

NERVE AGENT VX

Nerve agent VX is a member of the organophosphate family, similar to present day insecticides. It is a clear odorless and tasteless liquid with an appearance similar to that of motor oil. VX can become an aerosol (very small droplets) through explosion, or a vapor through heating. It is heavier than water and evaporates at about the same rate as light weight motor oil.

VX is considered a very persistent agent. If released, the liquid would be expected to stay in the environment for days to weeks before evaporating. The length of persistency is dependent on the amount of agent present and weather conditions. High temperature, humidity, wind and moisture lead to less persistency.

VX is highly toxic in its liquid, aerosol and vapor forms. It is most hazardous when absorbed through the skin. As a vapor or aerosol it can be inhaled and absorbed through the lungs. It can also be absorbed through the digestive system if eaten or swallowed.

VX is a rapid-acting, lethal nerve agent that affects the nervous system by interfering with the signals sent from the brain to the vital organs and other parts of the body. VX affects the body by blocking the action of the enzyme acetylcholinesterase (ACh).

When the enzyme is blocked, messages from the brain are short-circuited at the nerve endings. As a result, hyperactivity occurs in the organs stimulated by the nerves.

Severity of VX poisoning generally depends on the dosage received and the route of exposure.

Atropine and 2-PAM Chloride are pharmaceutical antidotes that relieve the symptoms of VX exposure.

They must be injected immediately after exposure to be effective.

Decontamination procedures must be followed prior to handling or providing first aid to someone suspected of agent exposure. A solution of common household bleach and water, followed by a water rinse, can be used to decontaminate the skin where contact was made with VX. Only clean water (no bleach or other chemicals) should be used to remove agent from the eyes.

Long-term effects of VX poisoning are not fully understood. With more serious exposures, long term psychiatric effects such as depression and anxiety may be present for weeks and then disappear. This agent is not known to cause cancer or birth defects.

Symptoms of VX poisoning

Pinpointed pupils	Involuntary defecation
Runny nose	Localized involuntary muscular movement
Difficulty breathing	Convulsions
Nausea	Cessation of breathing
Vomiting	
Involuntary urination	

