

Chapter 3: Health Effects

Chapter 3

Health Effects

Chapter 3: Health Effects

3

Preparing for Delivery

Time

The *Health Effects* chapter is approximately 4 hours of classroom training.

Follow the Lesson Plan for a guide to scheduling this course. Time allotments for specific topics are provided within the plan. You may devote more time to classroom and hands-on activities as needed, as the plan reflects the minimum suggested time allotments.

Staffing

The maximum participant – instructor ratio is 25:1.

During classroom activities, the recommended participant – instructor ratio is 10:1.

During hands-on activities, the recommended participant – instructor ratio is 5:1.

Materials Needed

For this chapter, you will need the following:

- A copy of the Infectious Disease Operations Participant Guide (PG)
- A flip chart or whiteboard and markers
- A computer and projector or monitor

The table on the following page lists the materials needed for this lesson.

Chapter 3: Health Effects

Preparing for Delivery (continued)

Chapter 3: Health Effects

Lesson Overview	Media 	Handouts 
Introduction and Objectives (10 min.)	<i>Slides 1 to 3</i>	
Exercise 1: Health Supports (20 min.)	<i>Slides 4 to 5</i>	<i>HO 9: Health Supports</i>
Exercise 2: Health Effects of Biological Hazards (40 min.)	<i>Slides 6 to 10</i>	<i>HO 10: Sample Infectious Diseases</i>
Exercise 3: Managing Occupational Health (90 min.)	<i>Slides 11 to 13</i>	<i>HO 11: Occupational Health Plans</i>
Exercise 4: Health Effects of Chemical Hazards (30 min.)	<i>Slides 14 to 15</i>	<i>HO 12: Health Effects of Chemical Hazards</i>
Exercise 5: Health Effects of Physical Hazards (40 min.)	<i>Slides 16 to 21</i>	<i>HO 13: Heat Stress</i>
Summary (10 min.)	<i>Slides 2 to 3</i>	<i>Chapter 3: Things to Remember</i>

Introduction and Objectives

Introduction and Objectives



10
Minutes

Open the lesson by telling participants that in Chapter 2, they learned about the different types of hazards on an infectious disease worksite. In this chapter, they will learn more about the types of effects these hazards may have on their health, as well as the types of medical supports available.

Ask volunteers to consider their experience, and share what types of health effects are potentially present in some of the infectious diseases they have learned about so far (ranging from influenza to Ebola). Allow 2–3 minutes for this activity. When finished, tell them they will now explore these topics in more detail.

Display Slides 1 to 3. Introduce the chapter and review the chapter objectives. At the end of this chapter, participants will be able to:

1. Describe at least three types of safety and health personnel.
2. Explain medical screening and surveillance for infectious diseases.
3. Describe at least two symptoms or signs of exposure that are related to infectious diseases.
4. List at least five types of information that workers should know about pathogens that are known or suspected to be present on a worksite.
5. Explain the importance of occupational health plans when working around infectious diseases, and list at least four categories of information they normally contain.
6. Describe the health effects of chemical disinfectants used in infectious disease cleanup operations.
7. Describe the health effects of heat stress in an infectious disease work environment.
8. Explain at least three safe work practices for preventing heat stress.

Invite questions about the objectives.



SL 1 to 3



PG: 3–1 to 3–2

Chapter 3: Health Effects

Exercise 1: Health Supports



20
Minutes

Exercise 1: Types of Hazards

Objectives

1. Describe at least three types of safety and health personnel.
2. Explain medical screening and surveillance for infectious diseases.



SL 4 to 5

Display Slide 4. Ask participants if any of them have ever had to have a medical exam for a job placement. Ask for additional details, “Why? Who administered the test or exam? Who provides health, safety, or medical support for workers?” Write the information on the board.



HO 9: Health
Supports

Display Slide 5. Ask participants if they are familiar with these terms, have had any experience with one or more of them, and give a definition of each one. Have participants discuss their ideas in pairs. Then have pairs share their answers with the class. Note their answers on the board. Explain that they are going to look at these terms in more detail in the following exercise.



PG: 3–3 to 3–6

Distribute Handout 9: *Health Supports*. Read the directions aloud. Ask, “What are you going to do?” (Match each of the terms with only two sentences.) Point out that there may be some overlap in the descriptions that could cause them to match up more than two sentences with the same term, but that they need to find the two that match up the *best* with each term.

