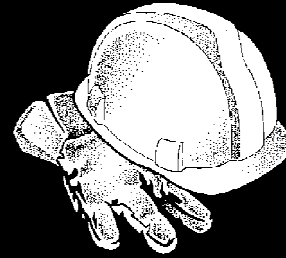



# TRAINING GUIDE

## HEAT



1994

*Before you begin the meeting...*

- Does this topic relate to the work the crew is doing? If not, choose another topic.*
- Did you read this Training Guide and fill in the blanks where the  appears? (To find the information you need, look over the Safety Walkaround Checklist for this topic.)*

*Begin:* You don't have to work in the desert to suffer from too much heat on the job. Even in a moderate climate, many operations on construction sites are hot and uncomfortable.

But discomfort isn't the only problem. If you don't take the proper precautions, heat can give you a rash, make you pass out, or even kill you. Sometimes you reach your limit, and you just have to know that it's time to stop.

*You or a crew member may want to add a personal story about heat.*

*Next, discuss with the crew when and where heat could be a problem at this particular job site:*



### ASK THE CREW THESE QUESTIONS:

*After each question, give the crew time to suggest possible answers. Use the information following each question to add points that no one mentions.*

#### 1. What signs and symptoms might you notice if your body is too hot?

- First, you may notice that you are **tired** and **less mentally alert**. This increases the danger of **accidents**.
- You may **sweat**. The body produces sweat so the evaporation will cool you off. Sweating isn't as effective if the air is very humid, because not as much sweat evaporates.
- **Heat rash** is possible. You get it when your sweat glands swell and get plugged up.
- You can get **sunburn** if you're in direct sunlight too long without using a sunscreen product on your skin. Sunburn can be painful and may even lead to skin cancer.

**2. If you don't pay attention to these early symptoms and get out of the heat, you can get *heat stress*. What does heat stress do to your body?**

- The first symptom is usually **heat cramps**. If you don't replace the fluids and salts (called **electrolytes**) that you lose by sweating, you may get muscle pain or muscle spasms. These are most common in the arms, legs, back, and stomach.
- **Heat exhaustion** can follow. Your whole body (especially your circulatory system) is extremely stressed. Some possible symptoms are:
  - Pale, flushed face and neck
  - Clammy skin
  - Heavy sweating
  - Fatigue
  - Shortness of breath
  - Headache, dizziness, or fainting
  - Nausea and vomiting
  - Rapid heartbeat and breathing
- **Heat stroke** is the most serious stage of heat stress. Your body temperature shoots up. 50% of people with heat stroke die. Symptoms are:
  - Dizziness and confusion
  - Red, hot, dry skin
  - Nausea and vomiting
  - Very little sweating
  - Rapid pulse
  - High body temperature (around 105° F)
  - Convulsions
  - Fainting
- Anyone with heat stroke must be taken to a **doctor or hospital** immediately.

**3. What's the best treatment for the different stages of heat stress?**

- **Heat cramps** — Stop work, drink fluids, and rest in a cool area. Drinking electrolyte solutions may also help.
- **Heat exhaustion** — Give first aid by moving the person to a cool place to rest. Remove as much clothing as possible. Give the person water. Drinking electrolyte solutions may also help. Don't allow the person to get chilled, and treat for shock if necessary. Get medical help.
- **Heat stroke** — Call 911 to get an ambulance immediately. Immerse the person in cool water or ice.

**4. Some people are more likely to get heat stress than others. Why?**

- You have a higher risk of heat stress if:
  - You are **not physically fit**.
  - You are **overweight**.
  - You have a **chronic illness** like heart disease or diabetes.
  - You **drink alcohol or take drugs** (either illegal drugs or prescription drugs).
  - You are **dehydrated**—from diarrhea, a fever, or not drinking enough water.
  - You wear **heavy or tight clothing**.
  - You wear some kinds of **personal protective equipment (PPE)** on the job. Some PPE (like a full body suit) is hot. Other PPE (like a respirator) increases the stress on your body in other ways, making it harder for the body to fight the heat.
  - You are **not used to working in heat**. The more you work in heat, the more your body gets used to it. This is called becoming **acclimatized** to heat.

