

Risk assessment and post-exposure prophylaxis (PEP) for potential exposure to *Brucella* spp.

Risk level	Risk area	Definition defining risk	PEP** considerations
High	Individual	Individual working with <i>Brucella</i> specimen 1. Sniffed culture plate, 2. Mouth pipetted specimen material, OR	Recommended for the individual(s) working with <i>Brucella</i> specimen
	5 foot radius of work with <i>Brucella</i>	Work (beyond that defined in “Individual” risk, above) with <i>Brucella</i> outside of class II biosafety cabinet on an open bench BUT work DID NOT involve widespread aerosol generating procedures*	Recommended for those within 5 feet of the work with <i>Brucella</i> on an open bench while the implicated work occurred
	Laboratory room	Work with <i>Brucella</i> outside of class II biosafety cabinet on an open bench INVOLVING widespread aerosol generating procedures*	Recommended for those present in laboratory room while widespread aerosol generating procedures involving <i>Brucella</i> specimen were conducted
Low	Laboratory room	Present in the lab at the time of manipulation of <i>Brucella</i> on an open bench, but who do not have high-risk exposures as defined above	May be offered to those present in laboratory room while work involving <i>Brucella</i> specimen was conducted
None	Laboratory room	Handling and testing of <i>Brucella</i> in a class II biosafety cabinet using BSL-3 precautions	None

Exposed persons who may be at increased risk for severe illness or complications include pregnant women, those who are immunosuppressed and possibly those with prostheses (heart or joint).

* Widespread aerosol generating procedures include, but are not limited to, centrifuging without sealed carriers, vortexing, sonicating, and accidents resulting in spillage or splashes (i.e. breakage of tube containing specimen). Other manipulations such as automated pipetting of a suspension containing the organism (using automated biochemical machines such as Vitek), grinding the specimen, blending the specimen, shaking the specimen or procedures for suspension in liquid to produce standard concentration for identification may require further investigation (i.e. inclusion of steps that could be considered major aerosol generating activities).

** Post-exposure prophylaxis should include doxycycline 100 mg orally twice daily and rifampin 600 mg once daily for at least 21 days. For those with contraindication to doxycycline, trimethoprim-sulfamethoxazole 160mg/800 mg orally twice daily for at least 21

days may be used. Persons with contraindications to these antimicrobial agents should consult with their health care provider for alternative post-exposure prophylaxis.

Serologic follow-up (agglutination testing) is recommended for low and high risk exposures on Day 0, week 2, 4, 6 & 24. *Note: CDC has proposed changes to the serologic follow-up based on recent findings from laboratorians who were infected following exposure to Brucella cultures. The proposed serologic testing schedule is: Day 0, week 6, 12, 18, and 24 to provide more even coverage throughout the incubation period.*

Homeland Security requires that the APHIS-CDC Select Agent Form 3 needs to be filled out and faxed to CDC within 7 days once the state health laboratory confirms the *Brucella* species is either *B. suis*, *B. melitensis* or *B. abortus*. Your local county health department or personnel in the zoonotic disease program in the state health office (850-245-4117) can assist with completing the form. A copy is also requested for your county health department or the state zoonotic disease program (fax 850-922-8473).

Additional/supporting information:

1. CDC website http://www.cdc.gov/ncidod/dbmd/diseaseinfo/brucellosis_g.htm
2. CDC. Laboratory-Acquired Brucellosis --- Indiana and Minnesota, 2006. MMWR 2008; 57(02):39-42. <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5702a3.htm>
3. APHIS-CDC Select Agent Form website: <http://www.selectagents.gov/resources/APHIS-CDC%20Form%203.pdf>