Brieser CONSTRUCTION

Section 17
Safety Health and Environmental Manual

2025

Heat Illness Prevention

Heat Illness Prevention

PURPOSE

Heat stress occurs when the heat load on the body exceeds the body's capacity to cool itself. The following information has been collected from the National Institute for Occupational Safety and Health (NIOSH). The purpose of this program is to provide guidance for protecting employees from hazards of high heat conditions and to provide information on engineering, administrative and PPE controls. Being uncomfortable is not the major problem with working in hot temperatures and humidity. Workers who are suddenly exposed to working in a hot environment face additional and generally avoidable hazards to their safety and health.

Scope

To define the requirements, responsibilities, and procedures necessary to reduce the risk of our employees suffering from a Heat related illness.

RESPONSIBILITIES

The Program Administrator: Brieser Safety Manager

This person is responsible for:

- Issuing and administering this program and making sure that it satisfies all applicable federal, state, and local requirements.
- Ensuring that employees receive initial and refresher training on the use of this policy.
- Maintaining training records for all employees included in the training sessions.
- Provide information to workers on signs of heat stress.
- Provide means of preventing heat stress and other heat related health hazards.

Project Managers, Superintendents and Foremen

These people are responsible for:

- Ensuring the Hot Workday checklist is completed prior to work when outside temperatures are 80°F or more.
- Providing training in the signs and symptoms of Heat related illnesses to workers on site
- Providing access to potable drinking water, located as close to the workers as possible.
- Providing shade to workers for breaks and if they need to recover.
- Ensure that all supervision is trained in the prevention of heat related illnesses prior to supervising employees working in heat.
- Ensure that all supervision is trained in emergency procedures when an employee exhibits symptoms consistent with possible heat illness.

Employees

- Understanding common signs and symptoms of heat illness
- Understanding proper precautions to prevent heat illness.
- Understanding the importance of acclimatization
- Understanding the importance of drinking water frequently
- Report heat symptoms early

GENERAL

OSHA does not have a specific standard that covers working in hot environments. Nonetheless, under the OSH Act, Brieser Construction Co. has a duty to protect workers from recognized serious hazards in the workplace, including heat-related hazards. This procedure will help worksite supervisors prepare and implement hot weather plans. It explains how to use the heat index to determine when extra precautions are needed at a worksite to protect workers from environmental contributions to heat-related illness. But first we must learn about Heat Illness disorders and the factors that contribute to them. Then this procedure will train and inform on what to do in varying heat indexes and when signs and symptoms arise in workers that are overcome by heat stresses.

FACTORS THAT MAY CAUSE HEAT-RELATED ILLNESSES

- **Environmental**
  - Hot temperature and humidity. Together this is called the Heat Index
  - Direct sun exposure (with no shade) or extreme heat
  - Limited air movement (no breeze or wind)
- **Job Specific**
  - Physical exertion
    - Type of work being performed.
    - Duration of the task
  - Use of bulky protective clothing and equipment
    - Light vs. dark colors
    - Breathability of fabric
- **Personal**
  - Age
  - Weight/fitness
  - Drug/Alcohol use
  - Prior heat-related illness
  - Acclimatization or adjustment to the heat.

Recognition of common signs and symptoms and how to respond to Heat-related Emergencies.

