

# MDH Anthrax Protocol

VERSION 1.1

Revision Date: 8/20/2018

Minnesota Department of Health  
Center for Emergency Preparedness and Response  
PO Box 64975  
St. Paul, MN 55164-0975  
651-201-5700  
[health.epr@state.mn.us](mailto:health.epr@state.mn.us)  
[www.health.state.mn.us](http://www.health.state.mn.us)

*Upon request, this material will be made available in an alternative format such as large print, Braille or audio recording. Printed on recycled paper.*

# Table of Contents

MDH Anthrax Protocol.....	1
Record of Revision .....	4
Introduction .....	5
Prescribing Protocol.....	6
Appendix A: Screener Guidance .....	9
Doxycycline and Ciprofloxacin Dispensing Algorithm .....	15
Doxycycline, Ciprofloxacin, & Amoxicillin Dispensing Algorithm (only use if advised by MDH).....	16
Appendix B: Dosing Guidance.....	17
Standard Antibiotic Regimen .....	18
Child and Neonate Dosing Charts for Liquid Medications.....	19
Children’s Weight Estimation Chart.....	23
Appendix C: Dispenser Guidance.....	24
Appendix D: LPC Guidance.....	29
Appendix E: Antibiotic Screening Form .....	32
Appendix F: Equivalent Medications List for Use with Screening Form .....	34
Appendix G: Doxycycline Pill Crushing Handout.....	35
Appendix H: Doxycycline Fact Sheet.....	37
Appendix I: Ciprofloxacin Fact Sheet .....	39
Appendix J: How to Take Amoxicillin to Prevent Anthrax .....	41
Appendix K: Anthrax Fact Sheet .....	44

# Record of Revision

Revision	Date of Revision
Reorganized information into separate Guidance for Screening, Dosing, Dispensing, and for LPCs	8/6/2018
Updated Child and Neonate Dosing Guidance	8/6/2018
Updated Language in Screening Algorithms	8/6/2018
MDH Doxycycline and Ciprofloxacin Handouts Replaced with CDC Handouts	8/6/2018
“Licensed Practitioner Consultant” changed to “Licensed Prescribing Consultant”	8/13/2018
Removed reference to ability to provide empty pill bottle in lieu of filling out a new screening form for 50 day dispensing	8/13/2018
Updated wording of screening form “Staff Use” section of screening form and removed “Country”	8/13/2018

# Introduction

The Minnesota Department of Health (MDH) has authority to execute protocols for medical countermeasure (MCM) dispensing when the Commissioner of Health determines there is an immediate threat from either a naturally occurring outbreak of disease or release of a biological agent requiring urgent prophylactic measures for a segment of the population.

This protocol provides instructions for dispensing antibiotics in an anthrax emergency to anyone who MDH determines may have been exposed. **This protocol MUST be followed when dispensing anthrax prophylaxis under the authority of MDH.** This protocol is an annex to, and is meant to be used in conjunction with, the MDH Mass Dispensing Guidelines. New guidance could be released by the U.S. Food and Drug Administration (FDA) or the Centers for Disease Control and Prevention (CDC) before or during an incident requiring changes in these procedures. In that event, MDH will distribute updated instructions. An anthrax vaccine has also been approved by the FDA for post-exposure prophylaxis (PEP). A future version of this document will include a protocol for vaccine administration.

For additional information:

- Community Health Boards and Tribal Health Departments (CHBs/THDs) may contact (651) 201-5700 or [health.phep@state.mn.us](mailto:health.phep@state.mn.us).
- Closed point of dispensing (CPOD) partners may contact the health department with whom they conduct CPOD planning, either a CHB/THD or MDH.

## BASIC ANTHRAX INFORMATION

- *Anthrax is **not** transmitted from person to person.* No special precautions are required of clients or staff at point of dispensing (POD) sites to prevent transmission.
- Anthrax is deadly. Rapidly dispensing antibiotics to potentially exposed people may prevent serious illness and/or death.
- People identified as potentially exposed based on MDH's definition of the target population will need 60 days of antibiotics to prevent infection. A 10-day regimen (usually one bottle) will be dispensed first, followed by a second round of dispensing for days 11 through 60.
- It is crucial for potentially exposed individuals to complete the full prophylactic regimen. Symptoms of anthrax exposure typically develop in one to seven days but may take as long as 60 days to appear.
- Although antibiotics can cause side effects, this protocol aims to minimize the risk of serious side effects by selecting the best antibiotic for clients based on certain pre-existing medical conditions and medications they are taking. No PEP protocol can eliminate the risk of adverse events, but the benefits of prophylaxis among potentially exposed persons outweigh the risk of side effects caused by antibiotics.
- MDH will distribute MCMs from CDC's Strategic National Stockpile (SNS) to CHBs/THDs and other organizations that have approved plans for dispensing.

- Multiple antibiotics are effective against most anthrax strains and approved for anthrax PEP. The proportion of each type of antibiotic received from the SNS by MDH may vary.
- For more information, see [Appendix K: Anthrax Fact Sheet](#).

## Prescribing Protocol

### STANDARD ANTIBIOTIC REGIMEN

The two antibiotics that PODs will definitely receive are doxycycline and ciprofloxacin.

- **Doxycycline** and **ciprofloxacin** are both effective against naturally occurring *Bacillus anthracis* strains. <sup>1</sup>

In certain circumstances, PODS may also receive amoxicillin.

- **Amoxicillin** is effective against some strains of anthrax. **Laboratory testing by MDH or CDC will determine whether amoxicillin is effective and can be dispensed** during a particular incident. <sup>2</sup>

### SCREENING AND DOSING OF CLIENTS

- PODs shall have signage describing possible anthrax symptoms. Signage shall instruct persons with symptoms of anthrax to leave the POD and seek medical care. Triage examinations are not necessary since anthrax is not contagious from person to person. Clients with influenza-like illness should not be turned away. However, ***clients exhibiting symptoms should seek prompt medical assistance immediately after receiving PEP.***
- Clients may complete either the electronic screening form or a paper form. More details on this process are available in the Mass Dispensing Guidelines. Clients using the electronic screening form will be automatically screened for the antibiotic best fit. Clients using paper screening forms ([Appendix E](#)) will need POD staff to determine the best option using the [appropriate dispensing algorithm](#) in Appendix A: Screener Guidance; electronic screening is based on the same underlying algorithms as outlined in these appendices. Note that all screening forms in alternate languages are available on paper only.
- Screening forms (electronic or paper) are used to determine which antibiotic(s) can be dispensed to a client:

---

<sup>1</sup> FDA and CDC will coordinate to issue an emergency dispensing order and Emergency Use Instructions (EUI) respectively to allow doxycycline and ciprofloxacin to be distributed without a prescription for anthrax PEP during an emergency. More information is available on the [FDA website's MCM Legal, Regulatory and Policy Framework page](http://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/) (<http://www.fda.gov/EmergencyPreparedness/Counterterrorism/MedicalCountermeasures/MCMLegalRegulatoryandPolicyFramework/>).

<sup>2</sup> It is categorized as an Investigational New Drug (IND) for anthrax PEP, so unless the FDA releases a specific Emergency Use Authorization (EUA), it must be prescribed individually by a Licensed Prescribing Consultant (LPC) in person or by phone. For more information on the roles and requirements for LPCs, see the Mass Dispensing Guidelines.

- POD staff shall reference the client’s completed screening form and the tables and charts that follow to determine the most appropriate antibiotic and dosage.
- An analyzed form will indicate one or several of the following antibiotics that could be dispensed: doxycycline, ciprofloxacin, or amoxicillin.
- Clients shall be dispensed the antibiotic indicated by their screening form. **However, if the form indicates amoxicillin as an option, amoxicillin can only be dispensed if MDH has notified PODs that the strain of anthrax involved in the event is susceptible to amoxicillin.**
- If “Medical Consult” is indicated, clients will be directed to a Licensed Prescribing Consultant (LPC) to determine the appropriate course of action (see [Appendix A: Screener Guidance](#)). Medical consult is also required if amoxicillin has not been approved for use and it is the only antibiotic the screening form indicates as safe.
- If multiple antibiotics are listed as options, the antibiotic in greatest supply, or as determined by the POD manager, shall be given.
  - SNS may provide significantly more of one antibiotic over another. If, for example, 75% of the antibiotics received from the SNS are ciprofloxacin, then the POD manager should provide guidance on prioritizing the limited quantity of doxycycline for those who cannot take ciprofloxacin.
- All attempts should be made to reserve oral suspensions for children.
- Those with contraindications for both doxycycline and ciprofloxacin, pregnant women, and children under 8 years of age should be prioritized to receive amoxicillin, if amoxicillin has been determined to be effective by MDH or CDC.
- Dosage may need to be modified based on age or health condition of client. POD PreCheck calculates dosage automatically. Dosing charts are also available in [Appendix B](#).

For more details on dispensing, refer to the MDH Mass Dispensing Guidelines.

## DISPENSING/LABELING MEDICATIONS AND PROVIDING EDUCATIONAL MATERIALS

- All dispensed medications must be appropriately labeled using the instructions in the MDH Mass Dispensing Guidelines.
- All clients shall be instructed to:
  - Take their first dose as soon as possible;
  - Review the antibiotic safety sheet they are provided;
  - Take their antibiotic as prescribed until it is gone (even if they experience mild to moderate side effects);
  - Contact their health care provider, insurance nurse hotline, or pharmacist if they have concerns about interactions with other medications they are currently taking as described in the patient drug handouts;

- Report any moderate to severe side effects to their health care provider and to MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or 1-800-FDA-1088;
- Call their CHB/THD or the MDH public hotline (if activated) with any additional questions; and
- The following materials must be provided to each client:
  - The appropriate fact sheet(s) for all medications dispensed to members of their household (see [Appendix H: Doxycycline Fact Sheet](#); [Appendix I: Ciprofloxacin Fact Sheet](#); and [Appendix J: Amoxicillin Fact Sheet](#)).
  - The Anthrax Fact Sheet ([Appendix K](#))
  - For clients with adults or children in their household who cannot swallow pills, Doxycycline Pill Crushing Instructions ([Appendix G](#)) and, if needed, an oral syringe.
- POD staff must handle the completed screening forms in accordance with the instructions in the MDH Mass Dispensing Guidelines.

## EDUCATION

- PODs may station public health educators near the POD exit to answer additional questions before clients depart. Educators may use information provided in the fact sheets and in [Appendix A](#) to answer questions about anthrax and MCMs.

## PRESCRIBING PROTOCOL AUTHORIZATION

This mass prophylaxis prescribing protocol for exposure to anthrax is in effect from Date \_\_\_\_\_ until rescinded.

Name of prescriber  
approving this protocol:

\_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Address: 625 Robert St. N Phone Number: \_\_\_\_\_  
P.O. Box 64975  
St. Paul, MN 55164-0975

Acting under the authority delegated by the Minnesota Commissioner of Health



# Appendix A: Screener Guidance

## RISK-BENEFIT STATEMENT

Anthrax is deadly. The benefits of prophylaxis outweigh the risk of side effects caused by appropriately selected antibiotics. The screening process decreases the risk of serious side effects by selecting the best antibiotic for clients based on certain pre-existing medical conditions or medications they are taking. It cannot eliminate the risk of all adverse events.

