



Office of Health Emergency Management

The Facts on SARIN

Because of recent terrorist events, people have expressed concern about the possibility of a terrorist attack involving chemical agents such as sarin, phosgene, cyanide, or other agents. The Office of Health Emergency Management (OHEM) has prepared several fact sheets to help you understand the different types of chemical threats and how they could affect your health.

What is sarin?

Sarin is a human-made chemical warfare agent classified as a nerve agent. Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents. They are similar to certain kinds of pesticides (insect killers) called organophosphates in terms of how they work and what kind of harmful effects they cause. Sarin is a clear, colorless, and tasteless liquid that has no odor in its pure form. However, sarin can evaporate into a vapor (gas) and

spread into the environment. It is also known as GB.

Where is sarin found and how is it used?

Sarin and other nerve agents may have been used in chemical warfare during the Iran-Iraq War in the 1980s. Sarin was used in two terrorist attacks in Japan in 1994 and 1995. Sarin is not found naturally in the environment.

How could I be exposed to sarin?

Following release of sarin into the air, people can be exposed through skin contact or eye contact. They can also be exposed by breathing air that contains sarin. Sarin mixes easily with water, so it could be used to poison water. Following release of sarin into water, people can be exposed by touching or drinking water that contains sarin. Following contamination of food with sarin, people can be exposed by eating the con-

taminated food. A person's clothing can release sarin for about 30 minutes after it has come in contact with sarin vapor, which can lead to exposure of other people. Because sarin vapor is heavier than air, it will sink to low-lying areas and create a greater exposure hazard there.

How does sarin work?

The extent of poisoning caused by sarin depends on the amount of sarin to which a person was exposed, how the person was exposed, and the length of time of the exposure. Symptoms will appear within a few seconds after exposure to the vapor form of sarin and within a few minutes up to 18 hours after exposure to the liquid form.

Sarin is the most volatile of the nerve agents, which means that it can easily and quickly evaporate from a liquid into a vapor and spread into the envi-

ronment. People can be exposed to the vapor even if they do not come in contact with the liquid form of sarin. Because it evaporates so quickly, sarin presents an immediate but short-lived threat. Immediate signs and symptoms of sarin [exposure](#). People may not know that they were exposed because sarin has no odor.

What are the symptoms of sarin poisoning?

People exposed to a low or moderate dose of sarin by breathing contaminated air, eating contaminated food, drinking contaminated water, or touching contaminated surfaces may experience some or all of the following symptoms within seconds to hours of exposure:

Runny nose or watery eyes

Small, pinpoint pupils

Eye pain or blurred vision

Drooling and excessive sweating

Cough or chest tightness

Rapid breathing

Diarrhea or increased urination

Confusion, drowsiness and weakness

Headache

Nausea, vomiting, and/or abdominal pain

Slow or fast heart rate

Low or high blood pressure

Even a small drop of sarin on the skin can cause sweating and muscle twitching where sarin

touched the skin. Exposure to large doses of sarin by any route may result in the following harmful health effects:

Loss of consciousness

Convulsions

Paralysis

Respiratory failure possibly leading to death

Showing these signs and symptoms does not necessarily mean that a person has been exposed to sarin.

What are the long-term effects of sarin exposure?

Mild or moderately exposed people usually recover completely. Severely exposed people are not likely to survive. Unlike some organophosphate pesticides, nerve agents have not been associated with neurological problems lasting more than 1-2 weeks after the exposure.

How can I protect myself if I'm exposed to sarin?

Recovery from sarin exposure is possible with treatment, but the antidotes available must be used quickly to be effective. Therefore, the best thing to do is avoid exposure.

Leave the area where the sarin was released and get to fresh air. Quickly moving to an area where fresh air is available is highly effective in reducing the possibility of death from exposure to sarin vapor. If the sarin release was outdoors, move away from the area

where the sarin was released. Go to the highest ground possible, because sarin is heavier than air and will sink to low-lying areas. If the sarin release was indoors, get out of the building. If people think they may have been exposed, they should remove their clothing, rapidly wash their entire body with soap and water, and get medical care as quickly as possible.

How is sarin exposure treated?

Treatment consists of removing sarin from the body as soon as possible and providing supportive medical care in a hospital setting. Antidotes are available for sarin. They are most useful if given as soon as possible after exposure.

For more information on emergency health preparedness, contact the Office of Health Emergency Management (OHEM) at 505/476-7701 or visit our website at www.health.state.nm.us/ohem