

It's Hot and It's Dangerous! Community Health Workers and the Prevention of Heat-related Illness

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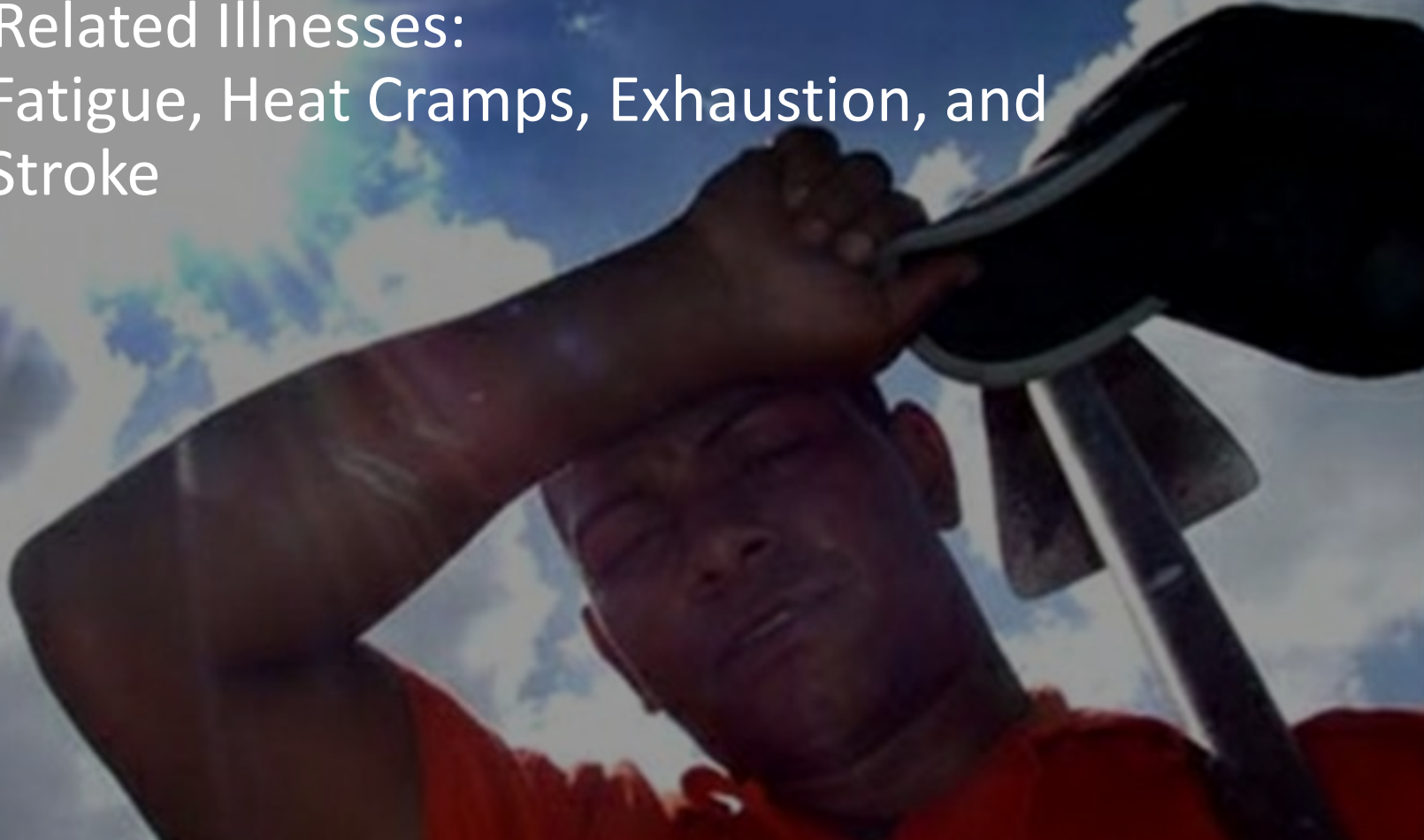
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Heat-related Illnesses




Heat-Related Illnesses:
Heat Fatigue, Heat Cramps, Exhaustion, and
Heat Stroke



We will learn...

- Signs and symptoms of heat stress
- Steps to take to prevent heat stress
- Resources and strategies to promote the prevention of heat stress





Extreme heat kills more people than hurricanes, floods, tornadoes, and lightning combined. As climate change becomes more severe it is predicted that heat-related deaths will increase substantially.