## HOW DO I INTERPRET THE ELECTRONIC SCREENING FORMS?

Clients may complete an online screening form before arriving at the Point of Dispensing (POD), which will automatically determine which medication they should receive. The antibiotics listed on the top of their completed form indicate the possible antibiotics that can be dispensed to that individual based on their answers to the screening questions. The possibilities include:

- Doxycycline
- Ciprofloxacin)
- Half dose of Ciprofloxacin
- Amoxicillin
- Medical Consult

**Patients who have both doxycycline and ciprofloxacin on their forms may receive either doxycycline or ciprofloxacin.** However, because doxycycline has fewer interactions with other drugs and fewer relative contraindications than ciprofloxacin, it is important to ensure that doxycycline remains available for those patients who cannot receive ciprofloxacin. It is critical that the POD not run out of any one medication. The POD manager is responsible for determining whether doxycycline or ciprofloxacin should be given to clients who can receive both, based on current supply.

**Not all strains of anthrax are susceptible to amoxicillin.** MDH must conduct testing to determine whether amoxicillin will work against the particular strain of anthrax before amoxicillin can be dispensed to the public. It is unlikely that this testing will be completed in time to dispense the first 10 days of prophylaxis. More likely, certain clients will be switched to amoxicillin when they return to the POD to receive their additional 50 day supply of antibiotics in the second phase of response.

Amoxicillin will appear as an option on the screening form whether or not amoxicillin is available to be dispensed. PODs will only receive amoxicillin if MDH or CDC confirms that it is an effective treatment against this particular strain of anthrax. **If the POD is not dispensing amoxicillin, clients with only “Amoxicillin” on their screening forms should be sent for a medical consult with the POD Licensed Prescribing Consultant (LPC).**

If amoxicillin is proven effective, PODs will receive a limited supply. While most people can take amoxicillin with few side effects, it should be conserved so that the following groups get priority:

- Those unable to take both doxycycline and ciprofloxacin
- Pregnant women
- Children under 8

## IF A CLIENT BRINGS ME A PAPER SCREENING FORM, HOW DO I DETERMINE WHICH ANTIBIOTIC THEY GET?

If a client brings you a paper screening form ([Appendix E](#)), you can use the appropriate algorithm to determine which medication they should receive. **Use the algorithm *without amoxicillin* in this appendix until MDH or CDC confirms that amoxicillin is an effective treatment in this scenario, at which point you may use the second algorithm containing amoxicillin.** Training on how to use the algorithm is available on MN.Train and on the MDH SharePoint.

The POD manager will provide information on which antibiotic to prioritize for those who can take both doxycycline and ciprofloxacin. This policy may change over the course of the event depending on supply levels.

If the algorithm directs the client to “Medical Consult,” you must send them to the LPC for further evaluation.

It may be helpful to have access to either a computer or a smartphone that can access the electronic screening form. If you have doubts about whether you used the algorithm correctly to process a paper screening form, you can use the online screening tool to check your work.

## WHAT IF A PATIENT APPEARS TO BE EXHIBITING SYMPTOMS OF ANTHRAX? WHAT ARE THE SYMPTOMS?

There is no way to diagnose anthrax at a POD. Anthrax is not contagious from person to person. Public messaging will instruct symptomatic people to seek medical care, not to go to a POD. If symptomatic patients do come to a POD and wait times are longer than 5-10 minutes, the POD manager or other POD staff may expedite these clients so they can leave to seek medical care after receiving post-exposure prophylaxis (PEP). Symptomatic persons should be instructed to take their first dose of PEP while en route to medical care. Use caution when prioritizing symptomatic clients to avoid incentivizing healthy clients to fake symptoms to move through the POD more quickly.

Like many other illnesses, the first symptoms of inhalational anthrax are flu-like, e.g., sore throat, mild fever, and muscle pain (myalgia). Later symptoms are cough, chest discomfort, shortness of breath, and fatigue. Symptoms usually occur within 7 days of inhaling anthrax spores, but can take up to 60 days to appear.

This annex addresses the most severe form of anthrax infection (inhalational), but exposed people may also develop gastrointestinal or cutaneous (skin) anthrax infections. People exhibiting symptoms<sup>3</sup> of any type of anthrax infection ([Appendix K](#)) should seek medical care.

#### GENERAL ANTIBIOTIC PEP TIPS FOR SCREENERS:

- Become familiar with the patient handouts for doxycycline ([Appendix H](#)), ciprofloxacin ([Appendix I](#)), and amoxicillin ([Appendix J](#)) to be aware of safety advice patients are receiving.
- Remind individuals who are taking warfarin, or similar blood thinners, to see their health care provider within 3 days of starting antibiotic PEP to assess if their dosing needs adjustment.
- Persons who are already taking systemic antibiotics (for other conditions) other than fluoroquinolones or “cycline” drugs like tetracycline or doxycycline should continue taking them as previously prescribed by their health care provider and take them in combination with the ciprofloxacin or doxycycline dispensed for PEP.
- Persons already taking a fluoroquinolone or “cycline” drugs like tetracycline or doxycycline, and for whom the anthrax PEP algorithm indicates they should be dispensed the same class of antibiotic that they are already taking, should stop taking the previously prescribed antibiotic and instead take the antibiotic dispensed by the POD for PEP. These patients should be notified to follow-up with their health care providers within 3 days.
- Breastfeeding considerations:
  - Breastfeeding can and should continue while taking antibiotic prophylaxis.
  - The antibiotic given to breastfeeding mother need not be same as the one given to the nursing child.
  - Breastfeeding mothers can be given doxycycline if other antibiotics are contraindicated; very little doxycycline is transmitted to the baby with breast milk.
- Antibiotic PEP should still be provided even if the recipient has received anthrax vaccine at any time in the past.

---

<sup>3</sup> Basic symptoms can be found on the CDC website (Anthrax) at [www.cdc.gov/anthrax/basics/symptoms.html](http://www.cdc.gov/anthrax/basics/symptoms.html)

## WHEN PATIENTS RETURN FOR THEIR 50-DAY SUPPLY, DO THEY NEED TO BE SCREENED AGAIN?

- Yes, they need a screening form in order for the POD to document the medicine that is dispensed to them. However, they may bring an empty pill bottle or prescription from a doctor to assist with screening.

## PEOPLE SHOULD KEEP TAKING THE PEP ANTIBIOTIC IF THEY ARE EXPERIENCING MILD REACTIONS SUCH AS:

- Mild nausea or vomiting
- Upset stomach, loose stools
- Vaginal yeast infection
- Mild sunburn
- People should seek medical care, however, if any of these symptoms become severe.

## PEOPLE SHOULD STOP TAKING THE PEP ANTIBIOTIC AND GET MEDICAL HELP IMMEDIATELY IF THEY HAVE ANY OF THE FOLLOWING:

- Symptoms of serious allergic/hypersensitivity reactions such as difficulty breathing, wheezing, swelling of the lips or tongue, and/or severe itching or rash
- Severe stomach cramps with high fever or diarrhea (antibiotic associated diarrhea and pseudomembranous colitis)
- Yellowing of the eyes or skin or dark-colored urine (liver failure)
- Unusual bleeding or bruising

## ADDITIONAL CONSIDERATIONS FOR DOXYCYCLINE

- The only absolute contraindication for doxycycline is a known allergy to doxycycline or any other “cycline” antibiotic.
- The dose does not need to be adjusted for persons with impaired kidney function.
- Persons taking isotretinoin, phenobarbital, carbamazepine, primidone, rifampin, phenytoin, or fosphenytoin (or equivalent brand name agent) need to know that if they are dispensed doxycycline they need to see their health care provider within 10 days to decide if their prescription for these other medications should be discontinued.
- Recipients taking magnesium, aluminum antacids, sucralfate, Videx (didanosine), or products that contain calcium, iron, or zinc should take doxycycline at least 2 hours before, or 2 hours after, taking any of these other products.
- Oral contraceptives (birth control pills) may not work as well among persons taking doxycycline; recommend use of an additional form of birth control while taking doxycycline (such as condoms).

- **Persons should STOP taking doxycycline and get medical help immediately if they have any of the following:**
  - Any of the general severe adverse events listed in the section above
  - Pain with swallowing (esophageal ulcers)
  - Severe headaches, dizziness, vomiting, or double vision (possible increased intracranial pressure)

## ADDITIONAL CONSIDERATIONS FOR CIPROFLOXACIN

- The two absolute contraindications for ciprofloxacin are: 1) a known allergy to ciprofloxacin or any other fluoroquinolone antibiotic, and/or 2) Persons treated with tizanidine (Zanaflex). These people should **absolutely not be dispensed Ciprofloxacin**.
- There are other people for whom ciprofloxacin should be avoided **if possible**:
  - Ciprofloxacin has the potential to alter electrical activity in the heart (specifically, prolongation of the QT interval); therefore ciprofloxacin should be avoided if possible in patients with a history of QT prolongation and those who are taking a variety of different medications that can prolong the QT interval.<sup>4</sup>
  - Persons taking oral anti-diabetic medications should monitor their blood sugar closely when taking ciprofloxacin and ask their doctor if the dose of those medications should be adjusted; persons using insulin may need to adjust insulin dosing to avoid hypoglycemia.
  - Persons taking phenytoin or carbamazepine should notify their doctor when taking ciprofloxacin because the dose of these anti-seizure medications may need to be adjusted.
  - Persons taking duloxetine (Cymbalta) should notify their doctor they are taking ciprofloxacin because duloxetine may need to be temporarily stopped when taking ciprofloxacin.
  - Persons with myasthenia gravis should know that ciprofloxacin can worsen muscle and breathing weakness associated with this disease and to notify their doctor that they are taking ciprofloxacin.
- **Persons should STOP taking ciprofloxacin and get medical help immediately if they have any of the following:**
  - Any of the general severe adverse events listed in the section above
  - Pain, swelling, or inflammation of joints or tendons
  - Seizures, dizziness, tremors, or serious mood changes

