

# How Sarin nerve gas works

The use of sarin, the most likely nerve agent used in the Damascus chemical attack, is difficult to prove. To gather good evidence, UN inspectors need soil, blood or hair samples directly from the area of attack or its victims for examination in certified laboratories



**SARIN:** Man-made nerve gas developed during World War II. Quickly breaks down after release but minuscule amounts can persist in victims' blood for 16-26 days

Nerve cell

## NERVE GAS ACTION

Nervous system relies on transmission of signals through nerve junctions called **synapses**

Electrical impulse

Impulse triggers release of chemical neurotransmitter, **acetylcholine (ACh)**

Enzyme breaks **ACh** down to free up receptor site – preventing over-stimulation

**Sarin molecules block enzyme that breaks down ACh and so increases ACh level at receptor**

Receptor molecules

**ACh** attaches to receptor molecule, stimulating cell to fire off impulses

Post-synaptic cell

Receptor continually fires off impulses as victim rapidly loses control of vital functions

## SARIN FACTFILE

**Appearance:** Odourless, tasteless, colourless

**Form:** Liquid vaporises quickly into gas and spreads

**Absorption:** Contact with skin, inhalation or ingestion

**Effects:** Inhalation can cause death within 1-10 minutes of exposure