



Training Solutions, Delivered!

SAFETY SHOWERS AND EYE WASHES IN THE LABORATORY

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

Item Number: 5015
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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.

5015 SAFETY SHOWERS AND EYE WASHES IN THE LABORATORY

FACT SHEET

LENGTH: 8 MINUTES

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PROGRAM SYNOPSIS:

No one wants to be in accident, that's why laboratory workers take so many precautions. They wear personal protective equipment and carefully select each piece of apparatus, but accidents sometimes happen, no matter how many precautions we take. In these situations, quick action is imperative, and a safety shower or eyewash can be extremely important. Many types of safety showers and eyewash stations exist. Laboratory employees need to be familiar with the various types of this equipment, their operation and under what circumstances they should be used.

To help employees plan for laboratory emergencies, and handle them when they occur, this education and training program is designed to present basic information in these areas. Topics include types of eyewashes and safety showers, working with corrosives, being prepared to use safety showers/eyewashes, assisting chemical splash victims and proper use of safety showers and eyewashes.

PROGRAM OBJECTIVES: After watching the program, participants will be able to explain the following:

- The characteristics of safety showers and eyewashes;
- How to access and maintain showers and eyewashes;
- How to use safety showers;
- How to use eyewashes.

INSTRUCTIONAL CONTENT:

INTRODUCTION

- No one wants to be in an accident. That's why we take so many precautions. We wear personal protective equipment and carefully select each piece of apparatus that we use.
- But accidents do happen, no matter how many precautions we take. When they do, quick action is imperative, and a safety shower or eyewash can be a godsend.

USES AND CHARACTERISTICS OF SHOWERS AND EYEWASHES

- There are several types of safety showers and eyewash stations. The best are simple. With one movement, the water starts to flow. The stream continues until a second movement is made to turn it off.
- The flow of water in a safety shower must be strong enough to immediately drench the victim. The unit should also provide enough water for at least fifteen minutes of continuous use.
- Eyewashes need to produce a soft stream or spray of aerated water. This should also last for at least fifteen minutes.
- Showers and eyewashes should be located wherever corrosive, infectious or other hazardous substances exist.
- Corrosives can be especially harmful. They can often cause severe damage to the skin and eyes.
- Corrosives include strong acids and bases, and both dehydrating and oxidizing agents. Nitric acid, for instance, produces a slow-healing, painful burn. Potassium hydroxide, a base, can inflict severe damage to the eyes.
- Of course, when you're working with these types of substances you should always wear personal protective equipment.
- You should also read the substances' Safety Data Sheets. These will tell you each substance's ingredients, properties and hazards.
- Your facility's Chemical Hygiene Plan will often provide additional information on the safe use of the chemicals.

ACCESSING AND MAINTAINING SHOWERS AND EYEWASHES

- No matter how safe you think you are, you should know the locations of the safety showers and eyewashes in your area, and how to use them. In fact, you should know how to find them with your eyes closed!
- It's important to make it easy for any victim to reach the showers and eyewashes in your labs. Keep access routes free of equipment and supplies. Shower areas themselves must also remain clear.
- The equipment should be routinely tested to make sure it's kept in peak condition. Accreditation agencies such as CAP require that showers and eyewashes be "stress tested" periodically. Your supervisor or Safety Manager will put

together a schedule.

- Showers and eyewashes must function properly at all times. The water should be checked to make sure it's potable, not stagnant. Results of the testing should be marked on a tag, dated and initialed.

USING SAFETY SHOWERS

- If you're splashed by a hazardous substance, don't panic. Call out for help, and get to a shower or eyewash, depending on the extent of the splash.
- If you find yourself helping with a victim, take charge. Make sure they are completely drenched. It usually requires two helpers to handle everything. Clothing should be soaked all the way through.
- Remove all personal protective equipment. Take special care with safety glasses and goggles.
- The victim's clothing should be removed to at least the underwear. This is no time for modesty. Don't forget to remove their shoes as well.
- If there isn't a retention basin under the shower, the wastewater should be surrounded with absorbent material. This will help to prevent the spread of contamination.
- After the initial deluge, the victim can move to a restroom or locker room to continue the shower. The victim should then remove the rest of their clothing. The entire showering time should be no less than 15 minutes.
- Anyone helping the victim may also be at risk. They will inevitably get wet. And while the shower dilutes the chemical that they're exposed to, they may also need to decontaminate.
- Disposal of the shower water can often be an issue. In some situations, the water will need to be disposed of as chemical waste. This is especially true if the spilled substance is radioactive.
- Stripped off clothing should be decontaminated prior to normal laundering. If the spilled substance is particularly hazardous, the clothing should be disposed of.
- If there's a drain under the shower, you must know whether it empties into a storage tank or the sewer. If it's the sewer, your supervisor may need to alert outside agencies.
- And remember, if a shower does have a drain, water should be kept in the trap at all times. This will keep sewer gases from seeping up into the room. These gases can be both flammable and toxic.

USING EYEWASHES

- If a chemical splashes into your eyes, an eyewash is what you should use. As we've said, it should provide a gentle, continuous stream of aerated water.
- You must get to the eyewash as quickly as possible. Hold the affected eye open with your fingers to get a complete rinse, both under and behind the eyelid.
- If only one eye was splashed, do not allow the water to transfer the contamination to the other eye.
- Once again, wash the area for at least fifteen minutes. The eye may feel better before then, but the damaging effects of many chemicals are sometimes slow acting.
- Some portable eyewash units don't supply fifteen minutes of water, so they can only be used for a quick, initial wash. The victim will still need a complete 15-minute rinse.
- Most hand-held drench hoses require constant hand pressure to operate. This doesn't allow both hands to be free for manipulating the injured eye, so a drench hose shouldn't be used as an eyewash.
- Small eyewash bottles should only be used when there is absolutely nothing else. Then the victim will need to get to another source of water immediately.
- Remember, safety showers and eyewashes are emergency equipment. After they're used, the victim should get immediate medical attention. And all uses of showers and eyewashes must be reported to your supervisor.

CONCLUSION

- Safety showers and eyewashes are as fundamental to the laboratory as hoods and pipettes. And you need to know how to use them in case of an emergency. Let's review.
- Know the locations of the safety showers and eyewashes in your laboratory. Keep routes to showers and eyewashes clear. Know what steps to take if a chemical splash does occur. And get splash victims medical attention immediately.
- By keeping your lab's safety showers and eyewashes in good shape and knowing how to use them, you may be able to prevent a serious injury, even save someone's eyesight!

SAFETY SHOWERS AND EYE WASHES IN THE LABORATORY

ANSWERS TO THE REVIEW QUIZ

1. a

2. a

3. b

4. a

5. a

6. b

SAFETY SHOWERS AND EYE WASHES IN THE LABORATORY
REVIEW QUIZ

Name _____ Date _____

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

1. Showers and eyewashes should be located wherever corrosive, infectious or other hazardous substances exist.
 - a. True
 - b. False

2. Safety equipment should be routinely tested to make sure it's kept in peak condition and the results of the testing should be marked on a tag, dated and initialed.
 - a. True
 - b. False

3. When using a safety shower, only the victim's PPE needs to be removed.
 - a. True
 - b. False

4. The entire showering time for a chemical splash victim should be no less than 15 minutes.
 - a. True
 - b. False

5. If a chemical splashes into your eyes, you must get to the eyewash as quickly as possible and wash the area for at least fifteen minutes.
 - a. True
 - b. False

6. Small eyewash bottles can be used as an acceptable alternative to an eyewash station with no need to flush the eyes further.
 - a. True
 - b. False