Extreme heat creates dangerous conditions for outdoor workers

JUNE 12, 2019

FRESNO, CA -- The groundwork for another hot summer in the Valley is being laid this week as temperatures are expected to spike. "It was raining for two weeks and bam you get triple digit degree weather," said Mario's Tree Service worker Daniel Mendoza. The big concern is for the people who work outdoors this time of year. Workers exposed to extreme heat are more vulnerable to heat stress, which can lead to heat stroke and heat exhaustion. "Farmworkers that are working in the working in the trees, construction workers, CALTRANS workers...anybody out heat has to take precautions," said M Cunha. Cunha is with the Nisei Farmers League. Cunha says outdoor workers should be drinking a quart of water every hour when temperatures reach dangerous levels.

Death of 3 farm workers in Kern County may have been caused by the extreme heat

JULY 30, 2016

ARVIN, CA KERN COUNTY (KFSN) -- The extreme heat is responsible for the death of three farm workers in Colquitt County

OSHA investigating after man dies picking tomatoes in Colquitt County



A 24-year-old man that had been in the United States for less than a week has died and OSHA is now investigating. / Photo: MGN Online

Teen Farmworker's Heat Death Sparks Outcry

JUNE 6, 2008

STOCKTON, CA -- Maria Isabel Vasquez Jimenez was tying grape vines at a farm east of Stockton on May 14, when the temperature soared well above 95 degrees. The nearest water cooler was a 10-minute walk away, and workers say the strict foreman didn't allow them a long enough break to stop and get a drink. Vasquez collapsed from heat exhaustion. Her fiancé, Florentino Bautista, cradled her in his arms. "When she fell, she looked bad," Bautista says. "She didn't regain consciousness. She just fell down and didn't react. I told her to be strong so we could see each other again." Bautista, 19, had saved up money to buy a gold ring for Maria Isabel, his childhood sweetheart from their indigenous village in Oaxaca, Mexico. Bautista says that after Jimenez collapsed, the farm labor contractor delayed bringing Jimenez to a hospital. Another employee took her to a drugstore to try and revive her with rubbing alcohol, Bautista says. In a written statement to NPR, Merced Farm Labor says Bautista was the one who decided to stop at the drugstore, and that he had refused the company's offer to call a doctor. Furthermore, the company says Jimenez wasn't engaged in strenuous work that day and had been working without apparent distress up to the time she collapsed. What is clear is that by the time she arrived at a hospital, Jimenez was in a coma, and her body temperature topped 108 degrees. She died two days later. It was only at the hospital Bautista found out she was two months pregnant.



33 workers die each year due to exposure to extreme heat.
OSHA estimates 800 workers have died from 1992-2016.

A black silhouette of a person's head and shoulders is positioned on the left side of the image. A large, black-outlined thought bubble is connected to the top of the head. Inside the thought bubble, the text "Chat: Who are the most vulnerable to heat-related illness?" is written in a bold, dark gray font. A smaller, black-outlined circle is located below the main thought bubble, connected to it by a thin line.

Chat:

**Who are the most
vulnerable to heat-
related illness?**



Who are the most vulnerable?

- Work outside
- Lower socio-economic status
- Children
- Pregnant woman
- Chronic illness
- Migrant



Packers



Restaurant Workers



Construction Workers



Farmworkers

Farmworkers are
20 times more
likely to die from
heat related illness
than other workers.

