

Brucellosis (Bang's Disease)

Brucellosis is a disease caused by a group of bacteria called *Brucella*. This disease may affect various organs of the body. In general, the risk of becoming infected with brucellosis is rare. However, people in industries with more chances for contact with animals or animal products, such as farmers, veterinarians, meat inspectors, and laboratory personnel are at increased risk of infection.

Transmission

People are typically infected in one of three ways

- **Contaminated food or water source.** Eating or drinking something that is contaminated (undercooked meat, unpasteurized milk products) with the *Brucella* bacteria.
- **Environment to Person.** Breathing in the organism (inhalation)
- **Animal to Person.** Having the bacteria enter the body through skin wounds when working with an infected animal or its tissues.

Person-to-person transmission is extremely rare but has been reported. These instances include being spread from mothers who are breastfeeding, sexual transmission, and contaminated tissue transplantation.

It is unknown if lifelong immunity results from infection. Infections can persist for long periods of time, even years.

Symptoms

Symptoms may appear less than a week to several months after exposure, but symptoms typically appear within three to four weeks. Recovery may take a few weeks to several months.

- Symptoms include:
 - **Irregular fevers of varying lengths**
 - **Headache**
 - **Weakness**
 - **Swollen lymph nodes**
 - **Excessive sweating**
 - **Chills**
 - **Weight loss**
 - **Generalized aching**
- Some symptoms may persist for longer periods of time, and some may never go away. These include:
 - **Recurrent fevers**
 - **Arthritis**
 - **Swelling of the testicle and scrotum area**
 - **Neurologic symptoms (up to 5% of cases)**
 - **Chronic fatigue**
 - **Depression**
 - **Swelling of the liver and/or spleen**

Diagnosis

A health care provider can order laboratory tests to diagnose brucellosis which may need to be repeated.

Prevention

- People **should not consume**:
 - **Undercooked meat**
 - **Unpasteurized dairy products**
 - **Milk**
 - **Cheese**
 - **Ice cream**
- People who are in contact with animal tissues **should protect themselves by using**:
 - **Rubber gloves**
 - **Goggles**
 - **Gowns or aprons**

Treatment

After a diagnosis is made, a health care provider can prescribe antibiotics.

For more information about the treatment of Brucellosis visit [Brucellosis | CDC](#). If you have further questions about the treatment of your Brucellosis, contact your health care provider.

Exclusion Guidance

Individuals with Brucellosis should not be excluded from work, school, or child care unless the [general exclusions apply](#).

For additional information about Brucellosis, contact the North Dakota Department of Health and Human Services, Division of Public Health, at 800.472.2180.

This disease is a reportable condition. As mandated by North Dakota law, any incidence of this disease in humans shall be reported to the North Dakota Department of Health and Human Services.

Resources:

1. Kimberlin, D. W., Barnett, E. D., Lynfield, R., Sawyer, M. H. (2021) Red Book: 2021- Report of the Committee on Infectious Diseases. 31st ed. American Academy of Pediatrics. [Management and Prevention of Infectious Diseases] [238-240].
2. Centers for Disease Control and Prevention. (2021, November). *CDC – Brucellosis*. Centers for Disease Control and Prevention. Retrieved May 26, 2023, from <https://www.cdc.gov/brucellosis/index.html>

 **Possible Bioterrorism Agents (CDC classified A, B or C Agent)**

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