

# Working outside during heat events

## About this document

This document provides information on:

- Heat events
- Heat stress
- Procedures for assessing your worksite and keeping your workers safe

The information is for outside workers and people leaders. People regularly working outdoors should already have heat stress programs in place, as per [WorkSafeBC regulations](#).

If you have questions or need assistance with outdoor heat stress programs, contact an occupational safety specialist by submitting a service request via [AskMyHR](#). Choose service category Workplace Safety and sub-category Other Issues and Inquiries.

## Heat events

Heat events, or heatwaves, involve high temperatures and sometimes high humidity. These events are usually hotter than the seasonally normal temperatures for your region.

B.C. is experiencing an increase in average summer temperatures and extremely hot days. As the climate changes, we can expect heat events to be hotter, more frequent and longer lasting.

Heat events can affect anyone's health. Unusually high heat can have serious and negative impacts on your health and some people are at greater risk, including older people, pregnant people and people with chronic health conditions.

## **What is heat stress?**

Heat stress occurs when a person is exposed to conditions that result in a core body temperature exceeding 38°C or 100°F (normal is 37°C or 98.6°F). Depending on the work environment, the body adapts and maintains its normal temperature by sweating and increasing skin blood flow to prevent body temperature from rising.

Several components are assessed when determining heat safety for workers:

- Temperature
- Humidity
- Level of physical exertion
- Duration of effort
- Adaptation in a hot environment

Heat stress and heat-related illnesses occur when the body overheats from prolonged exposure to high temperatures.

If core body temperature rises and steps are not taken to reduce body temperature, effects may include heat cramps, heat exhaustion and heat stroke. Medical intervention is likely required.

Supervisors and workers must take steps to avoid hazardous exposure to heat while working outside.

## How hot is too hot to be working outside?

WorkSafeBC considers no single temperature to be unsafe for work. Several components are assessed when determining heat safety for workers:

- Temperature
- Humidity
- Direct sunshine or shade
- Level of physical exertion
- Clothing
- Duration of the exposure to extreme high temperatures
- The ability of the worker(s) to acclimatize to the environment

Supervisors and managers are responsible for ensuring the safety of their staff when staff are working in hot conditions that may cause heat stress.

If there is a [heat warning](#) issued by public health authorities for the area that staff are working outside, evaluate if the work can be rescheduled (including early in the day). If the work must be completed, make sure a plan is in place to evaluate site conditions and mitigate the heat risk to staff.

If an [extreme heat emergency](#) is declared, only critical outdoor work should proceed with a full exposure control plan and medical monitoring of staff may be required. All non-critical outdoor work should be rescheduled.

For assistance with a heat exposure control plan, contact a BC Public Service Agency occupational safety specialist for advice by submitting a service request via [AskMyHR](#). Choose service category Workplace Safety and sub-category Other Issues and Inquiries.

## **As a supervisor, what am I required to do to make sure my staff are safely working outdoors in the heat?**

Supervisors of staff working outdoors must:

- Assess the risk of heat stress or illness to staff when the temperature outside is more than 23°C
- Train staff about the risks of heat exposure. This can be done prior to starting the season for outside work and at regular safety, toolbox or tailgate meetings
- Implement the risk mitigations as required
- Inform staff working outside that the mitigation strategies being used are based on the daily and current heat conditions
- Make sure the worksite is monitored for increased temperatures and reassess the risk throughout the shift as necessary
- Monitor staff health and safety

## How do I determine if there is a risk to staff working outside?

Taking the above factors into account makes it difficult to determine the overall risk of heat stress for staff. An easy way to complete an assessment and determine required actions is to use the IATSE 891 Heat Stress app. This application was developed by The International Alliance of Theatrical Stage Employees (BC local) and complies with WorkSafeBC regulations.

### Download the IATSE 891 Heat Stress app

The IATSE 891 Heat Stress app can be downloaded by searching 'IATSE 891' in any app store or via these direct links to [Google Play](#) and the [Apple store](#).



[Google App](#)



[Apple App](#)

### Using the IATSE 891 Heat Stress app

To use the app, staff must know the temperature and humidity of the work location and answer a few questions about the work.

While [Environment Canada](#) or a [nearby weather station](#) (use the closest) may be used, these should be used with caution because temperature and humidity can vary the farther the worksite is from the weather station.

For worksites in place for multiple days or sites that are not close to a weather station, the worksite must have a thermometer and hygrometer (measures humidity) to complete regular assessments. During a declared [extreme heat emergency](#), worksite temperature and humidity measurements must be taken and entered into the IATSE 891 Heat Stress app.

Conduct assessments throughout the day including during the warmest portion of the day. Once the assessment is completed, the app creates an instant report on heat stress risk. Implement the mitigation protocols indicated in the What to Do? section of the app report.

Take a screenshot of the app's final report each time an assessment is completed. Keep it for your records and to track environmental changes to the worksite.

If the Humidex or regular temperature is over 30°C, you must reassess hourly and implement new mitigation strategies as needed.

## **Is there training required for staff who may be at risk of heat stress?**

Supervisors must make sure staff who are working outdoors in temperatures over 23°C are trained on the following:

- What heat stress is and how it develops

- Personal factors that affect heat stress
- How to recognize symptoms of heat stress
- What workers should do if they or their coworkers develop a heat-related illness

The following are recommended resources for supervisors to support staff training:

- [7-minute training video \(YouTube\)](#)
- [Safety talk for an expected high Humidex day \(Sun Safety at Work\) \(DOC, 91KB\)](#)
- [Hot temperature: Heat stress \(BC Municipal Safety Association\) \(DOC, 670KB\)](#)
- [Working in the heat \(Canadian Centre for Occupational Health and Safety\)](#)
- [Heat-related illness: Watch for signs \(Canadian Centre for Occupational Health and Safety\) \(PDF, 680KB\)](#)
- [Health checks during extreme heat events \(National Collaborating Centre for Environmental Health\)](#)
- [Extreme heat \(Interior Health\) \(PDF, 382KB\)](#)

## Exposure control plans and further assistance

While this information sheet focuses on working outside, ministries may have other workplace settings that create a risk of heat stress for workers. For assistance identifying job tasks or positions and conducting a heat stress assessment, contact a BC Public Service Agency occupational safety specialist for advice by submitting a service request via [AskMyHR](#). Choose service category Workplace Safety and sub-category Other Issues and Inquiries.

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## Resources

- [Wildfire smoke, air quality and your health \(PDF, 94KB\)](#)
- [Heat, the workplace and your health](#)
- [Preparing for heat events \(BC Centre for Disease Control\)](#)
- [Beat the heat \(HealthLinkBC\)](#)