

HEAT ILLNESS

Recognizing heat exhaustion and heat stroke and what to do about it.

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COURSE OBJECTIVES

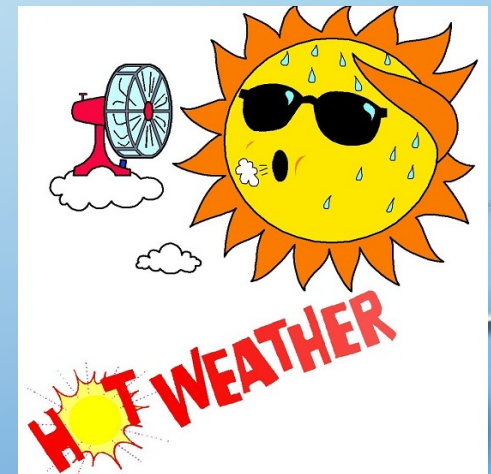
- To help workers detect early signs of heat stress, so that they can prevent and reduce symptoms
- To help workers learn the symptoms of heat stress and heat illness to limit any negative health effects

WHY IS IT IMPORTANT TO PREVENT HEAT ILLNESS?

- Heat illness can harm and even kill. Every death is preventable
- When heat stroke does not kill immediately, it can shut down major body organs causing acute heart, liver, kidney and muscle damage, nervous system problems and blood disorders
- Workers suffering from heat exhaustion are at a higher risk for accidents, since they are less alert and can be confused
- Having a serious injury or death occur at work affects workers and employers

WHAT CAN CAUSE HEAT ILLNESS?

- Hot weather (when the temperature is high)
- Humid weather (when there is a lot of moisture in the air)
- Heat from our bodies when we are working hard
- Machines we work close to that give off heat
- Hot work areas where there is no air movement
- Not drinking enough water
- Not listening to your body as it overheats




NOAA's National Weather Service

Heat Index

Temperature (°F)

Relative Humidity (%)	80	82	84	86	88	90	92	94	96	98	100	102	104	106	108	110
40	80	81	83	85	88	91	94	97	101	105	109	114	119	124	130	136
45	80	82	84	87	89	93	96	100	104	109	114	119	124	130	137	
50	81	83	85	88	91	95	99	103	108	113	118	124	131	137		
55	81	84	86	89	93	97	101	106	112	117	124	130	137			
60	82	84	88	91	95	100	105	110	116	123	129	137				
65	82	85	89	93	98	103	108	114	121	128	136					
70	83	86	90	95	100	105	112	119	126	134						
75	84	88	92	97	103	109	116	124	132							
80	84	89	94	100	106	113	121	129								
85	85	90	96	102	110	117	126	135								
90	86	91	98	105	113	122	131									
95	86	93	100	108	117	127										
100	87	95	103	112	121	132										

Likelihood of Heat Disorders with Prolonged Exposure or Strenuous Activity

 Caution

 Extreme Caution

 Danger

 Extreme Danger

HEAT RELATED SYMPTOMS AND ILLNESSES

HEAT RASH



Areas of skin feel itchy and swollen because sweat glands get blocked due to too much heat, humidity and sweat

HEAT CRAMPS



Painful muscle cramps, usually in the legs or near the stomach, caused by losing too much salt through sweating

HEAT EXHAUSTION AND HEAT STROKE



Workers may become tired, weak or dizzy and sweat a lot. This is a sign of heat exhaustion.

When worker's body temperature rises above 105 degrees, worker may start to feel confused, vomit, and stop sweating. This is a sign of heat stroke. Call 9-1-1

EARLY SIGNS THAT YOUR BODY IS GETTING TOO HOT

- Headache, dizziness, fainting and constant coughing
- Weakness and wet skin from sweating
- Irritability and confusion
- Shortness of breath
- Thirst and a feeling like you are going to throw up

SIGNS YOU HAVE HEAT EXHAUSTION

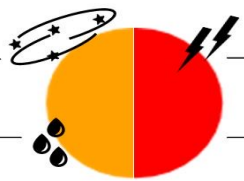








- Headache
- Dizziness or fainting
- Weakness
- Wet skin
- Irritability
- Thirst
- Feel like you are going to throw up
- **WARNING: IF YOU FEEL FAINT, CONFUSED OR IF YOU THROW UP, GET HELP FAST!**