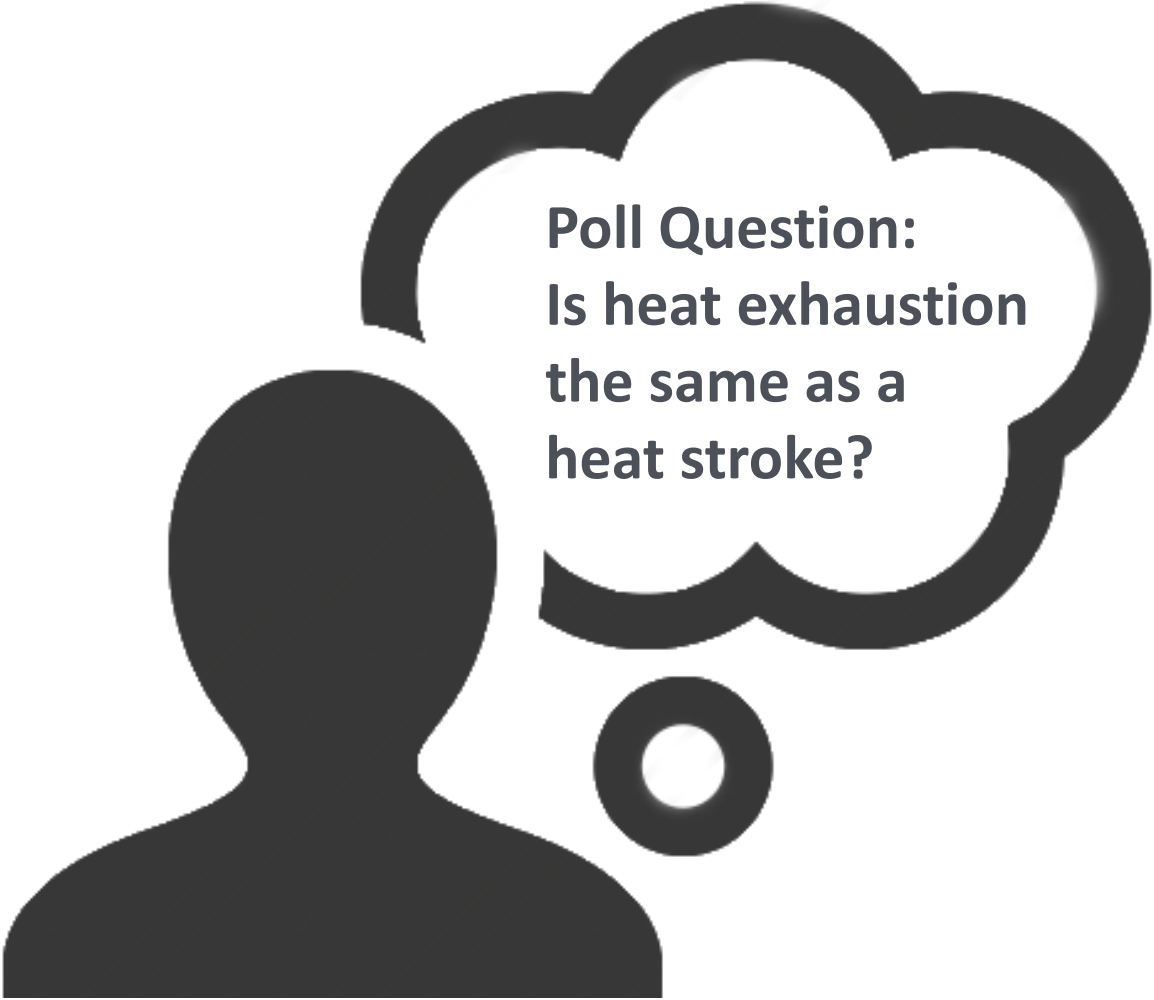




**What comes
to your mind when
we talk about heat
stress?**

A person wearing a dark jacket and jeans stands next to a blue car. The engine compartment of the car is open, and a large amount of white steam or smoke is rising from it, partially obscuring the person. The background shows green foliage and a clear sky.

Heat stress is when your body becomes hot to the point where it is unable to cool itself down.

A black silhouette of a person's head and shoulders is positioned on the left side of the image. A large, black-outlined thought bubble originates from the top of the head. Inside the thought bubble, the text "Poll Question: Is heat exhaustion the same as a heat stroke?" is written in a bold, dark gray font. A smaller, black-outlined circle is located below the main thought bubble, connected to it by a thin line.

Poll Question:
Is heat exhaustion
the same as a
heat stroke?

What are the symptoms
of heat fatigue?

