



Safety Showers and Eye Washes

**Leader's Guide, Fact Sheet
& Quiz**

This easy-to-use Leader's Guide is provided to assist in conducting a successful presentation.

PREPARING FOR THE MEETING

Here are a few suggestions for using this program:

- a) Review the contents of the Fact Sheet that immediately follows this page to familiarize yourself with the program topic and the training points discussed in the program. The Fact Sheet also includes a list of Program Objectives that details the information that participants should learn from watching the program.
- b) If required by your organization, make an attendance record to be signed by each participant to document the training to be conducted.
- c) Prepare the area and equipment to be used for the training. Make sure the watching environment is comfortable and free from outside distractions. Also, ensure that participants can see and hear the TV screen or computer monitor without obstructions.
- d) Make copies of the Review Quiz included at the end of this Leader's Guide to be completed by participants at the conclusion of the presentation. Be aware that the page containing the answers to the quiz comes *before* the quiz itself, which is on the final page.

CONDUCTING THE PRESENTATION

- a) Begin the meeting by welcoming the participants. Introduce yourself and give each person an opportunity to become acquainted if there are new people joining the training session.
- b) Introduce the program by its title and explain to participants what they are expected to learn as stated in the Program Objectives of the Fact Sheet.
- c) Play the program without interruption. Upon completion, lead discussions about your organization's specific policies regarding the subject matter. Make sure to note any unique hazards associated with the program's topic that participants may encounter while performing their job duties at your facility.
- d) Hand out copies of the review quiz to all of the participants and make sure each one completes it before concluding the training session.

5301 Safety Showers and Eye Washes

FACT SHEET

LENGTH: 16 MINUTES

PROGRAM SYNOPSIS:

“Accidents happen.” We hear that expression all the time. But when it comes to hazardous materials, accidental spills can create serious problems. The results can sometimes be tragic. HAZMATs that get onto your skin or into your eyes can cause severe injuries such as burns and blindness, even death.

To avoid this, you need to be prepared to wash off hazardous materials as soon as possible after you are exposed to them. That's where safety showers and eye washes come in. In an emergency, this equipment dilutes and flushes HAZMATs away, helping to lessen the severity of any injuries or preventing them altogether.

PROGRAM OBJECTIVES:

After watching the program, the participant should be able to explain the following:

- How safety showers and eye washes work;
- The safety standards that address their design, installation and use;
- How to use the equipment effectively if you or a coworker are exposed to a HAZMAT on the job.

PROGRAM OUTLINE:

INTRODUCTION

- “Accidents happen.” We hear that expression all the time. But when it comes to hazardous materials, accidental spills can create serious problems.
- The results can sometimes be tragic. HAZMATs that get onto your skin or into your eyes can cause severe injuries such as burns and blindness, even death.
- To avoid this, you need to be prepared to wash off hazardous materials as soon as possible after you are exposed to them.
- That's where safety showers and eye washes come in. In an emergency, this equipment dilutes and flushes HAZMATs away, helping to lessen the severity of any injuries or preventing them altogether.

HAZMATs, SAFETY SHOWERS AND EYE WASHES

- Every day, employees at companies across the country handle hazardous materials. These substances can include irritants such as solvents, detergents, and degreasers.
- Toxic materials like chemical reagents, insecticides, herbicides and petroleum products and corrosives such as acids and caustics.
- Companies that handle HAZMATs are required to implement policies and procedures to help their employees work with them safely. But you still need to be prepared for trouble if it occurs.
- One way to prevent injuries that result from contact with harmful substances is to install safety showers and eye washes in the areas where they are used. This equipment discharges large amounts of water or other fluids to first dilute and then flush away harmful contaminants.
- Safety showers can drench the whole body. Eye washes can gently rinse one or both eyes. Combination equipment can get water to multiple areas at the same time.
- Some of these units are permanently plumbed in so they have a continual supply of water while standalone and portable types have their own fluid reservoirs, and while the liquid that is discharged by the showers and eyewashes is often normal, drinking water, preserved water or buffered saline solutions are also sometimes used.
- But more important than the type of fluid that is used is the need to flush the HAZMAT away as soon as possible after exposure occurs.
- Prompt decontamination is especially important if someone is exposed to materials that are corrosive. These substances can actually destroy body tissue and cause burns, permanent scarring, blindness, even death.
- So the Occupational Safety and Health Administration, OSHA, has established a standard that requires employers to provide suitable facilities for quick drenching or flushing of the eyes and body in work areas where employees handle corrosives.
- Workers in these areas should also receive training on how to use the equipment and practice getting to it quickly.
- In some situations, a HAZMAT that gets into your eyes could make it difficult for you to see where you are going. So everyone should practice finding and operating showers and eye washes blindfolded to ensure that they can access the equipment even when their vision is impaired.