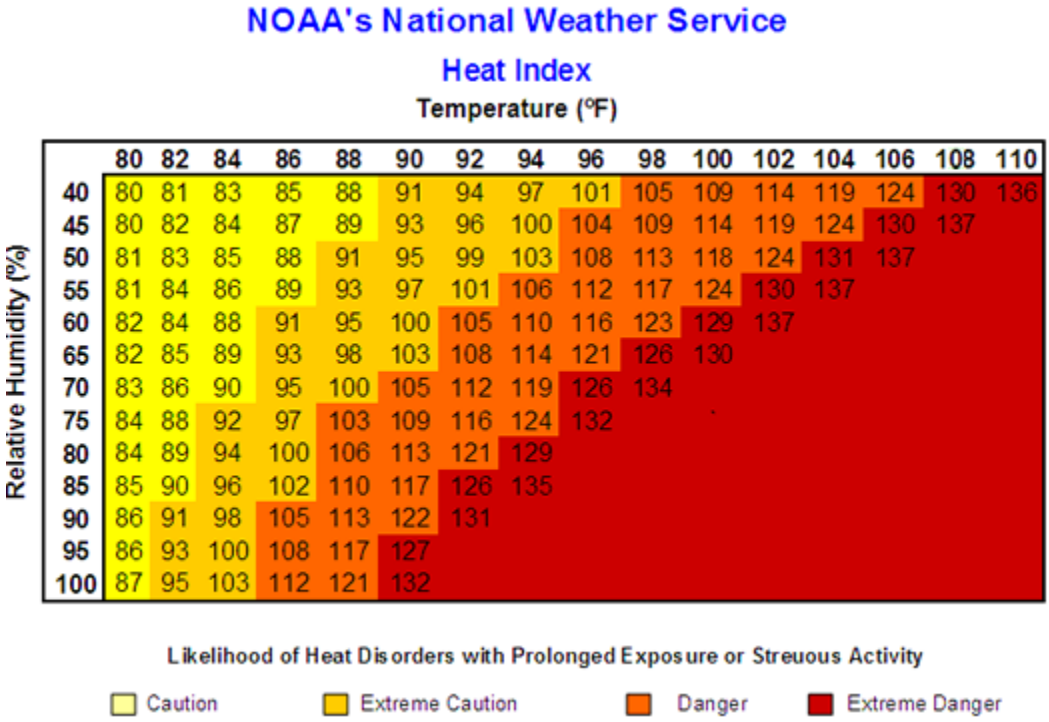
If workers report or supervisors observe signs or symptoms of heat-related illness, stop activity immediately. Act while waiting for help. HEAT STROKE IS A MEDICAL EMERGENCY. CALL 911 immediately if a worker shows any signs of heat stroke.

Illness	Symptoms	First Aid*
Heat stroke	▪ Confusion ▪ Fainting ▪ Seizures ▪ Excessive sweating or red, hot, dry skin ▪ Remarkably high body temperature	▪ Call 911 While waiting for help: ▪ Place worker in shady, cool area ▪ Loosen clothing, remove outer clothing. ▪ Fan air on worker; cold packs in armpits ▪ Wet worker with cool water; apply ice packs, cool compresses, or ice if available. ▪ Provide fluids (preferably water) as soon as possible. ▪ Stay with worker until help arrives
Heat exhaustion	▪ Cool, moist skin ▪ Heavy sweating ▪ Headache ▪ Nausea or vomiting ▪ Dizziness ▪ Light headedness ▪ Weakness ▪ Thirst ▪ Irritability ▪ Fast heartbeat	▪ Have workers sit or lie down in a cool, shady area? ▪ Give worker plenty of water or other cool beverages to drink. ▪ Cool worker with cold compresses/ice packs ▪ Take to clinic or emergency room for medical evaluation or treatment if signs or symptoms worsen or do not improve within 60 minutes. ▪ Do not return to work that day
Heat cramps	▪ Muscle spasms ▪ Pain ▪ Usually in abdomen, arms, or legs	▪ Have workers rest in shady, cool areas. ▪ Workers should drink water or other cool beverages. ▪ Wait a few hours before allowing workers to return to strenuous work. ▪ Have worker seek medical attention if cramps do not go away
Heat rash	▪ Clusters of red bumps on skin ▪ Often appears on neck, upper chest, folds of skin	▪ Try to work in a cooler, less humid environment when possible. ▪ Keep the affected area dry

* Remember, if you are not a medical professional; use this information as a guide only to help workers in need.

HEAT RELATED ILLNESS PREVENTION PROCEDURES

The U.S. National Oceanographic and Atmospheric Administration (NOAA) developed the heat index system. The heat index combines both air temperature and relative humidity into a single value that indicates the apparent temperature in degrees Fahrenheit, or how hot the weather will feel. The higher the heat index, the hotter the weather will feel, and the greater the risk that outdoor workers will experience heat-related illness.



The heat index can be used to help determine the risk of heat-related illness for outdoor workers, what actions are needed to protect workers, and when those actions are triggered. Depending on the heat index value, the risk for heat-related illness can range from lower to remarkably high to extreme. As the heat index value goes up, more preventive measures are needed to protect workers. Heat index values are divided into four bands associated with four risk levels.

Heat Index	Risk Level	Protective Measures
Less than 91°F	Lower (Caution)	Basic heat safety and planning
91°F to 103°F	Moderate	Implement precautions and heighten awareness
103°F to 115°F	High	Additional precautions to protect workers
Greater than 115°F	Very High to Extreme	Triggers even more aggressive protective measures

Use the protective measures described for each risk level to help you plan, and schedule and train your workers so that everyone is prepared to work safely as the heat index rises.

