

Contributors

Christopher Reddy: The growing menace of chemical war

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IRAQI INSURGENTS are now using suicide bombs laden with chlorine gas, a significant expansion in terrorism.

Victims of chlorine gas die miserably, as I learned as an undergraduate chemistry major. If the bombs are properly rigged, they will explode and release the gas into the atmosphere. Since chlorine gas is denser than air, it sinks and is then inhaled. It attacks the mucous membranes and causes fluid to accumulate in lungs. Those who perish from it drown with blue faces, black lips and clenched fists.

U.S. military personnel are prepared for chlorine gas and other, more sophisticated chemical weapons, but Iraqi civilians have little or no protection.

Who is to blame? History points to World War I, sometimes called "The Chemist's War," for modernizing and using chemical weaponry. Despite previous bans at the Hague Conventions of 1899 and 1907, both sides used chlorine gas, although the Germans initiated it.

About one million soldiers would be killed or injured by chlorine gas and other chemical weapons in the war. It was argued that such weapons would save lives by shortening the war. In any event, they certainly struck great fear into soldiers and reduced morale.

After World War I and following the Treaty of Versailles (1919) and the Third Geneva Convention (1925), chemicals were used infrequently on soldiers. Of course, Hitler did use gas on civilians during the Holocaust.

However, in the past several decades, Saddam Hussein gassed Iranian troops and killed about 20,000. He then attacked Kurds living in northern Iraq with mustard gas, and possibly other chemicals.

Why are insurgents using chlorine gas? There are numerous reasons. Chlorine gas is readily accessible, one of the most common chemicals in the world. The bombs are also easy to make. Books at your local bookstore provide schematics of chemical bombs used in World War I.

The insurgents' use of gas could be the beginning of an escalation to such nerve agents as tabun, sarin, and VX gas, or dirty bombs made from radioactive elements.

We need to galvanize all countries to condemn such weapons. The acts of suicide bombers are horrifying enough with conventional explosives. Now, their use of chemical weapons is a move toward an advanced, even more horrifying stage of terrorism. It should also signal to us the need to accelerate our efforts to address the root causes of such desperation, since there is no weapon other than diplomacy that can counter it.

Christopher Reddy, an occasional contributor, is a scientist at the Woods Hole Oceanographic Institution and studies chlorinated compounds in the ocean. He is also a fellow in the Aldo Leopold Leadership Program, which trains scientists to effectively communicate science to the public.