

Working to Protect all ONTARIO WORKERS

The Human and Environmental Physiology Research Unit at the University of Ottawa is launching a new study to protect all workers performing their duties in hot environments.

In collaboration with the Workplace Safety and Insurance Board of Ontario and our industry partners (BBE Consulting, Hydro One Networks, Technica Mining, Unifor, Workplace Safety North), we are initiating a study aimed at generating new heat management guidance that moves away from a “one-size fits all” approach to ensure maximal protection for all workers performing their duties in the heat. While governmental agencies provide recommendations to assist workers in managing their risk of heat stress, these are based on data from young men and do not consider the impact of age and sex on individual heat tolerance. Further, a key shortcoming of current guidelines is the lack of information given to workers on safe work times before heat-alleviation controls should be employed to mitigate dangerous increases in body temperature during daylong work in the heat as well as over consecutive workdays. Our study findings will help ensure that workers across Ontario can perform their duties safely when exposed to hot environments.



What will participants be asked to do?

Participants will be required to attend 3 study visits.

- 1 brief screening session (~2 hour duration).
- 2 experimental sessions performed on consecutive days:
 - Day 1: you will be required to walk on a treadmill at a moderate intensity work (represents the average work effort of physically demanding occupations) in the heat (34°C and 35% relative humidity) until core temperature reaches 38.0°C (estimated time of ~110 min). The work will then be interspersed with 15-minute rest breaks every 45 minutes for a total work duration of 240 minutes. The work protocol will be performed in the morning and afternoon, separated by a 1-hour lunch period to represent a typical workday.
 - Day 2: you will return to the laboratory the following morning to complete a final ‘morning’ session only.
 - Your core temperature and other physiological responses will be monitored throughout the session.

Who can participate?

Inclusion Criteria

1. Healthy male or female (non-pregnant), with no pre-existing chronic health conditions.
2. Aged 18-30 years (younger group) and 50-69 years (older group).
3. Non-Smoking.
4. Habitually active but not endurance-trained (<2 sessions per week, <150 minutes per week).
5. Ability to communicate in English or French.
6. Willingness to sign informed consent form.

Exclusion Criteria

1. Exposure to heat or hot environments on a regular basis.
2. Use of or changes in medication judged by the investigators to make participation in this study inadvisable.

Interested? Please email Dr. Glen P. Kenny at gkenny@uottawa.ca for more information.

If you agree to participate you would receive a fitness evaluation with the information summarized in a report (valued at \$750). Further, all eligible participants will receive financial compensation for their time.