



Heat Stress Fact Sheet

OCCUPATIONAL HEALTH & SAFETY ISSUES: HEAT STRESS

The hot summer weather has finally arrived. Our summer temperatures vary across the country, but in most areas, heatwaves and hot spells can really create a temporary heat-related hazard in our workplaces. This hazard can become so severe that it can become a matter of life and death. We invite you to review a more in-depth view of the heat stress topic in the detailed fact sheet available under the Resources section at unifor.org/healthandsafety.

Here is brief primer on some of the key points to remember when dealing with this serious workplace hazard.

WHAT IS HEAT STRESS?

Heat stress is an environmental and occupational hazard, resulting from physical activity in hot or humid environments capturing a spectrum of heat-related illnesses, including heat stroke, which can lead to death. Just like you can't let a car engine overheat or it shuts down, you don't want your body to get too hot. Working in the heat puts stress on our body's cooling system. High temperatures and high humidity, stress the body's ability to cool itself and heat illness can become a deadly concern.

WHAT AFFECTS HEAT STRESS?

There are four environmental factors that affect the amount of stress a worker faces in a hot work environment:

- temperature
- humidity
- radiant heat (such as from the sun or a furnace) and
- air velocity.

IN THIS FACT SHEET:

Introduction to Heat Stress

Using the Precautionary Principle

Signs and Symptoms of Heat Stress

Treatment and First Aid for Heat Stress

Employer Responsibilities

Bargaining Heat Stress Language

And more!

WHAT AFFECTS HEAT STRESS? (CONTINUED)

The level of stress the individual faces is highly dependent on a number of personal characteristics such as:

- age
- weight
- fitness
- pre-existing medical conditions such as diabetes, kidney and heart problems, pregnancy, being overweight
- acclimatization to the heat
- alcohol or drug use.

If you have any of these dependent factors you should talk to your doctor about the work you do, and find out whether there are any special precautions you need to take to protect yourself.

BE AWARE, ALERT AND ACTIVE

Heat stress can often affect you before you even realize it, so it's important to be very aware of the signs. Specialty work (such as in a confined space), especially with heat-generating equipment or appliances, can quickly render workers exhausted and overheated. Workers wearing protective gear or equipment are at an even higher risk for heat-related issues, given that protective gear can trap heat next to the body.

Exposure to extreme heat conditions can result in heat stroke, heat exhaustion, heat cramps, or heat rashes. Workers suffering from heat stroke experience mental dysfunction such as unconsciousness, confusion, disorientation, slurred speech or even death.

LOOK OUT FOR THESE CONDITIONS

People react differently, so you may have just a few of these symptoms, or most of them:

- Headache
- Nausea, vomiting
- Feeling faint
- Fainting
- Dizziness
- Weakness
- Irritability
- Confusion
- Thirst
- Heavy sweating
- Elevated body temperature
- Decreased urine output

THE PRECAUTIONARY PRINCIPLE AND HEAT STRESS

We do not have to wait for certainty before we take reasonable steps to reduce heat stress risk. We need to “feel safe” and if we do not feel safe we must take the necessary steps to create changes in the workplace to address the causes of health and safety insecurity. Your JH&SC should have heat stress on their agenda long before the heat arrives and employers are responsible to ensure a healthy and safe work environment exists.

In other words, we do not need to be certain that we are correct when we take action to protect ourselves when dealing with an occupational hazard.

ACCLIMATIZATION

Acclimatization is the result of beneficial physiological adaptations (such as increased sweating efficiency) that occur after gradual increased exposure to a hot environment. This process of building tolerance is called heat acclimatization. Not being used to working in the heat can be a major problem. Many workers who die from heat stroke are often in their first few days on the job or were working during a heat wave. If you haven't worked in hot weather for a week or more, your body needs time to adjust. You will need to take more breaks and not do too much strenuous work during your first weeks on the job.

FIRST AID

Treat a worker suffering from heat exhaustion by:

- Stopping activity
- Moving the person out of the heat and into a shady or air-conditioned place
- Laying the person down and elevating the legs and feet slightly
- Removing tight or heavy clothing
- Having the person drink cool water or other non-alcoholic beverage without caffeine
- Cooling the worker with cold compresses or have the worker wash head, face, armpits, and neck with cold water
- Seeking medical treatment

Call 911 or your local emergency number if the person's condition deteriorates, especially if the worker experiences:

- Fainting
- Agitation
- Confusion
- Seizures
- Inability to drink
- A core body temperature of 40 C (104 F) (heatstroke)

EMPLOYER RESPONSIBILITIES

Employers have a legal duty to take every precaution reasonable in the circumstances for the protection of workers. This includes developing policies and procedures to protect workers in hot environments due to hot processes or hot weather (or both). Employers must provide training to workers so they understand what heat stress is, how it affects their health and safety, and how it can be prevented.



WARNING - PPE MAY INCREASE EFFECTS OF HEAT STRESS!

When combined with other physiological problems, it is vitally important that employers take the wearing of PPE into consideration when formulating a heat stress plan. Some strategies for PPE use during hot weather include keeping PPE as cold as possible (through refrigeration) before being worn, as well as using other engineering or administrative controls. Ideas to mitigate the heat hazard include, portable canopies or pop up tents to create shade, portable fans, additional cool water availability, ice shirts, neck coolers, bandanas, hats, sunscreen and cooling stations..

Ultraviolet (UV) radiation exposure causes non-melanoma skin cancers. Ultraviolet (UV) radiation due to sun exposure is one of the most common causes of work-related skin cancers. When working outdoors, shade structures (portable canopies or pop-up tents) are better than slapping PPE on workers when possible.

REFUSING UNSAFE WORK

IN ALL CIRCUMSTANCES WHEN YOU ARE CONCERNED ABOUT YOUR HEALTH AND SAFETY, OR UNSURE OF WHAT TO DO WHEN ENCOUNTERING AN UNCONTROLLED HAZARD, DO NOT BE AFRAID TO EXERCISE YOUR RIGHTS TO KNOW ABOUT HAZARDS, TO PARTICIPATE BY RAISING CONCERNS AND BY EXERCISING YOUR RIGHT TO REFUSE UNSAFE WORK!

YOU NEED HEAT STRESS LANGUAGE IN YOUR AGREEMENTS

As much as we may believe that our employers will abide by all the necessary measures to protect from heat stress, it is highly recommended that you bargain specific heat stress language in your collective agreements. Your worker health and safety representative and member of the JH&SC will have many ideas that could be helpful in drafting the appropriate language. Positive experiences from past heat stress situations are an ideal start to making the bargained language stick and allows for improvements, year after year and in subsequent contracts.

EACH INDIVIDUAL IS DIFFERENT

When it comes to your personal health and safety, one must remember that each individual may react to heat stress differently. You should be aware of your own physical condition and personal limitations. What may be ok for some, may not be right for you. If you have any personal conditions that warrant additional protective measures, discuss these with your employer or JH&SC. There is no job so important that it is worth your health or safety.

For more information, contact the Unifor Health, Safety and Environment Department by email at healthandsafety@unifor.org or find additional resources, including a more detailed fact sheet on heat stress at unifor.org/healthandsafety.