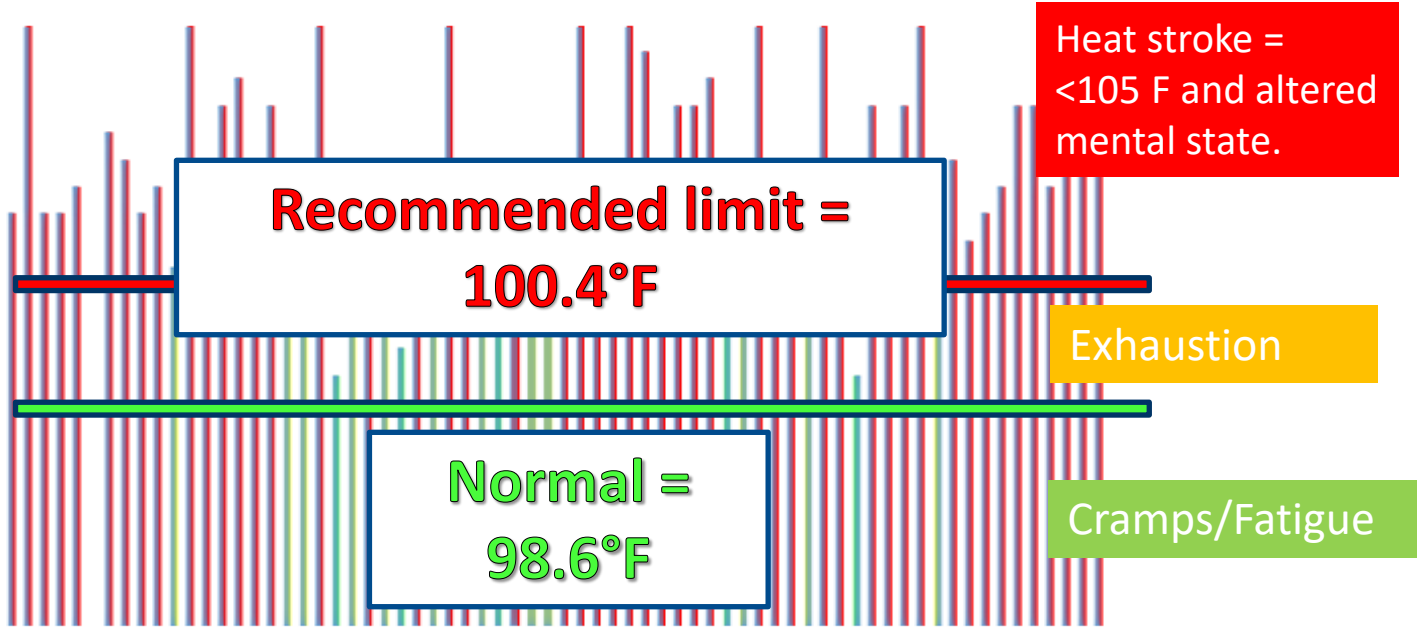
Heat cramps?

Heat exhaustion?

Heat stroke?

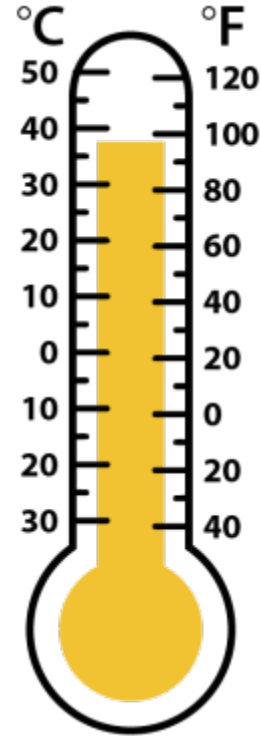


Internal Temperature



Heat Rash/Cramps/Fatigue

- Clusters of red bumps on skin
 - Often on neck, upper chest, folds of skin
- Cramps
- Pain
 - Usually in the stomach, legs and arms



Heat Exhaustion

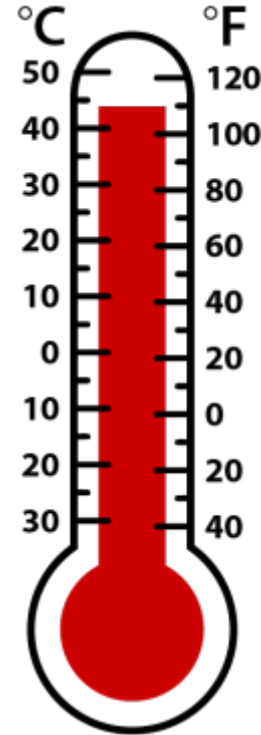
- Cool, moist skin
- Heavy sweating
- Headache
- Nausea or vomiting
- Dizziness
- Light headedness
- Weakness
- Thirst
- Irritability
- Fast heart beat



Heat Stroke

- Fever (Hyperthermia) > 104°F
- Confusion/Altered mental status
- Delerium
- Red or dry skin
- Lack of sweating despite heat
- Seizures
- Unconsciousness
- Death

The person's internal temperature and mental state are what differentiate heat exhaustion from heat stroke.





