

Heat Stress

A QUICK REFERENCE GUIDE

*This quick reference guide helps illustrate the various levels of heat-related illnesses and how to prevent them, with guidance from **ANSI/ASSP A10.50-2024, Standard for Heat Stress Management in Construction and Demolition Operations***

Occupational risk factors for heat illness



1 High heat index

2 Low fluid intake

3 Direct sun exposure

4 Limited air movement

5 Physical exertion

6 Prior heat illness

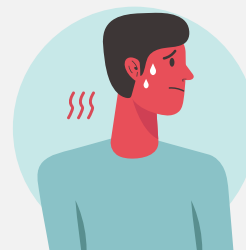
7 Non-breathable clothing or PPE

Heat-related illnesses



HEAT RASH

Occurs when sweat is trapped in the skin. Symptoms can range from small blisters to deep inflamed lumps.



HEAT EXHAUSTION

Happens when the body overheats.

SYMPTOMS OF HEAT EXHAUSTION INCLUDE:

Headache

Dizziness

Fast, shallow breathing and rapid heartbeat

Heavy sweating

Nausea

Vomiting

Slightly elevated body temperature

Extreme weakness and fatigue

Irritability



HEAT CRAMPS

Painful, involuntary muscle cramps or spasms in the abdomen, arms or legs. Fluid and electrolyte loss often contribute.



HEAT STROKE

Heat Stroke is the most serious heat-related illness and happens when the body can no longer control its temperature.

SYMPTOMS OF HEAT STROKE INCLUDE:

High body temperature. A core body temperature of 104° F (40° C) or higher, obtained with a rectal thermometer, is the main sign of heatstroke.

Altered mental state or behavior. Confusion, agitation, slurred speech, irritability, delirium, seizures and coma can all result from heatstroke.

Alteration in sweating. If heatstroke is brought on by hot weather, your skin will feel hot and dry to the touch. However, in heatstroke brought on by strenuous exercise, your skin may feel dry or slightly moist.

Nausea and vomiting. You may feel sick to your stomach or vomit.

Flushed skin. Your skin may turn red as your body temperature increases.

Rapid breathing. Your breathing may become rapid and shallow.

Racing heart rate. Your pulse may significantly increase because heat stress places a tremendous burden on your heart to help cool your body.

Headache. Your head may throb.

PPE to protect workers

Choosing the right PPE for your needs is important for staying cool while you work in dangerously warm environments.



Vented Safety Helmets

Allows air to pass through the sides or above the head and the circulation of air helps perspiration and moisture evaporate



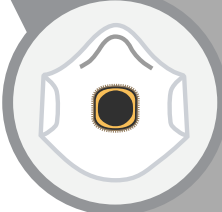
Sweat Bands

Absorptive materials help to keep the sweat and the sting out of workers' eyes while trapping and moving sweat for a safer, more comfortable job with fewer distractions



Hard Hat Liners & Shades

Helps to screen workers from the sun, to alleviate the toll it takes on productivity, protects the worker's skin and the ability to keep hydrated



Valved Respiratory Protection

Typhoon™ low resistance exhalation valve increases comfort and reduces fatigue



Cooling Vests

Provides cooling relief and protection from the stress of high temperatures indoors or outdoors



21 Gauge Gloves

Offers an ultra-lightweight solution that is thin and breathable



Cooling Sleeves

Enhance cooling effects by wearing the sleeves on key pulse points like wrist or under arm

Hats

Helps to screen workers from the sun, to alleviate the toll it takes on productivity, protects the worker's skin and the ability to keep hydrated



Bandanas & Neck Bands

Ideal for use in warm environments for protection from the stress of high temperatures, outdoor and indoor



Bisley® Workwear Essentials

Features a two-faced moisture-wicking hydrophobic polyester outer layer with a cotton backing that contains hydrophilic cooling properties and a Bisley® exclusive Bioscience Fresche® antimicrobial treatment to fight bacteria, mold, viruses, and odors



Bisley® X-Airflow™ Workwear

Features a unique, differentiating laser perforation technology along the side panels, underarm and across the back



ATG® Gloves with AD-APT™ Cooling Technology

Proprietary system that releases microencapsulated, natural cooling agents on the inside palm area of the glove



Hydration

Proper hydration is essential to prevent heat-related illness



White Boots

White boots absorb less heat than traditional black boots



Preventing heat illnesses

Prevention is the best way to avoid heat related illnesses. Here are some tips from the Occupational Safety and Health Administration (OSHA) to protect workers from Heat Illnesses:

- ▶ Establish a complete written heat illness prevention plan.
- ▶ Provide training about the hazards leading to heat stress and how to prevent them.
- ▶ Provide cool water to workers close to the work area. At least one pint of water per hour is needed.
- ▶ Modify work schedules and arrange frequent rest periods with water breaks in shaded or air-conditioned areas.
- ▶ Gradually increase workloads and allow more frequent breaks for workers new to the heat or those that have been away from work to adapt to working in the heat (acclimatization).
- ▶ Designate a responsible person to monitor conditions and protect workers who are at risk of heat stress.
- ▶ Consider protective clothing that provides cooling.



