Heat Illness Training — Discussion Guide #1

Understanding Heat Illness: Symptoms and Prevention (10–15 min)

Recommended materials:

- **Picture of car overheating**
- **Cal/OSHA heat poster**

1. Introduce the Topic

Say: Today we are going to talk about heat illness, including: the symptoms of heat exhaustion and heat stroke, how to prevent heat illness, and the importance of acclimatization. As we discuss heat illness, remember these three words: water, shade, and rest.

Ask: What would you do if you were driving on the freeway and noticed your car was overheating? Why would you do those things? *As you talk, point to the picture of the car overheating. Wait for responses.*

Possible responses:

- Stop and try to cool down your car.
- Add water to the engine.
- To prevent the car from overheating, to prevent damage to the car, or to avoid paying for repairs.

Say: Yes! You would stop and let the car cool down before continuing to drive it. If you do not cool down the car, it could get damaged, and would cost you a lot of money to repair it.

Most people would take care of their car if it overheated, but the same people may push their bodies to keep working even when the heat is affecting them. This may happen because people think that if they stop working, they will be seen as weak or that their job will be in jeopardy.

2. Discuss the Types of Heat Illness, Symptoms, and What to Do in an Emergency

Say: There are two types of serious heat illnesses: heat exhaustion and heat stroke. These can cause permanent damage to the body or even result in death, so it is important to act quickly to avoid an emergency. As you talk, point to the two types of heat illness on the poster.

Say: The symptoms of heat exhaustion are: dizziness, headache, sweaty skin, weakness, cramps, nausea or vomiting, and a fast heartbeat. Point to the images of heat exhaustion symptoms on the poster.

- If you are experiencing heat exhaustion, you need to:
    - Stop working immediately.
    - Inform your supervisor that you are feeling sick.
    - Go to the shade to cool down and drink water.
- Tips for cooling down:
    - Remove outer layers of clothing.
    - Drink small sips of water and fan yourself.
    - Do not go back to work until your temperature goes back to normal and you do not feel sick.
- If you have had heat exhaustion, we will refer you to a health care provider covered by our workers' compensation insurance to be sure your health has not been affected.

Say: Heat exhaustion can quickly progress to heat stroke. The symptoms of heat stroke are: red, hot, dry skin; high body temperature; confusion; convulsions; and fainting. Individuals experiencing heat stroke may also have a fast heartbeat and little or no sweating. *Point to the images of heat stroke symptoms on the poster.*

- If you suspect you are being affected by the heat, tell the person closest to you, and go to the shade to cool down and drink water

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment,Subsections b. Definitions ('Heat illness' and 'shade'), d. Access to Shade, and g. Acclimatization as of 2/1/2021.

- If you notice a coworker experiencing heat stroke:
    - Inform your supervisor and contact emergency medical services immediately.
    - Move the person to the shade and help remove outer layers of clothes.
    - Help the person cool down by fanning them and spraying or sponging with cool water. If the person is alert enough to sit upright, help them drink small sips of fresh water. If the person is unconscious, do not put anything in their mouth.
- Don't leave your coworker alone if they're experiencing any symptoms of heat illness as it can become serious very quickly and even lead to death.

3. Discuss Ways to Prevent Heat Illness

Say: Remember water, shade, and rest? There are several ways to prevent heat illness and stay safe while working in the heat:

- **Acclimatization** – Pay close attention to your body when the hot season starts or after a break from working. It takes up to 2 weeks for your body to get used to working in the heat. A person has a higher risk of being affected if they are not used to the heat, in other words, if they are not acclimated.
- **Drink enough water** – Do not wait to be thirsty to drink water. Thirst is the first sign the body uses to tell you that you do not have enough water to function (otherwise known as dehydration). Like in the car example, water helps control body temperature; therefore, drinking water is an easy way to protect your health.
- **Prevent overheating** – If you start feeling the symptoms of heat illness, move to the shade to rest and cool down. When you feel better, go back to work.
- **Rest and cool down at night** – After working hard in the heat, your body needs time to recuperate and get ready to work hard again the next day. Cooling down overnight will help you to feel energized and strong the following day. After work, go home and take a shower to cool off, keep drinking water, limit your intake of alcohol, and sleep in a cool room.

4. Review

Ask: Now to review, what are some symptoms of heat exhaustion and heat stroke? *Wait for responses.*

Possible responses (clarify answers when you need to reinforce the information):

- **Heat exhaustion:** dizziness, headache, sweaty skin, weakness, cramps, nausea/vomiting, fast heartbeat.
- **Heat stroke:** red, hot dry skin; high body temperature; confusion; convulsions; fainting; little or no sweating; fast heartbeat

Ask: What is the first sign a person experiences when their body is "low in water" or dehydrated? *Wait for responses.*

Answer: Thirst, but remember that you should be drinking water before you feel thirsty.

