



## Coast Guard Flag Voice 44

### ANTHRAX VACCINATION

The Coast Guard's Anthrax Vaccine Implementation Program (AVIP) was released via ALCOAST 032/99. The vaccine program is extremely important to protect us against a disease that has a near 100% fatality rate, is known to have been weaponized, and is readily available to countries and terrorists likely to use it against the U.S. if they think it will further their cause.

Anthrax is a disease of grazing animals caused by bacteria that can infect humans. Currently, naturally occurring anthrax is not a problem in the U.S., even in animals, because they are routinely vaccinated. However, the disease is more common in poorer farming regions of the world. People who work with animals or animal products in these areas are at risk of acquiring the disease. Fortunately, because the disease does not spread directly from person to person, human epidemics rarely occur naturally.

Anthrax bacteria infect humans in one of three ways: through a break in the skin, by ingesting infected food or water, or by inhaling airborne bacteria. Antibiotics usually cure anthrax of the skin. Anthrax from food or water is difficult to diagnose because it looks like other stomach or intestinal illnesses. This anthrax is harder to treat, and about half the people who get it will die. Airborne anthrax is the worst form. People cannot smell, see, or taste anthrax contamination in air, but almost all people who inhale it will die within about one week. Although antibiotics can be helpful, exposed persons must take them BEFORE symptoms appear. Rarely will a person know of exposure before any symptoms appear, and then antibiotic treatment is likely too late to be effective.

The deadliness of airborne anthrax is only one reason it could be such an effective biological weapon. It also is easily grown in large quantities; yet it is so deadly, exposure to a small amount is enough to be fatal. The bacteria can survive for decades because they form a protective coating called a spore, which allows them to live 40 years or more in various environmental conditions. Airborne distribution can easily spread anthrax spores over large areas.

Fortunately, we have effective defenses against this deadly weapon of potential mass destruction. The Food and Drug Administration has licensed an anthrax vaccine available in the U.S. for almost 30 years. Over the years, thousands of veterinarians, livestock workers, wool sorters, and laboratory personnel have received the vaccine, and those who received at least 2 shots have NEVER caught anthrax. The vaccine also has very few serious side effects (fewer than with many other more common vaccines we receive every day without a second thought).

Anthrax vaccination requires six initial doses at days 0, 14, and 28, and then at months 6, 12, and 18. Thereafter, yearly boosters maintain immunity. The shot may cause a burning sensation at the injection

site, but this usually dissipates in a few minutes. About 30% of those vaccinated experience some redness and mild irritation for a few days at the injection site, and then a small lump may form in the skin; this lump goes away after several weeks; 0.2% (about 2 in 1,000) will suffer an allergic reaction.

The Coast Guard is phasing in its vaccination program. During Phase I, already underway, Service members being deployed to areas considered high-risk (Korea, Israel, and the Persian Gulf states of Saudi Arabia, United Arab Emirates, Qatar, Kuwait, Oman, Jordan, Yemen, and Bahrain and contiguous waters) ideally will receive at least 3 shots before they deploy. Phase II will begin in FY 2000; Service members assigned to units that could deploy on short notice will enter the program then. Only in Phase III (FY 2003) will the entire force enter the program. The only Service members exempted from the program are those medically confirmed to have an immune system deficiency, true hypersensitivity reaction to the vaccine or its components, or pregnant.

Some commonly asked questions asked about the anthrax vaccine:

Q. Does the anthrax vaccine cause infertility, sterility, or birth defects?

A. No. Although we do not conduct experiments on the human reproductive system for ethical reasons, nearly 30 years of experience with anthrax vaccine has shown no association with infertility, sterility, or birth defects.

Q. Is this vaccine considered a possible cause of Gulf War illnesses?

A. No. Several national scientific groups have addressed this issue and found no evidence to link anthrax vaccine with illnesses among Gulf War veterans. The National Academy of Sciences' Institute of Medicine, Presidential Advisory Committee on Gulf War Illnesses, Veterans Administration, National Institutes of Health, and Defense Science Board have reviewed the correlation between vaccines and Gulf War illnesses and concluded the anthrax vaccine does not explain the reported chronic effects.

Q. What information is available on the vaccine long-term adverse effects?

A. Numerous studies have been conducted. The FDA-licensed anthrax vaccine has an excellent safety record. Clinical studies involving 6,985 people were submitted to the FDA and reviewed for licensing the vaccine in 1970. From 1977-1996, the U.S. Army Medical Research Institute for Infectious Disease has monitored 3,679 primary doses and 5,799 booster doses of FDA-licensed anthrax vaccine administered to DoD personnel and reported no long-term adverse effects. The fact that clinical testing of anthrax vaccines began in the 1950s and has continued through present day with no reports of long-term adverse effects attests to the vaccine's safety.

In summary:

- (1) Anthrax can be a deadly biological weapon.
- (2) The most reliable means of protection against this deadly threat is vaccination.
- (3) Scientific research demonstrates long, safe, successful use over 30 years of this FDA-approved vaccine by thousands of people.

(4) To ensure readiness and protect our people, the Coast Guard has begun immunization.

I am aware rumors about the dangers of the anthrax vaccine continue to circulate on the Internet. I encourage you to educate yourself on the medical facts, the threat anthrax presents, and the reason for this program. To help in this regard, here are three sources of accurate information on the Internet.

(1) Centers for Disease Control at <http://www.cdc.gov/ncidod/dbmd/anthrax.htm>

(2) Navy Environmental Health Center (NEHC) at <http://www-nehc.med.navy.mil/prevmed/immun/anthrax.htm>

(3) Department of Defense at <http://www.anthrax.osd.mil>

Regards, FL Ames

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[Flag Voice Contents](#)

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