

## **SAFETY NOTE #3: It's a Dry Heat – Heat Stress**

May 9, 2022

Welcome to **SAFETY NOTE #3!**

It is soon to be **HOT, HOT, HOT!** Cook an egg on the pavement **HOT!!** Whether you've lived in the desert all your life, or you just arrived yesterday, it is important to know that **HEAT KILLS**. In our continuing adventure to keep you informed and safe, the Executive Safety Committee is sending these **SAFETY NOTES** providing insight, resources, and recommendations on how to keep your cool when the temperature is **EXTREME!**

AS ALWAYS, BE conscious of safety in your work, with your team, and in your surroundings, including everywhere outside of work too. Thanks!

### **Heat Stress Hazards**

#### *What is heat stroke?*

Heat stroke is the most serious heat-related illness. It occurs when the body becomes unable to control its temperature: the body's temperature rises rapidly, the sweating mechanism fails, and the body is unable to cool down. Body temperature may rise to 106°F or higher within 10 to 15 minutes. Heat stroke can cause death or permanent disability if emergency treatment is not provided.

Warning signs of heat stroke vary but may include the following:

- An extremely high body temperature (above 103°F)
- Red, hot, and dry skin (no sweating)
- Rapid, strong pulse
- Throbbing headache
- Dizziness
- Nausea
- Confusion
- Unconsciousness

If you see any of these signs, you may be dealing with a life-threatening emergency. Have someone call for immediate medical assistance while you begin cooling the victim. Do the following:

- Get the victim to a shady area.
- Cool the victim rapidly, using whatever methods you can. For example, immerse the victim in a tub of cool water; place the person in a cool shower; spray the victim with cool water from a garden hose; sponge the

person with cool water; or if the humidity is low, wrap the victim in a cool, wet sheet and fan him or her vigorously.

- Monitor body temperature and continue cooling efforts until the body temperature drops to 101-102°F.
- If emergency medical personnel are delayed, call the hospital emergency room for further instructions.
- Do not give the victim alcohol to drink.
- Get medical assistance as soon as possible.

*What is heat exhaustion?*

Heat exhaustion is a milder form of heat-related illness that can develop after several days of exposure to high temperatures and inadequate or unbalanced replacement of fluids. Those most prone to heat exhaustion are elderly people, those with high blood pressure, and those working or exercising in a hot environment.

The warning signs of heat exhaustion include the following:

- Heavy sweating
- Paleness
- Muscle cramps
- Tiredness
- Weakness
- Dizziness
- Headache
- Nausea or vomiting
- Fainting

The skin may be cool and moist. The pulse rate will be fast and weak, and breathing will be fast and shallow. If heat exhaustion is untreated, it may progress to heat stroke. See medical attention if symptoms worsen or last longer than one hour.

What steps can be taken to cool the body during heat exhaustion?

- Drink cool, nonalcoholic beverages.
- Rest.
- Take a cool shower, bath, or sponge bath.
- Seek an air-conditioned environment.
- Wear lightweight clothing.

*What are heat cramps?*

Heat cramps are muscle pains or spasms – usually in the abdomen, arms, or legs – that may occur in association with strenuous activity. People who sweat a

lot during strenuous activity are prone to heat cramps. This sweating depletes the body's salt and moisture. The low salt level in the muscles causes painful cramps. Heat cramps may also be a symptom of heat exhaustion. If you have heart problems or are on a low-sodium diet, seek medical attention for heat cramps.

See attached and website for signs & treatments

*What is heat rash?*

Heat rash is a skin irritation caused by excessive sweating during hot, humid weather. It can occur at any age but is most common in young children. Heat rash looks like a red cluster of pimples or small blisters. It is more likely to occur on the neck and upper chest, in the groin, under the breasts, and in elbow creases.

See attached and website for signs & treatments

Excerpted from: <https://www.cdc.gov/disasters/extremeheat/faq.html>

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## Prevent Heat Stresses

### Early Symptoms

- Fatigue
- Heavy sweating
- Headache
- Cramps
- Dizziness
- High pulse rate
- Nausea/vomiting



### Life-threatening Symptoms

- High body temperature
- Red, hot, dry skin
- Confusion
- Convulsions
- Fainting

### Heat Stress Hazard

### Symptoms

### Treatment

#### Heat Stroke



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|---|---|--|
| <ul style="list-style-type: none"> <li>▪ Red, hot, dry skin</li> <li>▪ Excessive sweating</li> <li>▪ Hallucinations</li> <li>▪ Chills</li> <li>▪ Throbbing headache</li> <li>▪ High body temperature</li> </ul> | <ul style="list-style-type: none"> <li>▪ Confusion</li> <li>▪ Dizziness</li> <li>▪ Slurred speech</li> <li>▪ Loss of consciousness</li> <li>▪ Seizures</li> </ul> | <ul style="list-style-type: none"> <li>▪ Call 9-1-1 and notify your supervisor</li> <li>▪ Move to a cool environment</li> <li>▪ Loosen or remove any heavy exterior clothing</li> <li>▪ Soak, sponge or shower with cold water</li> <li>▪ Apply ice packs, if available</li> <li>▪ Fan their body</li> </ul> |
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#### Heat Exhaustion