**What
factors can affect
heat stress?**

Environment



Temperature



Humidity



Shade



Wind

Dehydration



**Before working
(AM)**



**After working
(PM)**

$\frac{1}{2}$ of the workers were dehydrated before work.
 $\frac{3}{4}$ were dehydrated upon leaving work.

Prevention!





Water



Rest



Shade

Long-sleeved,
cotton shirts,
long pants,
and a wide-
brimmed hat
will protect
you the best!



Avoid Certain Drinks





Another case...

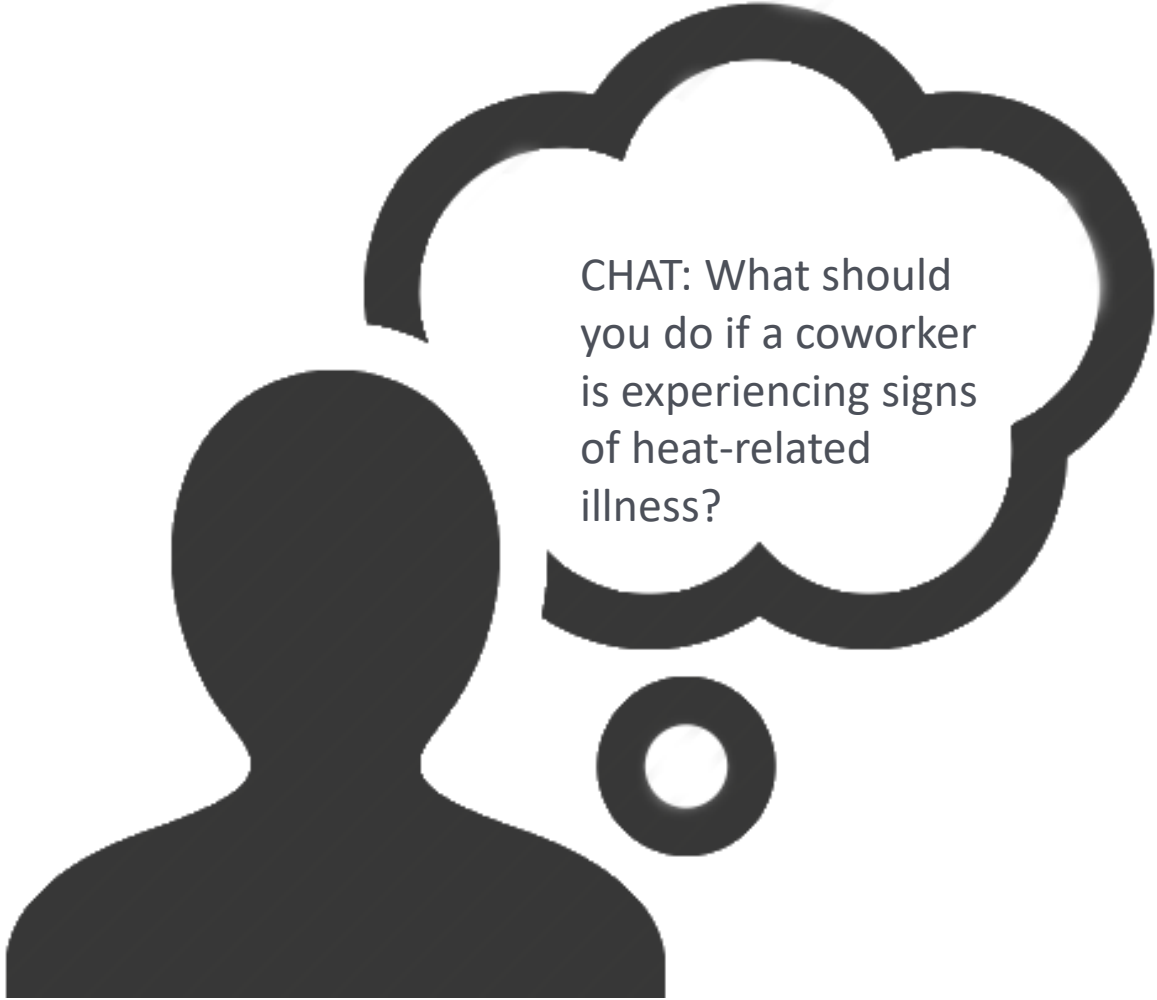
Acclimatization

Temperature



Task



A black silhouette of a person's head and shoulders is positioned on the left side of the image. A large, black-outlined thought bubble originates from the top of the head, containing text. A smaller, black-outlined circle is connected to the bottom of the thought bubble.

