HEAT STRESS

April 2019

Heat Stress

Heat stress occurs when the body produces or absorbs more heat than it can release; the body loses its ability to cool itself.

On average, July and August are the hottest months in the Stennis Space Center area (*weatherspark.com*).

The average high temperature is about 90°F

The average humidity is about 80%

In 2014 alone, 2,630 workers suffered from heat illness and 18 died from heat stroke and related causes. Heat illnesses and deaths are preventable (OSHA).

Prevention of heat stress illnesses and injuries is vital. Employers should provide training to workers such that they understand what heat stress is, how it affects health and safety, and how it can be prevented.

Workers at greater risk of heat stress illnesses include those who are 65 years of age or older, not acclimated, are overweight, have heart or kidney disease , high blood pressure, are pregnant, or take medications.

Heat-Related Illnesses

And Their Signs and Symptoms

Heat Rash (caused by excessive sweating)

Heat Exhaustion (caused by loss of water and electrolytes through sweating)

Dizziness

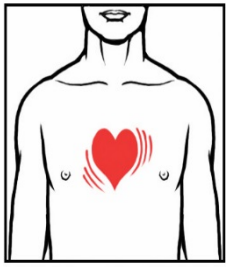
Headache

Sweaty Skin

Weakness

Cramps

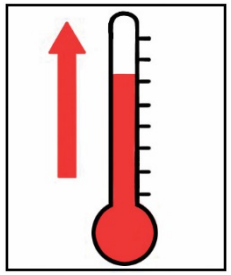
Nausea/
Vomiting



Fast
Heartbeat

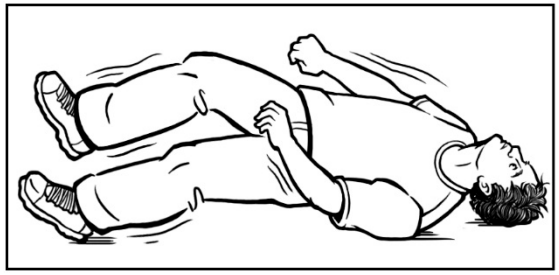
Heat Stroke Signs (occurs when the body becomes unable to control its temperature/can cause death or permanent disability)

Red, Hot,
Dry Skin

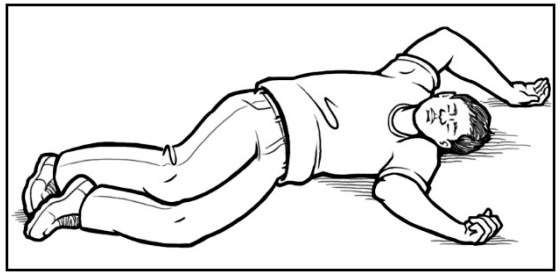


High Body
Temperature

Confusion



Convulsions



Fainting

Stennis Space Center's Heat Stress Warning System

(the daily flag can be found near the bottom of the Stennis Space Center (SSC) portal page)

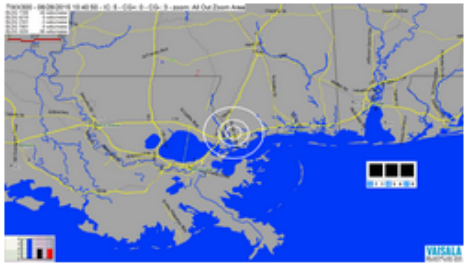
http://sscintranet.ssc.nasa.gov/

Category	Flag	Heat Index	Intensity of Prolonged Exposure and/or Physical Activity
Okay		Less than 80°F (< 27°C)	
Caution		80 - 90°F (27 - 32°C)	Fatigue possible with prolonged exposure and/or physical activity.
Extreme Caution		90 - 105°F (32 - 41°C)	Sunstroke, muscle cramps, and/or heat exhaustion possible with prolonged exposure and/or physical activity.
Danger		105 - 129°F (41 - 54°C)	Sunstroke, muscle cramps, and/or heat exhaustion likely. Heat stroke possible with prolonged exposure and/or physical activity.
Extreme Danger		130°F or higher (54°C or higher)	Heat stroke or sunstroke likely

Severe Weather Status
Lightning All Clear

Weather

[Click to Enlarge]



LDS Radar Image [Enlarge]

Extreme Caution
Heat Index: 93° F
Flag Definitions

Credit: NWS

Forecast and Radar | Severe Weather Warning System | Daily Ozone Forecast | National Hurricane Center

When possible workers should avoid exposure to extreme heat, sun exposure, and high humidity.

