

## NERVE AGENTS

### What are nerve agents?

Nerve agents are man-made chemical substances that could be used in wars. Many of these chemicals affect the nervous system and are therefore called nerve agents. Nerve agents are similar to certain insect killers (pesticides) in how they work and the kinds of harmful things they do to the body. In fact, these chemicals were first developed in Europe as pesticides; however, the chemicals were so strong that they were able to kill humans as well as insects.

Nerve agents are among the most poisonous of the known chemical agents. They also act the fastest. Some of the most common nerve agents are sarin, soman, tabun and VX.

### How can someone come into contact with nerve agents?

Nerve agent poisoning does not spread from person to person. Accidental contact with nerve agents is not likely; it would take a planned act to make a nerve agent and use it to poison people.

**Nerve agents as weapons:** Poisoning from nerve agents can happen through —

- 1) ingestion, eating or drinking something that has a nerve agent in it;
- 2) inhalation, breathing in air that has a nerve agent in it; or
- 3) dermal (skin) contact, having a nerve agent touch your skin or open wound.

### How likely is someone to die from nerve agents?

Nerve agents are very toxic, even if very small amounts are breathed in, swallowed or come in contact with skin or eyes. A person who comes into contact with a nerve agent may not be able to move his/her muscles. It could take up to 10 minutes after contact with the poison to experience this paralysis.

Death can result within a few minutes to several hours, depending on the *kind* of agent, the *amount* of agent and the length of time the person is in contact with the agent. If a person can walk and talk after coming into contact with a nerve agent, it is not likely that they will feel serious symptoms.

### What happens if someone gets sick from nerve agents?

Symptoms of nerve agent poisonings may include the following:

- runny nose
- chest tightness
- shortness of breath
- sweating
- nausea
- vomiting
- stomach cramps
- muscle twitching
- confusion
- seizures
- paralysis
- coma
- death

A person may be tired, crabby, nervous and forgetful for several weeks after recovery from a nerve agent poisoning.

### What is the treatment for nerve agent poisoning?

- **Prevention of illness after contact:** First, leave the area where the nerve agent was released and move to fresh air.

(Nerve agents continued)

- **Remove clothing.**
  - Quickly take off clothing that may have the chemical on it. If possible, any clothing that has to be pulled over the head should be cut off the body instead so the chemical does not get near the eyes, mouth or nose. If helping other people remove their clothing, try to avoid touching any areas that may have the chemical on them, and remove the clothing as fast as possible.
- **Wash affected areas.**
  - As quickly as possible, wash any chemical from the skin with lots of soap and water.
  - If the eyes are burning or vision is blurred, rinse the eyes with plain water for 10 to 15 minutes.
  - If contact lenses are worn, remove them and put them with the clothing. Do not put the contacts back in. If eyeglasses are worn, wash them with soap and water. Eyeglasses can be put back on after they are washed.
- **Discard contaminated items.**
  - Place the clothing and any other contaminated items that may have come into contact with the chemical inside a plastic bag. Avoid touching them by wearing rubber gloves, turning the bag inside out and using it to pick up the clothing, or putting the clothing in the bag using tongs, tool handles, sticks or similar objects. Anything that touches the contaminated clothing should also be placed in the bag.
  - Seal the bag, and then seal that bag inside another plastic bag.
  - Contact the local county health department right away. (Visit [www.idph.state.il.us//local/alpha.htm](http://www.idph.state.il.us//local/alpha.htm) for a listing of all county health departments in Illinois or check your local phone book.)
  - When the local or state health department or emergency personnel arrive, tell them what you did with the contaminated clothes. The health department or emergency personnel will arrange for further disposal. Do not handle the plastic bags yourself.
- **Treatment of illness:** If symptoms are serious, hospitals and other health care experts may use medicines to treat nerve agent poisonings.

### **Is there a vaccine for nerve agents?**

No, there is no vaccine for nerve agents.

### **What should be done if someone comes into contact with a nerve agent?**

If you think that you or someone you know may have come into contact with a nerve agent, contact the local county health department right away. (Visit [www.idph.state.il.us//local/alpha.htm](http://www.idph.state.il.us//local/alpha.htm) for a listing of all county health departments in Illinois or check your local phone book.)

If you are showing symptoms of nerve agent poisoning, call your doctor or the Illinois Poison Center right away. The toll-free number for the poison center is 1-800-222-1222.

### **Where can one get more information about nerve agents?**

- U.S. Centers for Disease Control and Prevention      [www.bt.cdc.gov/agent/agentlistchem-category.asp#nerve](http://www.bt.cdc.gov/agent/agentlistchem-category.asp#nerve)
- Illinois Department of Public Health                      [www.idph.state.il.us](http://www.idph.state.il.us)
- Illinois Poison Center    [www.IllinoisPoisonCenter.org](http://www.IllinoisPoisonCenter.org)