

Michigan Department of Community Health Guidelines to Clinics and Hospital Emergency Departments for Handling Anthrax Scares or Threats from Letters or Packages

This first section is intended to clarify what individuals should do at the home or workplace with suspicious letters or packages.

- Do not open the letter or package.
- If the letter or package has already been opened and **powder spills out, do not clean it up.** Keep others away from the area.
- Immediately wash your hands with soap and water.
- Notify your supervisor if at work.
- Notify local law enforcement officials.
- Evacuate the area.
- Local law enforcement officials will, in conjunction with the FBI, do a risk determination and contact the state health department.
- Place all clothing items that had direct contact with powder from the letter or package into plastic bags. Keep these bags open, so that the clothes are available for law enforcement officials to examine.
- Ensure that all persons who have handled the letter or package wash their hands.
- Start a list of names, addresses and telephone numbers of all persons who have handled the letter or package. Share that list with law enforcement officials if requested.
- As soon as possible shower with soap and water.
- Do not go to a clinic or emergency room unless you have illness serious enough that it would prompt such a visit under usual circumstances.
- If you do have contact with health care providers, do not request testing for anthrax (e.g., a nasal swab culture) or treatment for anthrax (e.g., ciprofloxacin or other antibiotic) unless directed to do so by local and/or state public health officials.

Be assured that the risk of actual exposure to anthrax through contact with a letter or package is extremely low.

Please be patient. Public safety and health officials will respond as quickly as possible.

This section is intended to clarify how health care providers in clinics or emergency departments should deal with patients expressing concerns about anthrax.

For the asymptomatic patient WITHOUT known exposure

- Provide reassurance to the patient about the rarity of infection without known exposure.
- Recommend that the presently asymptomatic patient return to see a health care provider if illness serious enough that it would prompt such a visit under usual circumstances develops.

- It is important for people to know that there is no screening test available for the detection of anthrax infection in an asymptomatic person. Nasopharyngeal (NP) swabs and blood serum tests should not be used for diagnosis or screening. NP swabs and blood serum tests are generally used to confirm a case or as an epidemiologic tool, and only when directed by public health officials.
- Do not prescribe even a short course of ciprofloxacin or other antibiotic to treat anthrax for this asymptomatic patient.

For the asymptomatic patient WITH exposure to anthrax verified by public health officials

- Start this patient on post-exposure prophylaxis (PEP). (Please see the box and its footnotes below.)
- Although there are no screening tests available for the detection of anthrax infection in an asymptomatic person, public health officials may direct you to collect a nasopharyngeal swab and/or a serum sample, to assist in epidemiological evaluation.

Post-exposure Prophylaxis Recommendations

	Initial therapy	Duration
Adults (including pregnant woman ^{1,2} and immunocompromised)	Ciprofloxacin 500 mg po BID Or Doxycycline 100 mg po BID	60 days
Children ^{1,3}	Ciprofloxacin 15-20 mg/kg po Q12 hrs ⁴ Or Doxycycline ⁵ : >8 yrs and >45 kg: 100 mg po BID >8 yrs and = 45 kg: 2.2 mg/kg po BID = 8 yrs: same as >8 yrs and = 45 kg	60 days

1. If susceptibility testing allows, therapy should be changed to oral amoxicillin for post-exposure prophylaxis to continue therapy out to 60 days.
2. Although tetracyclines are not recommended during pregnancy, their use may be indicated for life-threatening illness. Adverse affects on developing teeth and bones are dose related, therefore, doxycycline might be used for a short course of therapy (7-14 days) prior to the 6th month of gestation. Please consult physician after the 6th month of gestation for recommendations.
3. Use of tetracyclines and fluoroquinolones in children has adverse effects. These risks must be weighed carefully against the risk for developing life-threatening disease. If a release of *B. anthracis* is confirmed, children should be treated initially with ciprofloxacin or doxycycline as prophylaxis but therapy should be changed to oral amoxicillin 40 mg/kg of body mass per day divided every 8 hours (not to exceed 500 mg three times daily) as soon as penicillin susceptibility of the organism has been confirmed.
4. Ciprofloxacin dose should not exceed 1 gram/day in children.
5. In 1991, the American Academy of Pediatrics amended their recommendation to allow treatment of young children with tetracyclines for serious infections, such as, Rocky Mountain Spotted Fever, for which doxycycline may be indicated. Doxycycline is preferred for its twice-a-day dosing and low incidence of gastrointestinal side effects.