STANDARDS FOR DECONTAMINATION EQUIPMENT

- In workplaces where employees handle hazardous materials, safety showers and eyewashes provide them with the ability to quickly dilute and flush away any substance that attacks them.
- While OSHA establishes the requirements for safeguarding employees against hazardous materials, the standards for the design and function of the showers and eye washes themselves have been established by the American National Standards Institute, ANSI.
- These voluntary ANSI standards address a number of things. First, they require safety showers and eye wash stations to be located within a 10 second walk of any area where HAZMATs are used. They also specify that the area around these devices should be well lit, so they are easy to locate and get to.

- The pathways from the areas where HAZMATs are handled to a facility, showers and eye washes must not be obstructed by other equipment, materials, furniture, or debris either. And any doors along the route should swing outward in the direction of the device.
- As for their design, the showers and eye washes themselves should be configured so that a user can activate them in less than a second with a single motion. And when the activator is released, the flow of water must continue.
- This hands-free operation is needed so that a person can use both hands to hold their eyes open at an eye wash station or remove contaminated clothing when they are under a safety shower.
- The ANSI standards also state that all of this decontamination equipment should be inspected, tested, and maintained on a regular basis to ensure that it will work properly when it's needed.
- All decontamination devices should be able to discharge water for at least 15 minutes at a pressure of 30 PSI. For safety showers, the rate of flow should be 20 gallons per minute. For eye washes, the rate is 4/10 of a gallon per minute.
- Combination units should be able to discharge water at these rates from all of their nozzles at the same time.
- And while rinsing your eyes or body with cold water might feel refreshing at first, overtime it can become very uncomfortable. So, to encourage users to rinse for a full 15 minutes, ANSI specifies that the temperature of the water discharged by an eye wash or shower should be tepid, somewhere between 60- and 100-degrees Fahrenheit.

USING A SAFETY SHOWER

- If some type of HAZMAT comes into physical contact with your body, it's natural to be upset about it. You may feel shock, anger, fear, but to deal with the situation you need to stay calm, remember your training and take action. The longer a chemical is on your skin, the more damage it can do.
- Call out for help. Your coworkers can assist you in getting to the shower and call for medical assistance as well.
- When you reach the shower, pull the handle immediately to start the water flowing and get under the spray. Continue to flush for at least 15 minutes.
- Fabric that is soaked with a hazardous chemical will keep it in contact with your skin, so you should first drench your clothes to dilute the HAZMAT, then remove them. This is no time for modesty.
- Stripping off contaminated clothing as well as shoes and jewelry is essential for complete decontamination. The faster that clothing comes off, the better, so coworkers should help you to undress.
- While you're in the shower, take care to prevent any of the hazardous material that is being washed off your body from getting into your eyes.
- You need to protect your eyes from the spray as well. An ANSI compliant shower fixture discharges water with enough force to cause eye damage.
- After showering for at least 15 minutes, get medical attention. If emergency assistance has already been summoned, it's a good idea to stay under the shower until the EMT's arrive.
- If you are assisting a coworker when they are decontaminating in a safety shower, remember that the runoff water can contain residual amounts of hazardous material, so you should be sure to shower yourself after helping a coworker as well.

USING AN EYE WASH

- A hazardous chemical that gets in your eyes puts your eyesight in danger right away. To protect your eyes, you have to respond quickly and decisively because the longer you wait, the more damage the HAZMAT can do.
- So don't hesitate, stay calm and head for the nearest eyewash station in your work area. On the way call out to your coworkers for help. They can guide you to the station and also call for medical assistance.
- Do your best to keep your eyes open. Closing them can trap the HAZMAT against your eyes where it can do more damage.
- But even with them open, the material that's in your eyes may make it difficult for you to see where you're going. This is why you should practice getting to your eye wash stations blindfolded so you can find them, even if you can't see them.
- Once you reach the eyewash, turn it on and get your eyes directly into the water so it can dilute the chemical and start to flush it away. If you are wearing contacts, don't delay flushing your eyes to remove them.
- Begin rinsing and then take your contacts out so they don't trap any of the material in your eye. Continue to rinse for at least 15 minutes.
- You should hold the affected eyes open with your fingers. Gently rotate your eyeballs left and right, up and down. Make sure the water reaches all areas, including under your eyelids. If only one eye has the HAZMAT in it, don't let it get into your other eye.
- When your eyes start to feel better, you might be tempted to turn the water off, but don't do it. Some hazardous chemicals take time to do damage, so you should always rinse for a full 15 minutes to ensure that the substance is completely flushed away.
- Remember using an eye wash is only the first step in responding to a HAZMAT exposure. As soon as you finish rinsing, you should seek medical attention.

