

MEDICAL MANAGEMENT PLAN

Treponema pallidum (syphilis)

Below is a protocol for accidental exposure to *T. pallidum*.

POST-EXPOSURE CONTACTS

Contact UW Employee Health Center Nurse	206-685-1026 (M-F, 8am-5pm)
If After-Hours, call UW Medical Center Paging Operator	206-906-8082
Request the Campus Health Physician	
Contact UW Environmental Health & Safety Dept. for assistance	206-221-7770 (M-F, 8am-5pm)
Call 911 for a life-threatening emergency	911

Medical Protocol

First aid	<p>Mucous Membrane Exposure (eye, nose, or mouth):</p> <ol style="list-style-type: none"> 1. Flush the affected areas immediately and thoroughly with water for 15 minutes. 2. Use an eyewash if available, use cold water, and keep eyelids open. 3. Go to UWMC ED or HMC ED for medical treatment/evaluation, lab work, and antibiotic RX. <p>Percutaneous injury (intact skin):</p> <ol style="list-style-type: none"> 1. Splash to intact skin: Wash the site immediately and thoroughly with soap and water for 15 minutes No antibiotics needed. <p>Percutaneous Injury (through the skin):</p> <ol style="list-style-type: none"> 1. Wash the site immediately and thoroughly with soap and water for 15 minutes (without scrubbing). 2. Do not use harsh detergents or abrasive scrubbing on wounds. 3. Go to UWMC ED or HMC ED for medical treatment/evaluation, lab work, and antibiotic RX.
Surveillance	Monitor for symptoms and confirm infection by serological methods.
Post exposure or Symptoms	<p style="text-align: center;">Post Exposure Protocol for <i>Treponema pallidum</i></p> <ol style="list-style-type: none"> 1. Penicillin provides the most effective treatment for all stages of disease cause by <i>Treponema pallidum</i>. 2. If allergic to penicillin, tetracycline, doxycycline, or erythromycin are options. 3. Ceftriaxone may be considered as an alternative for treatment of early syphilis in pregnancy. 4. Monitor for symptoms (chancre at puncture site) and confirm infection by serological methods. 5. Baseline Syphilis IgG and 4-6 week follow-up IgG

Treatment	<p>Recommended Treatment:</p> <ol style="list-style-type: none"> 1. Amoxicillin 3.5g and Probenecid 1.0 g taken STAT <p>If penicillin allergic:</p> <ol style="list-style-type: none"> 2. Doxycycline 100mg PO bid for 14 days
Reporting	Report all accidents, injuries and near miss events as soon as possible on the UW Online Accident Reporting System.

BACKGROUND INFORMATION

Mode of transmission

Primary hazards for laboratory exposure are via accidental parenteral inoculation and droplet exposure on mucous membranes. Experimentally-infected animals are a potential source of infection. All subspecies of *Treponema pallidum* can be transmitted through direct contact with active lesions.

Infectious dose

57 organisms by injection.

Incubation period

Incubation is from 10 days to 3 months (usually 3 weeks).

Communicability

Treponema pallidum is transmitted by direct contact with active lesions; healed lesions are not infective. *T. pallidum pallidum* is also spread through sexual contact, and from a pregnant mother to her child. *T. pallidum endemicum* is also communicable through mucous membrane contact, and is occasionally transmitted vertically.

Vaccines

No vaccine currently available.

Characteristics

Treponema pallidum is a spirochete bacterium belonging to the *Spirochaetaceae* family. The three subspecies (*Treponema pallidum pallidum*, *Treponema pallidum endemicum*, and *Treponema pallidum pertenuae*) are all morphologically indistinguishable and have an approximate diameter of 0.18 µm and length of 6-20 µm.

Signs and Symptoms

Diverse clinical manifestations; initial genital tract (or skin) lesion followed by disseminated lesions and cardiovascular and neurologic problems; CNS disease manifested as acute syphilitic meningitis; infection during pregnancy results in fetal death and numerous birth defects.

Survival Outside the Host

Treponema pallidum can survive 120 hours or more in blood at 4°C (although this varies by concentration of treponemes)

Prior Laboratory Acquired Illness

As of 1995, fifteen laboratory acquired cases were reported. Primary hazards for laboratory exposure are via accidental parenteral inoculation and droplet exposure on mucous membrane.

REFERENCES:

BMBL6: *Treponema Pallidum* [Biosafety in Microbiological and Biomedical Laboratories—6th Edition \(cdc.gov\)](#) Pages 187-188. Accessed 5/04/2021

Government of Canada: [Pathogen Safety Data Sheets: Infectious Substances - Treponema pallidum - Canada.ca](#) Accessed 5/4/2021