Have participants complete the handout in small groups. Try to have them do the handout as much as possible without looking at the PG. If needed, tell participants to look at PG pages 3–3 to 3–6 as a reference.

Check the answers with the class. (See the answer key on the following page.) Answer any questions that may have come up in the completion of the handout.

Conclude by saying there are a number of supports available to workers to help ensure they have a safe and healthful work environment, and that this especially applies to infectious disease sites. Tell participants they’ll learn more about medical symptoms, treatments, and supports in the following exercises.

Handout 9: Health Supports



Handout 9 Health Supports

Instructions: Match each term with two sentences that describe it best. Note: there are *only two* correct answers for each term. Write the numbers of the correct sentences next to each term.

7, 13 Industrial hygienist

6, 11 Infectious disease specialist

3, 8 Safety professional

2, 16 Infection control practitioners

5, 10 Occupational and environmental physician

1, 15 Medical screening

4, 14 Occupational health nurse

9, 12 Medical surveillance

1. The main purpose of this is early diagnosis and treatment of the individual and thus has a clinical focus.
2. They create infection control plans and are also responsible for training both medical staff and patients in infection control protocols.
3. They evaluate hazards and risks on jobsites, as well as identify, recommend, and help implement controls.
4. They focus on promotion and restoration of health, prevention of illness and injury, and protection from work-related and environmental hazards.
5. They provide first-level medical care on site as well as medical surveillance when it is applicable or required by OSHA or other standards.
6. They are doctors who have received special training to diagnose and treat infectious diseases.
7. They are scientists and engineers committed to protecting the health and safety of people in the workplace and the community.
8. They are engaged in the prevention of events that harm people, property, or the environment by preventing injuries, illnesses, and property damage.
9. The main purpose of this is to detect and eliminate the underlying causes such as hazards or exposures of any discovered trends and thus has a prevention focus.
10. They must possess knowledge of worksite operations and hazards, determine workers' fitness for work, and diagnose and treat occupational and environmental diseases.
11. A worker might be referred to this person if an infection is difficult to diagnose, is accompanied by a high fever, or if the patient does not respond to treatment.
12. This includes the analysis of health information to look for problems that may be occurring in the workplace that require targeted prevention.
13. They play a vital part in ensuring that federal, state, and local laws and regulations are followed in the work environment.
14. They provide for and deliver health and safety programs and services to workers, worker populations and community groups.
15. This is a method for detecting disease or body dysfunction before an individual would normally seek medical care.
16. They work in healthcare settings to help prevent, investigate, monitor, and report the spread of infectious diseases in the workplace.

Infectious Disease Operations

Chapter 3: Health Effects

Exercise 2: Health Effects of Biological Hazards



40
Minutes

Exercise 2: Health Effects of Biological Hazards

Objectives



SL 6 to 10



HO 10: Sample
Infectious Diseases



PG: 3-7 to 3-12

3. Describe at least two symptoms or signs of exposure that are related to infectious diseases.
4. List at least five types of information that workers should know about pathogens that are known or suspected to be present on a worksite.

Display Slide 6. Ask participants if they, or someone they know, have ever been sick with any kind of infectious disease. Ask a few volunteers to give details if they're comfortable doing so.

Display Slide 7. Have participants pair up and talk about their answers to the questions about having a cold or having the flu. Then ask pairs to share their information with the class. Write notes on the board.

Display Slide 8. Point out that there are a lot of similarities between having a cold and having the flu, but there are some differences as well. Read through the information with the class or have volunteers read them.

Remind that if there is a particular known or suspected pathogen present on a worksite, a risk assessment should be done to create an exposure control plan.

Display Slides 9 and 10 and review the types of information that may be considered as part of the risk assessment.

Explain that in most cases, environmental services workers are not likely to be called into an operation where a Category A pathogen is present, but in an emergency situation, it could happen. Every situation is different, and it is the employer's responsibility to ensure that a proper exposure control plan is in place.

Distribute Handout 10: *Sample Infectious Diseases*. Read the directions aloud. Have participants complete the handout in pairs. Tell participants to look at PG pages 3-8 to 3-12 as a reference. Then have each pair check their answers with another pair.

Check the answers quickly with the class. (See the answer key on the following page.) Answer any questions that may have come up in the completion of the handout.