Summary of Risk Levels and Associated Protective Measures

The most critical actions Brieser supervision should take to help prevent heat-related illness at each risk level:

Heat Index	Risk Level	Protective Measures
<91°F	Lower (Caution)	▪ Provide drinking water. ▪ Ensure that adequate medical services are available. ▪ Plan for times when heat index is higher, including worker heat safety training. ▪ Encourage workers to wear sunscreen. **If workers must wear heavy protective clothing, perform strenuous activity or work in the direct sun, additional precautions are recommended to protect workers from heat-related illness.** *
91°F to 103°F	Moderate	In addition to the steps listed above: ▪ Remind workers to drink water often (about 4 cups/hour) ** ▪ Review heat-related illness topics with workers: how to recognize heat-related illness, how to prevent it, and what to do if someone gets sick. ▪ Schedule frequent breaks in cool, shaded area. ▪ Acclimatize workers.

		▪ Set up buddy system/instruct supervisors to watch workers for signs of heat-related illness. **If workers must wear heavy protective clothing, perform strenuous activity or work in the direct sun, additional precautions are recommended to protect workers from heat-related illness.** * ▪ **Schedule activities at a time when the heat index is lower.** ▪ **Develop work/rest schedules.** ▪ **Monitor workers closely**
103°F to 115°F	High	In addition to the steps listed above: ▪ Alert workers of high-risk conditions ▪ Actively encourage workers to drink plenty of water (about 4 cups/hour) ** ▪ Limit physical exertion (e.g., use mechanical lifts) ▪ Have a knowledgeable person at the worksite who is well-informed about heat-related illness and able to determine appropriate work/rest schedules. ▪ Establish and enforce work/rest schedules. ▪ Adjust work activities (e.g., reschedule work, pace/rotate jobs) ▪ Use cooling techniques. ▪ always Watch/communicate with workers. **When possible, reschedule activities to a time when heat index is lower**

>115°F	Very High to Extreme	**Reschedule non-essential activity for days with a reduced heat index or to a time when the heat index is lower.** **Move essential work tasks to the coolest part of the work shift; consider earlier start times, split shifts, or evening and night shifts. Strenuous work tasks and those requiring the use of heavy or non-breathable clothing or impermeable chemical protective clothing should not be conducted when the heat index is at or above 115°F.** If essential work must be done, in addition to the steps listed above: ▪ Alert workers of extreme heat hazards ▪ Establish water drinking schedule (about 4 cups/hour) ** ▪ Develop and enforce protective work/rest schedules. ▪ Conduct physiological monitoring (e.g., pulse, temperature, etc.) ▪ Stop work if essential control methods are inadequate or unavailable.

*The heat index is a simple tool and a useful guide for employers making decisions about protecting workers in hot weather. It does not account for certain conditions that contribute additional risk, such as physical exertion. Consider taking the steps at the next highest risk level to protect workers from the added risks posed by:

- Working in the direct sun (can add up to 15°F to the heat index value)
- Wearing heavy clothing or protective gear

**Under most circumstances, fluid intake should not exceed 6 cups per hour or 12 quarts per day. This makes it particularly important to reduce work rates, reschedule work, or enforce work/rest schedules.

DRINKING WATER

Water should have a palatable (pleasant and odor-free) taste and water temperature should be 50ºF to 60ºF, if possible.

- Drink water throughout the day
- Guidelines recommend that outdoor workers drink 4 cups (8 cones) of water every hour, even if they are not thirsty.
- It is best to drink a small amount of water often, approximately 1 cup (2 cones) every 15 minutes.
- Avoid alcohol and drinks with caffeine or sugar. Energy drinks can contain substantial amounts of caffein AND sugar and have been known to cause health issues when consumed in hot weather. Do your absolute best to avoid these types of beverages.
- Generally, fluid intake should not exceed 6 cups per hour.

All water shall be “potable water” set up at the worksite. Commercial bottled water is acceptable and if water from a plumbed source is used and transferred in portable drinking containers the following procedures must be followed to prepare the container for safe drinking.

To ensure employees of safe drinking water on the job site, certain steps need to be taken. The job site foreman should pick out 1 or 2 people to do the job of providing potable water to the job site.

There is a chart that can help you determine your body’s hydration by recognizing the color of your urine. Please see the chart on the next page for reference and to help read what your body is telling you.

Urinating is a common body function used to expel toxins from your body. An initial sign of the onset of dehydration is that you are not urinating at all. Even though you are expelling fluids by sweating, your body still needs the fluids to assist in the filtering of those toxins. Increase the intake of vital fluids if you are not urinating.


GOOD
You are hydrated
GOOD
You are hydrated
GOOD
You are hydrated
FAIR
Start drinking you need water
DEHYDRATED
Drink water
DEHYDRATED
Drink water
VERY DEHYDRATED
Consider taking rehydration sachets to help you re-hydrate
SEVERE DEHYDRATION
Consider taking rehydration sachets to help you re-hydrate

Water coolers need to be cleaned daily. Items required for cleaning the coolers are.

