

What is Anthrax?

Anthrax is a serious disease caused by a bacterium called *Bacillus anthracis*. The small, one celled organism survives as a spore and may remain inactive for many years until it infects a human or animal. Anthrax is naturally found in soil around the world. Hoofed animals (e.g., cattle, sheep, goats, camels, antelopes) ingest the soil as they graze and are thereby infected with the spores (or disease). Humans can be infected when exposed to anthrax infected animal tissue, such as bones or hides, or when spores are used as a bioterrorist weapon.

Anthrax cannot be spread from one person to another. Humans must come in contact with the actual spore to be infected. The bacteria can enter the body in four different ways:

- 1. Inhalation.** This exposure happens when the spores are inhaled into the lungs. It is the deadliest form of anthrax. Symptoms include sore throat, mild fever, muscle aches that worsen over several days, to breathing problems, shock, meningitis, and death.
- 2. Cutaneous.** The most common exposure is through a small break in the skin. It can cause skin ulcers, fever, and fatigue.
- 3. Gastrointestinal.** This exposure occurs by eating raw or undercooked infected meat. Symptoms include fever, fatigue, nausea, vomiting, sore throat, abdominal pain and swelling. It may also lead to blood poisoning, shock, and death.
- 4. Injection.** This was recently identified as another means of exposure to anthrax. It has been identified in heroin-injecting drug users in northern Europe. This type of infection has not yet been reported in the U.S. Symptoms may be similar to those of cutaneous anthrax, but there may be infection deep under the skin or in the muscle where the drug was injected. Injection anthrax can spread throughout the body faster and can be harder to recognize and treat.

Why is the Department of Defense vaccinating personnel?

Anthrax can be and has been used as a biological weapon. Weaponized anthrax spores are known to be odorless, colorless, tasteless, and very difficult to detect. Currently the only measure available to protect personnel is pre-exposure vaccinations. Inhalation anthrax, the expected route of weaponized exposure, requires hospitalization and aggressive treatment, and is often fatal. Since the DoD anthrax vaccination program began in 1998 over 2.8 million people have been vaccinated with over 11.5 million doses.

What is the anthrax vaccine?

BioThrax (Anthrax) vaccine was licensed in 1970 and is approved for use in individuals 18 to 65 years of age. The vaccine does not contain live anthrax cells and it cannot cause an anthrax infection.

The vaccine is injected into the deltoid at day 0, 4 weeks, and 6 months, with booster doses at 6 and 12 months after completion of the primary series, and then additional boosters given annually. Each dose builds on the immune response from earlier doses; like climbing steps on a ladder towards full protection. The complete series, with boosters, is needed for maximum protection. Vaccinations should not be administered earlier than the recommended due date. The series should not be restarted; if a dose was delayed just continue vaccinations as scheduled.



Schedule	Route	Dosing Schedule
Primary Series	Intramuscular	0, 1, and 6 months
Booster Series	Intramuscular	6 and 12 months after completion of the primary series and at 12-month intervals thereafter

Annual boosters are recommended to sustain ongoing protection.

Who is required to receive the vaccine?

Anthrax vaccination is mandatory for uniformed personnel, emergency essential or comparable U.S. government civilian employees, and contractors traveling or assigned (or deploying within 120 days) to the U.S. CENTCOM area of responsibility (AOR) and the Korean Peninsula for 15 or more consecutive days. Anthrax vaccination is also mandatory for all special units with previously approved exceptions to policy (ETP), to include members of the USPACOM Forward Deployed Naval Forces and NORTHCOM Chemical, Biological, Radiological and Nuclear (CBRN) Response Teams. Continuation of vaccination series is voluntary for uniformed and civilian personnel no longer in mandatory status.

Personnel and family members traveling to the AORs noted above, who do not meet the mandatory requirement, may receive the vaccine on a voluntary basis.

Who should NOT receive the vaccine?

Anyone who:

- Had a serious allergic reaction to a prior dose of anthrax vaccine
- Had a severe allergic reaction to a vaccine component
- Is immunosuppressed due to a disease or medication
- Has ever been diagnosed with Guillain-Barré Syndrome (GBS)
- Is currently pregnant

Use caution in individuals with latex sensitivity.

If you are unsure whether you are pregnant or not, request a pregnancy test before receiving a vaccination. The anthrax vaccine should be deferred during pregnancy unless exposure occurs. Breastfeeding is not a contraindication to receiving the anthrax vaccination.

Temporary exemptions should be provided for individuals with moderate or severe illness. Medical exemptions must be evaluated and documented by a medical provider. If assistance is needed for a medical exemption, the 24-hour DHA Immunization Healthcare Support Center is available for consultation at [877.GETVACC](tel:877.GETVACC) (877.438.8222), Option 1.

What if the vaccine is administered to a pregnant woman?

Anthrax vaccine should not be administered to pregnant women. Limited studies have shown inconclusive results on the safety of anthrax vaccination in pregnancy. If a pregnant woman inadvertently receives anthrax vaccine, she should be referred to the DoD Anthrax Vaccine in Pregnancy Registry at nhrc-VaccineRegistry@mail.mil or [619.553.9255](tel:619.553.9255) (DSN 553.9255)

What side effects may occur after vaccination?

The anthrax vaccine may cause local reactions such as tenderness, itching, redness, bruising or a small lump or burning at the injection site. These reactions usually resolve on their own after a few days.

Other side effects may include muscle or joint aches, headaches, fatigue, and fever. These symptoms are less common and usually go away in less than a week. If any symptoms persist please contact your primary care provider.

With any vaccination, serious reactions may occur. Signs of a serious allergic reaction include difficulty breathing, weakness, unconsciousness, hoarseness or wheezing, a fast heartbeat, hives, dizziness, paleness, or swelling of the throat. Seek immediate medical care for any symptoms of a serious allergic reaction.