Conclude by saying that the objective is not for participants to memorize lists of facts about infectious diseases, but that if an infectious disease is present on a worksite, their employer should make them aware of its symptoms, routes of transmission, and what kinds of vaccines and/or treatments may be available.

Handout 10: Sample Infectious Diseases



Handout 10 Sample Infectious Diseases

Instructions: Which of the following diseases fit the criteria below? Write the name. Most will have more than one answer.

pertussis/whooping cough	hepatitis A	seasonal influenza (flu)	E. coli
Ebola virus disease (EVD)	hepatitis B	MRSA	tuberculosis

1. Which present symptoms such as fever and loss of appetite?
hepatitis A, hepatitis B
2. Which have vaccines available?
hepatitis A, hepatitis B, seasonal influenza (flu), tuberculosis
3. Which have airborne transmission (droplets, aerosols)?
seasonal influenza (flu), tuberculosis, pertussis/whooping cough
4. Which are transmitted through direct contact (body fluids)?
pertussis/whooping cough, EVD, hepatitis B, MRSA
5. Which are transmitted through infected food?
Hepatitis A, E. coli
6. Which can be treated with antibiotics?
Pertussis/Whooping cough, MRSA
7. Which produce visible symptoms on the body?
hepatitis A, hepatitis B, MRSA, EVD
8. Which cause vomiting?
pertussis/whooping cough, EVD, hepatitis A, hepatitis B, E. coli

Infectious Disease Operations

Chapter 3: Health Effects

Exercise 3: Managing Occupational Health

 90
Minutes

Exercise 3: Managing Occupational Health

Objective

5. Explain the importance of occupational health plans when working around infectious diseases, and list at least four categories of information they normally contain.



SL 11 to 13



HO 11: Occupational
Health Plans



PG: 3–12 to 3–15

Display Slides 11 and 12. Open the lesson by asking participants what the single most effective approach is for managing biohazards. Click Slide 12 again to reveal the answer (prevention). Explain that risk assessments are done and controls are put in place with the hope that they will prevent people from contracting an infectious disease, but that no plans are 100% effective.

Display Slide 13. Explain that ensuring workers' health and safety on an infectious disease site is not only something that happens when someone is injured or contracts a disease. It begins before a job starts, and may continue throughout the job, as well as after the job. These components are all part of an *Occupational Health Plan*. (You may need to explain that *prophylaxis* is a medical term that means prevention of disease, and includes things like vaccines.)

Ask participants to comment on when these different parts of an occupational health plan may be used. (For example, control methods are planned before a job starts, as part of the risk assessment, but they are used throughout a job. Pre-exposure prophylaxis happens before a job starts.)

Distribute Handout 11: *Occupational Health Plans*. Read the instructions aloud. Have participants write answers to the questions in small groups. Tell them to look at PG pages 3–12 to 3–15 as a reference.

Check the answers with the class. (See the answer key on the following page.) Answer any questions that may have come up in the completion of the handout.

Conclude by saying that occupational health plans should be put in place before any work assignment that includes potential exposures to biological agents or other hazards that can affect workers' health. Workers should be aware of the contents of the health plan before they begin an assignment.

Handout 11: Occupational Health Plans



Handout 11 Occupational Health Plans

Instructions: Answer the questions.

1. What are the topics that should be included in an occupational health plan for an infectious disease worksite?

Control methods (engineering/administrative), PPE, pre-placement medical evaluations, pre-/post-exposure prophylaxis and vaccines, periodic medical evaluations, post-injury or post-exposure reporting

2. What kind of information should be collected and evaluated during a pre-placement medical exam?

The healthcare provider should review the worker's previous and ongoing medical problems, current medications, allergies, and prior immunizations. It should also include medical information: the current health status and a medical evaluation.

3. What is pre-exposure prophylaxis and what is it used for?

Pre-exposure prophylaxis usually refers to being vaccinated, if a vaccine exists for that particular pathogen.

4. What is post-exposure prophylaxis and what is it used for?

Post-exposure prophylaxis involves offering a treatment that may help prevent certain pathogens from developing into an infection.

5. Why are periodic medical evaluations sometimes required?

Periodic examinations are dependent upon specific factors cited in the standard such as airborne concentrations of a hazardous substance and/or years of exposure, biological indices, age of employee, amount of time exposed per year.

