

# NERVE AGENT DISASTER RESPONSE

## **Background:**

Sarin is a chemical agent that is odorless, tasteless and colorless. It is called a nerve agent because it can affect the nervous system. It can be in a gas or liquid. Vaporized Sarin stays near the ground and remains deadly in warm, dry temperatures. Sarin can be breathed in or absorbed through the skin. Even a small amount can be deadly.

There are antidotes, but they must be used quickly to be effective. It cannot be guaranteed that the antidote will be available in time to be effective.

## **Basic Facts and History:**

- Sarin can be a gas or liquid
- Even small amounts can be lethal
- Sarin is absorbed through the skin or respiratory tract and causes severe respiratory damage
- Sarin is a nerve agent that is odorless, colorless, and tasteless
- Nerve agents are the most toxic and rapidly acting of the known chemical warfare agents
- Nerve agents prevent the proper operation of the chemical that acts as the body's "off switch" for glands and muscles. Without an "off switch," the glands and muscles are constantly being stimulated. They tire and are no longer able to sustain breathing functions.
- Sarin was originally developed in 1938 in Germany as a pesticide
- Sarin is not found naturally in the environment
- Vaporized Sarin stays near the ground
- Sarin remains deadly in warm, dry temperatures but can break down in humidity

## **Sarin as a Weapon:**

- Sarin can be released into the air and expose people through ingestion or contact with the skin and eyes.
- Sarin can be released into water and expose people who touch or drink it.
- Sarin can contaminate food.
- Sarin is most dangerous in enclosed spaces.
- Sarin was used by Aum Shinrikyo, a Japanese cult, in a 1995 Tokyo subway attack, which demonstrated its effectiveness as a terrorist weapon.

## **Symptoms:**

- Difficulty breathing, tightness in chest, and respiratory arrest
- Nausea, drowsiness, vomiting, and diarrhea
- Confusion and seizures
- Drooling, runny nose, eye irritation, and tearing
- Severe muscle weakness

## **Diagnosis and Treatment:**

- With large doses, death can occur within seconds to minutes after exposure
- Quickly determining that Sarin is responsible for symptoms is key to successful treatment
- Atropine and pralidoxime are the preferred antidotes, but must be given quickly to be effective
- Oxygen should be administered to those having difficulty breathing

## **Lessening the Impact of Nerve Agent Exposure:**

- Leave the site of exposure and move to higher ground for fresh air
- Begin decontamination by taking off clothes and jewelry
- To prevent further exposure to eyes, nose, and skin, clothes that would be pulled over your head should be cut off instead
- If possible seal items in a plastic bag and then seal that bag in another plastic bag
- Immediately wash body with lots of water
- Rinse irritated eyes for 10-15 minutes with plain water
- Do not induce vomiting or drink fluids



# NERVE AGENT DISASTER RESPONSE TEMPLATE cont'd.

- Seek medical attention immediately



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