For the patient with symptoms compatible with anthrax

- Notify local and state public health officials so they can begin an epidemiologic investigation, follow-up and control efforts.
- Confirm the diagnosis by obtaining the appropriate laboratory specimens based on the clinical form of anthrax that is suspected -- inhalation, gastrointestinal, or cutaneous. (See the next page for signs and symptoms of anthrax infection.)
 - Inhalational anthrax: nasal swab, blood, CSF, and/or sputum
 - Gastrointestinal anthrax: vomitus, feces, and/or blood
 - Cutaneous anthrax: vesicular fluid and/or blood
- Clarify with your laboratory that they should handle these specimens in close consultation with the state public health laboratory, which is contactable 24 hours per day.

Please be aware that this and related materials are easily accessible on two state of Michigan government websites:

<http://www.mdch.state.mi.us>

<http://www.michigan.gov>

Health care providers who still have questions or concerns after careful review of these materials may contact the state health department during usual working hours at 517-335-8024, after hours at 517-335-9030.

Signs and Symptoms of Anthrax Infection

Inhalational anthrax: A brief prodrome resembling a viral respiratory illness followed by development of hypoxia and dyspnea, with radiographic evidence of mediastinal widening. This, the most lethal, form of anthrax results from inspiration of 8,000-40,000 spores of *B. anthracis*. The incubation of inhalational anthrax among humans is unclear, but it is reported to range between 1 and 7 days possibly ranging up to 42 days. Host factors, dose of exposure and chemoprophylaxis may play a role. Initial symptoms include sore throat, mild fever, muscle aches and malaise. These may progress to respiratory failure and shock. Meningitis frequently develops. Case-fatality estimates for inhalational anthrax are based on incomplete information regarding exposed populations and infected populations in the few case series and studies that have been published. However, case-fatality is extremely high, even with all possible supportive care including appropriate antibiotics. Records of industrially acquired inhalational anthrax in the United Kingdom before antibiotics were available reveal that 97% of cases were fatal. With antibiotic treatment the fatality rate is estimated to be at least 75%. Though estimates of the impact of the delay in postexposure prophylaxis or treatment on survival can only be approximated, it has been suggested that on each day of delay postexposure in initiating prophylaxis the case-fatality rate increases by 5 to 10%.

Gastrointestinal anthrax: Severe abdominal distress followed by fever and signs of septicemia. This form of anthrax usually follows the consumption of raw or undercooked contaminated meat and is considered to have an incubation period of 1-7 days. An oropharyngeal and an abdominal form of the disease have been described in this category. Involvement of the pharynx is usually characterized by lesions at the base of the tongue, sore throat, dysphagia, fever, and regional lymphadenopathy. Lower bowel inflammation usually causes nausea, loss of appetite, vomiting and fever, followed by abdominal pain, vomiting blood and bloody diarrhea. The case-fatality is estimated to be 25-60%, and the effect of early antibiotic treatment on that case-fatality is not defined.

Cutaneous anthrax: A skin lesion evolving from a papule, through a vesicular stage, to a depressed black eschar. This is the most common naturally occurring type of infection (>95%) and usually occurs after skin contact with contaminated meat, wool, hides or leather from infected animals. Incubation period ranges from 1-12 days. Skin infection begins as a small papule, progresses to a vesicle in 1-2 days followed by a necrotic ulcer. The lesion is usually painless, but patients also may have fever, malaise, headache and regional lymphadenopathy. The case fatality for cutaneous anthrax is 20% without and 1% with antibiotic treatment.