# Notes from the Field

## Compliance with Postexposure Prophylaxis for Exposure to *Bacillus anthracis* Among U.S. Military Personnel — South Korea, May 2015

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In the United States, *Bacillus anthracis* is a select agent and is subject to select agent requirements under the U.S. Code of Federal Regulations.* On April 20, 2015, samples of *B. anthracis* spores considered inactivated were shipped from a U.S. Department of Defense (DoD) laboratory at Dugway Proving Ground, Utah, to various laboratories for routine collaborative diagnostics research. On May 22, 2015, CDC was notified of live *B. anthracis* in one sample received by a private company and initiated a response. On May 29, 2015, DoD began reviewing safety practices for generating and handling inactivated *B. anthracis* spores. By June 1, 2015, the Office of the Assistant Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs had established a task force to coordinate the DoD response (*1*).

The DoD Comprehensive Anthrax Laboratory Review (*2*) was completed within 30 days and addressed five main objectives: 1) conduct root cause analysis for incomplete inactivation of *B. anthracis*; 2) investigate the lack of effective postinactivation sterility testing for detection of live *B. anthracis*; 3) review DoD laboratory biohazard safety procedures/protocols; 4) determine laboratory adherence to established procedures/protocols; and 5) identify systemic problems and corresponding solutions. The DoD investigation identified 194 commercial companies, academic institutions, and federal laboratories that had received potentially live *B. anthracis* samples across 50 states, the District of Columbia, three U.S. territories, and nine foreign countries.

In South Korea, the Joint U.S. Forces Korea Portal and Integrated Threat Recognition program works on detection of biologic agents in the environment. A sample of *B. anthracis* was sent to Osan Air Base from the Dugway Proving Ground shipment for research, and 22 DoD personnel were exposed to the sample. Immediately after the event was discovered, these personnel were assessed for the need for emergency postexposure prophylaxis (PEP). On May 27, 2015, all 22 potentially exposed personnel began a PEP regimen tailored to their individual vaccination history. Persons lacking prior anthrax vaccination or with expired vaccination history received the standard emergency use protocol for PEP: 3 anthrax vaccine doses over 4 weeks plus 60 days of oral ciprofloxacin (500 mg twice a day) or doxycycline (100 mg twice a day) (*3*,*4*). Persons current for *B. anthracis* vaccination received emergency PEP: 30 days of oral ciprofloxacin or doxycycline (*3*,*4*) (Table).

The cohort of exposed personnel was monitored by the Armed Forces Health Surveillance Center, in collaboration with CDC and Army Public Health Center. Cases were monitored for adherence with PEP regimens and onset of symptoms consistent with exposure. No clinical anthrax cases were associated with this incident. Of the 22 persons exposed in South Korea, 14 (63.6%) who lacked prior anthrax vaccination or had expired vaccination received anthrax vaccine and a 60-day schedule of ciprofloxacin or doxycycline; all 14 completed antibiotics, and 13 of the 14 completed all anthrax vaccine doses. Eight persons who were current for *B. anthracis* vaccination had 30-day antibiotic schedules, with 100% completing their PEP. No adverse events to vaccination or antibiotics were reported; one pregnant woman was medically advised to transition from ciprofloxacin to amoxicillin.

This unintentional incident that resulted in no clinical cases highlights the importance of vigilance in preparedness and response capabilities for biologic events. Surveillance of potentially exposed military personnel demonstrated near 100% adherence to required PEP. Although challenging because of the mobility of this unique population, the swift DoD response ensured control of the population at risk, minimized risk for disease, and demonstrated that a high rate of compliance is achievable in closely monitored otherwise healthy persons.

**TABLE. Completion of postexposure prophylaxis (PEP) by U.S. military personnel potentially exposed to anthrax (N = 22), by anthrax vaccination history and military service branch — South Korea, May 2015**

| Service | Total no. | PEP among those current for anthrax vaccination No. (%) | PEP among those not current for anthrax vaccination No. (%) | Total completing PEP No. (%) |
|---|---|---|---|---|
| Army | 16 | 3 (19) | 13 (81) | 15* (94) |
| Navy | 1 | 0 (0) | 1 (100) | 1 (100) |
| Air Force | 5 | 5 (100) | 0 (0) | 5 (100) |
| **Total** | **22** | **8 (100)** | **14 (100)** | **21* (95)** |

* One person completed the antibiotic series but did not complete all anthrax vaccine doses.

* http://www.ecfr.gov/cgi-bin/text-idx?SID=f4edcf593150dda1ca3154c98de05e9e&mc=true&node=se42.1.73_13&rgn=div8.

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