---

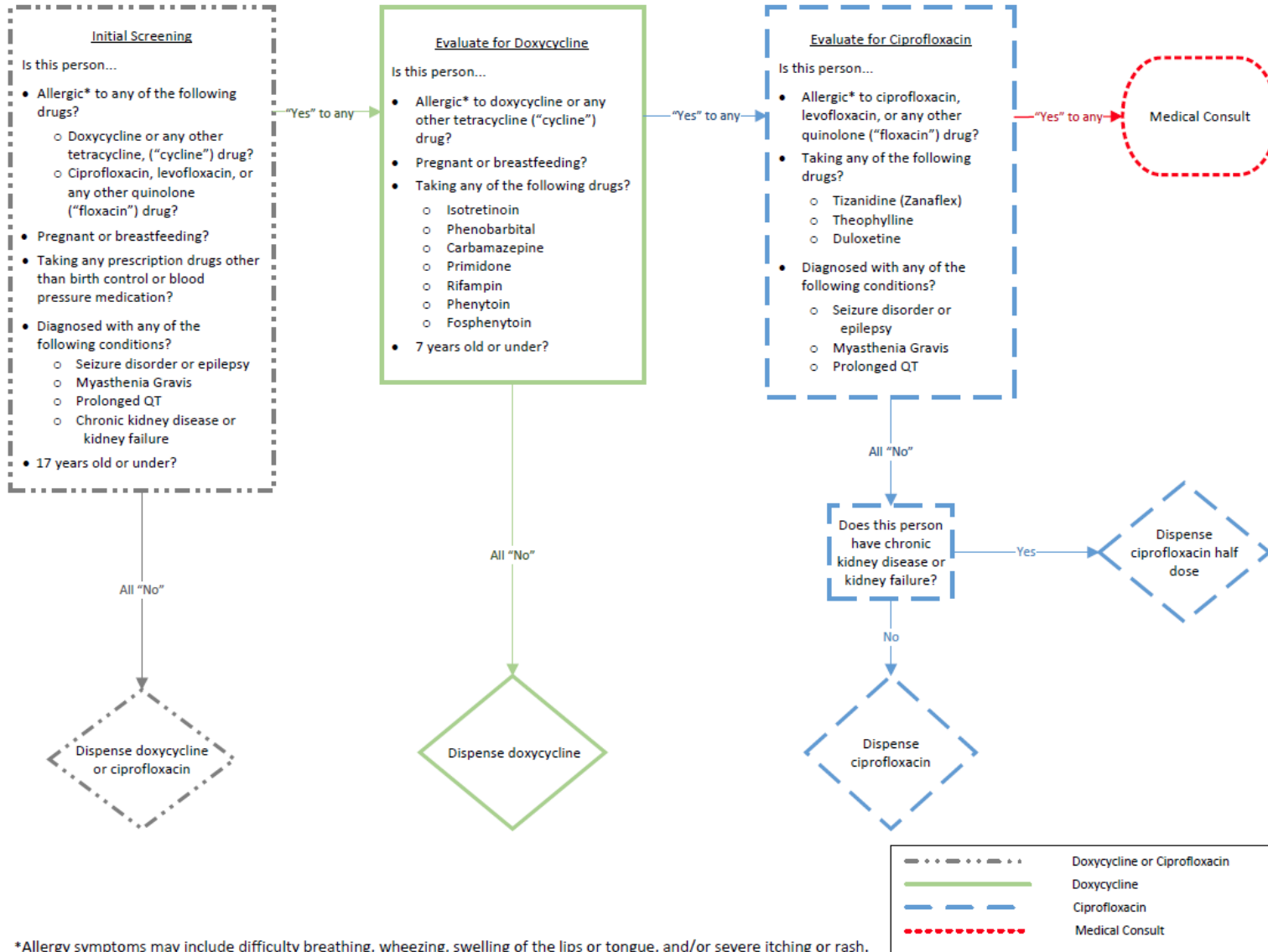
<sup>4</sup> The Minnesota anthrax antimicrobial PEP algorithm aims to minimize this risk by preferentially dispensing doxycycline to patients taking any medications other than oral contraceptives (birth control) or anti-hypertensive (high blood pressure) medication.

- Very fast or irregular heartbeat
  - Temporary loss of consciousness
  - Pain, burning, tingling, numbness, or weakness of arms, hands, legs, or feet (peripheral neuropathy)
- If persons feel jittery while taking ciprofloxacin they should minimize caffeine intake.

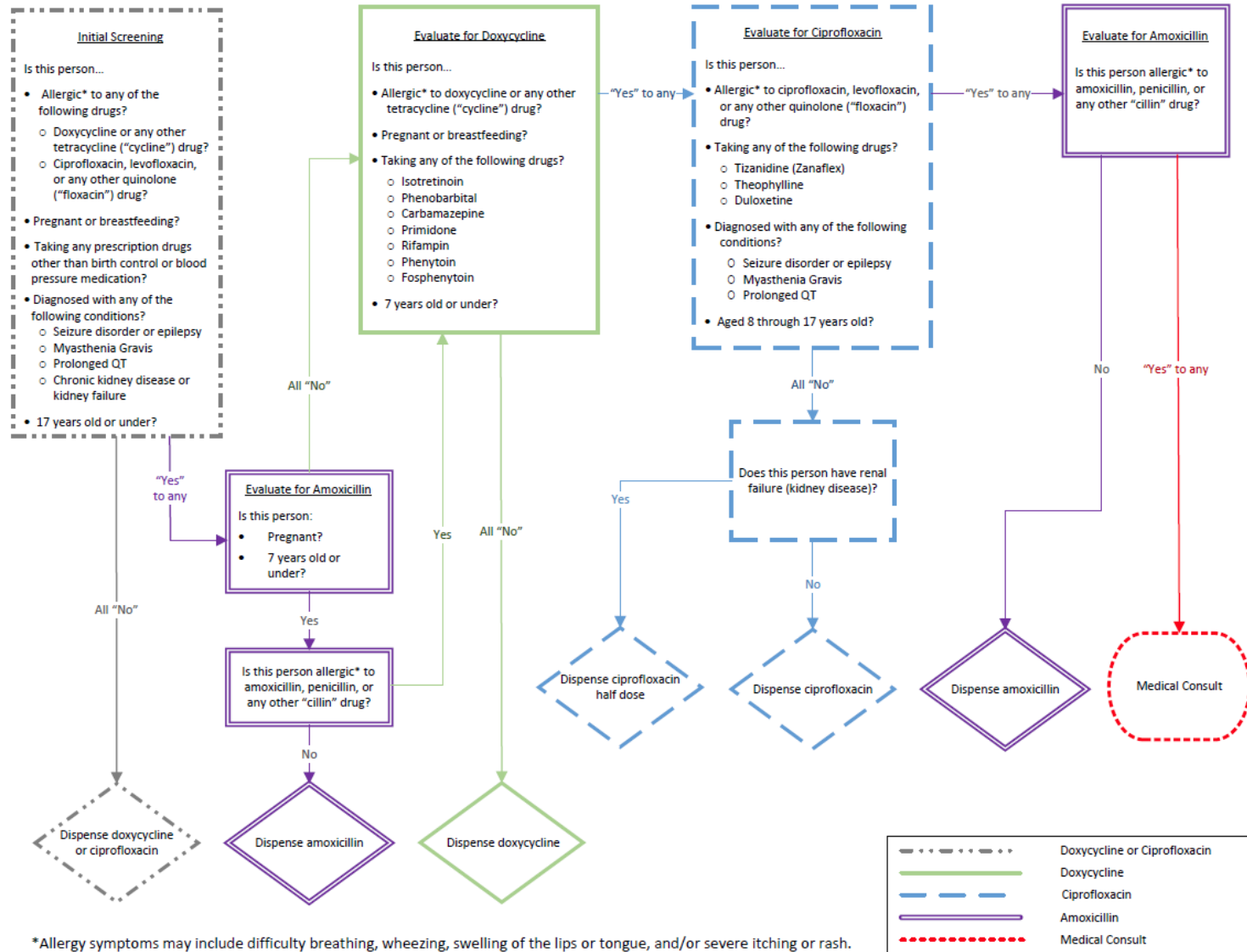
## REPORTING ADVERSE EVENT OR MEDICATION ERRORS

Procedures for reporting adverse events or medication errors are included in the medication fact sheets for doxycycline ([Appendix H](#)), ciprofloxacin ([Appendix I](#)), and amoxicillin ([Appendix J](#)). If as a POD staff person you notice adverse events seemingly related to SNS antibiotics occurring with unusual frequency or severity, contact MDH.

# Doxycycline and Ciprofloxacin Dispensing Algorithm



# Doxycycline, Ciprofloxacin, & Amoxicillin Dispensing Algorithm (only use if advised by MDH)





# Appendix B: Dosing Guidance

## HOW DO I DETERMINE A CLIENT'S DOSAGE?

Use the tables in this appendix to determine dosage based on age, weight, and antibiotic. Note the following:

- There are separate dosage tables for liquid antibiotics (which are generally reserved for children).
- For children 0-4 weeks old, ask if they were born prior to 37 weeks. If yes, check the neonate dosage chart for a possible adjusted dosage.
- Dosage for children is based on weight. If a parent does not know their child's weight, use the Children's Weight Estimation Chart to approximate based on age.
- A dosage table for home-prepared crushed doxycycline solution is in [Appendix G](#), which is provided as a handout for clients to take home.
- Note that clients with renal failure who are prescribed ciprofloxacin will only need half their normal dose (one pill per day instead of two). Clients with kidney transplants can receive a normal dose but should follow up with their doctor within 3 to 7 days.

## Standard Antibiotic Regimen

Age group	Doxycycline	Ciprofloxacin	Amoxicillin (if determined to be effective)
<p>Adults including pregnant women</p> <p>AND</p> <p>Children who exceed the weight thresholds below</p>	<p>One 100 mg tablet by mouth every 12 hours (morning and evening).</p>	<p>One 500mg tablet by mouth every 12 hours (morning and evening).</p> <p><b>For clients with chronic kidney disease or kidney failure:</b> change dosing frequency to every 24 hours.</p>	<p>One 500mg capsule by mouth three times daily (morning, afternoon, and evening, spaced as evenly as possible).</p>
<p>Children</p> <p>[NOTE: Prioritize oral suspension for infants and children 29 lbs (13kg) and under].</p>	<p><b>75 lbs (34 kg) and under</b></p> <p>If oral suspension is available:</p> <ul style="list-style-type: none"> <li>▪ Mix oral suspension according to instructions provided.</li> <li>▪ Determine dose by weight using “Child and Term Neonate Dosing Charts for Liquid Medications” below (if weight is unknown, use “Children’s Weight Estimate Chart” to estimate based on age).</li> <li>▪ One dose by mouth every 12 hours (morning and evening).</li> </ul> <p>OR</p> <ul style="list-style-type: none"> <li>▪ Crush pills according to instructions in handout, determining dose using table contained in the instructions (and the “Children’s Weight Estimation Chart” if needed).</li> <li>▪ One dose by mouth every 12 hours (morning and evening).</li> </ul>	<p><b>66 lbs (30 kg) and under</b></p> <p>If oral suspension is available:</p> <ul style="list-style-type: none"> <li>▪ Mix oral suspension according to instructions provided.</li> <li>▪ Determine dose by weight using “Child and Term Neonate Dosing Charts for Liquid Medications” below (if weight is unknown, use “Children’s Weight Estimate Chart” to estimate based on age).</li> <li>▪ One dose by mouth every 12 hours (morning and evening)</li> <li>▪ <b>For clients with chronic kidney disease or kidney failure:</b> change dosing frequency to every 24 hours.</li> </ul>	<p><b>66 lbs (30 kg) and under</b></p> <p>If oral suspension is available:</p> <ul style="list-style-type: none"> <li>▪ Determine dose by weight using “Child and Term Neonate Dosing Charts for Liquid Medications” below (if weight is unknown, use “Children’s Weight Estimate Chart” to estimate based on age).</li> <li>▪ One dose three times daily (morning, afternoon, and evening, spaced as evenly as possible).</li> </ul>

## Child and Neonate Dosing Charts for Liquid Medications

### Dosing Table for Doxycycline Oral Suspension Powder (25mg/5ml) for Children and Neonates >4 Weeks Old<sup>a, b, c</sup>

Child's weight in pounds (lbs)	Child's weight in kilograms (kg)	Dose	Number of 60mL bottles needed for <u>10 day coverage</u>
0-5 lbs	0-2 kg	1 mL(5 mg)	One (1) bottle
6-10 lbs	3-4 kg	2 mL (10 mg)	One (1) bottle
11-15 lbs	5-7 kg	3 mL (15 mg)	One (1) bottle
16-20 lbs	8-9 kg	4 mL (20 mg)	Two (2) bottles
21-25 lbs	10-11 kg	5 mL (25 mg)	Two (2) bottles
26-30 lbs	12-14 kg	6 mL (30 mg)	Two (2) bottles

<sup>a</sup> Dosing shown in the table is designed to approximate 4.4 mg/kg/day divided every 12 hours (not to exceed 100 mg per dose)

<sup>b</sup> For children's dosing for home-prepared crushed doxycycline pill solution, see [Appendix G: Doxycycline Pill Crushing Handout](#).