CHAT: What should you do if a coworker is experiencing signs of heat-related illness?

Treatment

Move to a shaded area

Loosen or remove clothing

Drink water

Splash cool water on the body- especially on the chest

**SEEK
MEDICAL
ATTENTION**

Emergencies: Dial 911



- Know your work address
- Explain the condition of the worker
- Offer the worker first aid



Inform your supervisor!

Heat Stress and Regulations

No National Heat Standard

States

California

Washington

Minnesota

Maryland
2022



Asuncion Valdivia Heat Illness and Fatality Prevention Act



Protecting Workers from Heat Stress

Heat Illness

Exposure to heat can cause illness and death. The most serious heat illness is heat stroke. Other heat illnesses, such as heat exhaustion, heat cramps and heat rash, should also be avoided.

There are precautions your employer should take any time temperatures are high and the job involves physical work.

Risk Factors for Heat Illness

- High temperature and humidity, direct sun exposure, no breeze or wind
- Low liquid intake
- Heavy physical labor
- Waterproof clothing
- No recent exposure to hot workplaces

Symptoms of Heat Exhaustion

- Headache, dizziness, or fainting
- Weakness and wet skin
- Irritability or confusion
- Thirst, nausea, or vomiting

Symptoms of Heat Stroke

- May be confused, unable to think clearly, pass out, collapse, or have seizures (fits)
- May stop sweating

To Prevent Heat Illness, Your Employer Should

- Establish a complete heat illness prevention program.
- Provide training about the hazards leading to heat stress and how to prevent them.
- Provide a lot of cool water to workers close to the work area. At least one pint of water per hour is needed.



OSHA Occupational Safety and Health Administration
www.osha.gov (800) 321-OSHA (6742)

For more information:

OSHA 3764-108 2/14

OSHA Employer Recommendations

- Employer should monitor conditions and implement and adjust a heat plan throughout the workday.
- To create a heat plan, the employer should:
 - ✓ identify heat hazards;
 - ✓ recognize early symptoms of heat stress;
 - ✓ administer first aid for heat-related illnesses; and
 - ✓ activate emergency medical services quickly when needed.

OSHA does not have a heat stress standard. Employers must provide workplaces free of excessive heat.

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



Risk level: Lower

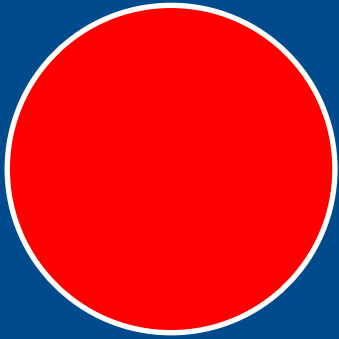
- Provide drinking water
- Plan ahead and provide worker heat safety training
- Encourage workers to wear sunscreen and protective clothing



Risk level: Moderate

- Review heat stress - how to prevent it, how to recognize it and what to do if someone is sick
- Schedule frequent breaks in a cool, shaded area
- Make sure workers adjust to climate
- Establish buddy system





Risk level: High

- Alert workers of high-risk conditions
- Limit physical exertion, adjust work activities to be less strenuous
- Establish and enforce work/rest schedules



