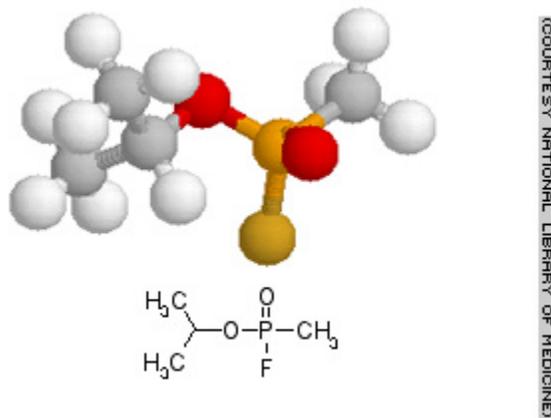


# SARIN

## Overview

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**Sarin** is a [chemical warfare agent](#) that was first synthesized in 1938 by [Gerhard Schrader](#) and his team of chemists. It was produced commercially in numerous countries throughout the world but its production, stockpiling and use were outlawed by the 1993 [Chemical Weapons Convention](#).



## Pharmacology and Metabolism

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Like all [Nerve Agents](#) it inhibits cholinesterase production and results in very high levels of acetylcholine.

## Health Effects

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From the [#CDC](#):

People may not know that they were exposed because **sarin** has no odor. People exposed to a low or moderate dose of **sarin** by breathing contaminated air, eating contaminated food, drinking contaminated water, or touching contaminated surfaces 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

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

Even a small drop of **sarin** on the skin can cause sweating and muscle twitching where **sarin** touched the skin. Exposure to large doses of sarin by any route may result in the following harmful health effects:

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

Mild or moderately exposed people usually recover completely. Severely exposed people are not likely to survive. Unlike some [organophosphate](#) pesticides, nerve agents have not been associated with neurological problems lasting more than 1 to 2 weeks after the exposure.

## Precaution

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From [#CDC](#):

*How people can protect themselves, and what they should do if they are exposed to sarin: \_*

- ♣ Recovery from sarin exposure is possible with treatment, but the antidotes available must be used quickly to be effective. Therefore, the best thing to do is avoid exposure.
- ♣ Leave the area where the sarin 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 **sarin** vapor.
- ♣ If the sarin release was outdoors, move away from the area where the **sarin** was released. Go to the highest ground possible, because sarin is heavier than air and will sink to low-lying areas.
- ♣ If the sarin release was indoors, get out of the building.

*If people think they may have been exposed, they should remove their clothing, rapidly wash their 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 sarin 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 people from any chemicals that might be on their clothes.
- ♣ If clothes were placed in plastic bags, inform either the local or state health department or emergency personnel upon their arrival. Do not handle the plastic bags.
- ♣ If 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 sarin from the skin with large amounts of soap and water. Washing with soap and water will help protect people from any chemicals on their bodies.
- ♣ Rinse the eyes with plain water for 10 to 15 minutes if they are burning or if vision is blurred.
- ♣ If sarin has been swallowed, do not induce vomiting or give fluids to drink.
- ♣ Seek medical attention immediately. Dial 911 and explain what has happened.

## Regulation

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Its production, stockpiling, and use are outlawed by the [Chemical Weapons Convention](#). See the [Chemical Weapons](#) page for a more complete regulatory history.

Source : <http://www.toxipedia.org/display/toxipedia/Sarin>