<sup>c</sup> For neonates less than 4 weeks old, refer to the neonate dosing chart on page 22.

**Dosing Table for Ciprofloxacin Oral Suspension Powder (250 mg/ml) for Children and Neonates >4 Weeks Old<sup>c, d</sup>**

<b>Child's weight in pounds (lbs)</b>	<b>Child's weight in kilograms (kg)</b>	<b>Dose</b>	<b>Number of 100mL bottles needed for <u>10 day coverage</u></b>
0-7 lbs	0-3 kg	1 mL (50 mg)	One (1) bottle
8-14 lbs	4-6 kg	2 mL (100 mg)	One (1) bottle
15-22 lbs	7-10 kg	3 mL (150 mg)	One (1) bottle
23-29 lbs	11-13 kg	4 mL (200 mg)	One (1) bottle
30-36 lbs	14-16 kg	5 mL (250 mg)	One (1) bottle
37-44 lbs	17-20 kg	6 mL (300 mg)	Two (2) bottles
45-51 lbs	21-23 kg	7 mL (350 mg)	Two (2) bottles
52-58 lbs	24-26 kg	8 mL (400 mg)	Two (2) bottles
59-66 lbs	27-30 kg	9 mL (450mg)	Two (2) bottles
67 lbs and over	31 kg and over	10 mL (500 mg)	Two (2) bottles

<sup>c</sup> Dosing shown in the table is designed to approximate 30 mg/kg/day divided every 12 hours (not to exceed 500 mg/dose).

<sup>d</sup> For neonates less than 4 weeks old, refer to the neonate dosing chart on page 22.

**Dosing Table for Amoxicillin Oral Suspension for Children and Neonates >4 Weeks Old<sup>e, f</sup>**

Child's weight in pounds (lbs)	Child's weight in kilograms (kg)	Dose in milligrams (mg) given 3 times daily	Dose in Teaspoons (given 3 times daily)	Dose in mL (given 3 times daily)	Number of 100mL bottles needed for <u>10 day coverage</u>
0-5 lbs	0 to <3 kg	50mg	⅛ teaspoon	0.60 mL	One
6-10 lbs	3 to 4.9	100mg	¼ teaspoon	1.25 mL	One
11-14 lbs	5 to 6.9	150mg	¼ + ⅛ teaspoon	2.00 mL	One
15-19 lbs	7 to 8.9	200mg	½ teaspoon	2.50 mL	One
20-23 lbs	9 to 10.9	250mg	½ + ⅛ teaspoon	3.1 mL	One
24-28 lbs	11 to 12.9	300mg	¾ teaspoon	3.75 mL	Two
29-32 lbs	13 to 14.9	350mg	¾ + ⅛ teaspoon	4.40 mL	Two
33-36 lbs	15 to 16.9	400mg	1 teaspoon	5.00 mL	Two
37-43 lbs	17-19.9	450mg	1 + ⅛ teaspoon	5.60 mL	Two
≥44 lbs	≥20 kg	500mg	1 + ¼ teaspoonful	6.25 mL	Two (dispense 500mg capsules if child tolerates pills)

<sup>e</sup> Dosing shown in the table is designed to approximate 75 mg/kg/day divided every 8 hours (not to exceed 1 gram/dose or 1500 mg/day).

<sup>f</sup> For neonates less than 4 weeks old, refer to the neonate dosing chart on page 22.

**Dosing for Neonates Less than One Week Old**

<b>Gestational Age</b>	<b>Doxycycline</b>	<b>Ciprofloxacin</b>	<b>Amoxicillin</b>
32-37 weeks	Do Not Use	20 mg/kg/d divided q12h	50 mg/kg/d divided q12h
38 weeks or more	Use regular pediatric weight-based dosing tables	Use regular pediatric weight-based dosing tables	Use regular pediatric weight-based dosing tables

**Dosing for Neonates 1-4 Weeks Old**

<b>Gestational Age</b>	<b>Doxycycline</b>	<b>Ciprofloxacin</b>	<b>Amoxicillin</b>
32-37 weeks	Do Not Use	20 mg/kg/d divided q12h	Use regular pediatric dosing tables
38 weeks or more	Use regular pediatric weight-based dosing tables	Use regular pediatric weight-based dosing tables	Use regular pediatric weight-based dosing tables

**NOTE: Dosing for neonates born at less than 32 weeks gestational age should be determined by a neonatologist, pediatric infectious disease specialist, or pharmacist.**

## Children’s Weight Estimation Chart

**How to use the following chart:** If unsure of child’s weight, use the chart below to estimate based on age. Client should confirm child’s weight and, if necessary, adjust the dose in consultation with their health care provider.

Girls (in lbs)	Age	Boys (in lbs)
7	Newborn	8
14	3 months	15
16	6 months	18
19	9 months	21
21	12 months	23
23	15 months	25
25	18 months	27
27	2 years	29
30	3 years	31
34	4 years	36
40	5 years	41
44	6 years	46
50	7 years	51
56	8 years	57
64	9 years	63
72	10 years	71
82	11 years	80

# Appendix C: Dispenser Guidance

## FOR HOW LONG MUST PROPHYLAXIS BE TAKEN?

The full post-exposure prophylaxis (PEP) regimen is 60 days. People identified as potentially exposed based on the MDH definition of the target population will initially be given a 10-day supply of medication, with a 50-day supply to follow as more supplies are received. As the investigation continues and the exposed population is more accurately identified, some clients later determined not to be part of the target population will not need the 50-day supply.

## WHO GETS ORAL SUSPENSION? WHO GETS PILL CRUSHING INSTRUCTIONS?

Doxycycline:

- Pill crushing instructions should be provided when a child is prescribed doxycycline.
- Pill crushing instructions may also be provided for adults with trouble swallowing pills.

Ciprofloxacin:

- Reserve oral suspension for infants and toddlers, when possible.
- Ciprofloxacin pills cannot be crushed because the taste is too bad, so older children may need the liquid formulation if they cannot swallow pills.

Amoxicillin:

- Reserve oral suspension for infants and toddlers, when possible.
- Amoxicillin pills cannot be crushed because they are in capsule form.

## WHEN CAN I DISPENSE AMOXICILLIN?

Not all strains of anthrax are susceptible to amoxicillin. MDH or CDC must conduct testing to determine whether amoxicillin will work against the particular strain of anthrax before amoxicillin can be dispensed to the public. If this testing indicates amoxicillin is effective, MDH will communicate this information to the POD manager and ensure that amoxicillin is shipped to the POD site.

This testing will not be completed in time to dispense the first 10 days of prophylaxis. Certain clients may be switched to amoxicillin when they return to the POD to receive their 50 dose of antibiotics in the second phase of response.

If a client's screening form indicates that amoxicillin is the only option but amoxicillin testing has not been completed, the client must consult with the LPC.



## WHEN A CLIENT HAS AN ELECTRONIC SCREENING FORM WITH MULTIPLE OPTIONS FOR MEDICATIONS, WHICH MEDICATION DO I DISPENSE?

Any of the medications listed as an option on a client's electronic screening form may be safely dispensed, so the decision is largely one of supply. The POD manager will instruct you whether to dispense doxycycline or ciprofloxacin to these clients.

If the anthrax strain is susceptible to amoxicillin, then amoxicillin should be reserved for the following clients:

- Children 7 years old and under
- Pregnant women
- Clients whose only option is Amoxicillin

## SHOULD I BE CONCERNED ABOUT MEDICATIONS THAT APPEAR TO BE PAST THEIR EXPIRATION DATE?

No. FDA routinely tests the antibiotics in the SNS and extends the shelf-life when appropriate. Even though the drug may not have been relabeled, if it was sent through the SNS, it was appropriately tested and deemed safe and effective.

## HOW DO I LABEL MEDICATIONS?

All medications dispensed by the POD must be labeled with the following additional information:

- Patient name,
- Medication dosage,
- Medication frequency, and
- Date medication is dispensed.

If a household representative is picking up medications for multiple people, each medication must be individually labeled for the appropriate person. MDH provides a template to use for printing labels. See the MDH Mass Dispensing Guidelines: [Appendix A](#) for more detailed labeling instructions.

## WHAT RECORDS MUST I KEEP?

POD dispensing staff are required to document prescription information.

- For printed forms, this means peeling a label from the bottle and affixing it onto the dispensing form in the designated space and signing where required. (This label comes on the bottle and is not printed by the POD)
- For electronic forms, this means scanning the QR code on the screening form followed by the QR code for the medication dispensed.

Retain your printed forms at your station face down or in a box so no personal information is visible. Your POD manager will designate a process for collecting the forms and transferring them to the CHB/THD in charge of the POD.

### GENERAL ANTIBIOTIC PEP TIPS FOR DISPENSERS:

- Become familiar with the patient handouts for doxycycline ([Appendix H](#)), ciprofloxacin ([Appendix I](#)), and amoxicillin ([Appendix J](#)) to be aware of safety advice patients are receiving.
- Remind individuals who are taking warfarin, or similar blood thinners, to see their health care provider within 3 days of starting antibiotic PEP to assess if their dosing needs adjustment.
- Persons who are already taking systemic antibiotics (for other conditions) other than fluoroquinolones or “cycline” drugs like tetracycline or doxycycline should continue taking them as previously prescribed by their health care provider and take them in combination with the ciprofloxacin or doxycycline dispensed for PEP.
- Persons already taking a fluoroquinolone or “cycline” drugs like tetracycline or doxycycline, and for whom the anthrax PEP algorithm indicates they should be dispensed the same class of antibiotic that they are already taking, should stop taking the previously prescribed antibiotic and instead take the antibiotic dispensed by the POD for PEP. These patients should be notified to follow-up with their health care providers within 3 days.
- Breastfeeding considerations:
  - Breastfeeding can and should while taking antibiotic prophylaxis.
  - The antibiotic given to breastfeeding mother need not be same as the one given to the nursing child.
  - Breastfeeding mothers can be given doxycycline if other antibiotics are contraindicated; very little doxycycline is transmitted to the baby with breast milk.
- Antibiotic PEP should still be provided even if the recipient has received anthrax vaccine at any time in the past.

### PEOPLE SHOULD KEEP TAKING THE PEP ANTIBIOTIC IF THEY ARE EXPERIENCING MILD REACTIONS SUCH AS:

- Mild nausea or vomiting
- Upset stomach, loose stools
- Vaginal yeast infection
- Mild sunburn
- People should seek medical care, however, if any of these symptoms become severe.

