



# The Heat is on the way!

Workers who are exposed to hot environments may be at risk of heat stress. Exposure to extreme heat can result in occupational illnesses and injuries. Heat stress can result in heat stroke, heat exhaustion, heat cramps, or heat rashes. Heat can also increase the risk of injuries to workers as it may result in sweaty palms, fogged-up safety glasses, and dizziness. Burns may also occur as a result of accidental contact with hot surfaces or steam when a worker loses focus due to a heat disorder.

Examples of Ardaman workers at risk of heat stress include outdoor workers such as field technicians, drillers, and engineers. Workers at greater risk of heat stress include those who are 65 years of age or older, are overweight, have heart disease or high blood pressure, or take medications that can result in complications for the employee working in extreme heat.

Prevention of heat stress in workers is important. Workers should understand what heat stress is, how it affects their health and safety, and how it can be prevented. Here are the heat related disorders starting from severe (heat stroke) to early identifiers (heat cramps).

## Heat Stroke

Heat stroke is the most serious heat-related disorder. 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. When heat stroke occurs, the body temperature can rise to 106 degrees Fahrenheit or higher within 10 to 15 minutes. Heat stroke can cause permanent disability or death if emergency treatment is not given.

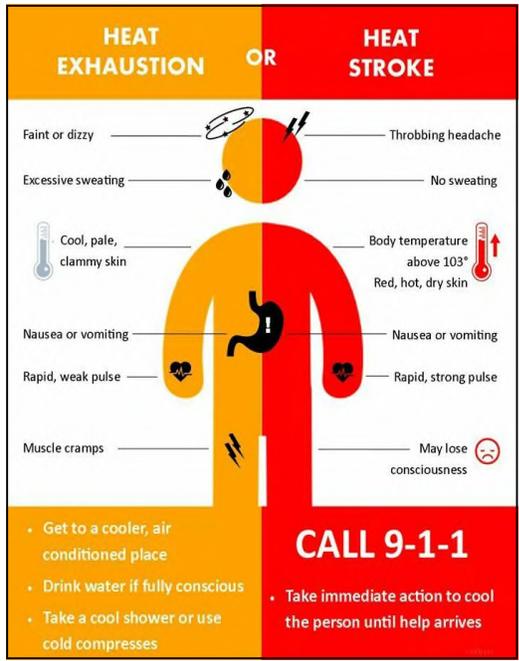
### Symptoms of heat stroke include:

- Hot, dry skin or profuse sweating
- Hallucinations
- Chills
- Throbbing headache
- High body temperature
- Confusion/dizziness
- Slurred speech
- Vomiting

### First Aid

Take the following steps to treat a worker with heat stroke:

- **Call 911 and notify supervisor.**
- Move the worker to a cool shaded area.
- Cool the worker using methods such as:
  - \* Soaking their clothes with cool water
  - \* Spraying, sponging, or showering them with cool water.
  - \* Fanning their body.
  - \* Placing icepacks under the arm pits or groin area.



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**Contact Information:**  
Health & Safety  
Ardaman & Associates, Inc.  
Brett A. Buxbaum  
Orlando, FL  
P: (407) 855-3860 X 2413  
Cell: (407) 509-3085  
[BBuxbaum@ardaman.com](mailto:BBuxbaum@ardaman.com)

**Safety Question:**  
**How much water on average do you lose during heavy work activity outside in the heat each hour?**

**A. 5 ounces**  
**B. 12 ounces**  
**C. 16 ounces**  
**D. 32 ounces**

Answer on page 4



## Heat Disorders Continued

### Heat Exhaustion

Heat exhaustion is the body's response to an excessive loss of the water and salt, usually through excessive sweating. Workers most prone to heat exhaustion are those that are elderly, have high blood pressure, and those working in a hot environment.

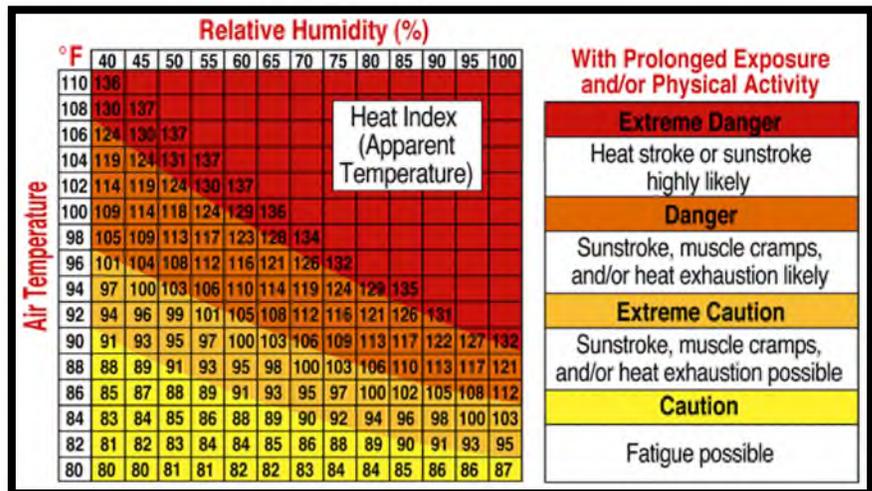
#### Symptoms of heat exhaustion include:

