

Brucellosis

Definition:

Brucellosis is a disease caused by *Brucella* bacteria. Because *Brucella* can be airborne and weaponized, it is considered a bioterrorism agent. *Brucella* can infect humans and several types of animals.

Signs and symptoms:

Initial symptoms of brucellosis may include fever, sweats, malaise, anorexia, headache, myalgias, arthralgias, and fatigue. Additional long-term or chronic symptoms can include recurrent fevers, arthritis, orchitis, endocarditis, swelling of liver or spleen, chronic fatigue, depression, and neurologic symptoms. Symptoms usually appear 1-2 months after exposure, but may appear between 5 days and several months after exposure.

Transmission:

Humans are generally infected in one of three ways: 1) eating undercooked/raw meats or consuming unpasteurized/raw milk or other dairy products, 2) inhaling *Brucella* bacteria (especially in laboratories, meat packing plants, slaughterhouses, etc.), or 3) *Brucella* entering the body through mucous membranes or skin wounds (hunters, veterinarians, meat workers). Being around infected birthing animals and products of birth (placentas, etc.) can also pose a risk of infection. Person-to-person transmission is rare, but nursing mothers can transmit *Brucella* to their infants through breast milk. Pregnant women may be at higher risk of infection and complications. *Brucella* is not common in the United States and is found worldwide.

Diagnosis:

Brucellosis is diagnosed by clinical symptoms and laboratory tests.

Role of the School Nurse:

Prevention

- Education about risks associated with consuming raw/undercooked meats and raw or unpasteurized milk, cheese, or other dairy products
- Encourage frequent hand washing, especially after contact with animals or livestock
- Encourage appropriate use of protective equipment (i.e. rubber gloves) when hunting or otherwise exposed to animal blood or secretions

Treatment Recommendations

- If symptoms are noted, the child should see a provider for testing and treatment.
- Antibiotic treatment is available.

Exclusions

- Children who are sick should remain at home and see a provider if the disease is suspected.

Reporting Requirements

- Brucellosis is reportable immediately by phone upon recognition or strong suspicion of illness.

Resources:

- Maine CDC brucellosis website: <http://www.maine.gov/dhhs/mecdc/infectious-disease/epi/zoonotic/brucellosis.shtml>
- Federal CDC Brucellosis website: <http://www.cdc.gov/brucellosis/index.html>.