A. Scrub brush that is marked for cleaning the outside of the containers only.
B. Long handled scrub brush that is marked for cleaning the inside of the containers only.
C. Test tube brush
D. Powered baking soda (Arm & Hammer)
E. Potable water
F. Diluted bleach solution (200 PPM): Into (1) gallon of potable water, carefully mix one half ounce of household bleach (Clorox or any similar 5.25% sodium hypochlorite solution in water). Always use caution when mixing acids and water.

TO START THE CLEANING PROCEDURE:

Step #1: Wash hands and arms thoroughly with soap and water. Rinse thoroughly and dry.

Step #2: Hose off the inside and outside of the container.

Step #3: Thoroughly scrub the outside of the container with a mild detergent such as dishwashing detergent. (Do not use this brush for any other purpose.) Thoroughly rinse the outside with potable water.

Step #4: Open the container and sprinkle 1 to 2 ounces of dry baking soda into the inside followed with enough potable water to make a loose paste mixture. Thoroughly scrub inside the container with a long-handled brush. (Do not use this brush for any other purpose.)

Step #5: Thoroughly clean inside the spigot with the test tube brush. (Do not use this brush for any other purpose.)

Step #6: Thoroughly rinse the inside using potable water. Rinse spigot by opening.

Step #7: Disinfect inside the container with the bleach solution for no less than one minute. (Switch about a quart of the solution inside the container so that all surfaces are contacted. Let stand for one minute.) Allow a portion of the solution to drain through the spigot.

Step #8: Thoroughly rinse the inside with potable water.

Step #9: A diluted baking soda rinse can be used at this point to neutralize any excess chlorine taste in the water. Use about a teaspoon of baking soda in one gallon of water. Rinse again with potable water.

Fill the water cooler with fresh potable water and ice. Then use duct tape to seal the lid shut, date it, and identify the contents. Be sure to have a receptacle for cup dispensing and a receptacle for throwing away used cups. This should be done every day at the beginning of the shift, and it should be refilled as needed throughout the day.

Water handlers shall maintain an elevated level of personal hygiene. This includes clean work clothes, skin, fingernails, hair, and mustaches.

WORK/REST SCHEDULES

Rather than being exposed to heat for extended periods of time during the course of a job, workers should, wherever possible, be permitted to distribute the workload evenly over the day and incorporate work/rest cycles. Work/rest cycles give the body an opportunity to get rid of excess heat, slow down the production of internal body heat, slow down the heart rate, and provide greater blood flow to the skin.

For the best protection from heat-related illness, workers should spend the rest periods of the cycle in a cool place, for example in a lightly air-conditioned room, trailer, or vehicle, or if one is not available, then in full shade.

Rest periods do not necessarily mean that the workers are on break; these can be productive times. During the rest periods, workers may continue to perform mild or light work, such as completing paperwork, sorting small parts, attending a meeting, or receiving training (e.g., instructions for upcoming work, or a tailgate safety talk).

Have a knowledgeable person at the worksite that is well-informed about heat-related illness and able to modify work activities and the work/rest schedule as needed. When evaluating an appropriate work/rest schedule:

Shorten work periods and increase rest periods:

- As temperature rises
- As humidity increases
- When sun gets stronger
- When there is no air movement
- When protective clothing or gear is worn

- For heavier work

Assign new and un-acclimatized workers lighter work and longer rest periods. Monitor these workers more closely. Competent people for Brieser Construction may use the following table to help establish a Work/Rest schedule. This table should only be used for heat indexes up to 103ºF.

TABLE 1. APPROACH FOR SETTING WORK/REST SCHEDULES FOR WORKERS WEARING NORMAL WORK CLOTHING[1]

Adjusted Temperature* (calculated)	Light Work	Moderate Work	Heavy Work
90	Normal	Normal	Normal
91	Normal	Normal	Normal
92	Normal	Normal	Normal
93	Normal	Normal	Normal
94	Normal	Normal	Normal
95	Normal	Normal	45/15[2]
96	Normal	Normal	45/15
97	Normal	Normal	40/20
98	Normal	Normal	35/25
99	Normal	Normal	35/25
100	Normal	45/15[2]	30/30
101	Normal	40/20	30/30
102	Normal	35/25	25/35
103	Normal	30/30	20/40
104	Normal	30/30	20/40
105	Normal	25/35	15/45
106	45/15[2]	20/40	Caution[3]
107	40/20	15/45	Caution[3]
108	35/25	Caution[3]	Caution[3]
109	30/30	Caution[3]	Caution[3]
110	15/45	Caution[3]	Caution[3]
111	Caution[3]	Caution[3]	Caution[3]
112	Caution[3]	Caution[3]	Caution[3]

NOTES:

1. This table is based on American Conference of Governmental Industrial Hygienists limits for heat-acclimatized adults in effect at the time the document was published (1993). Assumptions include physically fit, well-rested, and fully hydrated workers under the age of 40; adequate water intake; 30% relative humidity; natural ventilation with perceptible air movement; and air temperature readings in Fahrenheit, taken in the shade, no sunshine, or no shadows visible.

