



BRUCELLOSIS

Agent Information:	Brucellosis, a bacterial zoonosis, is caused by the bacterium <i>Brucella</i> . The bacteria are naturally occurring, primarily passed among animals, and cause disease in many different vertebrates. It is highly ineffective by aerosol and can survive for six weeks in dust and 10 weeks in soil or water. The incubation period is typically 5-60 days. Large aerosol doses may shorten the incubation period and increase the clinical attack rate. Brucellosis is more incapacitating than deadly. Mortality rate: ≤ 2 percent of untreated cases (generally due to endocarditis).
Signs and Symptoms:	In humans, brucellosis can cause a range of symptoms that are similar to influenza and 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.
Transmission:	Person-to-person transmission is rare. Humans become infected by ingesting contaminated animal products, by direct contact with infected animals, and by inhaling infectious aerosols.
Protective Measures:	Follow appropriate Body Substance Isolation (BSI) precautions, with use of Personal Protective Equipment (PPE). <u>Standard Precautions:</u> Hand washing before and after all patient contacts and contact with patient care equipment. <u>Contact Precautions:</u> Use of gloves, gown, and eye protection. <u>Airborne Precautions:</u> Initiate droplet precautions for persons with flu-like illness or confirmed infection, including wearing masks (fit tested, NIOSH approved N-95 respirator) when in contact with patient. Victims presenting immediately after aerosolized exposure require decontamination.
Decontamination of PPE and Equipment:	Equipment can be decontaminated using soap, water and 0.5 percent hypochlorite solution (one part household bleach to 10 parts water). This solution can be used as appropriate or if gear had any visible contamination. Note that bleach may damage some types of firefighter turnout gear (one reason why it should not be used for biological agent response actions). After taking off gear, response workers should shower using copious quantities of soap and water.
Prophylaxis:	There is no vaccine available for humans. Post exposure: Doxycycline, in combination with rifampin or streptomycin, for adults and children. Duration: 3-6 weeks. In a mass casualty setting, parental treatment may not be an option and recommendations for oral treatment should be followed.
Treatment:	Combination therapy recommended to prevent relapse: Adults: Doxycycline for 4-6 weeks and one of the following: Rifampin for 4-6 weeks OR Streptomycin for three weeks. Children: (treat 4-6 weeks) Doxycycline OR Tetracycline (>8 yrs) OR TMP/SMX PLUS Rifampin.
Reporting:	Any suspect cases should be reported immediately to the Division of Public Health, Epidemiology Branch: 1-888-295-5156. For additional information, visit the CDC website: www.cdc.gov/brucellosis/ .