Ask: What should you do if a coworker is showing symptoms of heat stroke? *Wait for responses.*

Possible responses:

- Inform your supervisor immediately and contact emergency services.
- Move the person to the shade. Help them to cool down by fanning them and spraying or sponging with cool water.

Ask: What you can do after work to help your body recover for the next day? *Wait for responses.*

Possible responses:

- Take a shower to cool off, keep drinking water, limit your intake of alcohol, and sleep in a cool room.

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Heat Illness Training — Discussion Guide #2

Water vs Sports Drinks, Energy Drinks, Alcohol, and Coffee (15–20 min)

Recommended materials:

- 8-oz cup and disposable cones used in field (measure how many ounces it holds)
- Urine color chart
- Picture of sports and energy drinks

1. Review Heat Illness Symptoms from Previous Lesson

Say: The last time we talked about heat illness, there were three important words to keep in mind.

Ask: Who remembers those three words? *Wait for responses.*

Possible responses: Water, shade, rest

Say: Perfect! Water, shade, and rest! These actions can protect us from heat illness and can even save lives.

Ask: Who remembers the first sign that you need to drink water? *Wait for responses.*

Possible response: Thirst

Say: The right answer is "thirst." While there are other signs of dehydration, thirst is usually the first you will notice. To function normally, your body needs to have a certain level of water for your brain, stomach, and other organs to work properly. If your body does not have enough water, it is like forcing a car to work without enough coolant; it may break.

2. Discuss How Much Water is Needed to Stay Hydrated

Say: So, how much water is needed for the body to function normally when you are working in the heat? Cal/OSHA recommends drinking four cups like this *(show 8-oz cup)* every hour.

Another way to measure 8 ounces is by making a fist. *(Make a fist.)* Your fist is about the size of 1 cup or 8 ounces. If you are drinking from our workplace water cones, you should drink ___ cones worth of water every hour. *Measure the cups or cones at your worksite to determine the number of ounces per cup. Workers should drink 32 oz of water every hour.*

Say: Some people may think that drinking four cups every hour is too much water and that it will make you need to pee a lot, but your body uses this water to sweat.

On a hot day, your body helps you to cool you down and maintain a healthy temperature by releasing water onto your skin or sweating. When the sweat evaporates from your skin, it takes a little bit of body heat with it. When your body is acclimatizing you will sweat more and therefore need more water. *See below for optional activity (+3 min).*

Say: If you don't drink enough water to replace what your body needs to function and the amount you are sweating, your body may overheat. If your body overheats, it will have trouble working, just like the example of the car we talked about last time. We agreed that fixing a car would cost money, but fixing our health will not only cost money, but in some cases, may not be possible.

3. How to Monitor if You Are Drinking Enough Water

Say: An easy way to tell if you are drinking enough water (or, in other words, if you are "hydrated") without counting cups is to monitor the color of your urine. *Point to the urine color chart as you talk.*

- If your urine is **dark and/or has a strong smell**, you probably aren't drinking enough water.
- If your urine is **light yellow and does not have a strong smell**, you probably are drinking enough water.

4. Sports and Energy Drinks

Say: Not all liquids keep us hydrated like water. Sports drinks can be used occasionally to replenish and hydrate the

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection b. Definitions ('Personal risk factors for heat illness') as of 2/1/2021.

body; however, they should always be a small amount of the total liquid you drink. *Show pictures of sports drinks, e.g. Gatorade, Powerade, Propel, etc.*

Say: When you sweat for a long period of time, your body not only loses water, it also loses important minerals, called "electrolytes," that help your body function. Sports drinks were created for athletes to help them replace the electrolytes they lose when sweating over long periods of time.

In addition to water and minerals, sports drinks also contain a lot of sugar. Drinking sports drinks often instead of water can contribute to health issues like type 2 diabetes. While sports drinks should not replace water, if you are sweating a lot, you can substitute one cup of water with one cup of sports drink, up to twice a day. Remember, one bottle of a sports drink may contain up to three or more cups of liquid.

Say: Energy drinks, on the other hand, should never be used to hydrate your body. *Show pictures of energy drinks, e.g. Monster, Red Bull, 5-Hour Energy, etc.*

Energy drinks contain chemicals, sugar, and stimulants, which can cause side effects like high blood pressure, fast heartbeat, and insomnia. Some of the ingredients may provide a temporary boost and block the sensation of being tired but can cause serious health effects. You get energy from eating right and drinking water. Rather than drinking energy drinks, it is important to stay hydrated by drinking water.