SIGNS YOU HAVE HEAT STROKE

- May be confused
- May not think clearly
- May faint
- May collapse
- May have seizure (fit)
- May stop sweating



TYPES OF HEAT ILLNESS

HEAT EXHAUSTION	OR	HEAT STROKE
Faint or dizzy		Throbbing headache
Excessive sweating		No sweating
 Cool, pale, clammy skin		Body temperature above 103° Red, hot, dry skin 
Nausea or vomiting		Nausea or vomiting
Rapid, weak pulse 		Rapid, strong pulse 
Muscle cramps 		May lose consciousness 
<ul style="list-style-type: none">• Get to a cooler, air conditioned place• Drink water if fully conscious• Take a cool shower or use cold compresses		CALL 9-1-1 <ul style="list-style-type: none">• Take immediate action to cool the person until help arrives

HOW TO HELP SOMEONE WHO IS HAVING A HEAT STROKE – CALL 9-1-1



WHO IS AT RISK?

- Workers who are not used to working in a hot building or doing heavy work
- Workers who are not physically healthy or are overweight
- Workers who work in small, confined spaces
- Workers who drink alcohol or take drugs (illegal or prescription medicines)
- Workers who wear heavy, dark or tight clothes

WHAT YOU SHOULD DO WHEN IT IS HOT

- Keep skin clean and dry
- **Rest** in a cool area
- **Drink water often, but a little at a time;** know where your water stations are
- Wear loose fitting and light colored clothes
- If you start feeling dizzy or weak, tell your supervisor and your health and safety representative
- If you start feeling confused or faint, call 9-1-1.



WHAT ROLE CAN YOU PLAY TO PREVENT HEAT STRESS IN THE WORKPLACE

Workers should look for ways to reduce heat in their working environment:

- Identify pipes that give off heat that are not insulated
- Identify vents that need to be cleaned to allow for good airflow
- Identify barriers (such as stacked up equipment) that prevent good airflow
- Make sure cooling stations are kept accessible and clean

When workers are able to identify opportunities to reduce heat in the workplace, they should make the suggestions to their health and safety committee, and supervisor so that these opportunities can be addressed.

The OSH Act of 1970 protects your rights to work in a safe and healthy workplace

- The OSH Act protects workers who complain to their employer, OSHA or other government agencies about unsafe or unhealthful working conditions .
- Help is available from OSHA for whistleblowers. *
- However, you have a limited right under the OSH Act to refuse to do a job because conditions are hazardous.
- You may refuse to do a job only when
 - you believe that you face death or serious injury (and the situation is so clearly hazardous that any reasonable person would believe the same thing);
 - you have tried, where possible but unsuccessfully, to get your employer to correct the condition and there is no other way to do the job safely; and
 - the situation is so urgent that you do not have time to eliminate the hazard through regulatory channels such as calling OSHA.
- OSHA cannot enforce union contracts or state laws that give employees the right to refuse to work.

WHAT ARE YOUR RIGHTS?

- Under federal law, you are entitled to a safe workplace. Your employer must provide a workplace free of known health and safety hazards.
- If you have concerns, you have the right to speak up about them **without fear of retaliation.**
- Be trained in a language you understand
- Work on machines that are safe
- Be protected from toxic chemicals
- Request an OSHA inspection, and speak to the inspector
- Report an injury or illness, and get copies of your medical records
- See copies of the workplace injury and illness log
- Review records of work-related injuries and illnesses
- Get copies of test results done to find hazards in the workplace

(See OSHA Workers' webpage <https://www.osha.gov/workers/index.html>)

WHAT ARE YOUR RESPONSIBILITIES?

- Read the OSHA poster
- Follow employers' safety and health rules and wear or use all required gear and equipment
- Follow safe work practices for your job, as directed by your employer
- Report hazardous conditions to your shop steward or safety committee
- Report hazardous conditions to OSHA if employers do not fix them
- Cooperate with OSHA inspectors

See OSHA Workers' webpage <https://www.osha.gov/workers/index.html>

WHAT ARE EMPLOYERS' RESPONSIBILITIES AND RIGHTS?

