

RISK CONTROL CONSULTING

Preventing Heat Illness

As the nation seeks to put the threat of COVID-19 behind us, we usher in the change of seasons with warmer temperatures. For most, warmer temperatures mean more outdoor activity, whether it be work or play. Unfortunately, these temperatures also carry increased exposure to heat-triggered illnesses.

Outdoor industries such as construction, landscaping, and agriculture are widely known to present the risk of heat illness. However, many indoor environments such as commercial kitchens, boiler rooms, laundry rooms, and attics present artificially hot and humid conditions that carry the same risk.

The Risk Control Consulting Team at Tribal First continues to provide guidance to help you protect workers from heat illness, which can cause injury or even death. This Risk Alert will help you prepare for and reduce the risk of:

- Heat exhaustion (moderate heat illness)
- Heat stroke (severe heat illness)
- Maintaining COVID-19 safe work practices in hot environments

Safe Practices

Heat-related illnesses fall under OSHA's general duty clause of *providing a workplace free of known safety hazards*. In 2011, OSHA launched a Heat Illness Prevention campaign with the goal of educating employers and workers of the dangers of working in the heat.

Some states, including California, Washington, and Minnesota, have specific program requirements that employers must have in place to safeguard employees from this workplace hazard. Determine if your organization has a Heat Illness Prevention plan in place to address outdoor work or at-risk indoor job tasks, even if not required by your state. We have included links to resources on the last page.

Identify Susceptibility

Employers should recognize that not all workers tolerate heat the same way. Heat tolerance happens for a variety of reasons. Knowing that there are certain risk factors that put some employees at higher risk can make the difference in preventing heat-related illnesses before it's too late. Educate/train your employees about personal factors and consider implementing an occupational medical monitoring program that identifies workers who are at increased risk of heat illness.

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Some more prominent risk factors include:

- High blood pressure
- Heart disease
- Lower levels of physical fitness
- Obesity (body mass index > 30%)
- Use of certain prescription medications (water pills, psychiatric or blood pressure medicines)
- Alcohol and/or drug use (illicit and prescription drugs)
- Prior heat illness

The list is not comprehensive. There are other medical conditions that predispose employees to heat-related illnesses.

Know the Signs and Symptoms

Persons with **mild heat illness** may exhibit fatigue or dizziness, rash, muscle spasms (also known as heat cramps) and changes in mental or physical performance. This can progress to moderate or severe heat illness if not recognized and treated promptly.

Moderate heat illness or “heat exhaustion” can include:

- Excessive sweating
- Cold, clammy, moist, pale, or possibly flushed skin
- Pronounced thirst
- Extreme weakness or fatigue, headache
- Nausea and/or lack of appetite
- Rapid weak pulse, and even collapse

What to do:

A person with mild or moderate symptoms should be moved to a cool, shaded place with circulating air. Have the person lay down with feet elevated, loosen their clothing, and provide small sips of cool water. A wet cloth on the skin or spray mist can aid in bringing down the body temperature. If symptoms do not improve, seek medical attention.

Severe heat illness or “heat stroke” can be fatal unless emergency medical treatment is administered. Symptoms can include:

- Red, hot, dry skin
- Body temp 104° F or higher
- Possible seizures, unconsciousness (fainting), severe headache
- Vomiting
- Absence of perspiration
- Possible confusion

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What to do:

- Heat Stroke is a life threatening condition that requires immediate medical attention. Contact emergency medical services.
- Take steps to cool the victim immediately:
 - **Remove from the hot environment**, increase air circulation
 - Loosen clothing, pour water or sponge with ice water soaked rags over entire body to cool immediately

To Prevent or Reduce the Risk of Heat-Related Illness

- Drink small amounts of water at regular intervals, every 15-20 minutes, avoiding alcohol and caffeine.
 - Schedule the heaviest, most intensive work in cooler times of the day and increase hydration/rest breaks in cool, shaded areas.
 - Understand the effect of humidity and heat index on the human body.
 - Add workers to allow for rotation, to reduce the workload, or to shorten the workday.
- Allow time for acclimatization of workers' bodies to gradually adjust to the increasing temperatures and reduce the effect of heat stress.
- Utilize engineering controls to keep worksite temperatures to adaptable levels. This can include fans, canopies, and shading of equipment operators to lessen the sun's intensity.
- Wear hats and loose, lightweight clothing if the job allows. Try to take into account the effects of heat and humidity when selecting the type of PPE (personal protective equipment) to be used.
- Monitor the environmental conditions at least hourly and check worker response to the heated conditions. Workers may not realize there is a problem, or they may be hesitant to verbalize discomfort.
- Allow or make available passive cooling items such as icepack vests, cooling bandanas or collars.

Integrate COVID-19 Practices While Addressing Heat Illness

- Prioritize the use of cloth face coverings when workers are in close contact with others (less than six feet distance).
- Consider allowing workers to remove face coverings when able to safely maintain at least six feet of physical distance from others.
- Evaluate the feasibility of wearing cloth face coverings on an individual task or job basis. Consider alternative face coverings such as face shields where deemed appropriate.
- Where fans are in use, avoid directing the airflow so that the air is pushed over multiple people simultaneously (fans may increase the distance respiratory droplets that could travel).

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- Encourage workers to change face coverings when wet as they will increase breathing difficulty and be less effective in protection. Provide clean or disposable replacements for frequent changing.
- Provide handwashing facilities or hand sanitizer with at least 60% alcohol content; encourage frequent use as workers are prone to touch face coverings more frequently when heat and/or moisture builds up.
- Remember that face coverings are not a substitute for engineering or administrative controls, or necessary PPE.
- Where feasible, incorporate six feet or more of physical distance into break areas and/or stagger break time to limit the number of workers on break at one time.

Additional Tips

Consider implementing procedures for job performance during periods of high heat even if not required by your state laws. These can include:

- Providing effective communication by voice or electronic means so employees can contact a supervisor when necessary. If electronic, ensure the signal is reliable.
- Providing monitoring of employees for heat illness symptoms through direct supervision, a buddy system, or regular communication with radio.
- Reminding employees frequently to stay hydrated (8 oz. every 15-20 minutes). Drinking at shorter intervals more frequently is more effective than drinking large amounts less frequently.
- Pre-shifting huddles to review protection measures against heat illness.
- Creating procedures for emergency responses in the event an employee suffers heat-related illness.

For more detailed information about heat illness, click [here](#).

Resources

Heat–Occupational Safety and Health Administration (OSHA)
<https://www.osha.gov/heat-exposure/standards>

Heat Illness Planning and Supervision (OSHA)
<https://www.osha.gov/heat-exposure/planning>

California–Heat Illness Prevention in Outdoor Places of Employment
<https://www.dir.ca.gov/title8/3395.html>

Minnesota–Indoor Ventilation and Temperature in Places of Employment
<https://www.revisor.mn.gov/rules/5205.0110/>

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Washington–Outdoor Heat Exposure

<https://app.leg.wa.gov/WAC/default.aspx?cite=296-62&full=true#296-62-095>

For additional information contact:

Tribal First Risk Control Solution Center Toll Free Help Line: (888) 737-4752.

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