

VIEU POLICY STATEMENT ON THERMAL STRESS IN THE WORKPLACE

**ENDORSED BY THE COMMITTEE OF MANAGEMENT
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A. INTRODUCTION

A reasonable degree of bodily comfort should be the normal expectation of all employees as they carry out their functions in the workplace. Thermal stress can be the source of considerable physical and psychological discomfort. At any time education workers employed in Victorian Catholic and Independent schools are likely to be subjected to the effects of thermal stress. Depending on circumstances extremes of temperature induced by both seasonal and occupational factors may constitute a health hazard to some education workers.

This VIEU policy statement aims to set forth guidelines to members concerning the management of thermal stress in schools and related work settings.

B. DEFINITIONS

1.0 Thermal stress may be:

“seasonal” — that is, induced by temperature extremes deriving from weather changes.

“occupational” — that is, deriving from the nature of the work process itself (eg, outdoor student supervision, sporting activities).

2.0 Workers may be:

“acclimatised” — that is, the extremes of temperature are usual such that workers have adjusted to the expected temperature level (eg, employers working in a hot/cold region; or employees working in a bakery, furnace area, etc).

“unacclimatised” — that is, the extremes of temperature are unusual and transient, such that there is less time for the body to adjust to the climate/temperature variation as it affects the work situation.

3.0 With respect to Victorian non-government schools most thermal stress would be generated by seasonal factors though the occupational aspect may also be significant. Depending upon location and other circumstances education workers may be both acclimatised and unacclimatised to the thermal conditions applying in a given instance.

C. MONITORING SEASONAL HEAT

The ordinary dry-bulb thermometer provides an adequate measure of seasonally changing temperatures. In the absence of this, the regular temperature announcements from radio stations will suffice.

D. HEAT STRESS

Heat stress is that deriving from upper range temperatures.

The following facts related to heat stress are relevant:

1.0

2.0 When the body produces or receives energy its temperature rises and perspiration occurs. This is the means by which the body loses heat. Blood flows to the surface of the skin to be cooled. The heart must beat harder and the blood flow to other vital bodily organs is reduced.

3.0 In such a situation any or all of the following effects may become evident:

3.1 Increase of accidents because of:

- reduced concentration;
- fatigue;
- slipperiness of sweaty palms, etc;

3.2 Increased effects of other hazards

Heat interacts with other workplace hazards compounding the individual effects. For example, noise levels may aggravate the heat stress. With respect to toxic substances, increased respiration and circulation may increase the quantity of solvents absorbed. There are also increased fire and explosion risks. In schools heat stress may be partly a function of the crowdedness that prevails in classrooms and student assembly areas.

3.3 Aggravation of medical conditions

Heat increases the burden on the heart. A person suffering from high blood pressure or some pre-existing heart problem may be particularly vulnerable to the effects of heat.

Heat stress may also be compounded with factors related to the age of the employee.

3.4 Skin rashes

A condition known as “prickly heat” can develop with exposure to heat.

3.5 Reproductive disorders

Prolonged exposure to intense heat can cause lowered sperm counts and birth deformities.

3.6 Heat illness

Heat illnesses may include:

- heat cramps resulting from bodily imbalances created by perspiration;
- heat exhaustion caused by dehydration;
- heat stroke;
- heat fainting due to an inadequate supply of blood to the brain.

