

**A Review :**

# **Biological weapons – spreading fear**

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**We hear a lot in the news about 'Weapons of mass destruction (WMDs). A WMD is a weapon that lead to destruction of human life. They include nuclear weapons, biological weapon, chemical weapons, and radiological weapons (sometimes known as 'dirty bombs'-regular explosives laced with radioactive material). of all the weapons, bioweapons may pose the greatest threat.**

**Key words :** WMDs, Biowar, WHO, Inhalation anthrax.

## INTRODUCTION

**A** BIOLOGICAL weapon is a device that carries and deliver to the target organism a pathological biological agent or toxin derived from it. The use of biological weapon against human or their crops and animals called biological warfare or biological war. Biological war are dangerous, devastating, disastrous, fast emerging trends in the world today.

Biological warfare is a international conflict in which biological agent used against there foe for destroyed their life. Biological weapons are preferred by some countries and terrorist because biological weapons are very cheap, kill large numbers of people, 10 gm of anthrax can kill 1-3 million people. Biological weapons produces disease that are difficult to diagnose they rarely occur naturally and often other mimics disease. Biological weapons are believed to be attractive to attackers because they inflict the most damage for the least financial expense.

## STARTING OF BIOWAR

The Biowar is an old phenomenon. The use of biological agent in war may date back to fifth century B.C. Some incident which prove that biological warfare is not new The Assyrians poisoned enemy water wells with ergot (disease caused by a fungus) to induced vomiting, diarrhea and other effects.

In 1760 both the British and American armies use the smallpox virus against Native American tribes attempting to spread the disease to them through infected blankets.

Last century anthrax begins to be use by a number of countries including Germany Japan and Britain. During the world war second, the British military tested anthrax on the tiny island of Grignard off to the Scottish coast. Anthrax spores can live in the soil for decades so the island was inhabitable until 1987.

In 1972, International concern over their use lead to a treaty –Biological weapon convention. It banned the development, production, acquisition and stock piling of Biological weapons, and was eventually signed by some 140 nations.

## PRODUCTION OF BIOLOGICAL WEAPONS

To produce an infectious biological weapon, first of all the right organism must be isolated. Then large number of those organisms should be allowed to grow from starter culture. Once the organism must be stabilized in such a way. So that they will survive until they reach their target. Stabilization techniques include freeze drying and ultrafreezing.

But U.S.A. other countries should follow suit to save humanity has stopped the preparation of biological weapon.

## MOST COMMON BIOLOGICAL WEAPON

Some of the potential pathogens for biological weapons are

those that cause anthrax, smallpox, botulism toxins. Some of these agents have already been used Example- the anthrax bacterium sent through letter after September 2001 anthrax are most common biological weapons to be used

## ANTHRAX

Anthrax is a disease caused by the bacterium bacillus anthracis. It occurs naturally in many parts of the world including Asia, Southern Europe, parts of Africa & parts of Australia. Boiling water does not destroy them. Freezing, strong disinfectants or gastric juice. Soil acts as a reservoir of bacillus anthracis. It occasionally infect people who come into contact with infected animals or their tissues

There are three forms of anthrax in humans, coetaneous (skin), intestinal and inhalation. Inhalation anthrax rarely occur naturally. However it's the most likely form of the disease to be cause by a biological warfare attack. It develops when the bacterial organism is inhaled into the lungs. The first symptoms of inhalation anthrax are like those of a common cold. But after several days, the symptoms may progress to severe breathing problems and shock. If caught early enough, anthrax can usually be cured with antibiotics. Unfortunately inhalation anthrax is usually not diagnose in time for treatment. *Bacillus anthracis* can be easily grown in the laboratory. Anthrax spores can be. Produced in a dry form, which can be stored as particles. These particles can be used in biological warfare. Spores are infective in a dry form, not in wet form.

## REASON OF THE SELECTION OF BIOWEAPON

There are many reasons military groups might choose to attack with biological weapons. Terrorist chooses biological weapon because they are easy to obtain and are inexpensive. Biological weapons that are infectious disease have an incubation period, which means that although they don't have instant result on the battlefield. They can continue to have an impact many weeks after the initial attack as the disease spread. They are more threatening than the conventional ones. Some times some types of biological warfare attack could takes place completely secretly and causing tremendous amount of damage. Biological weapons have a serious psychological impact

## WAY OF DELIEVERY

An effective way of delivering the infectious Organisms to reach their target to be found. People have some misconceptions about biological weapon that they are not likely to be used that they have used rarely in the past. Their production and delivery are technically difficult but following misconceptions are wrong. They are easy to obtain and delivered by many ways. The biological agent is kept in a suitable container so that it remains active and virulent during delivery. This container could be delivered by

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aerosol, using either as powder or in the form of spray devices or explosives devices including missiles and aircraft.

#### CONCLUSION

Biological weapons would also force exposed troop or civilians to take antidotes whose side effects remain largely unknown. Expert disagrees over how likely biological weapon is to be used by either nation or smallest terrorist groups. Only a country with reasonably advanced military force would have the resources to disperse a biological weapon over a large area. The most likely weapons to be used by terrorists are bombs and other standard devices designed to cause direct physical injury. These are the most tried and tested weapons as well as the most available. Most expert believed that the threat of biological weapon doesn't currently justify fear or panic but that we should be prepared just in case.

Public health authorities and health care professional must be aware of the threat of biological war and terrorism to minimize the effect of the biological attack but official action to prevent their production are not sufficiently funded and supported. Effort should be made to stop these harmful activities this requires both government action and people cooperation

#### PREVENTION

The best preventive measure is the immunization of nearest population.

Infected carcasses should be burnt. Protection from biological weapon requires respiratory or gases mask, vaccines etc. In addition, sensitive detection system should be developed to control and minimize damage.

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