5. Alcohol and Coffee

Say: Now let's talk about some other drinks. It's common for people to drink coffee in the morning and beer at lunch or after work. A cup of coffee may not be an issue, but we need to drink water to stay hydrated. In the summer when it is hot, it's a good idea to drink less coffee and drink water instead of coffee at work.

Ask: Have any of you seen what happens the day after someone drinks too much alcohol? *Wait for responses.*

Possible responses: The person may have a headache, feel tired, and/or feel thirsty.

Say: You're right, after drinking alcohol, someone may feel thirsty, have a headache, and feel tired. This is because alcohol has the opposite effect on the body as water. Alcohol is a diuretic, which makes you pee more often and dehydrates you. You will feel better and have more energy if you are hydrated. If you do choose to drink alcohol, be aware that you will need to drink more water to stay hydrated.

6. Review

Say: Now we know the best way to stay hydrated is to drink water. If we are not working in the fields, drinking eight 8-oz cups of water during the day *(show cup)* is enough. But when we are working in the fields and it is hot, we need more water.

Ask: How much water is recommended to drink when it is hot and we are working in the fields? *Wait for responses.*

Possible responses: Four 8-oz cups or __ cones every hour *(Write in how many cones based on the ones used at your workplace."*

Ask: Will we need more bathroom breaks if we drink four cups of water every hour? *Wait for responses.*

Possible responses: Probably not. Your body uses the water to sweat, which helps cool the body down.

Ask: How can someone monitor if they are drinking enough water? *Wait for responses.*

Possible responses: By monitoring the color of your urine at the end of the day. If it is a pale yellow, you are likely drinking enough water to keep your body healthy. If your urine is dark, you could be dehydrated.

Ask: Is it a good idea to use alcohol to hydrate? *Wait for responses*

Possible responses: No, it is not a good idea. When you are trying to be well hydrated, drinking alcohol is not a good choice because, although alcohol is liquid, it has the opposite effect of water. It "squeezes" the water out of your body.

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection b. Definitions ('Personal risk factors for heat illness') as of 2/1/2021.

Optional Activity: Will Drinking More Water Make You Use the Restroom More? (+3 minutes)

Materials needed:

- **Cup, bottle, or spray bottle with some water**
- **Paper towel or a small cloth (e.g., bandana, rag)**

Say: To understand this concept better, let's imagine that this paper towel is your body.

Ask: If I dump all the water from this cup onto this paper towel, what do you think will happen to most of the water?

Possible responses: It will all fall on the ground.

Say: Yes, the paper towel will absorb what it can, but most of the water will just end up on the ground. But what would happen if I sprinkle a little bit of water onto this paper towel, then leave it in the sun for 15 minutes, then I sprinkle it again and leave it for another 15 minutes, and I keep doing that the whole time that the paper towel is out in the sun?

The paper towel may always be a little wet but it will never become wet enough for the water to fall on the ground because the sun will dry most of the water in between each time I sprinkle the paper towel.

Say: Your body functions in a similar way. If you drink four cups *(or ___ cones based on your worksite)* all at once at the beginning of each hour, your body will absorb what it can, but it can't use all of it at once and you will have to go to the bathroom to get rid of the extra water.

But if you drink small amounts frequently over the course of each hour before you feel thirsty, your body will be using the water that you drink as you sweat throughout the day.