6. What should be included in standard protocols for post-exposure responses?

Standard protocols should include a printed summary of the recommended medical response to specific exposures that can guide immediate response in the workplace and that the injured worker can provide to the treating facility.

Infectious Disease Operations

Chapter 3: Health Effects

Exercise 4: Health Effects of Chemical Hazards



30
Minutes

Exercise 4: Health Effects of Chemical Hazards

Objective

6. Describe the health effects of chemical disinfectants used in infectious disease cleanup operations.



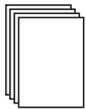
SL 14 to 15

Instructor note: Before starting this activity, write the numbers 1–10 on small pieces of paper (one number per piece of paper) and place them into a hat or small container. This will be used to assign questions for the handout below.



HO 12: Health Effects of
Chemical Hazards

Display Slides 14 and 15. Open the lesson by reviewing information about chemical hazards from Chapter 2. Ask, “What types of chemicals might be used in an infectious disease cleanup operation?” (For example, bleach and bleach-based disinfectants are common; more information about registered disinfectants can be found on the EPA website.) “What types of controls are recommended for use of these types of disinfectants?” (Ventilation, PPE such as face masks and shields, proper training, etc.) Explain that participants are going to look at the health effects of using chemical disinfectants in more detail in the following activity.



Pieces of
8 ½ x 11-inch paper

Pass around the container with the numbered pieces of paper, have each participant pick one number at random. (If there are more than 10 participants in the class, pair up participants for some of the numbers. If there are fewer than 10 participants, have some pick two numbers.) Pass out paper to the participants.



PG: 3–18 to 3–21

Distribute Handout 12: *Health Effects of Chemical Hazards*. Read the instructions aloud. Tell participants to write the answer (but *not* the number) for their question on a sheet of paper. Tell them to look at PG pages 3–18 to 3–21 as a reference. Have participants post their sheet of paper with the answer randomly around the room.

Tell participants to get up and walk around the room, read each answer, find the matching question, and write the answer in the correct place on their handout.

Check the answers with the class. (See the answer key on the following page.) Answer any questions that may have come up in the completion of the handout.

Conclude by saying that depending on the dose and the type of disinfectants used, chemicals can have a significant impact on workers’ health. Proper controls and instructions should always be followed, and employers should provide training to workers to ensure a safe and healthy working environment.

Handout 12: Health Effects of Chemical Hazards



Handout 12 Health Effects of Chemical Hazards

Instructions: Answer the questions.

1. What is a toxin?
A toxin is a poison.

2. What are three ways that workers can be exposed to chemicals?
 1. **Inhaling contaminants in the form of vapors, gases, dusts, fumes, or mists.**
 2. **Swallowing contaminants (dangerous materials).**
 3. **Absorbing contaminants through the skin or eyes.**
3. What determines the dose of a chemical?
The length of exposure and the concentration determines the dose of a chemical.

4. What is the dose-response relationship?
The connection between the dose amount and the dose effect. In general, higher doses of chemicals will have a greater effect on your body.

5. What is a chemical reaction and why can it be dangerous?
A chemical reaction occurs when chemicals combine to produce a new substance and/or a release of energy. The new substance may also act differently than either of the original chemicals and be more hazardous.
6. What is acute exposure?
An acute exposure is a single short exposure or a few short exposures to a relatively large concentration of a chemical.

7. What is chronic exposure?
A chronic exposure is a repeated exposure to a chemical that occurs over months and/or years.

8. What are the physical warning signs of acute exposure?
Breathing difficulties; dizziness, drowsiness, disorientation, and difficulty concentrating; burning sensation in your eyes or on your skin; weakness, fatigue, and lack of energy; chills and upset stomach; a strange taste in your mouth.
9. What should you do if you experience any signs of acute exposure?
If you experience any signs of acute exposure, remove yourself from the work area.

10. Where can you get information on what to do if you suffer an acute exposure from chemicals?
Refer to the product warning label and safety information if you suffer an acute exposure from chemicals.

Infectious Disease Operations

Chapter 3: Health Effects

Exercise 5: Health Effects of Physical Hazards



40
Minutes

Exercise 5: Health Effects of Physical Hazards

Objectives

7. Describe the health effects of heat stress in an infectious disease work environment.
8. Explain at least three safe work practices for preventing heat stress.



SL 16 to 21

Display Slides 16 and 17. Open the lesson by asking participants if any of them have experienced heat stress on the job. Ask a few volunteers to talk about their experience: where it happened, the cause(s), what kinds of symptoms they experienced, and what they did to remedy the situation.



