

West Virginia Department of Health and Human Resources Information for the Public – Bioterrorism Preparedness

What is bioterrorism?

“Bioterrorism” is the use of disease-causing bacteria, viruses, or toxins in terrorist acts. Smallpox and anthrax are two of the most often mentioned germs bioterrorists could use. Recent terrorist attacks on the U.S. have increased public discussion and concern about the possibility of bioterrorism and our readiness to handle an attack. People are asking about the use and availability of vaccines, antibiotics, and other measures to protect themselves. It is important to note that, to date, there is no evidence of biologic agents being used in recent terrorist attacks on this country.

Should I have my own supply of antibiotics?

There are many different germs a bioterrorist might use. Unfortunately, there is no one antibiotic that is effective against all these germs, meaning there is no single type of pill you can put on your shelf for use in a bioterrorist attack. Federal, state, and local health agencies do not recommend people stockpile antibiotics or use antibiotics in anticipation of a bioterrorist event.

There are problems with keeping a home supply of antibiotics. Antibiotics sitting on a shelf lose their effectiveness over time. Household availability of antibiotics can result in people self-medicating and causing delays in proper diagnosis and treatment of potentially serious, non-bioterrorist related illness. In addition, antibiotics can cause side effects. Finally, improper antibiotic use can lead to germs becoming resistant to the antibiotic, causing the antibiotic to be useless in the future. Antibiotics should only be taken under medical or public health guidance.

What about smallpox vaccine?

Smallpox is a life threatening disease caused by the *Variola* virus. While treatment of smallpox is difficult, there is an effective smallpox vaccine that can prevent disease and stop its spread. It was through use of this vaccine among contacts of cases that smallpox was stamped out worldwide in the late 1970s. The vaccine provides good protection for at least 5 years and partial protection for about 10 years.

Although rare, it is important to note that smallpox vaccine can cause serious side effects. Thus, once disease was eliminated, routine vaccination against smallpox was stopped. At that point, the risks of vaccination far outweighed the risk of disease. In the absence of the disease resurfacing, this remains the case. Routine smallpox vaccination is not currently recommended, and smallpox vaccine is not available commercially through doctors’ offices or local health departments.

Unlike many vaccines, smallpox vaccine can provide protection even when given a few days after exposure. Were smallpox to resurface through a bioterrorist event, the Centers for Disease Control and Prevention (CDC) and state and local health authorities would swiftly provide vaccine to those exposed to the disease. An emergency supply of smallpox vaccine (12-15 million doses) is maintained for such purposes. In addition, a new smallpox vaccine is currently in production.

What about anthrax vaccine?

Anthrax is a disease caused by a bacteria called *Bacillus anthracis*. The disease of concern in a biologic attack is “inhalational” anthrax. This occurs when people breathe in aerosolized anthrax spores. Certain antibiotics can prevent anthrax disease if taken after exposure to the spores but before development of symptoms. Were anthrax to be used in a bioterrorist event, antibiotics would swiftly be given to people exposed to the spores. As part of the National Pharmaceutical Stockpile, the federal government has stored large amounts of antibiotics around the country for rapid deployment and use in the event of a bioterrorist attack using anthrax.

While there is a vaccine against anthrax, it is used only among military personnel. In addition, it is only for use in adults. The vaccine is not currently recommended for the general public and is not available through physicians or local health departments. Anthrax cannot be spread person to person.

What is the National Pharmaceutical Stockpile?

The National Pharmaceutical Stockpile is a large reserve of antibiotics, chemical antidotes, and medical supplies set aside for emergencies. Stockpiles are located at strategic points around the country. The CDC states they can provide these stockpiles to any affected U.S. community within 12 hours of notification. In addition, agreements have been made with drug manufacturers to make additional emergency medicine available for national stockpiling.

Should I buy a gas mask?

No. It would only protect you if you were wearing it at the exact moment a bioterrorist attack occurred. By their nature, these events are not announced in advance. In addition, to be effective, masks must be individually fitted to provide an airtight seal. Gas masks found in army surplus stores or from the Internet carry no guarantees of effectiveness. It is often difficult to determine exactly what they would protect against and how old they are. In addition, there have been reports of accidental suffocation among people wearing gas masks incorrectly.

What can I do to protect myself and my family?

While there is little to do in terms of holding antibiotics or getting a vaccine, there are things you can do to help your community be better prepared for the threat of a biological attack. While national, state, and local planning efforts need to be coordinated, no community should wait for someone else to begin the process. Much of a community’s ability to rapidly detect and respond to a bioterrorist threat centers on the strength of its public health and medical systems as well as on its local disaster response planning. Your support of efforts to strengthen the local health department and medical institutions/organizations in your community is critical. In addition, you can express your concern to local leaders, encouraging enhanced preparedness planning both locally and statewide. Such efforts will certainly help us prepare for the bioterrorist event we hope will never come. In addition, these efforts will strengthen our public health and medical systems’ ability to address far more common threats to your health – threats like food borne disease outbreaks, a particularly severe influenza season, a natural disaster, etc.