Risk level: Extreme

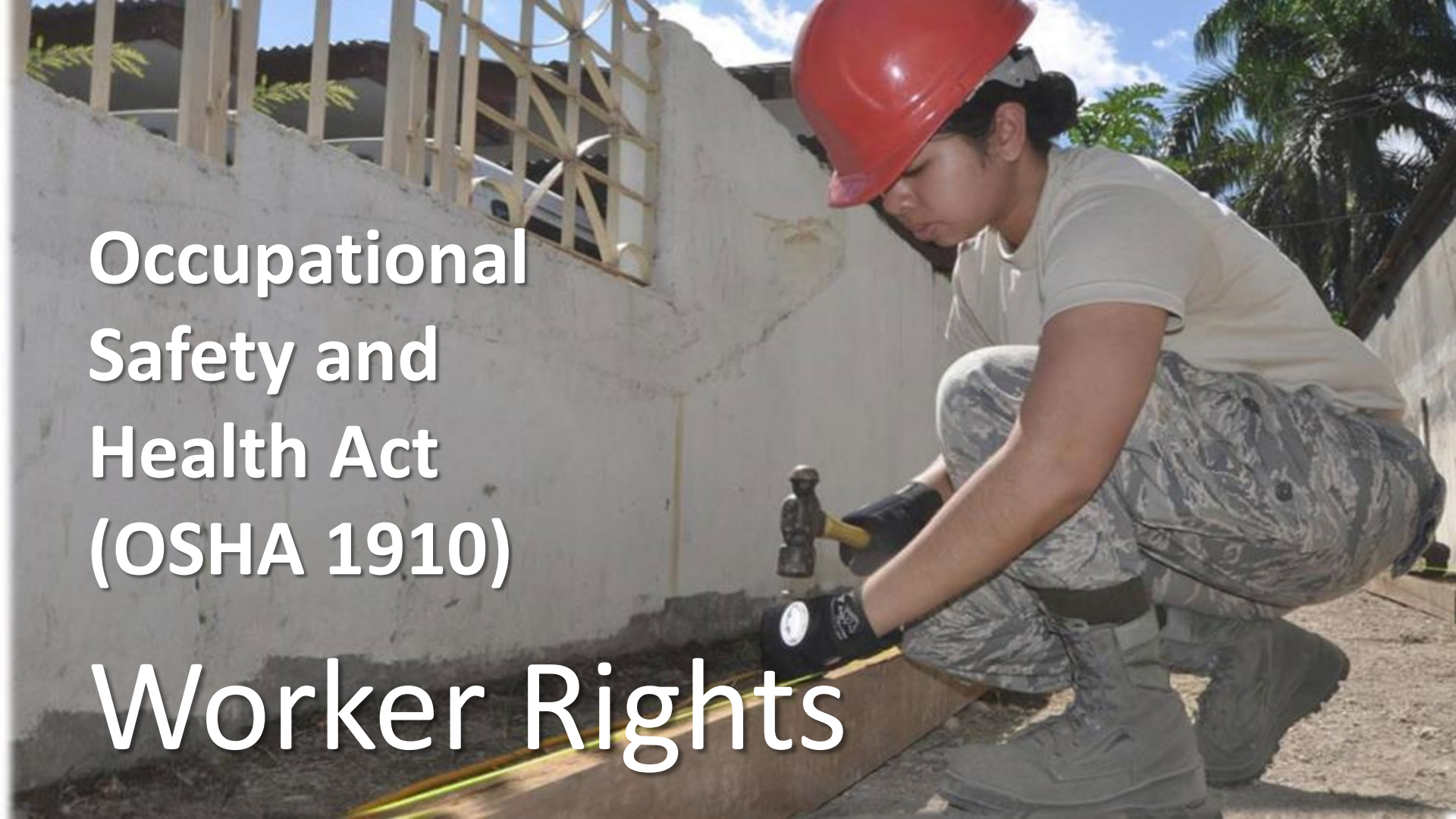
- Conduct physiological monitoring - pulse, temperature
- Stop work if essential control methods are inadequate or unavailable






In Summary...Heat fatigue, heat exhaustion and heat stroke are different.

- Heat fatigue and exhaustion can be reversed.
- Heat stroke can lead to death, but it is preventable.
- Stay hydrated!
- Take breaks in the shade.
- Acclimate by gradually increasing the workload and taking more breaks during the first week of work.
- Eat foods that contain salt and electrolytes and avoid drinks that can dehydrate.
- Use the buddy system. Encourage each other to drink water, stay in the shade, and take breaks.
- Wear appropriate clothing.
- Stay up-to-date on the temperature each day.
- Know the signs and symptoms of heat-related illness. Teach workers about the dangers of heat and how to avoid serious injury.



Occupational
Safety and
Health Act
(OSHA 1910)

Worker Rights

A black silhouette of a person's head and shoulders is positioned on the left side of the image. A large, white thought bubble with a thick black outline is connected to the head by a smaller, white circular bubble with a thick black outline. Inside the large thought bubble, the text "Poll: Does OSHA protect immigrant workers?" is written in a black, sans-serif font.