## 5. How long does it take to become acclimatized?

- It usually takes **4 to 7 days** of regular exposure to heat. But everyone is different.
- You shouldn't do strenuous work all day on a hot job until you've become acclimatized.
- When you are acclimatized, your body temperature and heart rate will be lower. You will sweat more, but your sweat will be less salty so you won't lose as much salt.
- You **lose acclimatization in a few weeks** if you stop working in the heat.

## 6. What precautions do we need to take on the site to prevent heat stress?

- In addition to providing this training, the **company** will: *(Mention all that apply)*
  - **Assign strenuous work** during **cooler** parts of the day.
  - Give **new hires** who are not acclimatized **lighter work** during their first week.
  - **Rotate workers** in strenuous, hot jobs so no one is exposed too long.
  - **Shield** or **enclose** sources of heat (like furnaces) to minimize radiant heat.
  - Provide **water-cooled garments** or ice-packet vests where necessary.
  - Keep **first aid** supplies and equipment available.
- **Workers** should:
  - **Drink a lot of cool water** (or an electrolyte solution). You may need a quart an hour or more, depending on conditions. Drink even if you don't feel thirsty.
  - **Take frequent breaks** in an air-conditioned or shaded area.

*Point out where drinking water and break areas are located on this site:*



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- Wear appropriate clothing when you're in the sun. The best clothing is a loose, lightweight cotton shirt and pants in a light color. Wear a wide-brimmed hat in the sun. Wear a lightweight **long-sleeve** shirt and **long pants** if it's over 95° F.
  - Use a sunscreen product to protect your skin from ultraviolet rays in sunlight. It should have a **sun protection factor (SPF)** of at least 15. (Check the label.)
  - Take frequent cool **showers** if possible.
  - Stay **physically fit**.
  - **Limit** your use of **alcohol**. Ask your doctor about prescription drugs you're taking.

## 7. How can we be sure no one on the site is getting affected by the heat too much?

- **Use the buddy system.** Watch your co-worker for signs of heat stress.
- **Know what to do** if you or your co-worker show any symptoms.
- **Notify your supervisor** and **stop work** if you notice any major symptoms.

## **CAL/OSHA REGULATIONS**

*Explain:* The safety measures we've talked about are included in our company's Injury and Illness Prevention Program (IIPP), as required by Cal/OSHA. At this time, there are no specific Cal/OSHA regulations on exposure to heat. I have a Checklist of recommended safety measures. If you'd like to know more, see me after the meeting.

## **COMPANY RULES**

*(Only if applicable.)* We have some additional company rules about heat on the job.

*Discuss company rules:* \_\_\_\_\_



## **COMMENTS FROM THE CREW**

**Ask:** Do you have any other concerns about heat on the job? Do you see any problems on our job? *(Let the steward answer first, if there is one.)*

**What about other jobs you've worked on? Have you had any experience with heat that might help us work safer on this job?**

## GENERAL SAFETY DISCUSSION

*This is a time to discuss all safety concerns, not just today's topic. Keep your notes on this page before, during, and after the safety meeting.*

**Are you aware of any hazards from other crews?** *Point out any hazards other crews are creating that this crew should know about. Tell the crew what you intend to do about those hazards.*

**Do we have any old business?** *Discuss past issues/problems. Report progress of investigations and action taken.*

**Any new business? Any accidents/near misses/complaints?** *Discuss accidents, near misses, and complaints that have happened since the last safety meeting. Also recognize the safety contributions made by members of the crew.*

**Please remember, we want to hear from you about *any* health and safety issues that come up. If we don't know about problems, we can't take action to fix them.**

*To complete the training session:*

- Circulate Sign-Off Form.*
- Assign one or more crew member(s) to help with next safety meeting.*
- Refer action items for follow-up. (Use the sample **Hazard Report Form** in the Reference Section of this binder, or your company's own form.)*

# SIGN-OFF FORM HEAT

Date Presented: \_\_\_\_\_ By: \_\_\_\_\_

Project Name/No.: \_\_\_\_\_ Location: \_\_\_\_\_

## NAMES OF THOSE WHO ATTENDED THIS SAFETY MEETING

<i>PRINTED NAME</i>	<i>SIGNATURE</i>