



Salem/Cumberland County Health Department
SOMAN
(PUBLIC HANDOUT)



What is Soman?

Soman is a human-made warfare agent classified as a nerve agent. It was originally developed as an insecticide in Germany in 1944. Soman is a clear, colorless, tasteless liquid with a slight odor similar to Vicks Vapo-Rub or a rotting fruit odor.

What are the symptoms of exposure to Soman?

Although Soman has a fruity odor or an odor similar to Vicks Vapo-Rub, the odor may not be noticeable enough to give people sufficient warning against a toxic exposure. People exposed to a low or moderate dose of Soman by inhalation, ingestion (swallowing), or skin absorption may experience some or all of the following symptoms within seconds to hours of exposure:

- Runny nose
- Watery eyes
- Small, pinpoint pupils
- Eye pain
- Blurred vision
- Drooling and excessive sweating
- Cough



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- Chest tightness
- Rapid breathing
- Diarrhea
- Increased urination
- Confusion
- Drowsiness
- Weakness
- Headache
- Nausea, vomiting, and/or abdominal pain
- Slow or fast heart rate
- Abnormally low or high blood pressure

Even a tiny drop of nerve agent on the skin can cause sweating and muscle twitching where the agent touched the skin. Exposure to a large dose of Soman by any route may result in these additional health effects:

- Loss of consciousness
- Convulsions
- Paralysis
- Respiratory failure possibly leading to death

Showing these symptoms does not necessarily mean that a person has been exposed to Soman.



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Where is Soman found and how is it used?

Soman is not found naturally in the environment. It is possible that Soman or other nerve agents were used in chemical warfare during the Iran-Iraq War in the 1980s.

How are people exposed to Soman?

If it is released into the air:

People can be exposed through skin contact, eye contact, or inhalation (breathing in Soman).

If it is released into the water:

Soman mixes easily into water, so it could be used to poison water. Following release of Soman into water, people can be exposed by drinking contaminated water or by getting contaminated water into the skin.

If it is put into food:

People can be exposed by eating the contaminated food.

Also note:

- ✓ A person's clothing can release Soman for about 30 minutes after contact with Soman vapor, which can lead to exposure of other people.



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- ✓ Soman breaks down slowly in the body, meaning that repeated exposures to Soman and/or other nerve agents can build up in the body.
- ✓ Because Soman vapor is heavier than air, it will sink to low-lying areas to create a greater exposure hazard there.

What are the long-term health effects of exposure to

Soman?

Those exposed to mild or moderate doses of Soman usually recover completely. Those exposed to severe doses Soman are not likely to survive. Unlike some pesticides, nerve agents have not been associated with neurological problems (of the nervous system) lasting more than 1-2 weeks after the exposure.

How can people protect themselves and what should they

do if they are exposed to Soman?

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



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- Leave the area where the Soman 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 Soman.
 - If the Soman release was outdoors, move away from the area where the Soman was released. Go to the highest ground possible, because Soman is heavier than air and will sink to low-lying areas.
 - If the Soman release was indoors, get out of the building.
- If you think you may have been exposed, remove your clothing, quickly wash your entire body with soap and water, and get medical care as quickly as possible.
- Removing and disposing of clothing:
 - Quickly take off clothing that has liquid Soman on it. Any clothing that has to be pulled over the head should be cut off the body instead of pulled over the head. If possible, seal the clothing in a plastic bag.
 - Then seal the first plastic bag in a second plastic bag. Removing and sealing the clothing in this way will help protect you and other people from any chemicals that might be on your clothes.
 - If you placed your clothes in plastic bags, inform either the local or state health department or emergency



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personnel upon their arrival. Do not handle the plastic bags.

- If you are helping other people remove their clothing, try to avoid touching any contaminated areas, and remove the clothing as quickly as possible.
- Washing the body:
 - As quickly as possible, wash any liquid Soman from your skin with large amounts of soap and water.
 - Washing with soap and water will help protect people from any chemicals on their bodies.
 - 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 place them in the bags with the contaminated clothing. Do not put the contacts back in your eyes. If you wear eyeglasses, wash them with soap and water. You can put the eyeglasses back on after you wash them.
- If you have ingested (swallowed) Soman, do not induce vomiting or drink fluids.
- **Seek medical attention right away. Dial 911 and explain what has happened.**

How is exposure to Soman treated?

Treatment consists of removing Soman from the body as soon as possible and providing supportive medical care in a



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hospital setting. Remedies are available for Soman. They are most useful if given as soon as possible after exposure.

Where can people get more information about Soman?

- Poison Control Center: 1-800-222-1222
- Centers for Disease Control and Prevention
 - English: 1-888-246-2675
 - Spanish: 1-888-246-2857