



## **OR-OSHA Heat Illness Training**

Heat-related illnesses can happen if workplace activities in a hot environment overwhelm the body's ability to cool itself. This becomes more likely if any of the risk factors are present.

### **Risk Factors for Heat- Related Illness**

The risk of heat-related illness increases when heat is paired with:

- Strenuous activity
- Wearing heavy or dark clothing
- Wearing personal protective equipment (PPE)
- Age, particularly 40 years or older
- Medical or chronic health conditions- obesity, high blood pressure, diabetes, or pregnancy
  - **Heart disease:** high heat causes an extra workload for the already strained heart and blood vessels, blocking the ability for the body to cool down.
  - **Diabetes:** can affect sweat glands, cause dehydration to occur in the body sooner, and affect how the body uses insulin
  - **Asthma and Chronic Obstructive Pulmonary Disease (COPD):** The low air flow during high heat and humidity causes pollutants to be trapped in the air, leading to breathing difficulties and asthma flare-ups.
  - **Obesity:** reduces the body's effectiveness to shed excess heat and regulate the body temperature.
  - **Kidney Disease:** too much fluid intake can cause swelling, high blood pressure, trouble breathing, and heart failure. Extra fluid in the body can also make dialysis treatments more difficult.
- Medication- antihistamines, beta blockers, diuretics, or calcium channel blockers
  - Can dehydrate the body, decrease the body's ability to regulate its temperature, increase heat sensitivity and increase the risk for heat illnesses.
- Alcohol and/or use of drugs:
  - Can dehydrate the body, raise the body's internal temperature, put more stress on the liver, and negatively impact the brain and body's normal response functions.
- History of heatstroke- if a person has had a heatstroke in the past, they are more likely to have another one
- Air temperature above 90 degrees F.
- Relative humidity above 40%
- Radiant heat from the sun and other sources
- Conductive heat sources such as dark-colored work surfaces
- Lack of air movement
- Physical effort needed for the work

### **Heat-Related Illness**

There are a variety of different heat-related illnesses that can happen. Listed below are different heat-related illnesses and signs to watch for.

**Heat Stroke:** The most serious heat-related illness, heat stroke can cause death or permanent disability if not treated immediately. The body is unable to control its temperature or cool itself down.

What to look for:

- Confusion, altered mental status, slurred speech
- Loss of consciousness
- Hot, dry skin or profuse sweating
- Seizures
- Very high body temperature

**Heat Exhaustion:** This comes from the body's response to losing water and salt, usually through sweating. What to look for:

- Headache
- Nausea
- Dizziness
- Weakness
- Irritability
- Thirst
- Heavy Sweating
- Elevated Body Temperature
- Decreased Urine Output

**Rhabdomyolysis:** The rapid breakdown, rupture, and death of muscle associated with heat stress and prolonged physical exertion. When the muscle tissue dies, electrolytes and large proteins are released into the bloodstream which can cause irregular heart rhythms and seizures, and damage the kidneys.

What to look for:

- Muscle cramps and/or pain
- Abnormally dark urine (tea or cola color)
- Weakness
- Exercise intolerance
- *Could be asymptomatic*

**Heat Syncope:** Fainting or dizziness spells caused by dehydration or not being used to worked in the heat (acclimatization). What to look for:

- Fainting
- Dizziness
- Light-headedness after standing for long periods or after quickly rising from a sitting or lying position
- *Heat syncope can be a symptom of heat exhaustion*

**Heat Cramps:** These happen when workers are sweating a great deal while doing physical tasks. The cramps come from losing salt through sweating, which causes muscle pain. What to look for:

- Muscle cramps or pain
- Spasms in the abdomen, arms, or legs
- *Heat cramps can be a symptom of heat exhaustion*

## High Heat Practices

**Heat Index:** the “heat index” (also known as “apparent temperature”) is measured in degrees Fahrenheit (°F). The heat index is what the temperature feels like to the human body when relative humidity is combined with the air temperature. The humidity impacts the body’s comfort and ability to regulate its internal temperature; it feels warmer in humid conditions and cooler in dry conditions. Cascade Wood Products, Inc. will monitor the heat index in both outdoor and indoor workspaces.

**Drinking Water:** There is cool drinking water located throughout the facility in drinking fountains and water coolers. It is important for employees to frequently drink small amounts of water before they become thirsty to stay hydrated. Employees should consume 32 ounces of water every hour during high heat times. Employees are permitted to get water as needed throughout their shift.

**Shade:** The facilities are all open air, shaded facilities. The lunch room is air conditioned and there are two covered areas outside of the lunch room which also provide shade. Covered and shaded smoking areas are also provided.

**Acclimatization:** The result of beneficial physiological adaptations (e.g., increased sweating efficiency and stabilization of the circulation) that occur after gradual increased exposure to a hot environment. Cascade Wood Products, Inc. will follow safety procedures to ensure employees are safe while working.

**Breaks:** When the heat index exceeds 90 degrees Fahrenheit, employees will receive a 10-minute preventative cool-down rest break in the shade at least every two hours, regardless of the length of the shift. When the heat index exceeds 100 degrees Fahrenheit, employees will receive a 15- minute preventative cool-down rest break in the shade every hour, regardless of the length of the shift.

Heat Index (°F)	Rest break durations and intervals
90 or greater	10 minutes every two hours
100 or greater	15 minutes every hour

**Emergency Medical Plan:** Foreman and Supervisors will be aware of employees and watch for signs of heat illness.

- If a supervisor observes signs or an employee reports symptoms of heat illness, the employee will be relieved from duty and given a cool area to rest, sip water, loosen their clothing, and cool the skin with a wet cloth or a spray mist to help reduce body temperature.
- If the signs or symptoms indicate severe heat illness- such as decreased consciousness, staggering, vomiting, disorientation, irrational behavior, or convulsions, emergency medical services will be contacted immediately.
- An employee exhibiting signs or symptoms of heat illness will be monitored and will not be left alone or sent home without being offered on-site first aid or provided with emergency medical services.
  - If emergency medical services do need to be contacted, clear and precise directions to the site will be provided.

**Reporting Signs or Symptoms:** If an employee is experiencing any signs or symptoms of a heat-related illness they should report to their foreman or supervisor immediately for care. Employees will not be retaliated for reporting signs or symptoms or exercising their rights under this rule.