# ANTHRAX VACCINE

## WHAT YOU NEED TO KNOW

Many Vaccine Information Statements are available in Spanish and other languages. See www.immunize.org/vis.

## 1 What is anthrax?

Anthrax is a serious disease that can affect both animals and humans. It is caused by bacteria called *Bacillus anthracis*. People can get anthrax from contact with infected animals, wool, meat, or hides. In its most common form, anthrax is a skin disease that causes skin ulcers and usually fever and fatigue. Up to 20% of these cases are fatal if untreated.

When *B. anthracis* is inhaled, as when used as a biological weapon, it is much more serious. The first symptoms may include a sore throat, mild fever and muscle aches. But within several days these symptoms are followed by severe breathing problems, shock, and often meningitis (inflammation of the brain and spinal cord covering). Once symptoms appear, this form of anthrax is almost always fatal, despite treatment with antibiotics.

## 2 What is anthrax vaccine?

Anthrax vaccine protects against anthrax disease. The U.S. vaccine does not contain actual *B. anthracis* cells and it does not cause anthrax disease. Anthrax vaccine was licensed in 1970.

Based on limited but convincing evidence, the vaccine protects against both cutaneous (skin) and inhalational anthrax.

## 3 Who should get anthrax vaccine and when?

People 18 to 65 years of age potentially exposed to large amounts of *B. anthracis* bacteria on the job, such as laboratory workers.

Military personnel who may be at risk of anthrax exposure from weapons.

The basic vaccine series consists of **6** doses.

- The first three doses are given at two-week intervals.
- Three additional doses are given, at 6, 12, and 18 months after the first dose.

Annual booster doses are needed for ongoing protection.

If a dose is not given at the scheduled time, the series does not have to be started over. Resume the series as soon as practical.

Anthrax vaccine may be given at the same time as other vaccines.

## 4 Some people should not get anthrax vaccine or should wait

Anyone who has had a serious allergic reaction to a previous dose of anthrax vaccine should not get another dose.

Anyone who has recovered from cutaneous (skin) anthrax should not get the vaccine.

Pregnant women should not be routinely vaccinated with anthrax vaccine. This is merely a precaution. There is no evidence that the vaccine is harmful to either a pregnant woman or her unborn baby. Vaccination *may* be recommended for pregnant women who have been exposed, or are likely to be exposed, to anthrax.

There is no reason to delay childbearing after either the man or the woman gets anthrax vaccine.

Vaccines, including anthrax vaccine, are safe to give to breast-feeding women.

## 5 What are the risks from anthrax vaccine?

Getting anthrax disease is much more dangerous than any risk from the vaccine.

Like any medicine, a vaccine is capable of causing serious problems, such as severe allergic reactions. The risk of anthrax vaccine causing serious harm, or death, is extremely small.

### Mild Problems

- Soreness, redness, or itching where the shot was given (about 1 out of 10 men, about 1 out of 6 women)
- A lump where the shot was given (about 1 person out of 2)
- Muscle aches or joint aches (about 1 person out of 5)
- Headaches (about 1 person out of 5)
- Fatigue (about 1 out of 15 men, about 1 out of 6 women)
- Chills or fever (about 1 person out of 20)
- Nausea (about 1 person out of 20).

### Moderate Problems

- Large areas of redness where the shot was given (up to l person out of 20).

### Severe Problems

- Serious allergic reaction (very rare - less than once in 100,000 doses).

As with any vaccine, other severe problems have been reported. But these events appear to occur no more often among anthrax vaccine recipients than among unvaccinated people.

There is no evidence that anthrax vaccine causes sterility, birth defects, or long-term health problems.

Independent civilian committees have not found anthrax vaccination to be a factor in unexplained illnesses among Gulf War veterans.

## 6 What if there is a moderate or severe reaction?

### What should I look for?

Any unusual condition, such as a severe allergic reaction or a high fever. If a severe allergic reaction occurred, it would happen within a few minutes to an hour after the shot. Signs of a serious allergic reaction can include difficulty breathing, weakness, hoarseness or wheezing, a fast heart beat, hives, dizziness, paleness, or swelling of the throat.

### What should I do?

- Call a doctor, or get the person to a doctor right away.
- Tell your doctor what happened, the date and time it happened, and when the vaccination was given.
- Ask your health care provider to file a Vaccine Adverse Event Reporting System (VAERS) form if you have *any* reaction to the vaccine. Or call VAERS yourself at **1-800-822-7967,** or visit their website at **www.vaers.org.**

## 7 How can I learn more?

- Ask your doctor or other health care provider. They can give you the vaccine package insert or suggest other sources of information.

- Contact the Centers for Disease Control and Prevention (CDC):
  - Call **1-800-232-4636 (1-800-CDC-INFO)**
  - Visit the CDC's website at **www.cdc.gov/ncidod/dbmd/diseaseinfo/anthrax_g.htm**

- Contact the U.S Department of Defense (DoD):
  - Call **1-877-438-8222**
  - Visit the DoD website at **www.anthrax.osd.mil**



**U.S. DEPARTMENT OF HEALTH & HUMAN SERVICES**
Centers for Disease Control and Prevention
National Immunization Program