Poll: Does OSHA
protect immigrant
workers?

OSHA Protects Immigrant Workers

All workers no matter race, place of origin, language, gender or salary, have the right to a healthy and safe work environment. Immigrant workers and the undocumented are also protected.

What are the basic
rights and
responsibilities of
workers?



#1

A safe workplace

- Workers have a right to safe and healthy working conditions
- The law requires that employers provide a workplace free of dangers, risk of injury, harm or illness





#2 Access to information

- Injuries and illnesses that happened at their workplace
- Their own medical records of any medical tests done as a result of their work
- Results of tests done in the workplace to measure hazards



#3 Information about chemicals

- Share with workers the “Safety Data Sheets” (SDS). The SDS includes detailed information about each chemical workers may be exposed to
- Ensures all containers containing chemicals have the proper labels

#4 Personal Protective Equipment





Foto: Getty Images / NEMO

#5 Right to ask for a safe workplace without being discriminated against or punished



#6 Safety and Health Training



© earldotter.com

#7 File a complaint with OSHA



#8 Request an
OSHA inspection



Hazard Communication Standard

29 CFR 1910.1200(g)

*Haz Comm or Right to Know
...workers have the “right to
know”, about chemical risk at
their workplace...in their
language...*

Workers Compensation



- Medical treatment for injured patient
 - Immediate
 - Long term
 - Access to Specialty Care
- Wages
- Return to Work
- Prevention - Hazard Control
- Public Health
 - Surveillance

Worker Compensation?



- Requirements differ from state to state.
- Ask your employer.
- Learn more about each state:
<https://www.dol.gov/agencies/owcp/dfec/regs/compliance/wc>

What do workers need to protect themselves?



Training



Personal protective equipment



Know their rights



Community resources

POST



Connect with MCN!



Access our
latest resources



Get updates
from the field



Attend our
virtual trainings

and a lot more at

www.migrantclinician.org

 @tweetMCN

 @migrantclinician

 @migrantcliniciansnetwork

Resources

Migrant Clinicians Network		
		
Heat Stress Resources		Description
	Occupational Safety and Health Act, Law and Regulations http://www.osha-slc.gov/law-regs.html	This page has links to all of OSHA standards and information about the regulatory process.
	California Heat Illness Prevention https://www.dir.ca.gov/dosh/heat/illnessinfo.html	This page overviews the CA Heat Illness standard and resources in multiple languages.
	OSHA's Workers' Rights https://www.osha-slc.gov/Publication/slcweb40222.pdf	Explains the rights of workers.
	OSHA Heat Safety Tool App https://www.osha-slc.gov/SATC/heat/index/heat_index/heat_app.html	Calculates the heat index for their worksite, and, based on the heat index, displays a risk level to outdoor workers.
	OSHA App: https://itunes.apple.com/us/app/osha-safety/id50088452?mt=8	OSHA Safety App has the complete text of OSHA regulations for general industry.
	OSHA Susan Harwood Program https://www.osha-slc.gov	This site offers worker health and safety training and educational materials developed by OSHA Susan Harwood grantees.
	Workers Compensation Regulations by State: http://workerscomp.hub.org/state-portal-system	This site has requirements and related organizations for each state.
	Farmworker Clinicians Manual www.farmworkercliniciansmanual.com	This manual has information for providers caring for farmworkers and many resources in Spanish.
	Water, Rest, Shade https://www.youtube.com/watch?v=88FASu8A1oE&list=PL8FASu8A1oE	This 9-minute video features workers from agriculture, construction and landscaping and heat illness prevention and treatment.
	Workplace Safety and Health for Farmworkers: Pesticides, Field Sanitation, and Heat Illness https://www.farmworkerjustice.org/sites/default/files/2017/08/08/2017-08-08%20Workplace%20Safety%20and%20Health%20for%20Farmworkers.pdf	This training curriculum from Farmworker Justice reviews basic concepts related to pesticide exposure, field sanitation, heat illness, and worker rights.



A close-up photograph of a hand holding a clear glass filled with beer. The beer has a thick, golden head of foam. The background is dark and out of focus, showing a person's face and a white shirt. The text "Thank you for your participation!" is overlaid at the bottom in white.

Thank you for your participation!

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