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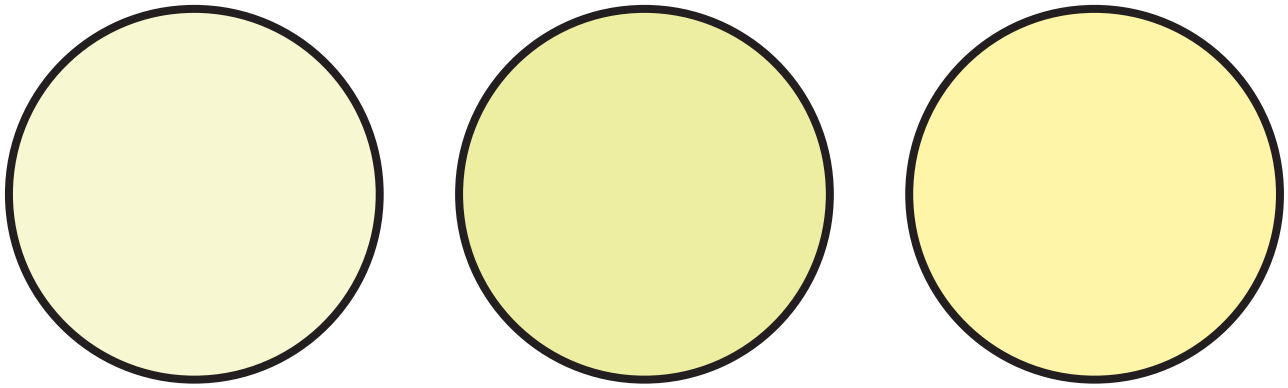
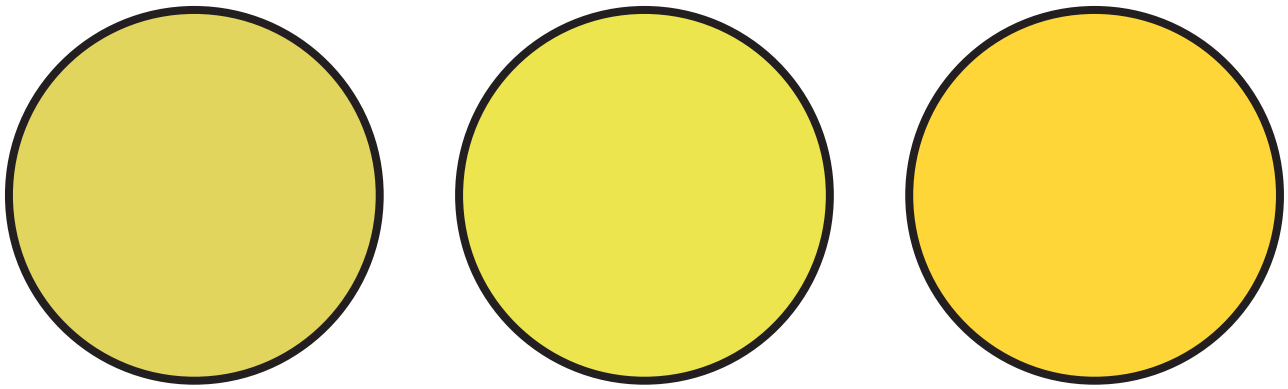
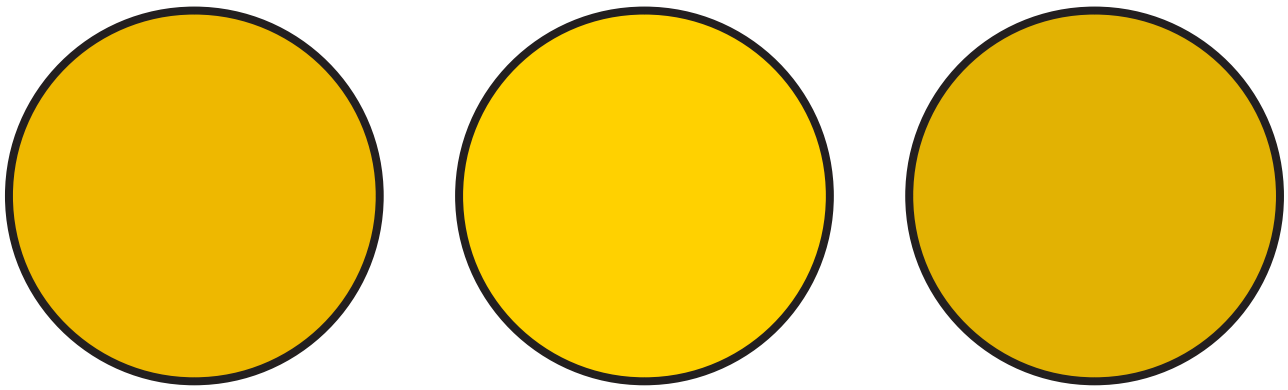


Adequately hydrated
Probablemente bien hidratado



Possibly dehydrated
Posiblemente deshidratado



Probably dehydrated
Probablemente deshidratado

ENERGY

Sports

Heat Illness Training — Discussion Guide #3

Environmental and Personal Risk Factors for Heat (10–15 min)

1. Review the Importance of Drinking Water and How to Monitor if You Are Drinking Enough Water

Say: Today we are going to talk about the environmental and personal risk factors for heat illness.

Ask: Before we start, who remembers the best way to stay hydrated while working in the heat? *Wait for responses.*

Possible response: The best way to hydrate is to drink water.

Ask: Do you remember how much water? *Wait for responses.*

Possible responses: We should drink four 8-oz cups (or 32 oz) of water every hour or ____ cones per hour *(based on measurements of cups/cones at your worksite).*

Ask: What can you use to demonstrate the size of an 8-oz cup? *Wait for responses.*

Possible responses: You can use the size of your fist.

Ask: How can you monitor if you are drinking enough water? *Wait for responses.*

Possible responses: You can check the color of your pee. If it is pale yellow and does not have a strong smell, you are probably drinking enough water.