HO 13: Heat Stress

Explain that heat stress is a potential physical hazard on an infectious disease worksite and can occur without warning. This is often because of certain PPE that is required and/or due to working in a hot environment.



PG: 3–21 to 3–28

Display Slide 18. Ask, “What kinds of health factors may put you at a higher risk for heat stress?” Have participants create a list in pairs. Have pairs take turns sharing items from their list with the class. Write their answers on the board or a piece of flip chart paper. Click on Slide 18 again to reveal the answers. Compare the answers with the list that participants created and note similarities and differences.

Ask, “How does heat stress occur?” Have participants discuss their ideas in pairs, and then share their information with the class. Refer participants to PG page 3–23 for more information about how heat stress occurs.

Display Slide 19. Ask, “What can you do to monitor for heat stress while you’re on the job?” Have participants try to guess which numbers fit in the blank spaces. Click on the slide again to reveal the first answer. Continue clicking to reveal the rest of the answers.

Ask, “How do you calculate 1.5% of your body weight?”

Display Slide 20 to show the equation. Have participants calculate their own numbers.

Display Slide 21. Explain that there are different degrees of heat stress, and that heat stress can escalate quickly and even be fatal. Read through the list of different types of heat stress. Explain that in the next activity, they are going to look at these types of heat stress in more detail.

Distribute Handout 13: *Heat Stress*. Have participants complete the handout in small groups. Tell them to look at PG pages 3–23 to 3–28 as a reference.

Exercise 5: Health Effects of Physical Hazards (continued)

Check the answers with the class. (See the answer key on the following page.) Answer any questions that may have come up in the completion of the handout.

Conclude by saying that heat stress can be one of the most significant hazards on an infectious disease worksite, and that it is critical that employers and workers be aware of this hazard, its health effects, and what to do if it occurs.

Chapter 3: Health Effects

Handout 13: Heat Stress



Handout 13 Heat Stress

Instructions: Fill in the missing information.

Type	Causes	Signs/Symptoms	Treatment
Heat <u>rash</u>	<ul style="list-style-type: none"> Heavy sweating, sweat not removed by skin <u>evaporation</u> 	<ul style="list-style-type: none"> <u>Redness</u> on skin Blisters or a rash 	Keep the affected area dry. Use of talcum or other.
Heat cramps	<ul style="list-style-type: none"> Heavy sweating with inadequate <u>electrolyte</u> replacement 	<ul style="list-style-type: none"> <u>Muscle spasms</u> Pain in hands, feet, and abdomen. 	Stop all activity. Sit in a cool place. Drink clear juice or sports beverage.
Heat exhaustion	<ul style="list-style-type: none"> Increased stress on various <u>body organs</u> and the circulation system Caused by the inability of the heart to work properly and/or <u>dehydration</u> 	<ul style="list-style-type: none"> Dizziness and nausea Normal to low temperature <u>Heavy sweating</u> Pale, cool, and moist skin Rapid pulse and breathing <u>Fainting</u> 	Rest in a cool, shaded, or air conditioned area. Drink plenty of water. Wet down with cool water or take a cool bath or shower.
Heat <u>stroke</u>	<ul style="list-style-type: none"> The <u>most serious</u> form of heat stress Temperature regulation fails Body temperature rises to critical levels, as high as <u>108°F to 112°F</u> The body must be cooled before serious injury or death occurs Competent medical help must be obtained 	<ul style="list-style-type: none"> Dizziness, confusion, nausea, and high fever <u>Little or no sweating</u> Red, hot, and usually dry skin Strong rapid pulse Convulsions Coma <u>Death</u> 	Wet the body with cool water and fanning. Sip cool water if conscious. Call 911 immediately so the victim can receive advanced medical care usually including hydration through I.V. methods.

Infectious Disease Operations

Summary

Summary



10
Minutes

Distribute *Chapter 3: Things to Remember*.

Explain that the *Things to Remember* document is a take-home list of information that can be used for reference or self-study. Note that this document provides information about the chapter's learning objectives and may be used as a study guide for the end-of-course assessment.

Display Slides 2 to 3 and briefly review the chapter objectives with the class. Review the information on the *Things to Remember* handout for each objective. Ask participants if they are comfortable with their knowledge about, or ability to do, each of the objectives, or if they need review or additional support on any of the items listed.