2. 45/15 minutes = 45 minutes work and 15 minutes rest during each hour.

3. Indicates exceedingly elevated levels of heat stress. Consider rescheduling activities for a time when the risk of heat illness is lower.

4. *Note: Adjust the temperature reading as follows before going to the temperature column in the table:
   For example, if the temperature is 91°, it is dusk, the relative humidity is 40%, and heavy work is to be done, such as moving heavy materials with a wheelbarrow:

   Start with 91° and add 3° because the humidity is 40% [91°+3°=94°]. Go to 94° in the table; under these conditions, it would be reasonable to follow a normal work schedule.

Full sun (no clouds)	add 13°
Partly cloudy/overcast	add 7°
No shadows visible/work is in the shade or at night	no adjustment
For relative humidity of:	
10%	subtract 8°
20%	subtract 4°
30%	no adjustment
40%	add 3°
50%	add 6°
60%	add 9°

ESTIMATING WORK RATES OR LOADS

Examples of work activities that are considered light, moderate, heavy, and very heavy:

Work Rate Category	Example Motions	Example Tasks
Rest	▪ Sitting	▪ Attending a meeting (seated) ▪ Reading instructions, completing paperwork ▪ Watching a training video
Light	▪ Sitting with light manual work with hands and arms ▪ Driving ▪ Standing with some light arm work and occasional walking ▪ Casual walking (2 miles per hour) ▪ Lifting 10 pounds fewer than eight times per minute, or 25 pounds less than four times per minute	▪ Using small bench tools or small power tools ▪ Inspecting and sorting produce ▪ Sorting light materials ▪ Assembling small parts ▪ Driving vehicle on roads ▪ Nailing
Moderate	▪ Sustained moderate hand and arm work. ▪ Moderate arm and leg work ▪ Moderate arm and trunk work ▪ Moderate pushing and pulling ▪ Walking at a moderate speed ▪ Lifting 10 pounds 10 times per minute, or 25 pounds six times per minute	▪ Picking fruits and vegetables (bending, squatting) ▪ Painting with a brush ▪ Pushing or pulling lightweight carts or wheelbarrows ▪ Off road operation of trucks, tractors, or construction equipment ▪ Operating an air hammer ▪ Weeding or hoeing

Heavy	▪ Intense arm and trunk work ▪ Carrying, shoveling, manual sawing ▪ Pushing or pulling heavy loads ▪ Walking at a fast pace (4 miles per hour) ▪ Lifting 10 pounds 14 times per minute, or 25 pounds 10 times per minute	▪ Transferring heavy materials, shoveling ▪ Sledgehammer work ▪ Hand mowing, digging. ▪ Concrete block laying ▪ Pushing or pulling loaded hand carts or wheelbarrows
Very Heavy	▪ Very intense activity at fast to maximum pace ▪ Jogging, running, or walking faster than 4 miles per hour. ▪ Lifting 10 pounds more than 18 times per minute, or 25 pounds more than 13 times per minute	▪ Heavy shoveling or digging. ▪ Ax work ▪ Climbing stairs, ramps, or ladders

If the Heat Index calculation is 103ºF or more, the Brieser Safety Department must be notified to set up a Work/Rest schedule based on WBGT (Wet Bulb Globe Temperature) readings. The WGBT monitor offers a useful, first-order index of the environmental contribution to heat stress. It is influenced by air temperature, radiant heat, and humidity. A Table will be used that is prepared by the American Conference of Governmental Industrial Hygienist to establish a Work/Rest Schedule. All Heat indexes below 1-03ºF will simply follow the site's competent person's personal recommendation for work breaks.

Acclimatizing Workers

Individual susceptibility to heat-related illness can vary widely between workers. Workers become gradually acclimatized when exposed to hot conditions for several weeks. Physical changes in blood vessels and in sweating occur to dissipate heat more effectively. When the heat index is high, special precautions are needed to protect un-acclimatized workers while they adjust, particularly on the first few days of the job.