Ask: Who remembers the three words to remind us about the importance of being safe in the heat? *Wait for responses.*

Possible responses: Water, shade, and rest.

2. Introduce the Topic

Say: Now that we all know the importance of drinking water to prevent heat illness, we are going to talk about things that increase the chances of heat illness. There are two types of risk factors: environmental risk factors and personal risk factors.

3. Explain Environmental Risk Factors

Say: The following are considered environmental risk factors: temperature, humidity, wind, how hard you work and how long, protective clothing, and use of personal protective equipment, like masks and aprons.

Say: As you may have guessed, the outside temperature is the main risk, but humidity (or moisture) in the air affects how hot it feels. The more humidity in the air, the hotter it will feel. Every day during the hot season, we will monitor the temperature and the humidity and take the necessary precautions to reduce your risk of heat illness.

Say: Another environmental risk factor is wind. If the temperature is hot, but the air is cool, a breeze or wind will cool you down. But if the temperature is hot and the air is also hot, the wind will increase your body temperature.

Say: How you work can also impact your temperature. When you are working fast, working hard, and/or working for a long time, your body temperature will increase.

Say: It is also important to pay attention to the clothes you wear. You know that you should wear a long sleeve shirt, long pants, closed toe shoes, and a brimmed hat. Light-colored clothing is also preferable. Some people wear two or more shirts. Wearing loose-fitting layers allows some air to move between the material. Keep in mind that by wearing layers of clothes, you will likely sweat more. Therefore, it is important to drink enough water. Do not wait to feel thirsty.

Say: The same is true when using personal protective equipment (PPE), such as aprons, masks, or gloves. PPE may cover your body or face and limit air movement, which means your body will have a harder time cooling off. When you need to wear PPE, be extra careful to drink water and take breaks to cool down.

Say: During the hot season we will reduce your risk of heat illness by _____ *(Explain how you will modify work tasks or schedules to reduce the risk of heat illness. Some examples: increase the number of breaks, work during early hours when it is not too hot, finish earlier before it gets too hot, reduce/monitor the pace, etc.)*

4. Acclimatization

Say: Before we talk about other personal risk factors for heat illness, let's talk about something important that everyone needs to consider: acclimatization or getting used to the heat. To work properly, your body needs to stay between 97 and 99°F. Your body adjusts to help you maintain this body temperature regardless of temperature outside. The process that helps you adjust to the new climate or new conditions is called acclimatization.

It can take up to two weeks to acclimate to the heat. For these two weeks, and any time after a break of a week or more from working outside, your body may not be ready for the heat. It is important to take extra precautions during this time, such as more frequent breaks in the shade, working at a slower pace, and drinking more water.

5. Explain Personal Risk Factors

Say: Let's talk about other individual or personal risk factors. In addition to acclimatization, these include age, overall health, water consumption, and the use of alcohol and caffeine, as well as the use of prescribed or over-the-counter medications.

- Generally speaking, older people and those who suffer from chronic diseases, such as diabetes and high blood pressure, will have a higher risk of heat illness.
- Remember that alcohol, coffee, and energy drinks are not a substitute for water.
- Some drugs and medications may increase the risk of heat illness by affecting your body temperature, increasing your heart rate, or acting as a diuretic (dehydrating you). Talk to your health care provider or pharmacist if you're taking any prescription or over-the-counter medications and working in the heat.

6. Review

Ask: Who can name some environmental risk factors? *Wait for responses.*

Possible responses: Temperature, humidity, wind, how hard you work, how many hours you work, clothing, PPE

Ask: What are some personal risk factors? *Wait for responses.*

Possible responses: Acclimatization, age, overall health, water consumption and the use of alcohol and/or coffee, the use of drugs or medications

Ask: What are some things we can do to prevent heat illness? *Wait for responses.*

Possible responses:

- Water, shade, rest
- Other workplace adaptations mentioned above, including starting work early, finishing work early, reducing work pace.

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection b. Definitions ('Environmental risk factors for heat illness' and 'Personal risk factors for heat illness') as of 2/1/2021.

Heat Illness Training — Discussion Guide #4

High Heat Procedures (10–15 min)

1. Review Environmental and Personal Risk Factors

Say: Before we start with today's topic, let's review what we learned last time: environmental and personal risk factors for heat illness.

Ask: Who remembers the environmental risk factors for heat illness? *Wait for responses.*

Possible responses:

- Temperature/humidity
- Wind
- How hard you've worked
- How long you've worked
- Protective clothing
- Personal protective equipment or PPE

Ask: What are personal risk factors? *Wait for responses.*

Possible responses:

- Acclimatization
- Age
- Overall health
- Water consumption and use of alcohol
- Use of drugs or medications

Ask: Who remembers what acclimatization is, and why it is important? *Wait for responses.*

Possible responses: Acclimatization is the process of your body getting used to the heat. It takes up to two weeks to get used to the heat, and during that time you're at a higher risk of heat illness.