- Heavy sweating
- Extreme weakness or fatigue
- Dizziness, confusion
- Nausea, headache
- Clammy, moist/cool skin
- Pale or flushed complexion
- Muscle cramps
- Irritable
- Thirst

#### First Aid

Treat a worker suffering from heat exhaustion with the following:

- Have them rest in a cool, shaded or air-conditioned area.
- Have them slowly drink room temperature water.
- Have them rest until they feel better



### Heat Cramps

Heat cramps usually affect workers who sweat a lot during strenuous activity. This sweating depletes the body's salt and water levels. Low salt levels in muscles causes painful cramps. Cramps may also be a symptom of heat exhaustion.

#### Symptoms of heat cramps include:

- Muscle pain or spasms usually in the abdomen, arms, or legs.

#### First Aid

Workers with heat cramps should:

- Stop all activity, and sit in a cool place.
- Slowly drink room temperature water.
- Do not return to strenuous work for a few hours after the cramps subside because further exertion may lead to heat exhaustion or heat stroke.
- Recent studies have shown that drinking commercially available carbohydrate-electrolyte replacement liquids occasionally is effective in minimizing physiological disturbances during recovery. Eating bananas is an additional aid during recovery.
- Seek medical attention if the worker experiences heat cramps symptoms and any of the following apply:
  - \* The worker has heart problems.
  - \* The worker is on a low-sodium diet.
  - \* The cramps do not subside within one hour.



**“IF IT’S NOT SAFE, STOP...DO IT THE SAFE WAY”**



## Heat Disorders Continued

### General Heat Safety Prevention Tips

- Use general ventilation, cooling fans, and evaporative cooling whenever possible;
- Shield heat producing equipment;
- **Drink water steadily before and during work in the heat:**
  - \* **Drink about 16 ounces before starting and 5 to 7 ounces every 15 to 20 minutes during hot work activities. On average we lose 1 quart of water per hour in hot conditions.**
  - \* **Pay attention to the color of your urine when going to the rest room. If you are not going to the bathroom regularly during the day, you are dehydrated.**
- Eat well-balanced meals, avoiding heavy or hot food,
- Eat smaller meals before work activity.
- Avoid caffeine and alcohol or large amounts of sugar.
- Work at a steady pace minimizing overexertion;
- Know your own limits and ability to work safely in heat;
- **Wear light-colored, loose-fitting, breathable clothing—cotton is good.**
- **Take breaks in cool shade.**
- Work in the shade when possible.
- Find out from your health care provider if your medications and heat don't mix.
- Know that equipment such as respirators or work suits can increase heat stress.
- Take fast action for symptoms of heat cramps, exhaustion, or heat stroke.

### What Does Urine Color Say About Your Hydration?

Urine color says a lot about our hydration status. Generally, the lighter the color, the more hydrated you are. But why is that? Well, dehydration is caused when the volume of water in the body is depleted. And when we're dehydrated, our kidneys, which filter waste, tell the body to retain water. Therefore, we have less water in our urine, which causes it to become more concentrated and darker.

This chart can help you determine if you're hydrated. It starts with normal, well-hydrated colors. But as you move down the list, dehydration becomes more severe; below the red line indicates dehydration.

#### Understand the Symptoms of Dehydration

Recognizing colors can be a helpful indicator, especially if you notice the change in color while other symptoms of dehydration are present. Dehydration symptoms include:

- |   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• <b>Thirst</b></li> <li>• <b>Dry mouth, dry nose</b></li> <li>• <b>Fewer trips to the bathroom</b></li> </ul> | <ul style="list-style-type: none"> <li>• <b>Headache</b></li> <li>• <b>Light-headedness</b></li> <li>• <b>Muscle Cramps</b></li> <li>• <b>Irritability/Confusion</b></li> </ul> |
|---|---|

\*Of course, abnormal urine color may indicate a health issue other than dehydration. Talk to your doctor if you're experiencing abnormal urine color.

### HYDRATION CHART

<b>HYDRATED</b>	<b>Safe Zone</b>	<b>1</b>	
		<b>2</b>	
		<b>3</b>	
<b>DEHYDRATED</b>	<b>Danger Zone</b>	<b>4</b>	
		<b>5</b>	
		<b>6</b>	
		<b>7</b>	
		<b>8</b>	



## **Ardaman Update**

### Safety Audits:

#### Identified Hazards from 37 Safety audits conducted in the month of February and March.

**Equipment:** Drill crew had a slap/bump stick broken off by the flight assembly. This acts as the emergency stop and was replaced immediately. The required inspection of equipment prior to the start of work is an important time to ensure the equipment will work properly.

