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Chlorine Gas

The German Army first used chlorine gas cylinders in April 1915 against the French Army at Ypres. French soldiers reported seeing yellow-green clouds drifting slowly towards the Allied trenches. They also noticed its distinctive smell which was like a mixture of pineapple and pepper. At first the French officers assumed that the German infantry were advancing behind a smoke screen and orders were given to prepare for an armed attack. When the gas arrived at the Allied front-trenches soldiers began to complain about pains in the chests and a burning sensation in their throats.

Most soldiers now realised they were being gassed and many ran as fast as they could away from the scene. An hour after the attack had started there was a four-mile gap in the Allied line. As the German soldiers were concerned about what the chlorine gas would do to them, they hesitated about moving forward in large numbers. This delayed attack enabled Canadian and British troops to retake the position before the Germans burst through the gap that the chlorine gas had created.

Chlorine gas destroyed the respiratory organs of its victims and this led to a slow death by asphyxiation. One nurse described the death of one soldier who had been in the trenches during a chlorine gas attack. "He was sitting on the bed, fighting for breath, his lips plum coloured. He was a magnificent young Canadian past all hope in the asphyxia of chlorine. I shall never forget the look in his eyes as he turned to me and gasped: I can't die! Is it possible that nothing can be done for me?" It was a horrible death, but as hard as they tried, doctors were unable to find a way of successfully treating chlorine gas poisoning.

It was important to have the right weather conditions before a gas attack could be made. When the British Army launched a gas attack on 25th September in 1915, the wind blew it back into the faces of the advancing troops. This problem was solved in 1916 when gas shells were produced for use with heavy artillery. This increased the army's range of attack and helped to protect their own troops when weather conditions were not completely ideal.

After the first German chlorine gas attacks, Allied troops were supplied with masks of cotton pads that had been soaked in urine. It was found that the ammonia in the pad neutralized the chlorine. These pads were held over the face until the soldiers

could escape from the poisonous fumes. Other soldiers preferred to use handkerchiefs, a sock, a flannel body-belt, dampened with a solution of bicarbonate of soda, and tied across the mouth and nose until the gas passed over. Soldiers found it difficult to fight like this and attempts were made to develop a better means of protecting men against gas attacks. By July 1915 soldiers were given efficient gas masks and anti-asphyxiation respirators.

One disadvantage for the side that launched chlorine gas attacks was that it made the victim cough and therefore limited his intake of the poison. Both sides found that phosgene was more effective than chlorine. Only a small amount was needed to make it impossible for the soldier to keep fighting. It also killed its victim within 48 hours of the attack. Advancing armies also used a mixture of chlorine and phosgene called 'white star'.



Otto Dix, *A German Gas Attack* (1924)

Poisonous gases were known about for a long time before the First World War but military officers were reluctant to use them as they considered it to be a uncivilized weapon. The French Army were the first to employ it as a weapon when in the first month of the war they fired tear-gas grenades at the Germans.

In October 1914 the German Army began firing shrapnel shells in which the steel balls had been treated with a chemical irritant. The Germans first used chlorine gas cylinders in April 1915 when it was employed against the French Army at Ypres. Chlorine gas destroyed the respiratory organs of its victims and this led to a slow death by asphyxiation.

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Mustard Gas (Yperite) was first used by the German Army in September 1917. The most lethal of all the poisonous chemicals used during the war, it was almost odourless and took twelve hours to take effect. Yperite was so powerful that only small amounts had to be added to high explosive shells to be effective. Once in the soil, mustard gas remained active for several weeks.

The German Army also used bromine and chloropicrin. A nerve gas obtained from prussic acid was also developed by scientists employed by the French Army but was not used a great deal on the Western Front.

It has been estimated that the Germans used 68,000 tons of gas against Allied soldiers. This was more than the French Army (36,000) and the British Army (25,000).

An estimated 91,198 soldiers died as a result of poison gas attacks and another 1.2 million were hospitalized. The Russian Army, with 56,000 deaths, suffered more than any other armed force.

Poison Gas Deaths: 1914-1918			
Country	Non-Fatal	Deaths	Total
British Empire	180,597	8,109	188,706
France	182,000	8,000	190,000
United States	71,345	1,462	72,807
Italy	55,373	4,627	60,000
Russia	419,340	56,000	475,340
Germany	191,000	9,000	200,000
Austria-Hungary	97,000	3,000	100,000
Others	9,000	1,000	10,000
Total	1,205,655	91,198	1,296,853

British Gas Casualties: 1914-18	Deaths	Non-Fatal
Chlorine	1,976	164,457
Mustard Gas	4,086	16,526