

MMWR Summary: CDC Anthrax Investigation Update and New Information
November 16, 2001 / Vol. 50 / No. 45

The full version of this week's Morbidity and Mortality Weekly Report, *MMWR*, can be accessed through <http://www.cdc.gov/mmwr/>

Update: Investigation of Bioterrorism-Related Anthrax, 2001

Since November 7, 2001, CDC and state and local public health agencies have identified no new cases of bioterrorism-related anthrax. Twenty-two cases of anthrax have met the CDC case definition; 10 were confirmed inhalational anthrax, and 12 (seven confirmed and five suspected) were cutaneous anthrax. Investigation of a case of inhalational anthrax in a hospital stock room worker in New York City found no evidence of anthrax contamination at the work site or home; the source of exposure is unknown. Since the previous report, all patients with bioterrorism-related anthrax who were hospitalized have been discharged and continue to recover. The source of the bioterrorist attacks has not been identified, and additional cases might occur. Public health authorities, health-care providers, and laboratorians should remain vigilant for cases of anthrax.

Use of Antimicrobial Prophylaxis

A 60-day course of antibiotics to prevent inhalational anthrax has been recommended for persons potentially exposed to *Bacillus anthracis* aerosols. These recommendations are for persons at risk for inhalational anthrax by 1) the presence of an inhalational case at a facility, 2) environmental specimens positive for *B. anthracis* in facilities along the path of a contaminated letter in which aerosolization might have occurred, and 3) exposure to an air space known to be contaminated with aerosolized *B. anthracis* from an opened letter. Specific recommendations for persons who should receive a full 60-day course of antimicrobial prophylaxis by site include:

- * Boca Raton, FL: prophylaxis is recommended for employees and visitors who spent >1 hour during August 1--October 6 in the American Media, Inc., building.
- * New York City, NY: prophylaxis is recommended for all employees who worked during October 9--26 on the second and third floors of the south section of the Morgan Central Postal Facility in Manhattan.
- * Hamilton Township, NJ: prophylaxis is recommended for all employees and business visitors (i.e., temporary postal workers, vendors, contractors, and anyone in nonpublic work sites) who were in the U.S. Postal Service Route 130 Processing and Distribution Center during September 18--October 18.
- * Washington, DC (Capitol Hill): prophylaxis is recommended for persons who were on the fifth and sixth floors of the southeast wing of the Senate Hart Building on October 15, from 9 a.m. to 7 p.m.
- * Washington, DC: prophylaxis is recommended for all employees and business visitors to the nonpublic mail room of the U.S. Postal Service Processing and Distribution Center at 900 Brentwood Road during October 12--21.
- * Sterling, VA: prophylaxis is recommended for all mail room employees and business visitors who were at the Department of State Annex 32 mail room facility during October 12--22.

In addition, a 60-day course of antimicrobial prophylaxis is recommended for other workers with specified risks for inhalational anthrax. Persons recommended to receive prophylaxis should complete the 60-day regimen. Public health programs should work with health-care providers and patients to promote completion of antimicrobial prophylaxis and to monitor the occurrence of adverse events.

Update: Interim Recommendations for Antimicrobial Prophylaxis for Children and Breastfeeding Mothers and Treatment of Children with Anthrax

Ciprofloxacin or doxycycline is recommended for antimicrobial prophylaxis and treatment of adults and children with *Bacillus anthracis* infection associated with the recent bioterrorist attacks in the U.S. Amoxicillin is an option for antimicrobial prophylaxis for children and pregnant women and to complete

treatment of cutaneous disease when *B. anthracis* is susceptible to penicillin, as is the case in the recent attacks. Use of ciprofloxacin or doxycycline might be associated with adverse effects in children and liquid formulations of these drugs are not widely available. The following is a summary of updated information about prophylaxis and treatment of children and breastfeeding mothers, including the use of amoxicillin; for complete recommendations, see <http://www.cdc.gov/mmwr/>.

Prophylaxis for infants and children:

- * Penicillins (including amoxicillin) are not recommended for initial treatment of anthrax, but are likely to be effective for antimicrobial prophylaxis following exposure to *B. anthracis*, a setting where relatively few organisms are expected to be present.
- * Amoxicillin may be used for the 60-day antimicrobial prophylaxis in infants and children when the isolate involved in the exposure is determined to be susceptible to penicillin.

Treatment of infants and children:

- * Initial treatment of infants and children with inhalational or systemic (including gastrointestinal or oropharyngeal) anthrax should consist of intravenous ciprofloxacin or doxycycline, plus one or two additional antimicrobial agents. If meningitis is suspected, ciprofloxacin might be more effective than doxycycline because of better central nervous system penetration. Experience with other fluoroquinolones in children is limited.
- * Ciprofloxacin or doxycycline should be the initial treatment of localized cutaneous anthrax. Intravenous therapy with multiple antimicrobial agents is recommended for cutaneous anthrax with systemic involvement, extensive edema, or lesions on the head or neck. Whether infants and young children are at increased risk for systemic dissemination of cutaneous infection is not known. For young children (e.g. aged <2 years), initial therapy of cutaneous anthrax should be intravenous, and combination therapy should be considered.
- * After clinical improvement following intravenous treatment, oral therapy (including either ciprofloxacin or doxycycline) may be used to complete the first 14--21 days of treatment for inhalational anthrax or the first 7--10 days for uncomplicated cutaneous anthrax. For both inhalational and cutaneous anthrax, antimicrobial therapy should be continued for 60 days because of likelihood of exposure to aerosolized *B. anthracis* and the need to protect against persistent spores that might germinate in the respiratory tract. Because of potential adverse effects of prolonged use of ciprofloxacin or doxycycline in children, amoxicillin is an option for completion of the remaining 60 days of therapy for persons infected in these bioterrorist attacks.

Prophylaxis for breast-feeding mothers:

- * Amoxicillin is an option for antimicrobial prophylaxis in breastfeeding mothers when *B. anthracis* is known to be penicillin-susceptible and there is no contraindication to maternal amoxicillin use.
- * Ciprofloxacin and tetracyclines (which include doxycycline) are usually compatible with breastfeeding because the amount of either drug absorbed by infants is small, but little is known about the safety of long-term use. Mothers concerned about the use of ciprofloxacin or doxycycline should consider expressing and then discarding breast milk so that breastfeeding can be resumed when antimicrobial prophylaxis is completed.
- * Decisions about antimicrobial choice and continuation of breastfeeding should be made by the mother and her and the infant's health-care providers. Consideration should be given to antimicrobial efficacy, safety for the infant, and the benefits of breastfeeding.