



Farm Safety Association
March 2000
Tailgate-Heat

Dangers of heat stress

Instructor: The following script can be used to deliver a 15-minute training session to employees. The text explains the impact that hot weather work can have on health, describes preventive measures, and touches briefly on first aid.

You may wish to go into more detail about what is to be done in the event of a heat stress emergency. However, it is suggested that you try to stay strictly on topic. Obviously, you will need to be prepared to answer questions.

POINTS TO EMPHASIZE:

- Drink plenty of water to keep body fluid levels up.
- Get out of the heat occasionally.
- Be alert to early warnings of heat stress, both in yourself and in your co-workers.

Heat stress needs to be taken seriously

Working in a hot environment puts stress on the body's cooling system. When heat is combined with other stresses—like hard physical work, loss of fluids, or fatigue—it may lead to heat-related illness, disability, or even death!

The body is always generating heat and passing it to the environment. The harder you work, the more heat your body has to lose. Heat leaves your body in several ways:

- transfer from skin to air.
- evaporation by perspiration.
- exhaling hot air.
- touching a cool object.

Individuals over age-40 need to take extra care when the weather is hot, because our ability to sweat declines as we age. However, heat stress can also affect individuals who are young and fit.

Water is crucial to helping the body adjust to high temperatures. The rate of water intake must equal the increased rate of water loss by perspiration to keep body temperature normal. **When it's hot, drink plenty of water!**

Your body must work even harder to get rid of excess heat when conditions are both hot *and* humid. Unfortunately, perspiration can't evaporate as readily under muggy conditions. The process is easier if the surrounding air is moving. That's why we welcome a cool breeze, or turn on a fan when the air is "sticky".

Sickness and accident rates increase when heavy work is done at temperatures above 30 degrees.

Don't push yourself beyond your limits. It could be harmful to your health, and could put you at increased risk of having an accident.

Heat stress hazards

Following are three common conditions that can result from the body overheating.

Heat cramps: Heavy sweating drains the body of salt, which cannot be replaced by simply drinking water. Painful cramps occur in the arms, legs, or stomach while on the job, or later at home. Move to a cool area at once if cramping is experienced. Loosen clothing and drink cool, lightly-salted water or a commercial fluid replacement beverage. Seek medical aid if the cramps are severe, or don't go away.

Heat exhaustion: Inadequate water and salt intake causes the body's cooling system to break down. Symptoms include heavy sweating, cool, moist skin, body temperature over 38 degrees, weak pulse, and normal or low blood pressure. The victim is likely to be tired, weak, clumsy, upset, or confused. They will be very thirsty, and will pant or breath rapidly. Their vision may be blurred. **Get medical help immediately!** Heat exhaustion can lead to heat stroke, which can kill. Move the person to a cool, shaded area. Loosen or remove excess clothing. Provide cool, lightly-salted water. Fan and spray the victim with cool water.

Heat stroke can kill a person quickly! Once the body uses up all its water and salt, sweating ceases. Temperature can rise quickly. You can assume a person is suffering from heat stroke if their body temperature is over 41 degrees, and any

of the following symptoms are present:

- weakness, confusion, distress, strange behaviour.
- hot, dry, red skin.
- rapid pulse.
- headache or dizziness.
- In later stages of heat stroke, a victim may pass out and have convulsions.

Call an ambulance immediately if heat stroke is suspected. The victim's life may be on the line! Until help arrives, move the victim to a cool area and remove excess clothing. Fan and spray them with cool water. Offer sips of water if the victim is conscious.

Heatwave guidelines

The following measures should help prevent the development of heat-related illnesses.

1. Slow down in hot weather. Your body's temperature regulating system faces a much greater workload when temperature and humidity are high.
2. Heed early warnings of heat stress, such as headache, heavy perspiration, high pulse rate, and shallow breathing. Take a break immediately and get to a cooler location. **Watch for heat stress**

signs among your co-workers.

3. Dress for hot weather. Lightweight, light-coloured clothing reflects heat.
4. **Drink plenty of water.** Don't let yourself "dry out".
5. Increase your salt intake, preferably by adding salt to your food. (Consult your physician if you are on a salt-restricted diet.)
6. Try to get used to warm weather gradually. Take it easy for those first two or three hot days. Your body will have a better chance to adjust if you take it slow.
7. Get out of the heat occasionally. Physical stress increases with time in hot weather. Take breaks in a cool, shady location.
8. Don't try to get a suntan while you are working! It's harder for your internal cooling system to work through sunburned skin. Wear a hat and long-sleeved shirt to prevent burning (which we know can increase the risk of skin cancer.)

Are there any questions?

Finally, let's take a moment to review some of the "Do's" and "Don'ts" of preventing heat-related illnesses.

DO:

Drink plenty of water.

Take breaks in a cool, shady area.

Watch for symptoms of heat stress, both in yourself and co-workers.

DON'T:

Ignore symptoms of heat stress.

Try to get a suntan while working.

Try to "keep up" with the rest of the crew, even though you feel ill.

The information and recommendations contained in this publication are believed to be reliable and representative of contemporary expert opinion on the subject material. The farm safety Association Inc. does not guarantee absolute accuracy or sufficiency of subject material, nor can it accept responsibility for health and safety recommendations that may have been omitted due to particular and exceptional conditions and circumstances.

Copyright © 2000

Farm Safety Association Inc.
22-340 Woodlawn Road West, Guelph, Ontario N1H 7K6 (519) 823-5600

Produced with the assistance of:



Agriculture et
Agroalimentaire Canada

Agriculture and
Agri-Food Canada



Canadian Coalition for
Agricultural safety and rural Health
Coalition canadienne pour la sécurité
agricole et la santé rurale



Ministry of
Agriculture,
Food and Rural Affairs

Ontario