

Tabun (GA)

What is tabun (GA)?

Tabun is a highly toxic substance belonging to a class of chemicals known as nerve agents. Tabun, also referred to as GA, is clear and has a slight fruity odor. It is not naturally-occurring. When heated, liquid tabun readily turns into a gas.

Tabun and other nerve agents are structurally similar to a family of common insecticides called organophosphates, but they are much more potent. As the name implies, nerve agents work by attacking the nervous system.

Can tabun be used as an attack agent?

Nerve agents, including tabun, are classified as weapons of mass destruction. They can be dispersed from missiles, artillery shells, land mines, spray tanks, and by other methods. Because tabun vaporizes when heated, breathing air containing tabun is particularly dangerous.

How are people exposed to tabun?

There are several ways that people can be exposed to tabun. The most likely way is for people to breathe air containing tabun gas or droplets. People also can be exposed when liquid tabun or droplets come into contact with the skin or eyes. Because tabun mixes easily with water, it has the potential to be used as a poison for food and water supplies. Clothing from a contaminated person can release vapors for about 30 minutes after exposure, thus endangering people who were not in an original area of release.

Effects from inhaling tabun gas are usually immediate, while effects from exposure to liquid tabun may be immediate or delayed.

What should you do if you are exposed to tabun?

If you are in an area where tabun has been released, leave quickly and go to an area with fresh air. If the release is outdoors, move to higher ground. Because tabun gas is heavier than air, it will sink to low-lying areas.

Remove your outer clothing, taking care not to touch the outside of your clothing to your skin. Carefully put contaminated clothing in plastic bags, and set them aside for proper disposal by authorities. Clothing contaminated with tabun should never be washed or worn again.

Decontaminate yourself by washing your body thoroughly with soap and water, preferably outdoors to avoid contaminating indoor facilities. The sun also will help degrade the tabun. Rinse your eyes with water for 10 to 15 minutes. Then quickly seek medical attention.

How does tabun affect the body?

Tabun and other nerve agents work by interfering with an enzyme critical to the normal control of nerve impulses to muscles, glands and other nerve cells in the brain, resulting in numerous reactions.

Signs and symptoms of low to moderate exposure include:

- Nausea and vomiting
- Abdominal cramps and diarrhea
- Small, pinpoint pupils
- Runny eyes and nose
- Blurred vision and aching eyes
- Excessive drooling and sweating
- Uncontrolled urination
- Tightness in the chest
- Slow breathing followed by rapid breathing that may become slow again*
- Slow heart rate followed by fast heart rate that may become slow again*
- Low blood pressure followed by high blood pressure that may become low again*
- Drowsiness
- Confusion

Large doses may cause the following symptoms:

- Uncontrolled muscle tremors and contractions
- Convulsions
- Loss of consciousness
- Paralysis
- Respiratory failure
- Death

People who experience mild or moderate exposure may recover completely. Severe exposure is often fatal.

How is tabun exposure treated?

Exposure to tabun can be treated with specific antidotes – atropine and pralidoxime chloride (2-PAM) – along with supportive medical care in a hospital. These nerve agent antidotes are most effective when given within minutes after exposure.

**Respiratory rate, heart rate and blood pressure follow a similar cycle. Reaction to the toxin causes an initial decrease. Then, to compensate for low levels of oxygen in the blood and brain, rates increase. The cycle may end with rates becoming slow again.*