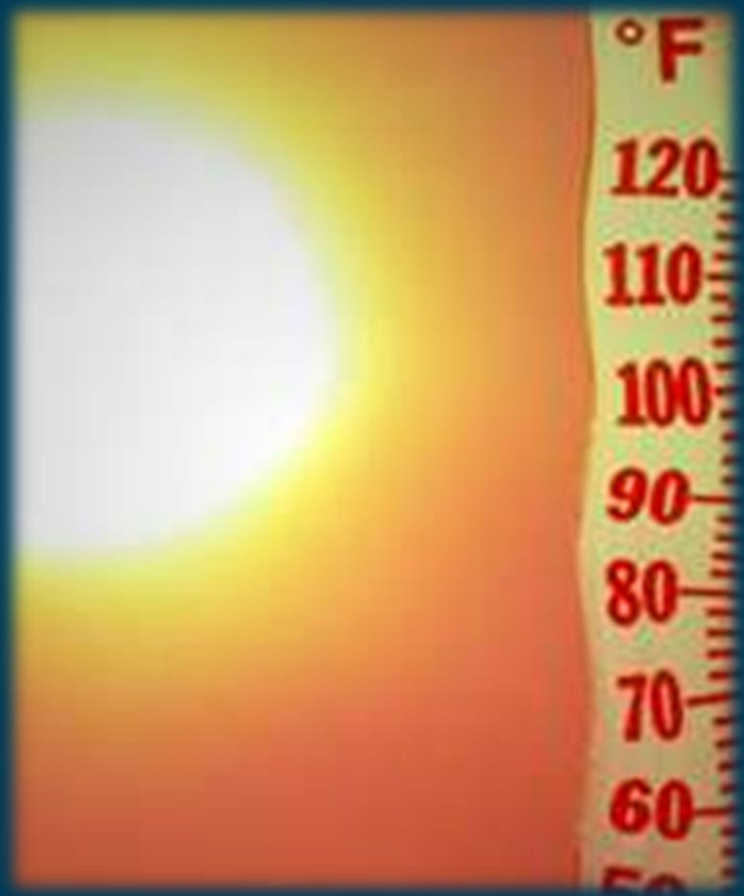
Heat Stress Signs & Symptoms Training

Summer Heat

Heat stress is a serious hazard in the workplace as well as at home.

- Excessive heat can place an abnormal stress on your body.
- When your body temperature rises even a few degrees above normal (which is about 98.6 degrees Fahrenheit) you can experience
  - muscle cramps
  - become weak
  - disoriented
  - dangerously ill
  - Fatigued



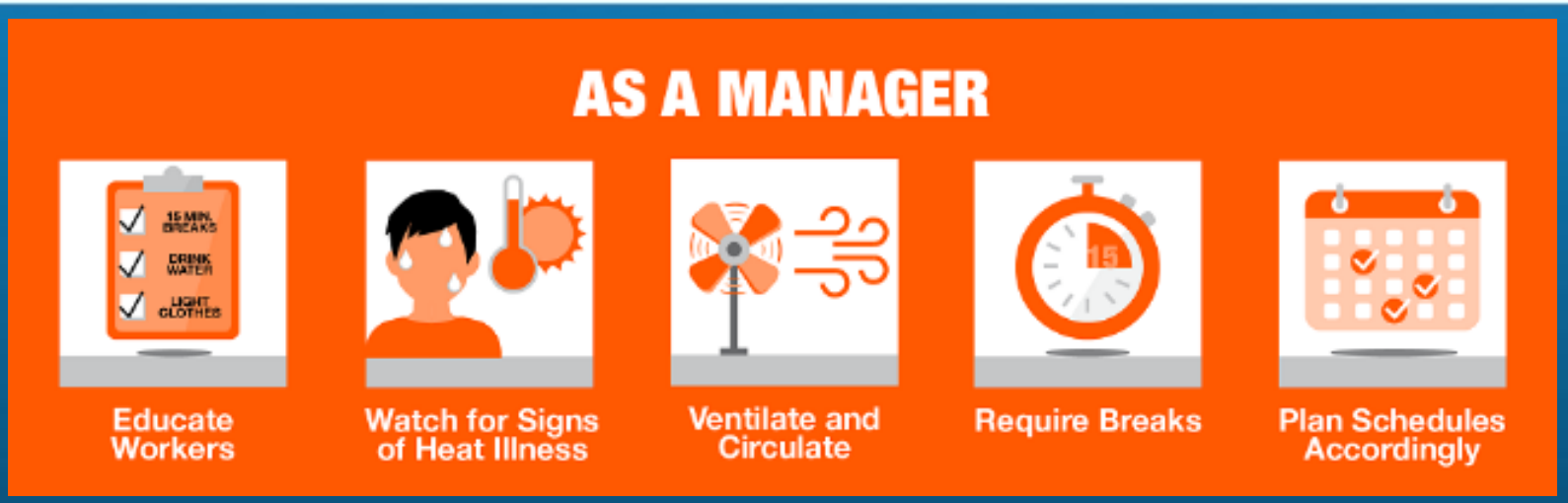
Understanding Heat Stress

Heat Stress Occurs…

- When employees are assigned to work outdoors on a regular basis in hot, humid weather.