## PEOPLE SHOULD STOP TAKING THE PEP ANTIBIOTIC AND GET MEDICAL HELP IMMEDIATELY IF THEY HAVE ANY OF THE FOLLOWING:

- Symptoms of serious allergic/hypersensitivity reactions such as difficulty breathing, wheezing, swelling of the lips or tongue, and/or severe itching or rash
- Severe stomach cramps with high fever or diarrhea (antibiotic associated diarrhea and pseudomembranous colitis)
- Yellowing of the eyes or skin or dark-colored urine (liver failure)
- Unusual bleeding or bruising

## ADDITIONAL CONSIDERATIONS FOR DOXYCYCLINE

- The only absolute contraindication for doxycycline is a known allergy to doxycycline or any other “cycline” antibiotic.
- The dose does not need to be adjusted for persons with impaired kidney function.
- Persons taking isotretinoin, phenobarbital, carbamazepine, primidone, rifampin, phenytoin, or fosphenytoin (or equivalent brand name agent) need to know that if they are dispensed doxycycline they need to see their health care provider within 10 days to decide if their prescription for these other medications should be discontinued.
- Recipients taking magnesium, aluminum antacids, sucralfate, Videx (didanosine), or products that contain calcium, iron, or zinc should take doxycycline at least 2 hours before, or 2 hours after, taking any of these other products.
- Oral contraceptives (birth control pills) may not work as well among persons taking doxycycline; recommend use of an additional form of birth control while taking doxycycline (such as condoms).
- **Persons should STOP taking doxycycline and get medical help immediately if they have any of the following:**
  - Any of the general severe adverse events listed in the section above
  - Pain with swallowing (esophageal ulcers)
  - Severe headaches, dizziness, vomiting, or double vision (possible increased intracranial pressure)

## ADDITIONAL CONSIDERATIONS FOR CIPROFLOXACIN

- The two absolute contraindications for ciprofloxacin are: 1) a known allergy to ciprofloxacin or any other fluoroquinolone antibiotic, and/or 2) Persons treated with tizanidine (Zanaflex). These people should **absolutely not be dispensed Ciprofloxacin**.
- There are other people for whom ciprofloxacin should be avoided **if possible:**

- Ciprofloxacin has the potential to alter electrical activity in the heart (specifically, prolongation of the QT interval); therefore ciprofloxacin should be avoided if possible in patients with a history of QT prolongation and those who are taking a variety of different medications that can prolong the QT interval.<sup>5</sup>
- Persons taking oral anti-diabetic medications should monitor their blood sugar closely when taking ciprofloxacin and ask their doctor if the dose of those medications should be adjusted; persons using insulin may need to adjust insulin dosing to avoid hypoglycemia.
- Persons taking phenytoin or carbamazepine should notify their doctor when taking ciprofloxacin because the dose of these anti-seizure medications may need to be adjusted.
- Persons taking duloxetine (Cymbalta) should notify their doctor they are taking ciprofloxacin because duloxetine may need to be temporarily stopped when taking ciprofloxacin.
- Persons with myasthenia gravis should know that ciprofloxacin can worsen muscle and breathing weakness associated with this disease and to notify their doctor that they are taking ciprofloxacin.
- **Persons should STOP taking ciprofloxacin and get medical help immediately if they have any of the following:**
  - Any of the general severe adverse events listed in the section above
  - Pain, swelling, or inflammation of joints or tendons
  - Seizures, dizziness, tremors, or serious mood changes
  - Very fast or irregular heartbeat
  - Temporary loss of consciousness
  - Pain, burning, tingling, numbness, or weakness of arms, hands, legs, or feet (peripheral neuropathy)
- If persons feel jittery while taking ciprofloxacin they should minimize caffeine intake.

## REPORTING ADVERSE EVENT OR MEDICATION ERRORS

Procedures for reporting adverse events or medication errors are included in the medication fact sheets for doxycycline ([Appendix H](#)), ciprofloxacin ([Appendix I](#)), and amoxicillin ([Appendix J](#)). If as a POD staff person you notice adverse events seemingly related to SNS antibiotics occurring with unusual frequency or severity, contact MDH.

---

<sup>5</sup> The Minnesota anthrax antimicrobial PEP algorithm aims to minimize this risk by preferentially dispensing doxycycline to patients taking any medications other than oral contraceptives (birth control) or anti-hypertensive (high blood pressure) medication.

## Appendix D: LPC Guidance

The following guidance is only for Licensed Prescribing Consultants (LPCs) to assist with prescribing alternative post-exposure prophylaxis (PEP). **LPCs should bring prescription pads to the POD if physically present.**

### WHEN AMOXICILLIN **CANNOT** BE USED

The following chart contains PEP options for days 1-10 and days 11-60 in situations where the *B. anthracis* strain has **NOT** been determined to be susceptible to amoxicillin by MDH or CDC.

Medication or Medical Condition <sup>a</sup>	Preferred Antibiotic	Alternative 1	Alternative 2	Alternative 3
Tizanidine	Doxycycline <sup>b,c,d</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>	
Theophylline	Doxycycline <sup>b,c,d</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Myasthenia Gravis	Doxycycline <sup>b,c,d</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Duloxetine	Doxycycline <sup>b,c,d</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Isotretinoin	Ciprofloxacin	Doxycycline <sup>g</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Prolonged QT syndrome	Doxycycline <sup>b,c,d</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Seizure disorder	Doxycycline <sup>b,c,d</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>	
Allergic to any fluoroquinolones	Doxycycline <sup>b,c,d</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>	
Allergic to any “cyclines”	Ciprofloxacin	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>	
Allergic to both “cyclines” and fluoroquinolones	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>		
Pregnant woman	Ciprofloxacin	Doxycycline <sup>b,d</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Children <8 yr old	Ciprofloxacin	Doxycycline <sup>c,d</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>

## WHEN AMOXICILLIN **CAN** BE USED

The following chart contains PEP options for days 1-10 and days 11-60 for use **only after MDH or CDC** determines that the *B. anthracis* strain is susceptible to amoxicillin.

Medication or Medical Condition <sup>a</sup>	Preferred Antibiotic	Alternative 1	Alternative 2	Alternative 3
Tizanidine	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Theophylline	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>
Myasthenia Gravis	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>
Duloxetine	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>
Isotretinoin	Ciprofloxacin	Amoxicillin <sup>i</sup>	Doxycycline <sup>g</sup>	Clindamycin <sup>e</sup>
Prolonged QT syndrome	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Ciprofloxacin <sup>f</sup>	Clindamycin <sup>e</sup>
Seizure disorder	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Allergic to any fluoroquinolones	Doxycycline <sup>b,c,d</sup>	Amoxicillin <sup>i</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Allergic to any “cyclines”	Ciprofloxacin	Amoxicillin <sup>i</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>
Allergic to both “cyclines” and fluoroquinolones	Amoxicillin <sup>i</sup>	Clindamycin <sup>e</sup>	Consult MDH <sup>h</sup>	Consult MDH <sup>h</sup>
Pregnant woman	Amoxicillin <sup>i</sup>	Ciprofloxacin	Doxycycline <sup>b,</sup>	Clindamycin <sup>e</sup>
Children <8 yr old	Amoxicillin <sup>i</sup>	Ciprofloxacin	Doxycycline <sup>c, d</sup>	Clindamycin <sup>e</sup>

<sup>a</sup> For patients who have more than one of the possible medication interactions or medical conditions listed, only use PEP options that are listed as possible options for all pertinent situations.

<sup>b</sup> It is ok to dispense doxycycline to women who are pregnant or breastfeeding if they are not allergic to doxycycline or other “cycline” drugs, but let women know about the potential of tooth discoloration. One published report suggests doxycycline may possibly be associated with a very small increased risk of orofacial cleft defects affecting infants of pregnant women.

<sup>c</sup> It is ok dispense doxycycline to children 7 years and under if they are not allergic to doxycycline or other cycline drugs, but let parents or caregivers know about the potential of tooth discoloration

<sup>d</sup> For any patient dispensed doxycycline, the dose should be doubled (i.e., 200 mg PO q12 hours for adults) and two bottled dispensed if a patient is taking any of the following medications that can speed metabolism of doxycycline: phenobarbital, carbamazepine, primidone, phenytoin, fosphenytoin, or rifampin; these patients should be instructed to consult with their medical providers within 10 days.

<sup>e</sup> Only for patients who are not allergic to clindamycin. Clindamycin dosing for adults is 600 mg PO every 8 hr, and is 30 mg/kg/day PO divided every 8 hours for children >1 month old (not to exceed 900 mg/dose); dosing of clindamycin varies by gestational age and week of life for neonates 0 to 4 weeks old: dosing infants born at 32-34 week gestational age is 10 mg/kg/day divided q12h for 0-1 week of age and 15 mg/kg/day divided q8h for 1-4 weeks of age; dosing of infants born at ≥34 weeks gestational is 15 mg/kg/day divided q8h for 0-1 week of age and 20 mg/kg/day divided q6h for 1-4 weeks of age.

<sup>f</sup> Patients taking theophylline or duloxetine, and patients with myasthenia gravis or prolonged QT syndrome can be prescribed ciprofloxacin if they are able to see their physician within 3 days to discuss possible medication changes or monitoring.

<sup>g</sup> It is ok to give doxycycline to a patient taking isotretinoin, but let the patient know that they should be seen by the a health care provider, preferably the provider who has prescribed the isotretinoin, within 10 days to assess if isotretinoin can be discontinued. In addition, the patient should be notified to seek medical care if for new headaches, vomiting, dizziness, changes in vision, or ringing in ears.

<sup>h</sup> Other antibiotics that have shown activity against B. anthracis in laboratory settings include rifampin and clarithromycin.

<sup>i</sup> Amoxicillin CANNOT BE DISPENSED UNTIL MDH NOTIFIES PODS that the outbreak strain of B. anthracis is susceptible. If no amoxicillin is available, patients could also be prescribed Penicillin VK which is not stocked in the POD. Dosing of Penicillin VK for adults is 500 mg PO every 6 hours; for children >1 month old the dosing is 50-75 mg/kg/day PO divided every 6 to 8 hours; dosing of Penicillin VK varies by gestational age and week of life for neonates 0 to 4 weeks old: dosing infants born at 32-37 week gestational age is 50 mg/kg/day divided q12h for 0-1 week of age and 75 mg/kg/day divided q8h for 1-4 weeks of age; dosing of term infants is 75 mg/kg/day divided q8h for 0-1 week of age and 75 mg/kg/day divided q6-8h for 1-4 weeks of age.