AFTER A HAZMAT DECONTAMINATION

- If someone you work with is exposed to a hazardous material, using a safety shower or eye wash to flush away the substance is an important first step in reducing or preventing injury. But what you do after decontaminating them is important as well.
- Getting professional medical assistance for the person who has been exposed is a top priority. That means calling for emergency aid as soon as possible after a HAZMAT exposure occurs.
- Contact information for first responders should be readily available in your work area. It can also be found in your company's HazCom program and emergency action plan.
- Both of these documents are available to all employees, and it's a good idea to become familiar with them. That way you'll know both who to call and what to do in a HAZMAT emergency.
- Once help is on the way, you should get a copy of the safety data sheet for the substance that was involved in the incident, so you can give it to the EMT's when they arrive.

- Any clothing that the victim removed during the decontamination process is likely to contain residual amounts of the HAZMAT, so it qualifies as a hazardous material too and should be decontaminated before normal laundering.
- If the HAZMAT that's involved is particularly nasty, it can be a good idea to dispose of the clothing permanently. Just remember that it should be handled as hazardous waste according to the procedures described in your HazCom program.
- The clothing of anyone who assists a coworker in decontaminating may need the same treatment since they can be exposed to the HAZMAT secondhand. The assistants themselves may also need to get under the shower.
- It's important to remember that the runoff that is created by safety showers and eye washes qualifies as hazardous waste too. If it has been caught in a retention basin or drained into a storage tank, it will need to be disposed of properly. In situations where no basin or drain exists, the contaminated liquid will need to be contained, cleaned up and disposed of.
- Again, your hazard communication program will describe the equipment and procedures that should be used to comply with federal and local cleanup regulations.
- Wastewater that drains into a sewer can create serious environmental problems by contaminating the local watershed. If the drains for safety showers or eye washes in your facility are plumbed into a sewer system, your hazard communication program will describe what should be done in the event of a wastewater release.

CLOSING

- As we've seen contact with hazardous materials can cause serious damage to our skin and eyes. But safety showers and eye washes enable us to take quick action to flush harmful substances away. Let's review.
- Safety showers and eye washes use large amounts of water to dilute and remove hazardous substances that get on our bodies or in our eyes. OSHA requires employers to provide safety showers and eye washes for their employees who handle materials that are corrosive.
- If a HAZMAT gets on your skin or in your eyes, go to the nearest safety shower or eye wash station immediately and flush the affected area for at least 15 minutes.
- At an eye wash, hold your eyes open with your fingers and rotate your eyeballs in the water streams.
- Under a shower, first drench any clothing that has been soaked with a HAZMAT, then remove it.
- And always seek medical attention after being exposed to a HAZMAT.

Safety Showers and Eye Washes

ANSWERS TO THE REVIEW QUIZ

1. a
2. b
3. a
4. c
5. b
6. b
7. b
8. a
9. b
10. b

Safety Showers and Eye Washes REVIEW QUIZ

Name _____ Date _____

The following questions are provided to determine how well you understand the information presented in this program.

1. Prompt decontamination is especially important if someone is exposed to materials that are corrosive.
 - a. True
 - b. False

2. While OSHA establishes the requirements for safeguarding employees against hazardous materials, the standards for the design and function of the showers and eye washes themselves have been established by the _____.
 - a. National Health Administration
 - b. American National Standards Institute
 - c. National Institute for Occupational Safety and Health
 - d. American Society of Safety Professionals

3. Any doors that are along the route to a safety shower or eye wash should swing open toward them.
 - a. True
 - b. False

4. Safety showers and eye washes should be configured so that a user can activate them in less than _____, with a single motion.
 - a. 10 seconds
 - b. 5 seconds
 - c. 1 second

5. Safety showers and eye wash equipment is reliable and simple enough that regular inspections are normally not required.
 - a. True
 - b. False

6. According to ANSI standards, all safety showers and eye washes should be able to discharge water continuously for at least _____ minutes.
 - a. 20
 - b. 15
 - c. 10

7. When you are rinsing a HAZMAT out of your eyes at an eye wash station you can stop just as soon as they start to feel better.
 - a. True
 - b. False

8. When EMTs arrive after a coworker has been exposed to a HAZMAT, you should provide them with a copy of the material's Safety Data Sheet.
 - a. True
 - b. False

9. It is unlikely that any hazardous substances will splash onto your clothing if you are assisting a coworker in decontaminating themselves under a safety shower.
 - a. True
 - b. False

10. The top priority after decontaminating from a HAZMAT exposure is to _____.
 - a. clean up any spilled chemicals
 - b. get medical assistance for the person who was exposed
 - c. investigate the incident
 - d. talk to management about the incident