Allow workers to get used to hot environments by gradually increasing exposure over at least a 5-day work period. Begin with 50% of the normal workload and time spent in the hot environment and then gradually build up to 100% by the fifth day. New workers and those returning from an absence of two weeks or more should have a 5-day minimum adjustment period. While a significant amount of acclimatization occurs rapidly in that first week, full acclimatization may take a little longer. Some workers require up to two or three weeks to fully acclimatize.

Keep in mind that acclimatization can occur naturally for outdoor workers in a hot climate as the weather changes. However, implementing acclimatization activities is essential for new workers, workers who have been out sick or on vacation, and all workers during a heat wave. Be extra-careful with these workers and recognize immediately the symptoms of possible heat-related illness.

Monitoring Workers who are at risk of Heat-related Illness

- Heart rate. Count the radial pulse during a 30-second period as early as possible in the rest period.
    - If the heart rate exceeds 110 beats per minute at the beginning of the rest period, shorten the next work cycle by one-third and keep the rest period the same.
    - If the heart rate still exceeds 110 beats per minute at the next rest period, shorten the following work cycle by one-third.
- Oral temperature. Use a clinical thermometer (3 minutes under the tongue) or similar device to measure the oral temperature at the end of the work period (before drinking).
    - If oral temperature exceeds 99.6°F (37.6°C), shorten the next work cycle by one-third without changing the rest period.
    - If oral temperature still exceeds 99.6°F (37.6°C) at the beginning of the next rest period, shorten the following work cycle by one-third.
    - Do not permit a worker to wear a semi-permeable or impermeable garment when his/her oral temperature exceeds 100.6°F (38.1°C).

Training

For both employees and supervisory personnel, heat stress training is the key to good work practices. If not, all employees understand the reasons for using appropriate work practices to prevent heat stress, the chances of this program succeeding are reduced. A good heat stress-training program for employees should cover at least the following components:

- Knowledge of the hazards of heat stress.
- Recognition of predisposed factors, danger signs, and symptoms.
- Awareness of first aid procedures for and potential health effects of heat stress.
- Employee responsibilities in avoiding heat stress. Dangers of the use of drugs, including therapeutic ones, and alcohol in a hot work environment.
- Proper use of protective clothing and equipment.
- Purpose and coverage of environmental and medical surveillance programs and the advantages of worker participation in such a program.
- The importance of maintaining body fluids at normal levels.
- The benefits and factors of acclimatization.
- The components of the heat stress program.

BRIESER CONSTRUCTION
SAFETY & HEALTH MANUAL
SECTION 17
HEAT ILLNESS PREVENTION
SUB-SECTION TRAINING

Training Session 1
Health Effects of Heat
(15 minutes)

1. **Introduce the topic by saying something like this:**
   - Today we are going to talk about how heat can affect you and what symptoms you should watch out for. Heat exhaustion can often affect you before you even realize it, so it is important to be very aware of the signs.
2. **Ask the crew questions.**
   - Just like we cannot let a car engine overheat or it shuts down, we do not want your body to get too hot. Start by talking about heat — where does the heat come from that causes our bodies to overheat?
     - Hot weather
     - Humid weather
     - Sun-you absorb more heat if you are in the sun.
     - Heat our bodies generate when we are physically active and doing demanding work.
3. **Working outdoors, especially in hot and humid weather, being in the sun, and doing hard physical work is something we have to take seriously.**
   - What are some of the signs you may notice if your body is getting too hot?
     - Headache, dizziness, or fainting
     - Weakness and wet skin
     - Irritability or confusion
     - Thirst, nausea, or vomiting
     - Darkening yellow color of urine
4. **These are the early signs that you need to cool off, rest, and drink water to let your body recover. If you do not, you could develop some of the more serious effects.**
5. **Review the following points.**
   - Working outdoors is demanding work and you will feel sweaty and tired.
   - Workers need to drink water, take shade breaks, and rest to prevent heat problems.
   - Once rested and feeling better, you can go back to work, but you should still drink water frequently and take another break when you need to. If you do not feel better, talk to your supervisor.
6. **Review the following points.**
   - If you are working in the heat, especially if you are not drinking enough water or taking enough breaks, you may get heat exhaustion.
     - You may get a headache, experience dizziness, or faint.
     - You could get weak or have wet skin.
     - You may become irritable or confused.
     - You may be thirsty, nauseous, or vomiting.
     - If you start to feel confused, or if you vomit or become faint, you may be having a more serious response.
   - Workers may also develop what is called heat stroke.
     - At this point you may be confused, unable to think clearly, pass out, collapse, or have seizures.
     - You may stop sweating. Sweating is the main way our bodies cool off!