# Appendix E: Antibiotic Screening Form



## Screening Form

First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_

Circle Answer

1. Is this person *allergic* to doxycycline or other tetracycline (“cycline”) drugs? Yes    No
  2. Is this person *allergic* to ciprofloxacin or other quinolone (“floxacin”) drugs? Yes    No
  3. Is this person *allergic* to amoxicillin, penicillin or other (“cillin”) drugs? Yes    No
  4. Is this person pregnant or breastfeeding? Yes    No
  5. Is this person taking any prescription drugs *other* than birth control or blood pressure medication? Yes    No
- If yes to question 5, answer 5a and 5b:
- 5a. Is this person taking tizanidine (Zanaflex), theophylline, or duloxetine? Yes    No
  - 5b. Is this person taking isotretinoin, phenobarbital, carbamazepine, primidone, rifampin, phenytoin, or fosphenytoin? Yes    No
  6. Has a doctor told this person they have renal failure (kidney disease)? Yes    No
  7. Has a doctor told this person they have seizures/epilepsy, myasthenia gravis, or prolonged QT? Yes    No

<b>CHILDREN ONLY</b>	<b>Age (select one)</b>	<input type="checkbox"/> 0-4 weeks old (newborn) <input type="checkbox"/> 5 weeks through 7 years old <input type="checkbox"/> 8 years through 17 years old
	<b>Weight (for children less than 76 pounds only)</b> _____ pounds	



For Staff Use Only



Medication:  Doxycycline     Ciprofloxacin     Amoxicillin     ½ Cipro     Medical Consult

Formulation:  Oral Suspension     Doxycycline Crushing Instructions

Dosing:  Standard Adult     Custom: \_\_\_\_\_

Dispenser Initials: \_\_\_\_\_ Label Sticker: \_\_\_\_\_



## Screening Form Instructions

**For your safety, please answer all questions accurately and completely (one form per person).**

The information you provide will help us:

- Determine whether it is safe to give a medicine to you
- Determine the best type and amount of medicine you should receive
- Make referrals to health care providers, if needed

**Contact Information:** Providing your name and contact information will allow your public health department to follow up or provide you with additional instructions, if needed.

**Questions 1-3:** Tell us about any allergies to medicines you have. Allergy symptoms may include difficulty breathing, wheezing, swelling of the lips or tongue, and/or severe itching or rash.

**Question 4:** Answering this question will help us select the safest medicine for you and your baby if you are pregnant or breastfeeding.

**Question 5:** Tell us about prescription medicines you are taking. Some medicines may not mix well with certain anthrax medications. If you are unsure if you are taking one of the prescriptions medications listed, ask your health care provider or pharmacist.

**Questions 6-7:** Tell us about health conditions you may have that may not react well to certain anthrax medicines. If you are unsure if you have one of the medical conditions listed, ask your health care provider.

**Child Information** - Children need a smaller dose of medication than adults. Providing age and weight helps us select the right dose of medication.

### Information Use (Tennessee Notice)

Point of dispensing (POD) Staff and/or medical consultants may have access to the information you provide. The Minnesota Department of Health (MDH), tribal public health agencies, local public health agencies, and the United States Department of Health and Human Services, which includes the Centers for Disease Control and Prevention (CDC), may also have access to this information for public health purposes. We will not provide the information to anyone else without your consent.

There is no legal obligation to provide this private information to us. However, without it, you may not receive any medicine or the best medicine for you.

## Appendix F: Equivalent Medications List for Use with Screening Form

**Directions:** This list contains medications dispensed in the United States that are equivalent to the medications on the screening form (listed in parentheses). Refer to this list if you are taking a medicine, but are not sure if it is an equivalent to a medicine listed on the screening form. This list may not be exhaustive. If you have concerns about a medication not listed here, **especially if it was filled in another country**, contact your pharmacist or health care provider.

A-D	E-L	M-R	S-Z
<b>A</b>	<b>E</b>	<b>M</b>	<b>S</b>
Absorica (isotretinoin)	Elixophyllin (theophylline)	Minocin (doxycycline)	Slo-Bid (theophylline)
Accutane (isotretinoin)	Epitol (carbamazepine)	Minocycline (doxycycline)	Solodyn (doxycycline)
Acticlate (doxycycline)	Equetro (carbamazepine)	Monodox (doxycycline)	Sotret (isotretinoin)
Acuatim (ciprofloxacin)	Eskabarb (phenobarbital)	Monodoxyne (doxycycline)	<b>T</b>
Adoxa (doxycycline)	<b>F</b>	Morgidox (doxycycline)	TagraDOX (doxycycline)
Aerolate (theophylline)	Factive (ciprofloxacin)	Moxifloxacin (ciprofloxacin)	Tegretol (carbamazepine)
Amnesteem (isotretinoin)	<b>G</b>	Myorisan (isotretinoin)	Tetracycline (doxycycline)
Avelox (ciprofloxacin)	Gemifloxacin (ciprofloxacin)	Mysoline (primidone)	Theochron (theophylline)
Avelox ABC Pack (ciprofloxacin)	<b>I</b>	<b>O</b>	Theoclear (theophylline)
Avidoxy (doxycycline)	Irenka (duloxetine)	Ofloxacin (ciprofloxacin)	Theo-Dur (theophylline)
<b>C</b>	IsonaRif (rifampin)	Oracea (doxycycline)	Theo-24 (theophylline)
Carbatrol (carbamazepine)	Isotrex (isotretinoin)	<b>P</b>	Theolair (theophylline)
Cerebyx (fosphenytoin)	<b>L</b>	Phenytek (phenytoin)	Theo-SR (theophylline)
Cipro (ciprofloxacin)	Levaquin (ciprofloxacin)	Primidone (primidone)	Tigecycline (doxycycline)
Cipro XR (ciprofloxacin)	Levofloxacin (ciprofloxacin)	<b>R</b>	Tygacil (doxycycline)
Claravis (isotretinoin)	Levsin PB (phenobarbital)	Rifadin (rifampin)	<b>U</b>
Cymbalta (duloxetine)	Luminall (phenobarbital)	Rifamate (rifampin)	Uniphyl (theophylline)
<b>D</b>		Rimactane/INH Dual Pack (rifampin)	Uroquina (ciprofloxacin)
Demeclocycline (doxycycline)		Rofact (rifampin)	<b>V</b>
Dilantin (phenytoin)			Vibramycin (doxycycline)
Donnata (phenobarbital)			<b>Z</b>
doxycycline (doxycycline)			Zanaflex (tizanidine)
Doryx (doxycycline)			Zenatane (isotretinoin)
Doxy (doxycycline)			

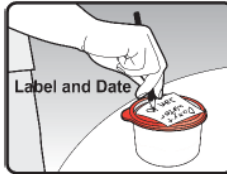
# Appendix G: Doxycycline Pill Crushing Handout

## What should you do with any leftover doxycycline and water mixture remaining in the first bowl?

**Throw it away** if your child weighs 51 pounds or more (or is 6 years or older). You do NOT have enough left over to make another dose.

**Keep it** if your child weighs 50 pounds or less (or is 5 years or younger). You will have enough left over to make another dose.

- **Store** the doxycycline and water mixture in a covered bowl or cup at room temperature (between 68–77°F or 20–25°C) for up to 24 hours.
- **Write** the date, time and container contents on a label.
- **Keep** the mixture in a safe place, out of the reach of children or pets.
- **Throw away** any unused mixture after 24 hours and make a new doxycycline and water mixture for the next dose.



## What should you know about side effects?

- Do not take doxycycline if you are allergic to an ingredient in doxycycline hyclate or any tetracycline antibiotics.
- Get emergency help if you have any signs of an allergic reaction, including hives, difficulty breathing or swelling of your face, lips, tongue or throat.
- Doxycycline may cause diarrhea, skin reaction to the sun, loss of appetite, nausea and vomiting. Refer to "Anthrax Emergency: How to Take Doxycycline to Prevent Anthrax" instructions for more information on possible side effects.
- Report any reaction to doxycycline to MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or 1-800-FDA-1088.



Doxycycline EUI Crushing Instructions (originally issued 03/28/2016; revised 08/18/2017)

Accessible at: <https://www.cdc.gov/anthrax/medical-care/doxy-crushing-instruction-pamphlet.html>

## In an Emergency: How to Prepare Doxycycline Hyclate for Children and Adults Who Cannot Swallow Pills

During a public health emergency, you might need to prepare emergency doses of doxycycline for children and adults who cannot swallow pills. This pamphlet shows you how to mix doxycycline hyclate 100 mg tablets with food or drink.

Follow the instructions below to prepare and give your child the **right amount** of medicine **every 12 hours** (once in the morning and once at night) **each day**, as long as directed. Use the same directions for adults who cannot swallow pills.

### **A** Get the supplies you need.

You will need these items to make doses of doxycycline for children and adults who cannot swallow pills:

- 1 doxycycline hyclate **tablet** (100 mg)
- 1 metal teaspoon
- 1 oral syringe or medicine spoon (if available)
- 2 small bowls
- small amount of drinking water (4 teaspoons or 20 mL)
- 1 of these foods or drinks to make the crushed doxycycline taste better\*:
  - milk, including breast milk and formula for infants
  - chocolate milk
  - chocolate pudding
  - apple juice mixed with 2 to 4 teaspoons of sugar



\*Doxycycline works just as well whether you take it with or without food or milk.

A [supplemental video](#) of these instructions is available by searching "doxycycline crushing instructions" on [www.cdc.gov](http://www.cdc.gov)

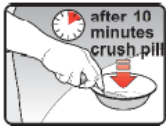


Doxycycline EUI Crushing Instructions (originally issued 03/28/2016; revised 08/18/2017)

## B Soak the tablet in water and crush it.



1. Put 1 doxycycline hyclate tablet in a small bowl.
2. Add 4 teaspoons (20 mL) of water to the same bowl.
3. Let the tablet soak in the water for at least 10 minutes to soften it.
4. Crush the tablet with the back of the metal spoon until you can't see any pieces of the tablet in the water.
5. Stir the tablet and water to mix it well.



**You have now made the doxycycline and water mixture.**

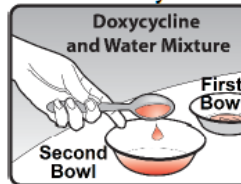
## C Measure the right amount of doxycycline.

1. Find your child's weight on the chart below. *Weight is better, but if you don't know how much your child weighs, find your child's age on the chart.*
2. Follow the row of your child's weight or age across to the column "**Amount of Doxycycline & Water Mixture to Measure.**"

Weight	Age	Amount of Doxycycline & Water Mixture to Measure*
12 pounds or less	Less than 1 month	½ teaspoon (2.5 mL)
13 to 25 pounds	1 to 11 months	1 teaspoon (5 mL)
26 to 50 pounds	1 to 5 years	2 teaspoons (10 mL)
51 to 75 pounds	6 to 8 years	3 teaspoons (15 mL)
76 pounds or more (Adult Dose)	9 years or older	4 teaspoons (20 mL)

\*Weight-range dosing based on 2.2 mg/kg derived dose calculation.

3. Measure the amount of doxycycline and water mixture for your child's weight or age from the first bowl. *For a ½ teaspoon dose, fill the teaspoon halfway or use an oral syringe (if available). It is better to give a little more of the medicine than not enough.*

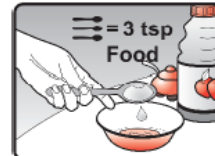


4. Place this amount into the second bowl. This is one dose that should be mixed with food or drink.

For children weighing 76 pounds or more and adults who cannot swallow pills, use all of the doxycycline and water mixture in the first bowl (4 teaspoons); the entire contents of the first bowl makes one dose that should be mixed with food or drink.

Doxycycline EUI Crushing Instructions (originally issued 03/28/2016; revised 08/18/2017)

## D Mix the dose with food or drink.



1. Mix the dose (measured amount of doxycycline and water mixture) in the second bowl with 3 teaspoons of one of the following:
  - Milk, including breast milk and formula for infants
  - Chocolate milk
  - Chocolate pudding
  - OR
  - Apple juice mixed with 2 to 4 teaspoons of sugar

**You now have one dose, mixed with food or drink.**

2. Stir well before giving it to your child.

## E Give the dose.

1. Give your child all of the doxycycline, water and food mixture from the second bowl. Make sure your child swallows all of it. This is one dose.
2. Do this once every 12 hours (once in the morning AND once at night) each day for as long as directed.