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| <ul style="list-style-type: none"> <li>▪ Heavy sweating</li> <li>▪ Cool, moist skin</li> <li>▪ Headache</li> <li>▪ Dizziness</li> <li>▪ Lightheadedness</li> </ul> | <ul style="list-style-type: none"> <li>▪ Weakness</li> <li>▪ Thirst</li> <li>▪ Irritability</li> <li>▪ Fast heart beat</li> <li>▪ Nausea and vomiting</li> </ul> | <ul style="list-style-type: none"> <li>▪ Rest in a cool, shaded area</li> <li>▪ Drink plenty of water, or nonalcoholic beverages</li> <li>▪ Cool with a shower, bath, or sponge bath</li> <li>▪ Cool with cold compresses or ice packs</li> <li>▪ Go to a clinic or ER if condition doesn't improve within 60 minutes</li> </ul> |
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#### Heat Cramps



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| <ul style="list-style-type: none"> <li>▪ Muscle pain</li> <li>▪ Muscle spasms – usually in abdomen, arms or legs</li> </ul> | <ul style="list-style-type: none"> <li>▪ Stop all activity, and sit in cool place</li> <li>▪ Drink clear liquids or a sports beverage</li> <li>▪ Continue resting even after cramps subside</li> <li>▪ Seek medical attention if victim has heart problems, is on a low-sodium diet, or continues to experience cramps for over one hour</li> </ul> |
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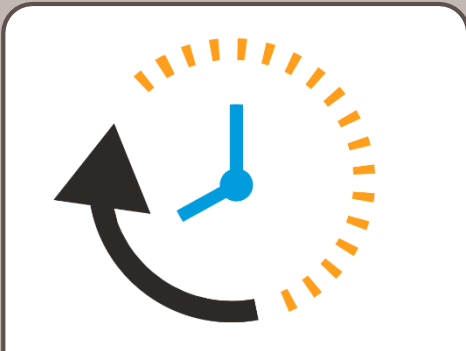
#### Heat Rash



#### Heat rashes (red or pink blisters) most commonly occur:

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| <ul style="list-style-type: none"> <li>▪ On the neck</li> <li>▪ On the upper chest</li> <li>▪ In the groin</li> <li>▪ Under the breasts</li> <li>▪ In the elbow creases</li> </ul> | <ul style="list-style-type: none"> <li>▪ Move to a cooler, less humid work environment, when possible</li> <li>▪ Keep the affected area dry</li> </ul> |
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You can prevent and minimize heat stress hazards by planning ahead, making good choices, and following safe work practices.



### Plan

- If you are not used to hot work conditions, don't attempt to do too much too fast; gradually build up to heavy work
- Use the coolest parts of the day for the most intense work
- Monitor weather conditions prior to starting work and as they change throughout the day
- Inform your supervisor of existing medical conditions that may increase your risks when working in hot environments
- Be extra cautious when you or your co-workers have existing medical conditions or are taking medications that may increase the risks of working in hot environments



### Prevent

- Select clothing that is light-colored, loose-fitting, and breathable (cotton, not synthetic)
- Drink water frequently (avoid drinks with caffeine, alcohol and sugar, and choose liquids with electrolytes when possible)
- Take more breaks throughout the work day and develop an hourly work-rest cycle
- Use areas of shade or cool whenever possible and especially when taking breaks



### Practice

- Monitor yourself and your co-workers for signs and symptoms of heat stress illnesses
- Respect and follow your employer's yearly, monthly and daily scheduling guidelines
- Inform your supervisor of heat stress incidents that require more than first aid
- Follow the site safety plan
- Participate in heat stress training

# HEAT-RELATED ILLNESSES

## WHAT TO LOOK FOR

## WHAT TO DO

### HEAT STROKE

- High body temperature (103°F or higher)
  - Hot, red, dry, or damp skin
  - Fast, strong pulse
  - Headache
  - Dizziness
  - Nausea
  - Confusion
  - Losing consciousness (passing out)
- Call 911 right away-heat stroke is a medical emergency
  - Move the person to a cooler place
  - Help lower the person's temperature with cool cloths or a cool bath
  - Do not give the person anything to drink

### HEAT EXHAUSTION

- Heavy sweating
  - Cold, pale, and clammy skin
  - Fast, weak pulse
  - Nausea or vomiting
  - Muscle cramps
  - Tiredness or weakness
  - Dizziness
  - Headache
  - Fainting (passing out)
- Move to a cool place
  - Loosen your clothes
  - Put cool, wet cloths on your body or take a cool bath
  - Sip water
- Get medical help right away if:**
- You are throwing up
  - Your symptoms get worse
  - Your symptoms last longer than 1 hour

### HEAT CRAMPS

- Heavy sweating during intense exercise
  - Muscle pain or spasms
- Stop physical activity and move to a cool place
  - Drink water or a sports drink
  - Wait for cramps to go away before you do any more physical activity
- Get medical help right away if:**
- Cramps last longer than 1 hour
  - You're on a low-sodium diet
  - You have heart problems

### SUNBURN

- Painful, red, and warm skin
  - Blisters on the skin
- Stay out of the sun until your sunburn heals
  - Put cool cloths on sunburned areas or take a cool bath
  - Put moisturizing lotion on sunburned areas
  - Do not break blisters

### HEAT RASH

- Red clusters of small blisters that look like pimples on the skin (usually on the neck, chest, groin, or in elbow creases)
- Stay in a cool, dry place
  - Keep the rash dry
  - Use powder (like baby powder) to soothe the rash