- When there is a sudden and significant increase in temperature and employees have not had time to acclimate.

Employer Responsibilities



- Implementing a written heat stress program by following this training program.
- Evaluating and controlling heat stress factors, where possible.
- Training employees on signs and symptoms.
- Encouraging frequent water consumption (one quart of water per employee per hour).
- Proper response to heat-related illness.

Employee Responsibilities

- ✓ Monitoring personal factors for heat-related illness
- ✓ Frequently drinking water.
- ✓ Reporting signs and symptoms of heat-related illness to their supervisor.
- ✓ Look out for one another, if you notice a coworker is suffering from heat stress, move them to a cool area immediately,

Environmental Factors

Direct sun, heat and humidity

- More direct sun = greater risk

Limited air movement

- Low or no wind the greater the risk

Hot equipment

- Engines add more heat

Heat reflected from the ground or objects

Asphalt, rocks

Other Environmental Factors for Heat Stress

Environment:

- The Sun
- Humidity
- Air Temperature
- No Air Movement

The Worker & Physical exertion

- What kind of work are you doing?
- How hard are you working?
- How long are you working?
- Physical health
- Medical conditions

Clothing and Personal Protective Equipment (PPE)

Heavy clothing or Multiple layers

Dark colored clothing

Protective clothing

Vapor barrier clothing

Chemical resistant suits or Respiratory protection

Where duties allow, switch to lighter, breathable fabrics

Personal Factors for Heat Stress

Some workers handle heat stress less effectively than others. Heat intolerance happens for a variety of reasons. Personal risk factors include:

- Obesity (body mass index ≥ 30 kg/m^2)
- Diabetes
- High blood pressure
- Heart disease
- Lower level of physical fitness
- Use of certain medications such as diuretics (water pills) and some psychiatric or blood pressure medicines
- Some medications can result in a worker's inability to feel heat conditions and/or the inability to sweat, so symptoms of heat stress may not be evident.
- Alcohol use
- Use of illicit drugs such as opioids, methamphetamine, or cocaine

The above list is not comprehensive. Other medical conditions can also predispose workers to heat-related illnesses.

Sun Safety

- Not only should you protect yourself from the heat but remember UV Rays are also damaging.
- Apply Sunscreen regularly throughout the day.

Helpful Hints for Working in the Heat

- Start and end the work shift early
- When possible, schedule strenuous work during the coolest part of the day
- Increase breaks if:
  - Conditions are very hot
  - Workload is heavy
  - Protective clothing limits cooling
- Take breaks in a shaded, cooler area
- Alternate heavy work with light work when possible
- Have a “Buddy System” to keep an eye on co-workers for symptoms of
- heat illness

Helpful Hints for Working in the Heat

- Work in the shade or out of direct sun when possible
- Avoid getting sunburned
- Remove PPE and excess clothing during breaks

- Wear proper clothing
  - Light colored
  - Light weight
  - Natural fibers
  - Hat with a brim
  - Cooling vest may be helpful in some cases
  - Cooling neck wraps

Water Consumption

- It is important to drink small quantities of water throughout the day.
- One quart or more over the course of an hour may be necessary when the work environment is hot, and you may be sweating more than usual.
- Supervisors are responsible for encouraging water consumption.
- Employees are responsible for monitoring their own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.

Hydration is key

- **DO:**

- Start work well hydrated
- Drink plenty of water throughout the day
- Consider sports drinks for electrolyte replacement when sweating a lot

- **AVOID:**

- Drinking pop and other sugary energy drinks
- Drinking lots of coffee and tea
- Drinking alcohol
- Waiting for thirst before drinking water

Dehydration

Causes of Heat Related Illness

- So much sweat is lost that
  - Dehydration results
  - The body cannot cool itself by sweating and the core temperature rises
- Salt loss causes heat cramps
- So much blood flow goes to the skin that other organs cannot function properly.
- The body is subject to more heat than it can cope with, and heat exhaustion and heat stroke can occur.