Doxycycline EUI Crushing Instructions (originally issued 03/28/2016; revised 08/18/2017)

# Appendix H: Doxycycline Fact Sheet

Accessible at: <https://www.cdc.gov/anthrax/medical-care/doxy-eui-recipients.html>

## Anthrax Emergency: How to Take Doxycycline to Prevent Anthrax Emergency Use Instructions for Recipients

During an anthrax emergency, you will be given a medicine called doxycycline (DOX-i-SYE-kleen) because you may have breathed in anthrax germs. These germs can be deadly. Taking this medicine reduces your chance of getting sick and dying. Until officials know for sure who breathed in the germs, it is important to start taking this medicine as soon as possible after the emergency starts. Public health officials will provide information on who should get the medicine. If you have questions, talk to a doctor or healthcare provider about taking doxycycline.

*People who may have breathed in anthrax germs should take the medicine twice a day for 60 days. Most people will be given a 10-day supply to start. Public health officials will tell you whether you need more and how to get it. To reduce your chance of getting sick, take the medicine as long as you are directed and avoid stopping early.*

### What is anthrax?

Anthrax is a serious disease that can be deadly. You can get sick if you breathe in the anthrax germs. You cannot get anthrax from another person who has anthrax.

- Early on, you could have any of the following symptoms: fever, chills, tiredness, cough or headache.
- Later, you could develop shortness of breath, chest discomfort, confusion or nausea. Symptoms usually start within 7 days of breathing in anthrax germs, but can start within 24 hours or take up to 6 to 7 weeks to appear. See a doctor right away if you have symptoms. If you take doxycycline as directed and begin to feel sick anyway or show any of the symptoms mentioned above, get medical care right away.

### What is doxycycline?

Doxycycline is a prescription antibiotic approved by the Food and Drug Administration (FDA) to prevent anthrax. FDA is allowing certain uses of doxycycline, including its use without a prescription, during an anthrax emergency. If you were given doxycycline that has an expired date on the container, please note that FDA is allowing the use of certain lots of doxycycline beyond the expiration date on the container based on FDA's scientific review. For more information, go to the FDA website at [www.fda.gov](http://www.fda.gov) (search for "doxycycline expiration").

### Who should NOT take doxycycline?

Do not take doxycycline if you have had a severe allergic reaction to doxycycline or similar medicines known as tetracyclines. A severe reaction may include closing of the throat, trouble breathing, or swelling of the lips, tongue or face. Talk to your doctor or public health official about other medicines available to prevent anthrax.

### How do I take doxycycline?

#### For children weighing 76 pounds (35 kg) or more and adults aged 18 years or older:

- Take 1 pill (100 mg) in the morning with a full glass of water (with or without food or milk) and
- Take 1 pill (100 mg) in the evening with a full glass of water (with or without food or milk).

The morning and evening doses should be taken 12 hours apart each day for as long as directed. Doxycycline works just as well whether you take it with or without food or milk.

If you cannot swallow pills, follow the doxycycline tablet [crushing and mixing directions](#) (which can also be found by searching "doxycycline crushing instructions" on [www.cdc.gov](http://www.cdc.gov)).

#### For children weighing less than 76 pounds (35 kg), the dose is determined based on weight:

- Follow instructions provided on the liquid doxycycline label or doxycycline tablet [crushing and mixing directions](#) (which can also be found by searching "doxycycline crushing instructions" on [www.cdc.gov](http://www.cdc.gov)).
- Take the same amount in the morning and evening (12 hours apart) each day for as long as directed.

- Do not skip doses. However, if you miss a dose, do NOT take 2 doses at once. Take the next dose as scheduled.
- Keep the pills dry. Store doxycycline pills and liquid at room temperature (between 68–77°F or 20–25°C).
- If you get an upset stomach when you take the medicine, take it with food.
- Keep doxycycline away from children and pets. Call the poison control center if children or pets ingest the medicine by accident (1-800-222-1222).



**What are common side effects of doxycycline?**

KEEP taking doxycycline if you have mild nausea, vomiting and/or diarrhea, a mild sunburn or a vaginal yeast infection. If these symptoms become severe, talk to your doctor.

**What are possible serious side effects of doxycycline?**

Serious side effects from doxycycline are rare. **STOP** taking doxycycline and get medical care right away (go to the emergency room or call 911) if you have:

- Closing of the throat or trouble breathing
- Swelling of the lips, tongue or face
- Severe itching or rash, especially hives and wheals (red, swollen bumps on the skin)
- Severe stomach cramps with fever or bloody or watery diarrhea
- Yellowing of the eyes or skin or dark brown or tea-colored urine
- Pain when swallowing (esophageal ulcers)
- Unusual bleeding or bruising
- Severe headaches, dizziness or double vision

**What if I am taking other medicines?**

- Talk to your doctor if you are on a blood thinner like warfarin or seizure medicine like phenytoin. Doxycycline may affect how much of these medicines you need.
- Doxycycline might not work as well when taken with some medicines. Take doxycycline at least 2 hours before or 2 hours after taking:
  - Multivitamins, supplements or antacids with aluminum, calcium, iron or magnesium
  - Helidac, Kaopectate, Pepto-Bismol or other products with bismuth subsalicylate used for indigestion, nausea or diarrhea

**What else do I need to know about doxycycline?**

- It can cause your skin to be more sensitive to the sun. Use sunscreen and cover exposed skin.
- It can slow bone growth in children.
- It can make birth control pills less effective. Use a second form of birth control until you finish taking all of your doxycycline.
- Long-term use can cause discolored teeth or poor tooth enamel in children younger than 8 years and in infants whose mothers took doxycycline during the last half of pregnancy or while nursing.
- Tell your doctor if you are or become pregnant or are breastfeeding.
- On rare occasions, doxycycline can cause serious problems. A federal program called the Countermeasures Injury Compensation Program (CICP) may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by some medicines or vaccines. If you have been injured by doxycycline used to prevent anthrax, you can learn more about this Program by visiting [www.hrsa.gov/cicp](http://www.hrsa.gov/cicp) or by calling 1-855-266-2427 (toll-free).

**What other antibiotics can I take instead of doxycycline?**

Public health officials will tell you if other antibiotics (such as ciprofloxacin, levofloxacin or amoxicillin) are available. The risks and benefits of other available antibiotics will be explained in separate instructions.

**Risk-Benefit Statement**

Although doxycycline has some potential and serious side effects, the expected benefit of doxycycline in helping to prevent disease and death associated with anthrax exposure outweighs these risks.

**How do I report side effects or medication errors?**

Tell your doctor or healthcare provider right away and report side effects or medication errors to MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or 1-800-FDA-1088.

Space Reserved for State/Local Public Health Information

# Appendix I: Ciprofloxacin Fact Sheet

Accessible at: <https://www.cdc.gov/anthrax/medical-care/cipro-eui-recipients.html>

## Anthrax Emergency: How to Take Ciprofloxacin to Prevent Anthrax Emergency Use Instructions for Recipients

During an anthrax emergency, you will be given a medicine called ciprofloxacin (sip-roe-FLOX-a-sin) because you may have breathed in anthrax germs. These germs can be deadly. Taking this medicine reduces your chance of getting sick and dying. Until officials know for sure who breathed in the germs, it is important to start taking this medicine as soon as possible after the emergency starts. Public health officials will provide information on who should get the medicine. If you have questions, talk to a doctor or healthcare provider about taking ciprofloxacin.

*People who may have breathed in anthrax germs should take this medicine twice a day for 60 days. Most people will be given a 10-day supply to start. Public health officials will tell you whether you need more and how to get it. To reduce your chance of getting sick, take the medicine as long as you are directed and avoid stopping early.*

### What is anthrax?

Anthrax is a serious disease that can be deadly. You can get sick if you breathe in the anthrax germs. You cannot get anthrax from another person who has anthrax.

- Early on, you could have any of the following symptoms: fever, chills, tiredness, cough or headache.
- Later, you could develop shortness of breath, chest discomfort, confusion or nausea. Symptoms usually start within 7 days of breathing in anthrax germs, but can start within 24 hours or take up to 6 to 7 weeks to appear. See a doctor right away if you have symptoms. If you take ciprofloxacin as directed and begin to feel sick anyway or show any of the symptoms mentioned above, get medical care right away.

### What is ciprofloxacin?

Ciprofloxacin is a prescription antibiotic approved by the Food and Drug Administration (FDA) to prevent anthrax. FDA is allowing certain uses of ciprofloxacin, including its use without a prescription, during an anthrax emergency. If you were given ciprofloxacin with an expired date on the container, please note that FDA is allowing the use of certain lots of ciprofloxacin beyond the expiration date on the container based on FDA's scientific review. For more information, go to the FDA website at [www.fda.gov](http://www.fda.gov) (search for "ciprofloxacin expiration").

### Who should **NOT** take ciprofloxacin?

Do not take ciprofloxacin if you have had a severe allergic reaction to ciprofloxacin or similar medicines known as quinolones. A severe reaction may include closing of the throat, trouble breathing, or swelling of the lips, tongue or face. **Avoid** taking ciprofloxacin if you have a history of myasthenia gravis or are taking Zanaflex (tizanidine). Talk to your doctor or public health official about other medicines available to prevent anthrax.

### How do I take ciprofloxacin?

#### For children who weigh 67 pounds (31 kg) or more and adults aged 18 years or older:

- Take 1 pill (500 mg) in the morning with a full glass of water (with or without food) and
- Take 1 pill (500 mg) in the evening with a full glass of water (with or without food)

The morning and evening doses should be taken 12 hours apart each day for as long as directed.

If you have trouble swallowing pills, please talk to your doctor for advice or an alternative medicine.

#### Children weighing less than 67 pounds (31 kg), the dose is determined based on weight

- Follow instructions provided on the liquid ciprofloxacin label.
- Take the same amount in the morning and in the evening (12 hours apart) each day as long as directed. Shake the liquid very well for about 15 seconds before each use.

- Do not skip doses. However, if you miss a dose, do **NOT** take 2 doses at once. Take the next dose as scheduled.
- If you have severe kidney disease, you may need a dose change. Talk to a doctor.
- Do not split, crush or chew the pills.
- Do not take ciprofloxacin with milk, yogurt or calcium-fortified juices.
- Keep the pills dry. Store ciprofloxacin pills and liquid at room temperature (between 68–77°F or 20–25°C). The liquid can be stored for up to 14 days at room temperature.
- Keep ciprofloxacin away from children and pets. Call the poison control center if children or pets ingest the medicine by accident (1-800-222-1222).



**What are common side effects of ciprofloxacin?**

KEEP taking ciprofloxacin if you have mild nausea, vomiting and/or diarrhea, a mild sunburn or a vaginal yeast infection. If these symptoms become severe, talk to your doctor.