Training Session 2
How to Respond to Symptoms
(15 minutes)

1. Introduce the topic by saying something like this:
   - Last time, we talked about the symptoms you may get if you have heat exhaustion, or the profoundly serious condition called heat stroke. Today we are going to talk about what you should do if you or your co-workers are having these symptoms.
2. Ask the crew these questions.
   - Example: There is a worker in our crew who has signs of heat exhaustion: she is very sweaty, weak, and has a headache. What do you think you should do?
     - Notify the supervisor. She needs medical help.
     - 2. Move the person to a cooler place to rest in the shade. Do not leave her alone.
     - 3. Little by little, give her water.
     - 4. Loosen her clothing.
     - 5. Help cool the person. Fan her, put ice packs on her groin and underarms, or soak her clothing with cool water.
3. Add the following points.
   - Be prepared to describe the symptoms and know how to describe our location to the emergency personnel so they can find us quickly.
   - Do not wait because heat exhaustion can quickly become more dangerous.
   - Be alert to unusual behavior: if your co-workers seem confused, or are sitting by themselves or walking around aimlessly, ask them if they are okay. If they are acting strangely, they may have heat stroke. Contact the supervisor.
4. For the next activity pick one of the workers to be a person who has heat exhaustion and explain: (Make sure the crew acts out what they would do, instead of just telling you. Add any points they miss from the bulleted answers below.)
   - Now to review how we would respond; you are going to practice what you should do if someone is having symptoms of heat exhaustion. Example: Say you are working with (fill in name) and you notice he is very sweaty and confused, and he looks disoriented and cannot seem to concentrate on his work. Show me what you would do.
     - Call the supervisor and ask for medical help.
     - Move the person to a cooler place to rest in the shade. Stay with the person.
     - Give the person water as long as he/she is not losing consciousness or vomiting.
     - Loosen the person's clothing.
     - Help cool the person. Fan the person, put ice packs on the person's groin and underarms, or soak the person's clothing with cool water.
5. To conclude, ask if anyone has questions, then close by saying:
   - Now we have learned how we would respond if someone developed heat exhaustion, but the best strategy is always prevention. Next time, we are going to talk about how to prevent heat exhaustion.

Training Session 3
Preventing Heat Exhaustion
(15 minutes)

1. Introduce the topic by saying something like this:
   - While heat exhaustion is extremely dangerous, it is also preventable. Today we are going to review what we have learned so far and talk about what we can do to protect ourselves from the heat. There are three simple words: water, rest, shade. Heat illness can be prevented: Drink water often, even if you are not thirsty; rest in the shade to cool down; report heat symptoms early; know what to do in an emergency.
2. Show the crew the drawing of Rogelio on this page. Read the following story aloud:
   - Rogelio is a new member of a crew that is picking melons in the fields. On his second day, he works hard for extended periods without a break. In the early afternoon his co-worker, Julio, looks over and sees that Rogelio is sweating profusely and is acting strangely. Julio asks Rogelio what is going on, and Rogelio says he has a slight headache and feels dizzy. Julio realizes Rogelio needs help and calls the crew leader. Together they give him water and help him sit down. Julio stays with him while the crew leader calls 911 for medical help. Rogelio recovers but cannot work for a few days. Later, he says he had wanted to show he could work hard, and he did not drink much water because he did not feel thirsty.

3. Ask the crew these questions:
   - How do you know Rogelio may be suffering from heat exhaustion?
     - He is sweating, weak, has a headache, and feels dizzy.
   - What went well in this case to address heat exhaustion?
     - Julio called the crew leader.
     - They gave Rogelio water.
     - They called 911.
     - They helped him sit down to rest.
     - Julio was watching out for his co-worker. He stayed with Rogelio while the crew leader mads the call.
   - What went wrong?
     - Rogelio was not used to working in the heat. He should have had less intense work until he got used to working in the heat.
     - They had not made sure Rogelio got adequate breaks.
     - Rogelio had not drunk water. You should not wait until you are thirsty to drink.
     - They did not take Rogelio to shade.
     - Rogelio wanted to prove he could work hard — he did not report symptoms as soon as he felt them.

Training Session 3
Preventing Heat Exhaustion
(15 minutes)

What can we learn from this – what are the important steps to prevent heat exhaustion?

- Rogelio was not used to working in the heat. He should have had less intense work until he got used to working in the heat.
- They had not made sure Rogelio got adequate breaks.
- Rogelio had not drunk water. You should not wait until you are thirsty to drink.
- They did not take Rogelio to shade.
- Rogelio wanted to prove he could work hard – he did not report symptoms as soon as he felt them.

