



## The Potential Use of Chemical Weapons by Russia

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Since the start of Russia's war on Ukraine, the alleged chemical weapons threat from Ukrainian paramilitary forces has been a significant element of Russian disinformation. These suggestions intensified with the lack of a military breakthrough and might be laying the groundwork for some use of chemical weapons by Russia. The risk that Russia could do this has been indicated by U.S. administration officials, the president of Poland, and the head of NATO, among others. The next declarations of Western countries on this issue should be based on an agreed set of political and military consequences of any potential chemical attack by Russia.

### What chemical warfare capabilities does Russia have?

After the Second World War, the USSR trained in chemical warfare in the countries of the Warsaw Pact and in Egypt, Iraq, Libya, and Syria, and Soviet chemical agents were used by satellite governments in Vietnam and Afghanistan. In Soviet military doctrine, chemical weapons were foreseen for both defensive and offensive operations in a variety of tactical and operational scenarios. The Soviet means of delivery were mainly artillery ammunition, unguided rockets, ballistic missiles, and bombs. Russia inherited from the USSR the majority of the research facilities, 24 factories, and the entire chemical weapons arsenal, officially declared at 40,000 tonnes at seven storage sites. The declared arsenal was based on older-generation chemical weapons—sarin, soman, and VX (80% of the arsenal), mustard gas, lewisite, or a combination of these chemicals. Operations involving chemical warfare are still an important training element of Russia's Land Forces, with a few chemical weapons training areas and at least 18 units trained in chemical defences at the level of regiment or brigade. In 1997, Russia ratified the Chemical Weapons Convention (CWC) and in autumn 2017 declared that it had finished the process of the neutralisation of its entire chemical arsenal.

### Has Russia continued research into and used chemical weapons since 1991?

There is a gap between the chemical arsenal disarmament declarations by Russia and some evidence of continued research and development of fourth-generation chemical weapons. After 1991, a few chemists engaged in the Soviet chemical programme revealed that Russia was excelling in a whole family of new neurotoxins called Novichoks. According to former Russian officer Vil Mirzayanov, Russia used the cover of an old VX agent to get rid of thousands of tonnes of one of its early Novichok variants. However, in 1994 Russia admitted research on these toxins but also assured the U.S. that it was not at an industrial scale and not in violation of the CWC. Research on Novichoks might be continued by the State Research Institute of Organic Chemistry and Technology (GosNIIOKhT) in Moscow and its branches. An unknown quantity of Novichoks and dioxins is also held by the intelligence services of Russia. This was confirmed by poisoning attempts on Vladimir Kara-Murza in 2015 and 2017, the [attacks on the Skripals in Salisbury in 2018, and on Alexei Navalny in 2020](#). Dioxin was likely used by Russia in 2004 against Victor Yushchenko, then president of Ukraine. There are also unconfirmed reports that Russia poisoned some radical Chechens and Al Qaeda-linked international terrorists. Moreover, in 2002 Russia used an unknown aerosolised chemical agent during the failed hostage rescue attempt at a theatre in Moscow's Dubrovka district.

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## What chemical weapons options might Russia have?

If Russia is in possession of significant stocks of chemical munitions, it may have a wide spectrum of options to use in the war with Ukraine. The risks in this context might increase with further fiascos or if Russian military operations are stalled. Russia is already trying to fix blame on Ukrainian paramilitary organisations for allegedly developing biological and [radiological weapons](#), so it's possible it might stage finding "evidence" or act "to prevent" a chemical attack on people in Lugansk and Donetsk as an internal and international rationalisation of the war. Apart from such "false flag" operations, Russia may use a limited chemical attack in both regions or even within the Russian Federation. Russia may also use chemical weapons to try to break the will of defenders, [particularly if the siege of Kyiv falters or in other city](#), almost all already targeted by [cluster munitions and thermobaric weapons](#). It cannot be excluded that a "false flag" attack by what it will call "terrorists" may also be used as rationalisation for a bigger chemical attack by Russia on the battlefield to avoid costly urban and/or trench warfare.

## What effect would a chemical attack by Russia likely have on Ukraine?

Regardless of the possible scale or kind of chemical attack by Russia against Ukraine, the effect would be a change in the war's dynamics. Because gas masks and other chemical weapons protective equipment is not broadly accessible to Ukrainian civilians, each attack might cause local or nationwide panic. The use of chemical weapons by the Syrian government in the suburbs of Damascus (Ghouta) in 2013 came as a shock for both civilians and insurgents and allowed the Assad regime to regain the military initiative, and opened the door to further smaller-scale chemical attacks. The lessons from the Syrian civil war and Russia's sense of impunity after previous chemical attacks by its

intelligence services might factor into Vladimir Putin's calculations. In the war against Ukraine, their use could also change the military situation to Russia's favour, as well as [increase the already massive refugee flow](#). Each chemical weapons scenario could be used by Russia to justify wider military and societal mobilisation for the war, or even conflict with NATO.

## What potential and necessary Western responses are there to Russia's chemical weapons provocations or actual attack?

The NATO response to the use of chemical weapons might depend on the scale of the attack(s) but for certain it will not accept Russian arguments that it was a "Ukrainian attack". So far, the West has avoided drawing clear "red lines" regarding Russia's potential actions, but [NATO is signalling its nuclear deterrence capabilities in case of an attack on a member state](#). In the context of the scenarios of chemical weapons use by Russia there is also a need for consultations on the subject between the U.S., the UK, and France, and within NATO. A disincentive for Russia from undertaking a "false flag" operation or chemical strike might be the initiation of preparations of a special mission of the Organisation for the Prohibition of Chemical Weapons (OPCW), which would collect evidence from any attack(s). There is also the necessity for cohesive communication between NATO and its members, and with Ukrainian and Russian citizens in case of the extreme scenarios of chemical attacks occur, as well as use of military communication channels between the U.S. and Russia. Regardless of the real risk and likelihood of chemical attacks, it is essential there is Western strategic communication towards Russia and Belarus on the real nature of the ongoing war and warning their leaders and societies that each case of chemical attack will have far-reaching consequences.