**What are possible serious side effects of ciprofloxacin?**

Serious side effects from ciprofloxacin are rare. **STOP** taking ciprofloxacin and get medical care right away (go to the emergency room or call 911) if you have:

- Closing of the throat or trouble breathing
- Swelling of the lips, tongue or face
- Severe itching or rash, especially hives or wheals (red, swollen bumps on the skin)
- Pain, swelling or inflammation of joints or tendons
- Seizures, dizziness, tremors or serious mood changes
- Very fast or irregular heart beat
- Severe stomach cramps with fever or bloody or watery diarrhea
- Pain, burning, tingling, numbness or weakness of your arms, hands, legs or feet
- Yellowing of eyes or skin or dark brown or tea-colored urine
- Unusual bleeding or bruising

**What if I am taking other medicines?**

- If you take Zanaflex (tizanidine), a medicine for muscle spasms, it is important to talk with your doctor right away. A change in medicine for muscle spasms or medicine to prevent anthrax would be necessary since tizanidine and ciprofloxacin should **not** be used together.
- Talk to your doctor if you take any of the following medicines: a blood thinner like warfarin, an anti-diabetic medicine like glyburide, phenytoin for seizures, theophylline for asthma or clozapine for schizophrenia. Ciprofloxacin may affect how much of these medicines you need.
- Ciprofloxacin might not work as well when taken with some medicines. Take it at least 2 hours before or 6 hours after taking:
  - Antacids
  - Carafate (sucralfate)
  - Videx (didanosine)
  - Multivitamins or supplements with magnesium, calcium, aluminum, iron or zinc
  - Phosphate binders

**What else do I need to know about ciprofloxacin?**

- It can worsen muscle weakness or breathing problems in myasthenia gravis. Talk to your doctor if you have a history of myasthenia gravis disorder.
- It can cause your skin to be more sensitive to the sun. Use sunscreen and cover exposed skin.
- It can make you feel jittery if you drink coffee, caffeinated sodas or energy drinks. Drink less caffeine if this occurs.
- Tell your doctor if you are or become pregnant or are breastfeeding.
- On rare occasions, ciprofloxacin can cause serious problems. A federal program called the Countermeasures Injury Compensation Program (CICP) may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by some medicines or vaccines. If you have been injured by ciprofloxacin used to prevent anthrax, you can learn more about this Program by visiting [www.hrsa.gov/cicp](http://www.hrsa.gov/cicp) or by calling 1-855-266-2427 (toll-free).

**What other antibiotics can I take instead of ciprofloxacin?**

Public health officials will tell you if other antibiotics (such as doxycycline, levofloxacin or amoxicillin) are available. The risks and benefits of other available antibiotics will be explained in separate instructions.

**Risk-Benefit Statement**

Although ciprofloxacin has some potential and serious side effects, the expected benefit of ciprofloxacin in helping to prevent disease and death associated with anthrax exposure outweighs these risks.

**How do I report side effects or medication errors?**

Tell your doctor or healthcare provider right away and report side effects or medication errors to MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or 1-800-FDA-1088.

Space Reserved for State/Local Public Health Information



## Appendix J: How to Take Amoxicillin to Prevent Anthrax

You have been given a medicine called **amoxicillin** (am-ok-suh-SIL-in) because you may have breathed in anthrax germs. These germs can be **deadly**.

**People who may have breathed in anthrax germs should take medicine for 60 days.** Taking your amoxicillin reduces your chance of getting sick and dying. Take the medicine as long as you are directed and do not stop early.

It is important to start taking this medicine as soon as possible after the emergency starts. Most people will be given a 10-day supply to start. Public health officials will tell you whether you need more and how to get it.

If you have questions, talk to a health care provider about taking amoxicillin.

### WHAT IS AMOXICILLIN?

Amoxicillin belongs to a class of drugs called penicillin antibiotics. It has been approved by the Food and Drug Administration (FDA) to treat people with infections caused by certain types of bacteria. Amoxicillin has not been approved by the FDA to use when treating people who have been exposed to anthrax. However, if test results show that the anthrax bacteria can be killed by penicillin antibiotics, the use of amoxicillin is recommended to prevent the development of anthrax disease in people who have been exposed to anthrax, **when other antibiotics are not as safe to use such as in people with certain medical conditions or allergies to other antibiotics, with pregnant women, and with young children.**

### WHO SHOULD NOT TAKE AMOXICILLIN?

Do not take amoxicillin if you have a severe allergic reaction to amoxicillin or similar antibiotic such as penicillin. A severe reaction may include swelling of the face, tongue, neck, hands, feet, closing of throat, wheezing, trouble breathing, or a rash.

**Tell your doctor** if you have mono (or mononucleosis). Amoxicillin can cause a rash among persons with mono.

## HOW DO I TAKE AMOXICILLIN?

- Take one dose **three times a day** (spaced as evenly as possible)
- Take each dose with a large glass of water.
- Amoxicillin works just as well whether you take it with or without food. If you get an upset stomach when you take the medicine, take it with food.
- ***Finish all your pills, even if you feel okay, unless your doctor tells you to stop. If you stop taking this medicine too soon, you may become ill.***
- Do not skip doses. However, if you miss a dose, **do NOT take 2 doses at once**. Take the next dose as scheduled.
- Keep the pills dry. Store amoxicillin pills and liquids at room temperature (between 68-77°F or 20-25°C). The liquid can be stored for up to 14 days at room temperature.
- Keep amoxicillin away from children and pets. Call the poison control center if children or pets ingest the medicine by accident (1-800-222-1222).

## WHAT ARE COMMON SIDE EFFECTS OF AMOXICILLIN?

The following effects of amoxicillin are normal. **KEEP** taking your regular dose. If any symptoms below become severe, talk to your doctor.

- Upset Stomach
- Diarrhea
- Birth control pills may become less effective. Use a second form of birth control until you finish taking all of your amoxicillin.
- Vaginal yeast infection (including itching and discharge)
- Vomiting

## WHAT ARE POSSIBLE SERIOUS SIDE EFFECTS OF AMOXICILLIN?

**Allergic reactions are rare.** Signs of an allergic reaction include swelling of the face, tongue, neck, hands, or feet, closing of throat, wheezing, trouble breathing, or a rash. If any of these symptoms occur, **STOP** taking amoxicillin and get medical help right away (go to the emergency room or call 911).

## WHAT IF I AM TAKING OTHER MEDICINES?

If you are currently taking an antibiotic for something else you should still begin taking amoxicillin. In addition, you should notify your primary care doctor or the health care provider who prescribed you the other antibiotic within 3 days and let them know you are now taking amoxicillin to prevent anthrax. Your doctor may adjust your antibiotic medications.

## WHAT IF I AM PREGNANT OR BREASTFEEDING?

Amoxicillin is safe to take when you are pregnant or breastfeeding, but be sure to tell your doctor.

## WHAT ALTERNATIVE MEDICINES CAN I TAKE INSTEAD OF AMOXICILLIN?

Public health officials will tell you if others medicines are available. The risks and benefits of alternative medicines, if available, will be explained in separate instructions. For more information, visit [www.cdc.gov](http://www.cdc.gov).

## RISK-BENEFIT STATEMENT

Although amoxicillin has some potential and serious adverse effects, the expected benefit of amoxicillin in helping to prevent disease and death associated with anthrax exposure outweighs these risks.

## HOW DO I REPORT SIDE EFFECTS OR MEDICATION ERRORS?

Tell your doctor or health care provider right away and report side effects or medication errors to MedWatch at [www.fda.gov/medwatch](http://www.fda.gov/medwatch) or 1-800-FDA-1088.

On rare occasions, amoxicillin can cause serious problems. A federal program called the Countermeasures Injury Compensation Program (CICP) may help pay for costs of medical care and other specific expenses of certain people who have been seriously injured by some medicines or vaccines. If you have been injured by amoxicillin used to prevent anthrax, you can learn more about this Program by visiting the HRSA website at [www.hrsa.gov/cicp](http://www.hrsa.gov/cicp) or by calling 1-855-266-2427 (toll-free).

## QUESTIONS?

Visit the MDH website at [www.health.state.mn.us](http://www.health.state.mn.us) or contact your local public health department.

## Appendix K: Anthrax Fact Sheet

### *ANTHRAX IS AN INFECTION CAUSED BY THE SPORE-FORMING GERM BACILLUS ANTHRACIS*

There are three types of anthrax infection: cutaneous (skin), inhalational (lungs), and gastrointestinal (stomach/intestines). Symptoms and consequences of anthrax infection vary greatly depending on the type of infection. Anthrax most commonly infects warm-blooded animals including sheep, cows, horses, and goats, but can also infect humans. Anthrax infection in humans is extremely rare in the U.S.

### *INHALATIONAL ANTHRAX OCCURS WHEN A PERSON BREATHES IN ANTHRAX SPORES*

- Anthrax is not spread from person to person.
- Spores are very tough forms of the anthrax germ. Spores are capable of surviving for many years in soil or water. The spores are often able to survive sunlight, heat, and disinfectants.
- Anthrax spores could also be used as weapons of war or terrorism.
- If the spores are breathed into the lungs, the spores will grow and spread to other body parts.
- About 1 to 2 days after breathing the spores, a person may have flu-like symptoms (low fever, cough, headache, and weakness).
- After the first 1 to 2 days, the person may feel better for a day or two.
- The disease usually worsens very quickly. Unless antibiotics are given promptly, more than 85% of infected people die 3 to 5 days after inhalation of spores.
- Even with aggressive treatment, the survival rate of patients who develop symptoms is approximately 55%. That is why antibiotic prophylaxis that keeps exposed people from getting sick is so important.

### *CUTANEOUS ANTHRAX OCCURS WHEN THE GERM ENTERS THE SKIN*

- The germ usually enters a cut or abrasion on the skin when handling contaminated wool, hides, leather, or hair products of infected animals.
- Symptoms begin as a raised itchy bump that resembles an insect bite, which progresses to a vesicle (blister), and then a painless ulcer (1 to 3 cm) with a black, dying area in the center.
- It may cause swelling of lymph glands close to the ulcer.
- Approximately 5-20% of untreated cases will die from the infection.

### *GASTROINTESTINAL ANTHRAX OCCURS WHEN A PERSON EATS CONTAMINATED MEAT*

- Infection results in inflammation of the stomach and intestines.
- Symptoms include nausea, loss of appetite, vomiting, and fever followed by stomach pain, vomiting blood, and severe diarrhea.
- 25% to 60% of untreated gastrointestinal anthrax infections result in death.

### *ANTHRAX INFECTIONS CAN BE PREVENTED*

Several antibiotics can fight anthrax if given soon enough, usually 2 to 3 days after exposure to anthrax bacteria and before serious symptoms have occurred.

### *EVEN A SINGLE CASE OF HUMAN ANTHRAX MUST BE INVESTIGATED IMMEDIATELY*

The health department, law enforcement agencies (like the FBI and police), and other agencies will investigate any human anthrax case. Doctors and other medical personnel are required by law to call the health department to report any human anthrax infections immediately.

**IF YOU HAVE REASON TO THINK THAT YOU OR SOMEONE ELSE HAS BEEN EXPOSED TO ANTHRAX SPORES, CALL 911. THE SOONER ANTHRAX IS INVESTIGATED AND TREATED, THE MORE LIVES WILL BE SAVED.**

For more information on anthrax, visit the CDC website <https://www.cdc.gov/anthrax/>