Protecting workers

The newly published **ANSI/ASSP A10.50-2024, Standard for Heat Stress Management**, establishes the minimum requirements for the prevention of heat illnesses and **management of heat stress hazards encountered during construction and demolition operations.**



Know signs/symptoms of heat illnesses; monitor yourself; use a buddy system.

Block out direct sun and other heat sources.



Drink plenty of fluids. Drink often and **before** you are thirsty. Drink water every 15 minutes.

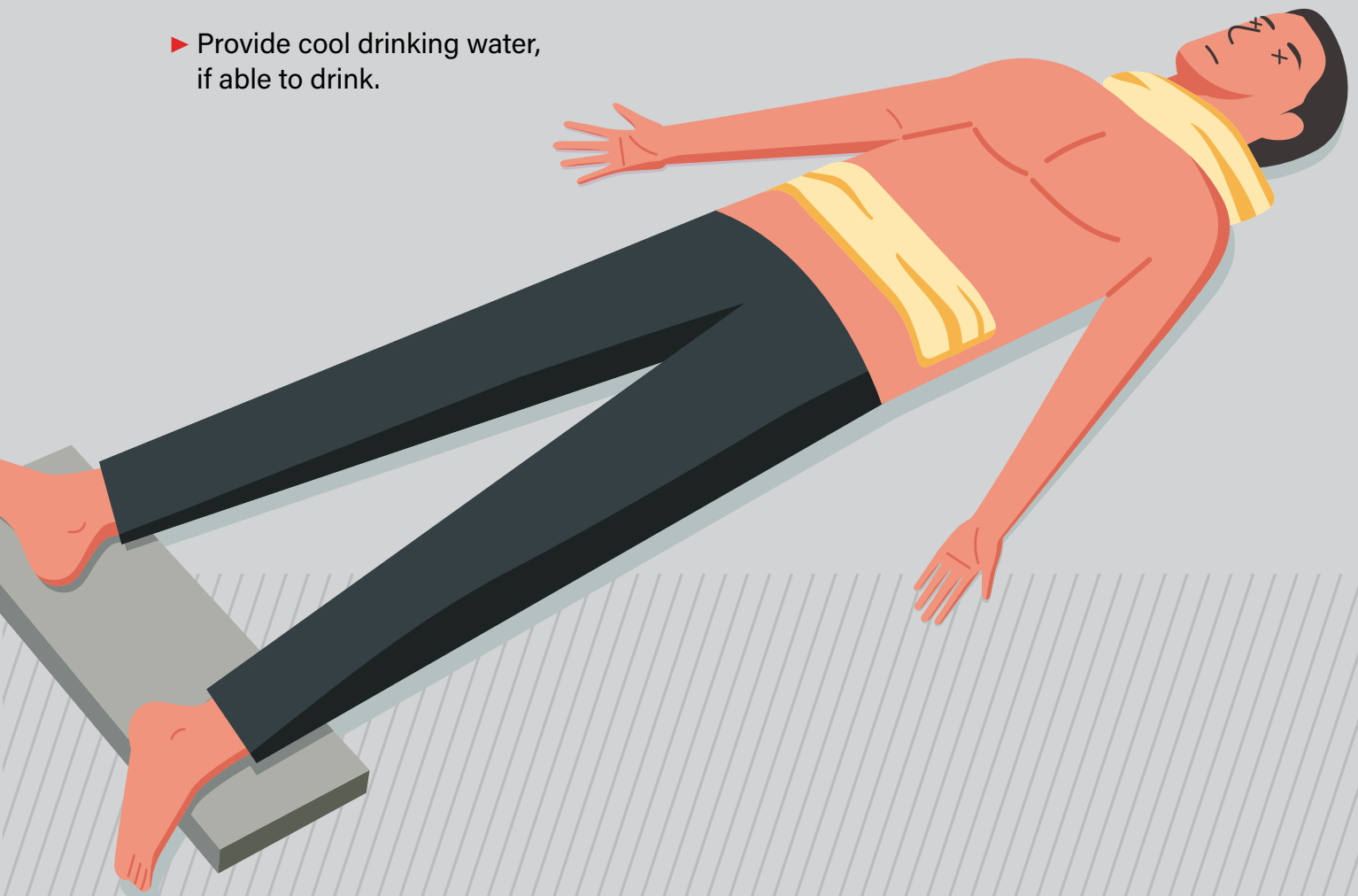
Avoid beverages containing alcohol or caffeine.



Wear lightweight, light colored, loosefitting clothes.

What to do when a worker is ill from the heat

- ▶ Call a supervisor for help. If the supervisor is not available, call 911.
- ▶ Have someone stay with the worker until help arrives.
- ▶ Move the worker to a cooler/ shaded area.
- ▶ Remove outer clothing.
- ▶ Fan and mist the worker with water; apply ice (ice bags or ice towels).
- ▶ Provide cool drinking water, if able to drink.





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