Ask the participants if they have any questions regarding any other topics of the chapter.

Address any questions or concerns.



Chapter 3:
Things to Remember



SL 2-3



PG: 3-29 to 3-30

Chapter 3: Health Effects

Chapter 3: Things to Remember



Chapter 3: Health Effects

Things to Remember

1. There are various types of occupational health and safety professionals to keep you and your coworkers safe and healthy, including:
 - **Industrial hygienist:** Scientists and engineers committed to protecting the health and safety of people in the workplace and the community.
 - **Safety professional:** Individuals who help organizations prevent injuries and illnesses, evaluate hazards and risks on jobsites, and help implement controls.
 - **Occupational and environmental physician:** Physicians who frequently provide first-level medical care on-site, in addition to medical surveillance when applicable or required by OSHA or other standards.
 - **Occupational health nurse:** Specialty practice that focuses on promotion and restoration of health, prevention of illness and injury, and protection from work-related and environmental hazards.
 - **Infectious disease specialist:** A worker might be referred to an infectious disease specialist if an infection is difficult to diagnose, is accompanied by a high fever, or if the patient does not respond to treatment.
 - **Infection control practitioners:** Work in healthcare settings to create infection control plans, and are responsible for training both medical staff and patients in infection control protocols.
2. Medical screening and medical surveillance are two fundamental strategies for optimizing employee health. Medical screening, a method for detecting disease or body dysfunction, is only one component of a comprehensive medical surveillance program. The fundamental purpose of screening is early diagnosis and treatment of the individual (clinical focus). The fundamental purpose of surveillance, which is the analysis of health information to identify potential problems in the workplace, is to detect and eliminate the underlying causes of hazards or exposures (prevention focus). If workers are exposed, or suspect exposure to an infectious agent, they should seek medical assistance immediately.
3. The health effects of biological hazards depend on the infectious agent, and can range from mild skin irritation to life-threatening viral or bacterial diseases. Two of the most common symptoms associated with biological hazards are intestinal upset and skin irritation or infection.
4. It is crucial for workers to be aware of the type of pathogen(s) known or suspected to be present at a worksite. This includes the routes of transmission, the severity or harmfulness, the signs and symptoms, the incubation period, whether or not a vaccine is available, what types of treatments are available, and the protocol for reporting any suspected exposure.
5. Employers must conduct and provide advance planning for medical care to workers potentially infected with highly infectious agents, which is a fundamental component of an occupational health program for a worksite where Category A priority pathogens are known or suspected to be present. Occupational health plans for an infectious disease worksite may cover such topics as control methods (engineering and administrative), medical evaluations and support, pre-/post-exposure prophylaxis and vaccines, PPE, and reporting.
6. Disinfectants used in cleanup operations, if not used properly or if proper work controls are not followed, can have different health effects. A chemical exposure can be either acute or chronic. An acute exposure is a single short exposure or a few short exposures to a relatively large concentration of a chemical. Physical warning signs of acute exposure include breathing difficulties; dizziness, drowsiness and disorientation; a burning sensation in your eyes or on your skin; weakness and fatigue; and chills and an upset stomach. Chronic exposures are hazardous because some chemicals may accumulate in your body over time.

Chapter 3: Things to Remember (continued)



Chapter 3: Health Effects Things to Remember

7. Heat stress from exposure to high temperatures can result in heat rash, heat cramps, heat exhaustion, and heat stroke. Heat rash is the mildest form and looks like a red cluster of pimples or small blisters. Heat cramps usually affect workers who sweat a lot, and can also be a symptom of heat stroke. Heat exhaustion is the body's response to an excessive loss of water and salt, and resembles shock. Heat stroke is the most serious form of heat stress, and can be fatal if not recognized and immediately treated at the scene.
8. You can reduce the risk of heat stress by monitoring your pulse, body temperature, and weight loss. Check your heart rate (pulse) during rest breaks. If it is greater than 110 beats per minute, your work time should be reduced and your rest time increased. Check your temperature at the end of the work period. If it is higher than 99.6°F (37.6°C), your work time should be reduced and your rest time increased. If it's higher than 100.6°F (38.1°C), your PPE needs to be removed. Check your weight before and at the end of the work shift. If your weight loss is greater than 1.5 percent of your total weight, you need to drink more fluids before and during work.