minutes;
- increasing the loss of body heat through sweating by reducing humidity, increasing air movement, and wearing suitable clothing (e.g. loose-fitting, light clothing);
- getting more people to share heavy workloads, or rotating demanding work around to spread the load;
- providing opportunities for unacclimatised employees or students to acclimatise to working in heat;
- reducing expectations relating to work outputs;
- educating employees and/or students about the warning symptoms of heat illness;
- instructing staff to seek first aid treatment for symptoms that cannot be rapidly reversed;
- and
- encouraging co-workers and students to monitor each other for signs and symptoms of heat illness.

In some cases, specific additional measures may be necessary. The measures required will depend on the particular problem at hand, the results of consultation with staff, and the nature of the work/activities and environment.

Step 3: Controlling Heat Discomfort

Individuals who experience heat discomfort should:

- relocate to cooler areas if practicable;
- wear loose clothing or loosen clothing, whilst still ensuring sufficient protection from the sun if working outdoors;
- drink cool water frequently;
- increase air movement, if possible, by opening windows and doors, using fans, etc.;
- use blinds, curtains or screens to limit the radiant heat entering rooms through windows;
- and
- rotate jobs or take more frequent rest breaks.

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