

SIU chemical warfare expert warns mustard gas has no antidotes

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If U.S. troops clash with Iraqi forces in Kuwait, they may face a barrage of chemical weapons.

Satu Somani, 53, a professor of toxicology and pharmacology at the Southern Illinois School of Medicine in Springfield, said U.S. soldiers can protect themselves better than the thousands of helpless Kurds who Saddam Hussein reportedly gassed in 1988 — but it's in everybody's interest to avoid using these weapons.

"They (the Iraqis) have these gases," Somani said. "That is why we have to be more cautious. Because these gases were not previously used in the war, and they are extremely dangerous."

Nerve gases are odorless and colorless. After exposure they cause paralysis, respiratory failure and, within five to 24 minutes, death, Somani said. Seizures occur as the central nervous system is attacked.

Mustard gas is a clear, oily liquid that smells like garlic or onion. Mustard, and the vapor it gives off, can penetrate clothing. Mustard causes sneezing, nasal bleeding and a burning sore throat. The eyes begin to hurt after two or three hours. Twenty-four hours after exposure, mustard-gas tears ooze from bulging eyes, and the patient becomes temporarily blind, Somani said. After 48 hours, pneumonia sets in.

During the Reagan administration, Somani participated in an Army-funded project to find antidotes for nerve gas. Small amounts of nerve gas can be found in common household insecticides, said Somani, who has contributed numerous articles on nerve and mustard gas to medical journals, and is currently working on a book on the subject.

The best form of protection against chemical weapons is protective wear — masks, gloves, boots, etc. Certain drugs can act as antidotes against nerve gas, and, to some extent, mustard gas, Somani said.

"The question is the proper antidote," he said. "It is very, very important."



Satu Somani

An antidote for nerve gas can be effective if it is taken minutes before exposure. U.S. troops have these antidotes, Somani said.

Nerve gas attacks enzymes in the body, shutting down the nervous system. The antidote attaches to enzymes before the nerve gas, "and when nerve gas gets into the body, it does not have a place to sit on the enzyme," Somani said. "And in two minutes of time, this nerve gas is deactivated in the body. This antidote then comes off from the enzyme ... and the processes of the body go on."

In most cases, the person is fine in 15 to 20 minutes if given the proper antidote prior to nerve gas exposure, Somani says.

"They will be effective," Somani said of nerve gas antidotes. "There are side effects. The side effects will be a little fatigue and salivation."

Mustard gas seems more heinous than nerve gas, and there is no effective antidote, Somani said.

"It has a slow, poisoning effect," he said. "It lingers a much longer time in the body. It acts on the skin, eyes and lungs."

It was mustard gas that Saddam reportedly used on Kurdish rebels and civilians in September 1988. Reports estimated as many as 2,400 people were killed in one gassing.