Ask: We've also talked about signs and symptoms of heat illness. Who remembers the symptoms of heat illness? *Wait for responses.*

Possible responses:

- **Heat exhaustion:** dizziness, headache, sweaty skin, weakness, cramps, nausea or vomiting, and a fast heartbeat.
- **Heat stroke:** red, hot dry skin; high body temperature; confusion; convulsions; fainting; little or no sweating; and a fast heartbeat.

2. Introduce High Heat Procedures

Say: So far, we've been talking about what to do to reduce our risk of heat illness, but we all know that some days are hotter than others. When the temperature is 95°F or above, we will implement special procedures to reduce the risk of heat illness.

_____ *(write the name of the person that will be supervising the crew)* will be observing you *(the workers)* during your shift to identify potential signs or symptoms of heat illness. We encourage each of you to drink enough water. Remember that if you are thirsty, you are not well hydrated. Dehydration increases the chances of heat illness.

_____ *(same person as above)* and _____ *(name/s of some other lead person in the crew that will be*

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection e. High-heat procedures as of 2/1/2021.

able to communicate with the office and emergency services if needed) are able to communicate with the office and contact emergency services if needed. However, each of you are your own best advocate. Please communicate any sign or symptom of heat illness as soon as you recognize it. The sooner you hydrate and take a cool-down rest, the better.

Say: We know that confusion is one of the symptoms of heat illness. When someone is confused, they may not recognize that the heat is affecting them, so it is important to look out for each other to reduce the risk of heat illness.

This is called the buddy system. If you notice that one of your coworkers is looking sick or acting confused, ask them if they need help, and communicate with _____ *(name of the supervisor, crew leader in charge)* about the issue.

We will immediately move the affected person to the shade and help them cool down and hydrate. When needed, emergency medical services will be called to assist. We'll go over emergency procedures next time. Regardless, we want to stress the importance of acting as soon as possible to avoid lasting health issues.

Ask: Who remembers the three words that are key when preventing heat illness? *Wait for responses.*

Possible responses: Water, shade, rest

Ask: Who remembers how many cups per hour are recommended to drink when we are working in the heat, and the approximate size of the cup? *Wait for responses.*

Possible response: Four 8-oz cups or ___ cones *(based on your worksite's cones)*

Say: To help you remember to drink water when the temperature is 95°F or higher, we are going to: _____ *(list here how you are going to remind workers to drink water; some growers use a whistle or other means to alert workers every hour).* It is really important that you recognize the signal and drink water shortly after hearing it. We want to protect you from the heat as much as possible, and we want you to let us know if you are being affected by the heat.

Say: When the temperature is 95°F or above, we will take mandatory cool-down breaks. During the hot season, we are going to schedule preventive cool-down periods at least every two hours. _____ *(name of the supervisor)* will let you know when it is time to take a cool-down break. *(Consider staggering break times so that fewer workers are on break together and can be under the shade without touching each other.)* This cool-down period is meant for you to rest under the shade; drink water; and do what helps you to cool off, such as removing your hat and/or outer layers of clothing, fanning yourself, etc. After at least 10 minutes, we will go back to work unless you're feeling sick. Remember, you also don't need to wait until the mandatory cool-down breaks if you're feeling sick.

3. Review

Ask: What is the buddy system? *Wait for responses.*

Possible response: It is taking care of each other. In the case of heat illness prevention, if you see a coworker being affected by the heat, check with them, and communicate with the supervisor if necessary.

Ask: What are the three words that remind us how to avoid heat illness? *Wait for responses.*

Possible responses: Water, shade, rest

Ask: What are the symptoms of heat illness? *Wait for responses.*

Possible responses:

- **Heat exhaustion:** dizziness, headache, sweaty skin, weakness, cramps, nausea or vomiting, and a fast heartbeat.
- **Heat stroke:** red, hot dry skin; high body temperature; confusion; convulsions; fainting; little or no sweating; and a fast heartbeat.

Ask: What is our signal to remind us to drink water? *Wait for responses.*

Possible responses: _____ *(Write down your signal.)*

Heat Illness Training — Discussion Guide #5

In Case of Emergency (10–15 min)

1. Review General Information

Say: Before we start with today's topic, let's review the general information about heat illness.