F. CONTROLLING THE HAZARD OF HEAT STRESS

- 1.0 The prevention of work related injuries and illnesses due to heat stress must be aimed at modifying workplace conditions. VIEU endorses the provisions of the Victorian Code of Practice for Workplaces relating to the maintenance of a reasonable temperature level (NN. 48-49); and the protection of outdoor workers (N. 52).
- 2.0 Furthermore, it urges that an acceptable workplace practice is that in periods of seasonal heat the workplace temperature should be kept below 30° Celsius through:
 - air-conditioning, air circulating fans, or good ventilation;
 - insulating or shielding sources of heat in the workplace;
 - insulating the roofs and walls of the workplace;
 - ducting hot exhausts outside the workplace;
 - where appropriate, providing air-conditioned school vehicles.
- 3.0 In the management of seasonal heat attention should also be paid to the work process itself. In the school situation this would entail:
 - avoidance of student crowdedness, where possible;
 - modifications to the time-tabling of school outdoor and sporting activities;
 - modifications to the allocation of space for various activities;
 - increasing the duration of work breaks;
 - the scheduling of alternative programs when extreme outdoor conditions prevail;
 - providing special protective measures for outdoor education workers.
- 4.0 When extreme heat conditions are forecast the problems generated by heat stress may be alleviated by:
 - encouraging parents to keep students at home;
 - without detriment to the duty of care, advising parents in advance of proposed changes to the school time-table so as to avoid certain customary activities in the hottest part of the day.
- 5.0 VIEU endorses the provisions of the Victorian Code of Practice for Workplaces relating to the supply of drinking water (NN. 44-47). These provisions include:
 - access to cool, clean and palatable drinking water separate from sanitary and handwashing facilities (tap, flask, drink dispenser or waterbag);
 - the provision of at least one drinking point for every forty employees or part of forty employees;
 - the distance of travel to such a drinking point should normally not exceed 30 metres.

H. COLD STRESS

1.0 Cold stress is that induced by lower range temperatures.

The human body produces its own heat from chemical energy and may lose heat to a cold environment. When the body is exposed to excessively low temperatures there results a state of discomfort due to loss of body heat. In these circumstances physiological adjustments are brought into play in an attempt to maintain thermal equilibrium:

- the body attempts to maintain its temperature by decreasing heat loss from the skin. This is accomplished largely through a constriction of the blood vessels in the skin and underlying tissues and a corresponding reduction in the plasma volume reaching the skin;
- an increase in the metabolic heat-production rate by either voluntary movement (exercise) or by shivering (a relatively inefficient mechanism for increasing heat production).

2.0 Effects of Cold Stress

Exposure to cold environmental conditions can result in a number of disorders. Those pertinent to the education industry may be:

2.1 Increased incidence of certain conditions.

Arthritis, rheumatism and bronchitis can be aggravated by increased damage to muscles/tissue;

2.2 Decrease in dexterity and sensitivity.

As body limbs become cold, stiff, numb and painful, a worker cannot perform usual manual tasks with dexterity and skill. Mobility may also be affected;

2.3 Increase in accident rates because of:

- reduced concentration;
- lack of manual dexterity;
- numbness/stiffness of limbs (eg, proneness to slips/falls).

2.4 Hypothermia.

This is the progressive lowering of the body's core temperature from 37⁰ C where unconsciousness followed by death can occur. Most cases of hypothermia occur in air temperatures between 1⁰ C and 10⁰ C although the body can lose significant heat in air temperatures as high as 18⁰ C or water temperature as high as 22⁰ C. Foetal damage can result in cases where the mother suffers hypothermia. In the education industry employees engaged in school outdoor programs may be exposed to this type of hazard.

2.5 Frostbite

This disorder normally occurs during exposure to temperatures well below freezing point and is the result of the actual freezing of the tissue in the affected area of the body. Outdoor education workers could possibly be exposed to this type of hazard.

2.6 The effects of cold stress may be aggravated by other associated factors such as rain, sleet and "wind-chill" (cooling increases in proportion to wind velocity).

2.7 The age and general health condition of the employee may also be relevant factors in the level of discomfort deriving from cold stress.

I. CONTROLLING THE HAZARD OF COLD STRESS

1.0 Workplaces should be capable of being heated during cold weather. A temperature of at least 15⁰ Celsius should be maintained, where practicable, where the work involves activity. A temperature of at least 18⁰ Celsius should be maintained where the work is performed in a sitting position or when little movement is required.