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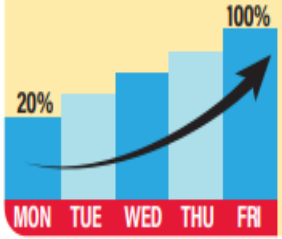
Per OSHA...

Ways to Protect Yourself and Others

Ease into Work. Nearly 3 out of 4 fatalities from heat illness happen during the first week of work.



- ✓ **New** and **returning** workers need to build tolerance to heat (acclimatize) and take frequent breaks.
- ✓ **Follow the 20% Rule.** On the first day, work no more than 20% of the shift's duration at full intensity in the heat. Increase the duration of time at full intensity by no more than 20% a day until workers are used to working in the heat.

Drink Cool Water

Drink cool water even if you are not thirsty – at least 1 cup every 20 minutes.

Take Rest Breaks

Take enough time to recover from heat given the temperature, humidity, and conditions.

Find Shade or a Cool Area

Take breaks in a designated shady or cool location.

Dress for the Heat

Wear a hat and light-colored, loose-fitting, and breathable clothing if possible.

Watch Out for Each Other

Monitor yourself and others for signs of heat illness.

If Wearing a Face Covering

Change your face covering if it gets wet or soiled. Verbally check on others frequently.

Acclimatization

- When people are not used to being in the heat they need to adjust (acclimate) to hot working conditions over a few days.
- In severe heat, gradually build up exposure time especially if work is strenuous.

Pay special attention to:

- New employees
- People just back from being sick
- Anyone absent for more than 2 weeks
- People who have just moved from a cooler climate
- Everyone during heat wave events

Recognize Heat Stress

Heat Stress will reduce your work capacity and efficiency.
Signs of heat stress include:

- Tiredness
- Irritability
- Inattention
- Muscular cramps

How to Respond to Heat Related Illness

- Employees showing signs and symptoms of heat related illness are to:
  - Cease work and report their condition to their supervisor.
  - Be relieved from duty and provided means to reduce body temperature. Water, shade etc.
- Employees experiencing sunburn, heat rash or heat cramps will be monitored to determine whether medical attention is necessary.
- 911 must be called if employees experience signs and symptoms of heat exhaustion or stroke.
- Fill out an Incident Report for any heat related incident.

Heat Cramps

HEAT CRAMPS may occur after prolonged exposure to heat.

They are the painful intermittent spasms of the abdomen and other voluntary muscles.

First aid for heat cramps will vary.

The best care is:

- Rest
- Move to a cool environment
- Drink plenty of **WATER**- No soda, sparkling water, or Alcohol.
- No Energy Drinks
- Electrolyte fluids such as Gatorade may also be used.

First Aid for Heat Illness

The following are signs of a medical emergency!

- Abnormal thinking or behavior
- Slurred speech
- Seizures
- Loss of consciousness

1. » CALL 911 IMMEDIATELY
2. » COOL THE WORKER RIGHT AWAY WITH WATER OR ICE
3. » STAY WITH THE WORKER UNTIL HELP ARRIVES

Watch for any other signs of heat illness and act quickly. When in doubt, call 911.

If a worker experiences:

Headache or nausea
Weakness or dizziness
Heavy sweating or hot, dry skin
Elevated body temperature
Thirst
Decreased urine output

Take these actions:

» Give water to drink
» Remove unnecessary clothing
» Move to a cooler area
» Cool with water, ice, or a fan
» Do not leave alone
» Seek medical care if needed

Heat Exhaustion Symptoms

HEAT EXHAUSTION may result from physical exertion in hot environments.

- Symptoms may include:
  - Profuse sweating
  - Weakness
  - Paleness of the skin
  - Rapid pulse
  - Dizziness
  - Nausea
  - Headache
  - Vomiting
  - Unconsciousness

The skin is cool and clammy with sweat. Body temperature may be normal or subnormal

Heat Exhaustion – First Aid

- Rest in the shade or cool place.
- Drink plenty of water (preferred) or electrolyte fluids.
- Loosen clothing to allow for your body to cool.
- Use cool wet rags to aid cooling

Heat Exhaustion or Heat Stroke

HEAT EXHAUSTION OR HEAT STROKE?