Ask: Who remembers the environmental risk factors for heat illness? *Wait for responses.*

Possible responses:

- Temperature/humidity
- Wind
- How hard you've worked
- How long you've worked
- Clothing
- Personal protective equipment or PPE

Ask: What are personal risk factors? *Wait for responses.*

Possible responses:

- Acclimatization
- Age
- Overall health
- Water consumption and use of alcohol
- Use of drugs or medications

Ask: Who remembers the symptoms of heat illness? *Wait for responses.*

Possible responses:

- **Heat exhaustion:** dizziness, headache, sweaty skin, weakness, cramps, nausea or vomiting, and a fast heartbeat.
- **Heat stroke:** red, hot dry skin; high body temperature; confusion; convulsions; fainting; little or no sweating; and a fast heartbeat.

Say: Remember the three words to avoid being affected by the heat: water, shade, rest. We all work hard to make money, but we need to take care of ourselves so we can keep working. First and most important is to drink enough water. Do not wait to be thirsty to drink water. You can also rest in the shade to keep your body healthy.

2. Introduce Emergency Procedures

Say: Today, we are going to talk about the steps to follow in case of an emergency. Hopefully, you will not have to use what you are going to learn today, but it is important to know what to do just in case.

Say: Knowing what to do in an emergency will not only help you to better assist the person in need but will also reduce the stress of those around you. Remember to stay calm. Stress sometimes causes people to do things that may not be helpful. Stay calm and do not get in the way of those taking care of the issue.

Say: If you see someone who has symptoms of heat exhaustion or heat stroke:

1. Ask the person if they are feeling sick. If they say yes or if you notice they are confused, help the person to the shade.

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection f. Emergency response procedures as of 2/1/2021.

2. At the same time: Shout for help or ask another coworker to inform the supervisor immediately. The supervisor will alert _____ (name(s) of the person(s) in your crew who has first aid training). They will give specific directions for what to do. Follow their directions.

Say: Next, help the person to cool down. Respectfully assist the person with removing outer layers of clothing, such as a sweatshirt or extra shirt, and fan them gently. Sponge or spray them with cool water. If the person is conscious, have them sit down and offer them a small amount of water. If they are unconscious, do not put anything in their mouth.

Allow the person to stay in the shade until they feel better. Do not leave the person alone. The situation could worsen very fast, so it is very important to have someone monitor the affected person. If the person looks confused, call emergency assistance immediately.

Say: If emergency services have been called, while you are helping the person to cool down, have someone else give directions to paramedics so they can arrive promptly at the field. If necessary, send someone to the entrance of the field so they can flag the paramedics, and direct them to where the affected person is waiting for them.

3. Review

Ask: Now to review, what should you do if you notice a coworker exhibiting symptoms of heat exhaustion or heat stroke, including acting confused? *Wait for responses.*

Possible responses:

- Move them to the shade and inform the supervisor/shout for help.
- Cool them down by respectfully removing outer layers of clothing and fanning them.
- If able, have the person drink small sips of water.
- Give clear directions to the paramedics so they can reach the affected person, as needed.

Ask: What are the directions to this worksite? *Wait for responses and provide the correct answer.*

Heat Illness Training — Discussion Guide #6

What is Humidity (10–15 min)

Recommended materials:

- **Humidity illustration**

1. Introduce the Topic

Say: Today we are going to talk about humidity and how it can increase the risk of heat illness.

Ask: Think about the air when you take a hot shower. How does it feel? *Wait for responses.*

Possible responses:

- It feels hot and wet
- There is water vapor in the air
- The air is humid
- The mirror fogs
- The air feels thick

Say: That is right. Humidity is when there are small droplets of water in the air, which can make you feel hotter. It can make the air feel thick and your skin feel sticky or sweaty.

Say: When you take a hot shower, it can feel harder to breathe. The air feels heavier because there is more water in the air. This is humidity in action.

Say: Sometimes it is possible to see humidity, like on a foggy bathroom mirror or in our breath on a cold morning. *Show the humidity illustration.*

Say: The more water droplets in the air, the higher the level of humidity. We feel this near large bodies of water. There is more humidity near the coast than there is near the desert.

Say: You need to be alert to how humidity makes you feel, so you are ready to work in the heat.

2. Explain Why Humidity Increases the Risk of Heat Illness

Say: When it is hot out, higher humidity makes the temperature feel even hotter. It can feel harder to breathe and affect how our body cools down.

Say: Our body cools down by sweating. Sweating works by pushing out water and salts from our skin. When sweat dries, it takes heat off our body and cools us down.

Say: When the air has high humidity, sweat dries slower and makes us stay hot and feel sticky.

Say: This means that your body cannot cool off as easily when the humidity is high.

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection f. Emergency response procedures as of 2/1/2021.