2.0 The following is suggested as a strategy for dealing with the working environment in indoor

school settings:

- effective, controllable heating in classroom and associated teaching/learning areas, in corridors and in staffrooms;
 - provision of hot drink and food heating facilities in staffrooms and associated areas;
 - measures for draught prevention or, at least, minimisation in classrooms and assembly areas;
 - measures to minimise moisture penetration in areas such as corridors and stairways.
- 3.0 With respect to heating appliances like portable electric and fuelled heaters VIEU notes the caveats and endorses the safety recommendations of the Victorian Code of Practice for Workplaces (N.51).
- 4.0 With respect to outdoor education workers (eg, physical education instructors) VIEU believes the following measures to be effective against excessive exposure of employees to cold stress:
- where possible, the provision of sheltered or screened teaching areas;
 - the scheduling of programs such that an appropriate work/rest regime is implemented (for example, in temperatures below 9^o C);
 - an air temperature of 2^o C being regarded as the minimum acceptable for regular outdoor programs. Should the temperature reach this level the activity should be abandoned, or alternative indoor teaching space be provided (eg, gymnasium, school hall etc);
 - the provision of heated rest-rooms or shelters for outdoor education personnel;
 - the provision of hot drink and food heating facilities.
- 5.0 Where special cold temperature requirements result from the regular work process itself (eg, school camps, snow trips, skiing and boating exercises) appropriate protective clothing (such as insulated gloves and clothing, vapour-barrier boots, face-masks, etc) should be supplied by the school. The protective clothing provided should be appropriate for the degree of cold weather conditions applying and the physical activity to be engaged in.

J. H. OCCUPATIONAL HEALTH AND SAFETY ACT

- 1.0 VIEU urges the full implementation of the provisions of the Victorian Occupational Health and Safety Act with respect to workplaces:
- 1.1 The duty incumbent on employers to provide a working environment that is safe and without risk to health. In particular, the responsibility of employers to ensure that there are appropriate measures in place for the control of workplace temperature.
 - 1.2 The responsibility to provide adequate facilities for the management of thermal stress in the workplace.
 - 1.3 The duty to provide employees with information, instruction, supervision and training on matters related to thermal stress.
 - 1.4 The duty to monitor conditions at the workplace especially those pertaining to adequate temperature control.
 - 1.5 To provide such information facilities and assistance to the health and safety representatives as are necessary or prescribed to enable them to perform their functions and duties relating to thermal stress in the workplace.
 - 1.6 The duty to comply with codes of practice regarding thermal stress. In particular, to observe the provisions of the Victorian Code of Practices for Workplaces (NN. 44-51).
- 2.0 Health and Safety Representatives
- VIEU endorses the provision of the Victorian Health and Safety Act 1985 regarding the role of health and safety representatives and committees. With respect to the management of thermal stress, this includes the right:

- 2.1 To inspect any part of the workplace:
 - after having given reasonable notice to the employer or the employer's representative in normal circumstances;
 - immediately in the event of any hazardous event or situation;
- 2.2 Accompany an inspector during any inspection of the workplace;
- 2.3 To have access to such information pertinent to the avoidance or management of thermal stress in the workplace;
- 2.4 To be consulted by management regarding the monitoring and management of thermal conditions in the workplace;
- 2.5 In appropriate circumstances, to issue a provisional improvement notice on the employer (N. 33);
- 2.6 To request the employer to set up a health and safety committee in order to deal with matters related to thermal stress in the workplace; and to have that request acceded to.

L. ROLE OF THE UNION

1.0 VIEU undertakes to provide support to individual members and to union sub-branches on matters relating to thermal stress in the workplace.

2.0 It will achieve this objective in a number of ways:

- By providing information on the relevant legislation and codes of practice applying to the issues;
- By assisting health and safety representations implement the provisions of the legislation and codes of practice in the workplace;
- Where possible, by ensuring that provisions relating to health and safety matters are included in enterprise agreements;
- In dispute situations, by engaging the services of the Australian Industrial Relations Commission in order to achieve a resolution of the matter.

M. POLICY REVIEW

It is recommended that this policy statement be revised periodically to reflect changing conditions, priorities and legislation as the need arises.