

## **Weapons of Mass Destruction (WMD) and Nuclear, Biological and Chemical (NBC) Defence**

The term weapons of mass destruction (WMD) means any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the release, dissemination, or impact of toxic or poisonous chemicals or their precursors; a disease organism; or radiation or radioactivity.

WMD includes chemical or biological warfare agents, nuclear or radiological agents, the intentional release of industrial agents as a weapon, or any large-scale destructive device using high yield explosives.

Nuclear warfare is warfare involving the employment of nuclear weapons.

All nuclear weapons so far invented require fission to initiate the explosive release of energy.

A variety of names are used for weapons that release energy through nuclear reactions - atomic bombs (A-bombs), hydrogen bombs (H-bombs), nuclear weapons, fission bombs, fusion bombs, thermonuclear weapons.

Chemical warfare agents comprise a diverse group of hazardous substances. We can recognize the following main types of chemical weapons:

nerve agents, blister agents, blood agents, and choking agents.

Nerve agents attack the body nerve system. They cause difficulties in breathing, convulsions, paralysis, and death. They can be inhaled or absorbed through the skin. Symptoms of nerve agent poisoning include runny nose, tightness of chest, difficulty in breathing, excessive sweating, nausea, vomiting, dimness of vision, pinpointing of the pupils, convulsion, and death.

Blister agents attack the lungs, eyes, and skin. They blister both skin and mucous membranes.

Blood agents interfere with body ability to absorb oxygen. The victim dies because the body tissues are starved of oxygen. Blood agents cause headaches, vertigo, and nausea before death.

Choking agents attack the lungs, causing them to fill with fluid. They are detected by their smell and their irritancy. The victim suffocates by drowning in his own body fluid. Choking agents cause coughing, choking, tightness of the chest, nausea, headache, and watering of the eyes.

Mentioning biological warfare, we speak about biological agents. They are naturally occurring microorganisms (bacteria, viruses, fungi) or toxins that can cause disease and death in a target population. They can also attack the food supply and/or materiel of a nation.

Speaking about bio-terrorism, there are two candidate agents that are of special concern: smallpox and anthrax.

The threat of WMD is real, and the potential for devastating casualties is high for nuclear, biological and chemical (NBC) agents. The potential for the use of WMD can range from blackmail to acts of terrorism, or from regional conflict to a global war including mutually assured destruction (MAD).

In today's world, we must realize the fact that not only the troops, but also the civilian population is threatened by the effects of NBC weapons anywhere and anytime. In the case of an attack, it is absolutely necessary to include NBC defence measures in all defence-political reflections and preparations. The Allied Forces must be able to survive, fight, and win in an NBC-contaminated warfare environment. It is necessary to learn as much as possible about the effects of NBC agents and the medical defence against them.

It is absolutely essential to take the global NBC threat seriously because the number of nations capable of developing and possessing WMD is increasing. NATO forces must be prepared to respond to any possible NBC attack.