3. Discuss When and Where You May Feel Humidity

Ask: Think about your workplace. When or where do you feel humidity? *Wait for responses.*

Possible responses:

- In a polytunnel
- When it rains
- When watering
- In fields near the coast
- In a canning facility

Say: Yes! You might feel humidity in all of these places or times.

Say: Let your supervisor know if you think humidity is negatively affecting you. They can direct you to the rest area where you should cool down and drink water.

4. Review

Ask: Now to review, what is humidity? *Wait for responses.*

Possible responses:

- Humidity is when there are small droplets of water in the air.

Ask: How does humidity feel? *Wait for responses.*

Possible responses:

- Hot
- Sticky
- Sweaty
- The air feels thick

Ask: Why does humidity increase the risk of heat illness? *Wait for responses.*

Possible responses:

- Sweat doesn't dry as easily when the air has a lot of water. It makes it harder for the body to cool down.

Heat Illness Training — Discussion Guide #7

Special Conditions for Polytunnels and Greenhouses (10–15 min)

Optional: Recommended for areas where polytunnels and greenhouses are common

1. Review Humidity

Say: Before we start today's topic, let's review humidity.

Ask: What is humidity? *Wait for responses.*

Possible response:

- Humidity is when there are small droplets of water in the air.

Ask: Who remembers why humidity increases the risk of heat illness? *Wait for responses.*

Possible response:

- Sweat doesn't dry as easily when the air has a lot of water. It makes it harder for the body to cool down.

2. Introduce the Topic

Say: Today we are going to talk about working in polytunnels and the risk of heat illness. A similar risk exists in greenhouses. *Point to a polytunnel or greenhouse if training in the field or say where it is used in the operation.*

Ask: Why do you think we use polytunnels? *Wait for responses.*

Possible responses:

- Plants grow faster
- Protects plants
- Controls the environment

Say: We use polytunnels to increase humidity and temperature. This environment protects plants and helps them grow better. However, the conditions created inside the tunnel also have an impact on us.

Ask: Does the heat feel different when you work inside polytunnels or greenhouses? What do you notice? *Wait for responses.*

Possible responses:

- Sweaty
- Hot faster
- Sticky
- The air feels thick

Say: That's right. The higher humidity inside the polytunnel compared to outside makes the temperature inside feel hotter.

3. Best Practices to Reduce Heat Illness in Polytunnels and Greenhouses

Say: Polytunnels and greenhouses are often more humid than outside. This may cause you to sweat more. Sweating when it is humid does not cool you off as much because of the water droplets in the air.

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection f. Emergency response procedures as of 2/1/2021.

Say: Drinking water is very important when you work in a humid setting. You may not realize how much you are sweating and how much water you are losing. Don't wait until you are thirsty to drink water. You should drink at least 8 ounces of water every 15 minutes.

Say: You should take regular cool-down breaks in the shade and outside of the polytunnel. Let your supervisor know if you need an additional break if you are feeling heat illness symptoms.

Say: Wearing loose-fitting, breathable clothing can help you stay cool.

Ask: What are the three things we can do to prevent heat illness in polytunnels and greenhouses? *Wait for responses*.

Possible responses:

- Drink water
- Take breaks in areas outside the polytunnel where it is cooler
- Wear loose-fitting clothing

Say: That is correct. Drink water, take breaks in areas outside the polytunnel where it is cooler, and wear loose-fitting clothing. These prevention steps are also important when you work in greenhouses. There are also a few more things to consider.

4. What Are We Doing to Keep You Safe?

Say: We will observe all workers for signs of heat illness and encourage you to watch for these signs in your coworkers. If someone is showing signs of heat illness, we will have them rest and recover outside of the polytunnel.

Say: We are taking extra steps to keep you safe from the heat when you work in polytunnels.

- *If applicable say:* We are measuring the temperature and humidity inside the polytunnel regularly. We will use this measurement to determine when more breaks are needed.
- *If applicable say:* We will rotate job tasks for workers between inside and outside the polytunnel as much as possible to reduce time worked in humid conditions.

4. Review

Ask: Now to review, what is a polytunnel used for? *Wait for responses.*

Possible responses:

- Plants grow faster
- Protects plants
- Controls the environment

Ask: What are three things we can do to prevent heat illness when working in polytunnels or greenhouses? *Wait for responses.*

Possible responses:

- Drink water
- Rest outside of the polytunnel or greenhouse where it is cooler
- Wear loose-fitting clothing

Per Cal/OSHA Heat Illness Prevention Standard, Subchapter 7. General Industry Safety Orders, Group 2. Safe Practices and Personal Protection, Article 10. Personal Safety Devices and Safeguards, Section 3395. Heat Illness Prevention in Outdoor Places of Employment, Subsection f. Emergency response procedures as of 2/1/2021.