When these exposures cannot be avoided, workers should take the following steps to prevent heat stress illnesses:

- **Acclimate to hot work environments**
- **Educate workers and supervisors to recognize heat stress illnesses**
- **Wear light-colored, loose-fitting, breathable clothing such as cotton**
- **Take breaks in the shade or in a cool area when possible**
- **Drink water frequently (approximately 1 cup every 15-20 minutes)**
- **Monitor your physical condition and that of your coworkers**
- **Avoid alcohol and drinks with large amounts of caffeine or sugar**
- **Use the buddy system when working out, especially on runs, bike rides, etc.**

In the Event of An Emergency at SSC:

Summon emergency medical services by dialing **911** from a SSC land line or dial **(228) 688-3636** if using a cell phone.

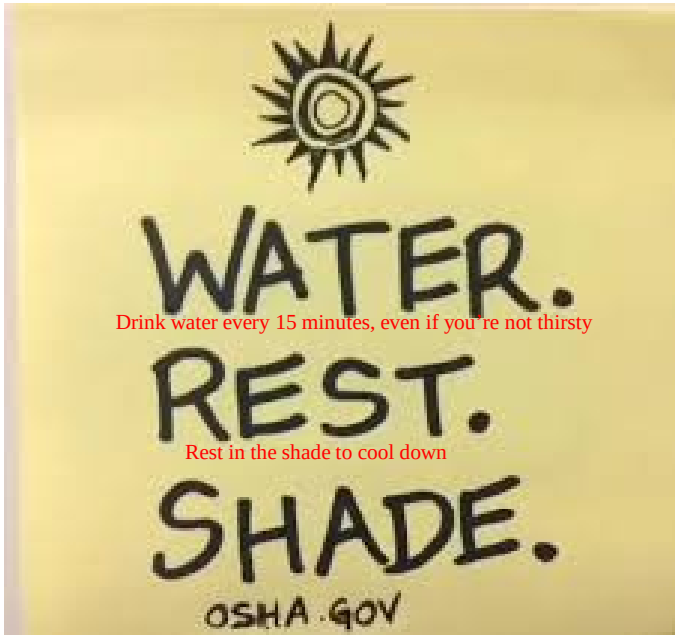
While waiting for help to arrive:

Move the affected worker(s) to a cool, shaded area
Loosen or remove heavy clothing
Provide cool drinking water
Fan and mist the worker with water

From SCWI-8715-0014, Heat Stress Section 5.4

- Fresh drinking water (plumbed, bottled, or water coolers) shall be provided daily at construction sites. If coolers are used, they shall be changed daily, taped/sealed, and dated. Wherever practical, fresh drinking water shall be cool, either by refrigeration or added ice.

- Water coolers shall be cleaned/sanitized as needed, but no less than once per week per the following guidance:
  - Wash, wipe and/or rinse the cooler with a detergent and water (wipe/wash away visible algae/grime/dirt).
  - Sanitize the water cooler with a chlorine-to-water mixture of 1:250 (1 tablespoon per gallon of water).
  - Sanitize all surfaces in contact with the drinking water.
  - Let it stand for two (2) minutes and then empty the cooler through the spigot to sanitize it.
  - The cooler can be air dried or rinsed with potable water.


WATER.
Drink water every 15 minutes, even if you're not thirsty
REST.
Rest in the shade to cool down
SHADE.
OSHA.GOV

QUESTIONS?

Quiz

1. If a white flag is displayed near the bottom of the portal page, workers should continue their regularly scheduled outside work activities. T/F? Why or Why Not?
2. Which heat stress illness is caused by loss of water and electrolytes through sweating?
3. Heat stress illnesses are preventable. T/F?
4. In hot work environments, workers should drink water only when they are thirsty. T/F?
5. Convulsions are a sign of which heat stress illness?

Quiz

1. If a white flag is displayed near the bottom of the portal page, workers should continue their regularly scheduled outside work activities. **T**/F? Why or Why Not? **A white flag indicates that the heat index is less than 80°F; it is unlikely that a heat stress illness will occur from prolonged exposure or strenuous activity.**
2. Which heat stress illness is caused by loss of water and electrolytes through sweating? **Heat Exhaustion**
3. Heat stress illnesses are preventable. **T**/F?
4. In hot work environments, workers should drink water only when they are thirsty. T/**F**? **Workers should drink water every 15 minutes, even if they are not thirsty.**
5. Convulsions are a sign of which heat stress illness? **Heat Stroke**