**Ergonomics:** Employee demonstrated poor head positioning while at their work station. Always keep your head straight while using monitors. Even the slightest tilt of your head can result in discomfort in the neck area at the end of the day.

**Equipment:** Employee was cutting samples with the chop saw without water causing excessive dust to be present. Wet methods are to be used while cutting concrete samples and cutting is to be performed outside of the lab in a well ventilated area. If water cannot be used, the operator should wear a N95 dust mask.

**Slip/Trip/Fall:** Employee observed several trip hazards on the site that were overlooked by the technician. Always remember to perform a LMSA prior to each task and ask yourself "What is the worst thing that could happen."

**PPE:** Employee was not wearing a hard hat or safety vest while coring on a job site. Hard hats and safety vests/shirts are required on all job sites where work is being performed by AAI employees.

## **Ardaman Health and Safety Recognition Awards**



A safety sticker was awarded to the following individuals:

- ◆ **Colin Jewsbury:** For observation of an unsafe condition due to a subsurface concrete tank hidden by vegetation on the site. Employee notified the crew prior to their arrival and marked the hazard. He also received a gift card for his actions. (Orlando)
- ◆ **Clay Cannon:** For observation and actions involving loose lug nuts on a vehicle after service was completed by a third party. Employee mitigated the hazard and notified the shop. He also received a gift card for his actions. (Orlando)
- ◆ **Nicholas Martin:** For recognition of an unsafe ladder condition in an excavation. Employee notified the contractor to have the ladder properly secured prior to use. (West Palm Beach)
- ◆ **Reynier Montero:** For observation and actions involving concrete boxes on site that were placed near a high traffic area with open excavations. Employee notified the contractor and had the boxes moved to a clear area for safe access. (Miami)
- ◆ **Donnie Tindall:** For observation of several utility boxes on site that were not marked by 811 locators. Employee notified AAI project manager and the locators were sent back to the site. (Orlando)
- ◆ **Tim Yelvington:** For recognition of an unsafe condition due to the contractor placing spoil piles too close to the edge of the excavation. Employee notified contractor and had them move the piles. (Ft. Myers)
- ◆ **William Cornelius:** For recognition of a potential laceration hazard and protecting his hands prior to performing the task by selecting the proper gloves to wear. (Port St. Lucie)
- ◆ **Ken Mayo:** For observation and recognition of a potential fire hazard due to a contractor performing grinding near flammable vegetation. The employee notified the worker and general contractor of the concern and the work was terminated. (Tallahassee)
- ◆ **Evelio Horta Jr.:** For observation of inadequate tools and work bench available during wire line coring activities. The employee notified the crew and procured the necessary tools and equipment to completed the task safely. (Miami)
- ◆ **Tom Taylor:** For recognition of several impalement hazards on the job site due to unprotected reinforcing bar sticking out of the ground. The employee notified the contractor and proper guarding caps were placed on the exposed ends. (Cocoa)

**Answer: D**

Drink about 16 ounces before starting and 5 to 7 ounces every 15 to 20 minutes during hot work activities. On average we lose 1 quart (32 oz.) of water per hour in hot conditions each day



## **Ardaman Update**

### **Injury Incidents:**

- **NO INJURIES IN THE MONTH OF APRIL, GREAT JOB EVERYONE!**

### **Vehicle/Equipment Incidents:**

- Employee was exiting the excavation after completing a nuclear gauge density test. He set the nuclear gauge on the top edge of the excavation so he could safely walk out of the excavation with the rest of the equipment. While exiting the excavation, the gauge fell back down into the excavation. This resulted in a crack on the plastic operations panel of the nuclear gauge. (West Palm Beach)  
**Reminder:** IN CASE OF AN INCIDENT: If the source fails to return to the shielded position, or if the gauge is damaged in an accident,
  - ◇ Secure the area within 15 feet of the gauge (by roping off the area).
  - ◇ Maintain the area of the accident site under constant surveillance.
  - ◇ Do not allow anyone to enter the area until emergency assistance arrives and radiation levels are known. However, do not delay necessary first-aid to the injured, and move them from the area only when medically safe to do so.
  - ◇ A radiation survey must be conducted as soon as possible.
  - ◇ Do not use a vehicle or equipment involved in a gauge accident until it is evaluated for contamination.
  - ◇ Contact your office Radiation Safety Officer (RSO). The RSO will contact radiation safety personnel, as necessary, to assist in the accident clean-up if required.
- Employee was stopped in right hand turn lane. Another vehicle came up on the right side of our vehicle in the safety/shoulder area of the roadway. The light turned green and our driver began to make the right turn in his established lane. The other vehicle also began to make a right turn from an illegal area. The vehicles side swiped each other. While glancing ahead, don't forget the sides and rear. Consistently update your information around your vehicle. (Port St. Lucie)
- Employee was approaching the left hand on the roadway. The vehicle behind him had moved to the outside left area of our driver without warning and was in the yellow diagonal marked area in the median area trying to pass our driver. The other driver then side swiped our vehicle as they were make an illegal pass. Remember to always keep your eyes moving at least every 2 seconds and check your mirror every 5 to 8 seconds to continually have the big picture of what is around your vehicle. (Miami)