4. Add the following points.

   It is recommended that each person drink water often.

   - It is better to drink tiny amounts frequently, as opposed to larger amounts less often.
   - Drink even if you don¡¦t feel thirsty.
   - Avoid drinks like sodas or coffee that have caffeine, or alcoholic drinks these drinks dehydrate you and can make it more dangerous to work in the heat. Also avoid sports drinks and energy drinks as these contain too much sugar.
   - People worry that if they drink a lot of water, they will have to go to the bathroom more often. In fact, you will mostly sweat it off.
   - When you are not at work, still drink plenty of water to help your body recover from the workday.
   - During a heat wave, it is recommended to provide more frequent breaks.
   - Pair off and watch your co-worker for signs of heat exhaustion. Remind your buddy to drink water or take a break. Talk to your buddy during the work shift to make sure everything is okay. Sometimes people with heat exhaustion get disoriented and think they are okay. If you suspect a problem, keep checking on your co-worker or tell a supervisor.
   - Sometimes people say they are more protected by dark-colored, heavier clothing. This will only make you hotter. Wear light-colored lightweight cotton clothing.

5. Ask the crew this question:
   - What suggestions do you have for what we can do on this job site to prevent heat exhaustion?
6. To conclude, ask if anyone has questions and remind workers of the following four points:
   - Drink water often
   - Rest in the shade
   - Report heat symptoms early
   - Know what to do in an emergency.

WATER

- Is there plenty of fresh, cool drinking water located as close as possible to the workers?
- Is there a plan for refilling water coolers throughout the day?
- Is the Brieser policy being followed for providing clean drinking water?

SHADE AND REST

- Is a shade structure available at all times (regardless of weather) for workers to rest and cool down?
- Is the shade structure up and ready when the weather forecast is 85ºF or higher?
- Do you have a plan in place for checking the weather forecast?

TRAINING

- Have workers been trained to recognize and prevent heat illness BEFORE they start working outdoors?
- Can workers identify symptoms of heat illness?
- Is there a special plan in place to allow workers to get used to the heat?

EMERGENCY PLAN

- Does everyone know who to notify if there is an emergency?
- Can workers explain their location if they need to call an ambulance?
- Does everyone know who will provide first aid?

WORKER REMINDERS

- Have workers been reminded to:
- Drink water frequently?
- Rest in the shade for at least 15 minutes as needed.
- Look out for one another and immediately report any symptoms?

Heat Illness Prevention Learning Exercise

Score: **%**

Employees Name: **Date:**

Answer each of the following questions by circling the appropriate letter.

1. Heat stress occurs when the heat load on the body exceeds the body's capacity to cool itself.
    a. True
    b. False

2. Some factors that may cause heat-related illnesses are: (Circle all that apply)
    a. Environmental
    b. Vehicular
    c. Job Specific
    d. Allergies
    e. Age Related

3. Mark the correct order for the steps in giving aid for someone with the symptoms of Heat Stroke.
    _____ Loosen clothing, remove outer clothing.
    _____ Place worker in shady, cool area
    _____ Fan air on worker; cold packs in armpits
    _____ Call 911
    _____ Wet worker with cool water; apply ice packs, cool compresses, or ice if available.

4. During the hot weather Brieser Employees should drink water throughout the day. Guidelines recommend that outdoor workers drink ____ cups of water every hour, even if they are not thirsty.
    a. 2
    b. 4
    c. 6
    d. 8

5. A urination chart will be available and can help you determine your body's hydration by recognizing the color of your urine. The lighter the color the less hydrated you are.
    1. True
    2. False

Heat Illness Prevention Learning Exercise

Answer Sheet

Heat stress occurs when the heat load on the body exceeds the body's capacity to cool itself.

a. True
b. False

Some factors that may cause heat-related illnesses are: (Circle all that apply)

a. Environmental
b. Vehicular
c. Job Specific
d. Allergies
e. Age Related

Mark the correct order for the steps in giving aid for someone with the symptoms of Heat Stroke.

3 Loosen clothing, remove outer clothing.
2 Place worker in shady, cool area
4 Fan air on worker; cold packs in armpits
1 Call 911
5 Wet worker with cool water; apply ice packs, cool compresses, or ice if available.

During the hot weather Brieser Employees should drink water throughout the day.
Guidelines recommend that outdoor workers drink ____ cups of water every hour, even if they are not thirsty.

a. 2
b. 4
c. 6
d. 8

A urination chart will be available and can help you determine your body's hydration by recognizing the color of your urine. The lighter the color the less hydrated you are.

c. True
d. False