

SULFUR MUSTARD

Polk County Preparations

Because of ongoing concerns about potential terrorist attacks, the U.S. government is working to improve overall preparation against terrorism. One aspect of this preparation is to learn more about protecting ourselves against possible attacks using chemical agents.

If a public health emergency happens in our community, the Polk County Public Health Department will be the local agency responsible for preparing and guiding medical response and public information efforts. During such an emergency, a critical role of the Public Health Department will be to work with other local first responders, such as fire and police. The Public Health Department will also coordinate response activities with state and federal agencies.

The Polk County Public Health Department is providing information to help you understand what sulfur mustard is and what kind of response you should take in the unlikely event that you would be exposed to sulfur mustard.

What is Sulfur Mustard?

Sulfur mustard or mustard gas is a type of chemical weapon agent. These types of agents are called vesicants or blistering agents because they cause blistering of the skin on contact. Sulfur mustard sometimes smells like garlic, onions or mustard and sometimes it has no odor. It can be a gas, a liquid or a solid. Sulfur mustard can also be clear to yellow or brown in its liquid or solid form.

Sulfur mustard is not found naturally. Until recently, it was available to treat the skin condition psoriasis. Currently it has no medical use.

Sulfur Mustard and Terrorism

Sulfur mustard was introduced in World War I as a chemical warfare agent and was made in large amounts during World Wars I and II. It was reportedly used in the Iran-Iraq war in 1980-1988. It is not presently used in the United States except for research purposes.

People may not know right away that they have been exposed because sulfur mustard often has no smell or has a smell that might not cause alarm. Exposure to sulfur mustard is usually not fatal. If sulfur mustard is released into the air as a gas, people can be exposed through their skin, eyes, nose and mouth.

Sulfur mustard gas can be carried long distances by wind. If it is released into water, people can be exposed by drinking the contaminated water or getting it on their skin. Sulfur mustard can last from 1 to 2 days in the environment under average weather conditions, and from weeks to months under very cold conditions.

In the event of a terrorist attack with sulfur mustard, the Public Health Department and emergency officials will provide emergency information and instructions on how to protect yourself and your family. You may be asked to evacuate (leave the area) or shelter-in-place (remain inside a building). In either case, it is important that you and your family have an Emergency Preparation Plan.

Symptoms of Exposure to Sulfur Mustard

Sulfur mustard often has no smell or has a smell that might not cause alarm. Typically, signs and symptoms do not occur immediately and you may not know if you have been exposed to sulfur mustard. Depending on the severity of the exposure, symptoms may not occur for 2 to 24 hours. Some people are more sensitive to sulfur mustard and may have symptoms sooner.

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The symptoms of exposure can include the following: redness and itching of the skin, changing eventually to yellow blisters. Irritation, redness, pain, swelling and watering of the eyes may occur within 3 to 12 hours of a mild to moderate exposure. A severe exposure may cause symptoms within 1 to 2 hours and may include sensitivity when exposed to mild or moderate light, severe pain or blindness lasting up to 10 days.

Runny nose, sneezing, sore throat, tightness in the chest, hoarseness, bloody nose, sinus pain, shortness of breath and cough can occur within 12 to 24 hours of a mild exposure and within 2 to 4 hours of a severe exposure.

Abdominal pain, diarrhea, fever, nausea and vomiting may occur if sulfur mustard has been swallowed.

Other severe symptoms can include tremors, convulsions, paralysis and coma.

Treatment for Exposure to Sulfur Mustard

The most important factor is removing sulfur mustard from the body. Exposure to sulfur mustard is treated by providing supportive medical care to minimize the effects of the exposure. Though no antidote exists for sulfur mustard, exposure is usually not fatal.

If You Were Exposed to Sulfur Mustard:

- **Immediately leave the area** where the sulfur mustard was released. Move to higher ground because sulfur mustard is heavier than air and will settle in low-lying areas.
- **Quickly remove clothing.** If possible, cut clothing off the body instead of pulling it over the head since it may get onto the skin. Avoid touching the contaminated clothing. If you are helping other people -- use gloves.
- **Place your clothing, contact lenses, shoes, etc. inside a plastic bag.** If you can, wear rubber gloves and use tongs, stick, etc. or turn the bag inside out to pick up the clothes. Seal the bag and place it inside another plastic bag. This will help protect you and other people from the sulfur mustard that might be on the items.
- **As quickly as possible, wash any sulfur mustard from your skin** with large amounts of regular soap and water.
- **If your eyes are burning or your vision is blurred, rinse your eyes with plain water** for 10 to 15 minutes. If you wear contacts, remove them and dispose of them with the contaminated clothing. If eyeglasses or jewelry are exposed to sulfur mustard, wash them with soap and water. You can put them back on after washing.
- **When the emergency personnel arrive,** tell them what you did with your clothes and other items. The emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.
- **If someone has swallowed sulfur mustard, do not induce vomiting.** Give the person milk to drink.
- **Seek medical attention right away.** Stay calm. Dial 911 and explain what has happened.

If you have any questions about sulfur mustard, please contact the **Polk County Health Department at 515-286-3798**. Public Health Department staff members are available to answer your questions Monday to Friday from 8 a.m. to 5 p.m.

For information about putting together an Emergency Preparation Plan, visit the Department of Homeland Security site at www.ready.gov. Also, see the Centers for Disease Control and Prevention's Web site at www.bt.cdc.gov for additional information.

