

BRUCELLOSIS

- Agent information:** Brucellosis, a bacterial zoonosis, is caused by the *Brucella* species bacteria. The naturally occurring bacteria are passed among animals and cause disease in many different vertebrates. It is highly infective by aerosol and can survive for six weeks in dust and 10 weeks in soil or water. The incubation period is typically five to 60 days. Large aerosol doses may shorten the incubation period and increase the clinical attack rate. Brucellosis is more incapacitating than deadly. Mortality rate: $\leq 2\%$ of untreated cases (generally due to endocarditis).
- Transmission:** Person-to-person transmission is rare. Humans become infected via ingestion of contaminated animal products, by direct contact with infected animals, and by inhaling infectious aerosols.
- Signs and symptoms:** In humans, Brucellosis can cause a range of symptoms that are similar to influenza. Symptoms may include fever, sweats, headache, myalgia, arthralgia, and weakness. Cough, chest pain, dyspnea, fatigue, hepatomegaly, dysuria, and lymphadenopathy may also develop. Onset may be sudden or insidious. Brucellosis can also cause long-lasting or chronic symptoms that include recurrent fevers, arthralgia, and fatigue.
- Protective measures:** Standard precautions. Decontamination is necessary if exposure is from aerosolization, and presentation is immediate.
- Evaluation:** Clinical specimens for culture and/or PCR: specimens for culture include blood, bone marrow, spleen, liver, abscess fluid. ONLY whole blood (purple top tube) may be submitted for PCR. If blood is submitted for PCR, a blood culture bottle must also be drawn to confirm the PCR result.

Emergency Medical Services and Preparedness Section
24/7 Emergency Contact Number: 1-888-295-5156
Contact Number: 302-223-2999

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- Prophylaxis:** There is no vaccine available for humans. Post-exposure prophylaxis consists of doxycycline, in combination with rifampin or streptomycin, for adults and children. Duration: three to six weeks. In a mass casualty setting, parenteral treatment may not be an option and recommendations for oral treatment should be followed.
- Treatment:** Combination therapy recommended to prevent relapse:
- Adults:** Doxycycline 100mg PO BID x four to six weeks and one of the following: Rifampin 600mg PO QD x four to six weeks **OR** Streptomycin 1gm IM QD x three weeks based on severity of infection.
- Children:** (treat four to six weeks) Doxycycline 2.2mg/kg PO BID **OR** Tetracycline 30-40mg/kg/day (>8 yrs) PO **OR** TMP/SMX 10mg/kg/day PO divided QID **PLUS** Rifampin 15 to 20mg/kg/day PO.
- Reporting:** Report suspect cases immediately to the Division of Public Health, Office of Infectious Disease Epidemiology: 1-888-295-5156 (24/7 coverage).
- For more information:** Visit the Centers for Disease Control and Prevention website: www.cdc.gov/brucellosis/clinicians.