

August 2023

By: James Dean

# Heat Related Illnesses

Editor: Emily Hanson

Intermountain Power Service Corporation



## Supervising Safety Newsletter

### Raising Awareness

Heat is the leading weather-related killer, and it is becoming more dangerous. The last 18 out of 19 years were the hottest on record. Excessive heat can cause heat illnesses and even death if not treated properly. It also exacerbates existing health problems such as asthma, kidney failure, and heart disease. Workers in agriculture and construction are at the highest risk of getting heat illness, however those who work in the heat or indoors without climate-controlled environments are also susceptible to heat illness.

Everyone should take into consideration the type of environment he/she will be working in and how it could affect his/her safety. When selecting clothing and PPE, choose light-colored and breathable materials that will help you stay cool. If you have any questions or concerns about a job or task that is assigned be sure to address it with your supervisor before work begins.



According to the Bureau of Labor Statistics, heat stress killed 815 U.S. workers and seriously injured more than 70,000 workers from 1992 through 2017. However, this is likely a vast underestimate given that injuries and illnesses are underreported in the U.S. Furthermore, heat is not always recognized as a cause of heat-induced injuries or deaths and can easily be misclassified because many of the symptoms overlap with other more common diagnoses.

### Types of Heat-Related Illnesses

There are several different types of heat-related illnesses that can quickly progress and become life-threatening. Some of the different types of heat-related illnesses and the signs and symptoms are:

**Heat Stroke:** Confusion, slurred speech, unconsciousness, seizures, heavy sweating or hot and dry skin, very hot body temperature, and a rapid heart rate.

**Heat Exhaustion:** Fatigue, irritability, thirst, nausea or vomiting, dizziness or lightheadedness, heavy sweating, elevated body temperature, fast heart rate.

**Heat Cramps:** Muscle spasms or pain. Usually occurring in the arms, legs, or trunk of the body.

**Heat Syncope:** Fainting, dizziness.

**Heat Rash:** Clusters of red bumps on the skin. Appearing on the neck, upper chest, and skin folds.

**Rhabdomyolysis (Muscle Breakdown):** Muscle pain, dark urine or reduced urine output, and weakness.

Heat stroke is the most severe and can result in serious bodily injury and death. Employers and workers alike should become familiar with the signs and symptoms of heat-related illnesses. When any of these symptoms are present, we should be ready to provide first aid immediately.

### Risk Factors for Heat-related Illnesses

Workers should avoid extended heavy physical labor when working in high temperatures and humidity with direct sun exposure. Avoid wearing heavy, dark, or waterproof clothing that does not allow your body to breathe. Clothing should be selected that is light, light-colored, and loose fitting whenever possible. Avoid constant over-exposure to high heat, and be sure to maintain time to get cool during the day. One of the best things that can be done to prevent heat-related illnesses is to have workers use the buddy system to watch out for one another. Stay hydrated and monitor your liquid intake and replace liquids with cool water or electrolyte sports drinks. A typical person should be drinking about 1 cup every 20 minutes even if they aren't thirsty. Avoid alcohol and drinks containing large amounts of caffeine to help your body perform at its best. Decreased or dark-colored urine can be a warning sign of an advanced heat-related illness or severe dehydration.

#### Dehydrated? Urine trouble.



### Take Action Quickly

Confusion, slurred speech, or unconsciousness are signs of heat stroke. Avoid trying to diagnose the symptoms as multiple heat-related illnesses can occur simultaneously together. When these types of symptoms are present, cooling should start immediately.

Immersing the person in cold water or an ice bath is the best method to cool someone rapidly in an emergency.

- Move the person to a cooler/shaded area.
- Remove or open outer clothing, especially protective clothing or garments.
- Place ice or cold wet towels on the head, neck, trunk, armpits, and groin.
- Use a fan and mist the person with water.
- Provide the person with cool drinking water to sip, if he/she is able to swallow.
- Call 2-911 at work or 911 at home if anyone is showing any signs or symptoms of heat exhaustion or stroke.
- Always stay with the person until help arrives as symptoms can progress quickly and conditions can worsen resulting in fatalities.

Heat-related illnesses are a serious matter and we should all remember to watch out for ourselves and our coworkers. Staying hydrated and taking regular breaks in a cooler area is essential when working in the heat. We need to protect ourselves by knowing the signs and symptoms of heat-related illnesses and be ready to act. Employees should also be willing to discuss any concerns with assigned job tasks and assignments with supervision and work towards suitable solutions.

#### References:

OSHA Heat-related Illness and First-aid <https://www.osha.gov/heat-exposure/illness-first-aid>  
OSHA Hydration Urine Color Chart <https://www.osha.gov/heat>