### **Near Miss Miss/ Hazard Identification:**

#### **Highlighted Near Misses from 22 reports received for the Month of April.**

- Employee was hand augering to install a temporary well. He was measuring the soil layers with a measuring tape inside the hole to a depth of seven feet. After finishing the measurement, he began retracting the tape. The end of the tape measure began to hang up on the walls of the hole. The technician pulled on the tape measure and the tape began to retract quickly. He then noticed that his glove had a 3/4" cut along the finger where the tape measure had sliced into it while retracting it. This is an excellent example of why we wear PPE to protect our hands, feet, body, and head when performing tasks. By wearing the proper glove, the incident is classified as a near miss instead of an injury. Always assess the task to see if any part of your body may be in the line of fire if something were to happen. (Port St. Lucie)
- Employee was on site observing a contractor. A worker was refueling a water pump. After finishing refueling the pump, the worker started the motor and left the fuel can sitting next to the hot exhaust of the pump. Our technician notified the worker about the potential fire hazard and the fuel can was moved to a safe area away from any source of heat or ignition. Remember to always turn off motors prior to refueling. Once refueling has been completed, ensure the fuel is placed in a designated area away from any potential sources of heat or ignition to reduce the chances of a fire starting. (Bartow)
- Employee was observing vibration monitoring in a wooded area. Adjacent to the job site where the sheet piles were being installed, a worker was cutting sheet metal and was shooting sparks into the wooded area where our employee was located. Our employee notified the project manager and supervisor of the worker regarding the fire hazard. The employee was notified to stop work. When performing any work that creates sparks, a hot work permit must be filed. In addition, a fire watch must be established for the work area. All systems that may carry sparks or fire shall be protected or shut down, and all flammable materials in the area must be moved or protected. (Tallahassee)

# May 2019 Safety Quiz

Please circle the letter of the answer that fits best. Some answers can be found in the newsletter

1. If you notice a potentially hazardous situation or condition, you should take the time to report it and correct the situation if it is safe do so.  
A. True                      B. False
2. The best thing to drink to prevent heat stress is?  
A. Soft Drinks              B. Water                      C. Alcohol                      D. Gatorade
3. Heat stroke occurs when body temperature rises to dangerous levels.  
A. False                      B. True
4. Symptoms of heat stroke include confusion/dizziness, vomiting, and \_\_\_\_\_?  
A. Cool, dry skin              B. Hot, dry skin              C. Cool, clammy skin              D. Hot, clammy skin
5. Symptoms of heat exhaustion include?  
A. Cool and clammy skin              B. Nausea                      C. Thirst                      D. All the above
6. When heat stroke symptoms occur, you should immediately?  
A. Drink cold water              B. Call for medical attention and move worker to a cool place and try to cool them down              C. Have them take a nap              D. Nothing
7. If you are staying well hydrated throughout the day, your urine should be what color?  
A. Dark Yellow              B. Bright Yellow              C. Light Yellow/Clear              D. All the above
8. You should consult your physician to check any medications that you are taking that can become problematic if you are working outdoors in the heat, and if so, notify your supervisor.  
A. True                      B. False
9. If an employee is showing signs of heat exhaustion you should immediately?  
A. Move the worker to a shaded or cooler area              B. Have the employee drink small amounts of room temperature water              C. Have the employee rest until they feel better              D. All the above
10. What precautions should be taken to reduce the likelihood of a heat related disorder from occurring when working in the heat?  
A. Wear light colored loose fitting clothing              B. Drink at least 1 cup of water every 15-20 minutes  
C. Take breaks in the shade or air conditioning              D. All the above

All Ardaman employees must complete the quiz and turn it in by the end of each month. For those individuals who cannot attend the monthly safety meeting please complete the quiz and submit it to your supervisor for approval. These will be sent to HR/H&S. All others must submit the quiz at the designated location at your office. The supervisor only needs to sign the quiz if you are unable to attend the meeting, you must explain the reason in the box below:

\_\_\_\_\_  
Print Name Here

\_\_\_\_\_  
Sign Name Here

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor Print Name Here

\_\_\_\_\_  
Supervisor Sign Name Here

\_\_\_\_\_  
Date