- Providing a safe and healthful workplace free of recognized hazards
- Following the OSHA standards
- Providing training, medical examinations and record keeping
- OSH Act gives rights, particularly during and after an OSHA inspection.

HOW TO REPORT CONCERNS, INCIDENTS TO OSHA

If you, your co-workers and/or your union representative determine that an OSHA inspection is needed to get workplace hazards corrected, you have several options.

- You can download the complaint form from OSHA's website, complete it and **mail** or **fax** it to OSHA at 215- 597-1956 or you can call 215-597-4955 to ask for a copy of the complaint form.
 - You can file a complaint **online** at www.osha.gov
 - You can **phone** the regional office. The number is 215-597-4955.
 - You can **visit** your regional or area office in Marlton NJ or Philadelphia to discuss your concerns.
 - Note that if a hazard is life-threatening, call the Regional or local office or 1-800-321-OSHA immediately.
- * You do not have to be a U.S. citizen to file a complaint with OSHA. You can also tell OSHA not to reveal your name. OSHA will keep your name off the complaint, if you wish.**

YOUR REPORT TO OSHA

- Can be in any language
- Can result in an investigation. If you want, you can ask OSHA to leave your name out of the complaint.
- Protects you from retaliation from your employer. Your employer is breaking the law if they react to your complaint by doing the following:

PROTECTION FROM WORKPLACE RETALIATION (ADVERSE REACTION)

If you file a complaint with OSHA and your employer retaliates with the following actions, they will be breaking the law. The actions may include:

- Applying or issuing a policy which provides for an unfavorable personnel action due to activity protected by a whistleblower law enforced by OSHA.
- Blacklisting
- Demoting
- Denying overtime or promotion
- Disciplining
- Denying benefits
- Failing to hire or rehire
- Firing or laying off
- Intimidation
- Making threats
- Reassignment to a less desirable position, including on adversely affecting prospects for promotion
- Reducing pay or hours
- suspension

WHAT TO DO IF YOUR EMPLOYER RETALIATES

The OSH Act protects workers who complain to their employer, OSHA or other government agencies about unsafe or unhealthful working conditions in the workplace or environmental problems.

You cannot be transferred, denied a raise, have your hours reduced, be fired, or punished in any other way because you used any right given to you under the OSH Act.

If you have been punished or discriminated against for using your rights, you **must file a complaint with OSHA within 30 days** of the alleged reprisal for most complaints. No form is required but you must send a letter or call the OSHA Area office nearest you to report the discrimination.

You have a limited right under the OSH Act to refuse to do a job because conditions are hazardous. You may do so under the OSH Act only when 1) you believe that you face death or serious injury and the situation is so clearly hazardous that any reasonable person would believe the same thing; 2) you have tried where possible, to get your employer to correct the condition and been unable to obtain a correction and there is no other way to do the job safely; 3) the situation is so urgent that you do not have time to eliminate the hazard through regulatory channels such as calling OSHA.

OSHA OFFICES NEAR YOU:

- **PHILADELPHIA AREA OFFICE (PENNSYLVANIA)**

The Wanamaker Building

100 Penn Square East, 12th Floor

Philadelphia, Pennsylvania 19107

Phone: (215) 597-4955

Fax: (215) 597-1956

- **MARLTON AREA OFFICE (SOUTH JERSEY)**

Marlton Executive Park, Building 2

701 Route 73 South, Suite 120

Marlton, New Jersey 08053

Phone: (856) 596-5200

Fax: (856) 596-5201



OSHA EMERGENCY HOTLINE

1-800-321-OSHA (6742)

- Report a workplace hazard
- Request information on OSHA
- Request an OSHA publication

CREDITS AND INFORMATION RESOURCES

- U.S. Department of Labor, Occupational Safety and Health Administration: Using the Heat Index: A Guide for Employers
- OSHA Fact Sheet: Protecting Workers from the Effects of Heat
- OSHA Fact Sheet: Your Rights as a Whistleblower
- Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health: Criteria for a Recommended Standard – Occupational Exposure to Heat and Hot Environments (Revised Criteria 2016)
- Commission on Health and Safety and Workers' Compensation, Department of Industrial Relations, Worker Occupational Safety and Health Training and Education Program (WOSHTEP), 2012: Excessive Heat at Work: How to Prevent Indoor Heat Illness

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