HEAT EXHAUSTION SYMPTOMS

1. Faint or dizzy
2. Excessive sweating
3. Cool, pale, clammy skin
4. Nausea, vomiting
5. Rapid, weak pulse
6. Muscle cramps

HOW TO TREAT IT

1. Move to cooler location
2. Drink water
3. Take a cool shower or use cold compresses

HEAT STROKE SYMPTOMS

1. Throbbing headache
2. No sweating
3. Body temp above 103° Red, hot, dry skin
4. Nausea, vomiting
5. Rapid, strong pulse
6. May lose consciousness

HOW TO TREAT IT

1. Get emergency help
2. Keep cool until treated

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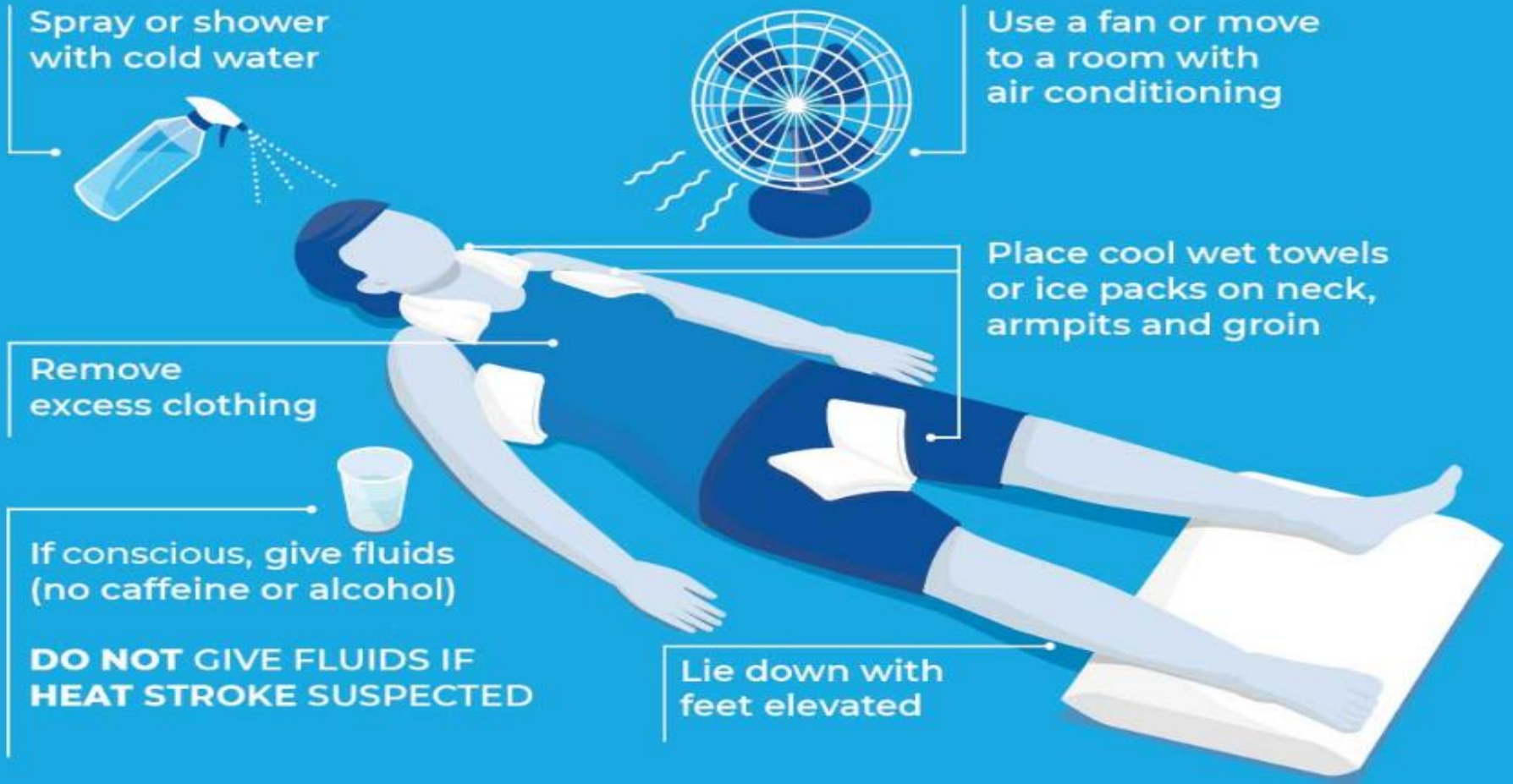
Move to a cool, shady area

HEAT STROKE CALL 911!

Cool down entire body

Spray or shower with cold water

Use a fan or move to a room with air conditioning



Place cool wet towels or ice packs on neck, armpits and groin

Remove excess clothing

If conscious, give fluids (no caffeine or alcohol)

DO NOT GIVE FLUIDS IF **HEAT STROKE** SUSPECTED

Lie down with feet elevated

Heat Stress isn't COOL!

1) Stay Hydrated with WATER!
2) Say NO to Energy Drinks!
3) Take regular breaks in a cool, shady spot.

Training Roster

Scan the QR Code or click the link below to Document you completed this training presentation

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