

Blister Agents

Chemical Stockpile Emergency Preparedness Program

The Umatilla Chemical Depot stores liquid blister agent, commonly known as mustard, which could hurt you in a chemical stockpile accident. Mustard can seriously injure your eyes, nose, throat, lungs and skin within seconds to minutes even though symptoms may not appear right away. It is important to **immediately** take shelter in a sealed room or leave the area to protect yourself if you are instructed to do so.

How can I be hurt?

It would take an accident such as an explosion or fire. In a fire, most of the agent would burn up, but some would stay in the smoke. Emergency officials call this smoky cloud and the invisible parts around it “the plume.”

As the plume drifts away from the scene of the accident, small drops of the blister agent may fall to the ground. These liquid drops are called the *aerosol*. The *aerosol* can hurt you if it falls on you or if you touch, eat or drink something that the *aerosol* has contaminated. This is very unlikely because the *aerosol* is heavy and quickly falls out of the plume close to the accident site.

Some tiny parts of the mustard, called *vapor*, stay in the plume as it drifts from the accident. If you breathe the vapor, it can hurt you. Because the *vapor* travels farther from the accident than the aerosol, it is the greater danger over a large area. Do not depend on seeing or smelling mustard vapors when asked to take protective action. Invisible mustard *vapors* will expand beyond any visible smoke, and the faint garlic-like odor of mustard is not a trustworthy sign of hazard because you can be hurt by lower levels of vapor that you can't smell. However, the *vapor* becomes less harmful the farther the plume travels. That's because wind mixes clean air with the contaminated air as the plume travels. The clean air dilutes the agent until it is no longer harmful.

Think of it this way. Like mustard, perfume in a bottle is liquid. When you spray it, the liquid becomes an *aerosol*. If you spray the perfume on yourself, drops will cling to your skin, hair and clothes. If you are on the other side of the room or if you spray the perfume away from yourself, the *aerosol* drops won't touch your skin or clothing but you still smell the fragrance. That fragrance is the *vapor*.

How will I know if I've been exposed?

Symptoms of mustard exposure may not show up for two to 24 or more hours. Symptoms may include redness and stinging of eyes or skin, followed by skin blisters; burning of the nose and sinuses; sore throat; and hoarseness or coughing. The severity of exposure depends on how much mustard is in the *vapor* and how long you are around it.

If you were outside before taking shelter or leaving the area and think you may have been exposed to mustard, there are several things you can do. If you are in a sealed shelter, take off at least your outer clothes, put them in a plastic bag and seal the bag. If water is available in the shelter, wash or take a cool to warm (not hot) shower, using lots of soap and water. Do not put soap in your eyes; just use lots of water. If you leave the area, tell emergency responders or medical staff at your destination that you may have been exposed. They are trained to help you. Tell emergency responders about the sealed bag so that they can arrange for its safe removal after the emergency.

If you have symptoms of mustard exposure, call for medical help immediately and follow those instructions. Don't ventilate or leave your sealed shelter until you are told to do so. Remember, avoiding the mustard vapor always should be your primary goal.