



Wyoming Game and Fish Department Brucellosis Information and Guidelines for Risk Reduction (Public)

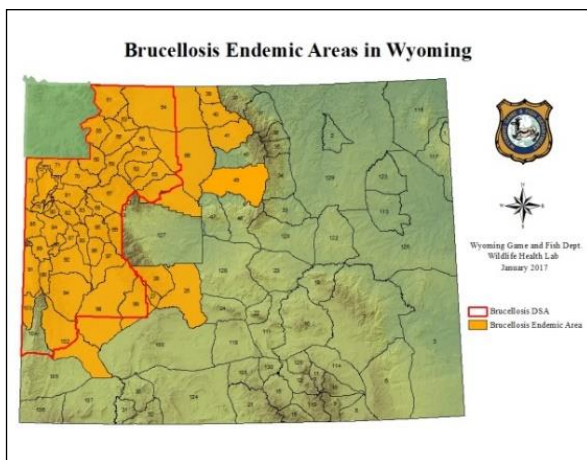
The Wyoming Game and Fish Department (Department) occasionally conducts hunting seasons, depredation hunts, and issues lethal take permits that could place sportspersons at risk of contracting brucellosis through contact with infected elk or bison. The following information and guidelines are designed to minimize the risk of contracting brucellosis.

What is brucellosis?

Brucellosis is a serious infectious disease that you must consider whenever handling carcasses of elk and bison in brucellosis endemic areas (see map below). The disease is caused by the bacteria, *Brucella abortus*, which normally infects ruminants (cattle, bison, elk) but can also be transmitted to humans. Transmission of brucellosis is greatest during the third trimester of pregnancy (generally from Feb 15th to June 30th in elk, and Jan to May in bison), but there is still some low risk at other times of the year.

Where is brucellosis found?

Elk in Teton, Sublette, Park, and Northern Lincoln counties and bison from the Jackson and Yellowstone herds are infected with brucellosis at varying levels.



What are signs of brucellosis in elk and bison?

There is no effective way to detect brucellosis infected animals by their appearance. Brucellosis can cause elk or bison to abort or give birth to weak calves. It can cause infections in the joints leading to swollen, enlarged joints with pockets of fluid, known as a hygroma.



Brucellosis positive hygroma near the fetlock of an elk

How can brucellosis be transmitted to humans?

Brucella abortus is primarily transmitted through exposure to a fetus, fetal fluids, uterus, birth fluids, or an open joint or abscess from an infected animal. The probability of becoming infected is dependent on dose and route of exposure. *Brucella* can infect through mucous membranes (mouth, eyes, nose), broken skin (cut, scratch), and under prolonged contact with large numbers of organisms, unbroken skin.

What are the risks of getting brucellosis?

Farmers, veterinarians, and hunters have been infected with brucellosis after exposure to an infected fetus, uterus, or birth fluids. Risk associated with brucellosis during hunting seasons is low; however, standard safety precautions should be followed including: not harvesting obviously ill animals; wearing latex or rubber gloves when field dressing; not cutting into visible abscesses or swollen joints, and reporting obvious abnormalities to WGFD personnel as soon as possible. These precautions are not specific to brucellosis; they apply to all infections that might be encountered in game animals.

What are symptoms of brucellosis in humans?

In humans, symptoms of brucellosis include: a fever that tends to rise and fall (undulant fever), lower back pain, headaches, alternating chills and fevers (especially in the evening), night sweats, and insomnia. Symptoms generally mimic the flu. Brucellosis is treatable with antibiotics, but in rare cases it can progress to a debilitating, lifelong disease. Successful treatment is dependent on taking antibiotics as soon as possible if positive on blood tests or if symptoms appear.

Are elk or bison infected with brucellosis safe to eat?

Brucella abortus is usually localized in lymph nodes or reproductive organs, but almost never in muscle (meat) and it is readily killed by cooking. Carcasses and meat of infected elk and bison are generally quite safe to handle and consume. We recommend cooking all game meat thoroughly prior to consumption.

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Guidelines for Brucellosis Risk Reduction

Personal Protective Equipment (PPE) for field dressing elk and bison

- Always wear latex or rubber gloves when field dressing carcasses; consider double gloving for extra protection.
- Do not handle a pregnant uterus or its contents. Be extremely careful not to puncture the uterus during field dressing and removal. Remove intact uterus by cutting below the cervix (towards the vagina), this will prevent leakage and exposure to fetal fluid. The cervix is a 2-3" long, firm structure that forms the "necklike" passage on the lower end of the uterus (see diagram below)
- Do not cut into a swollen joint or tendon sheath; do not cut into enlarged testicles.
- Immediately wash cuts received while processing any carcass. If deep cuts occur, see a physician.
- Wash hands and forearms thoroughly with soap and water as soon as you return from the field. Hand sanitizer can be used as an alternative if soap and water are not available.

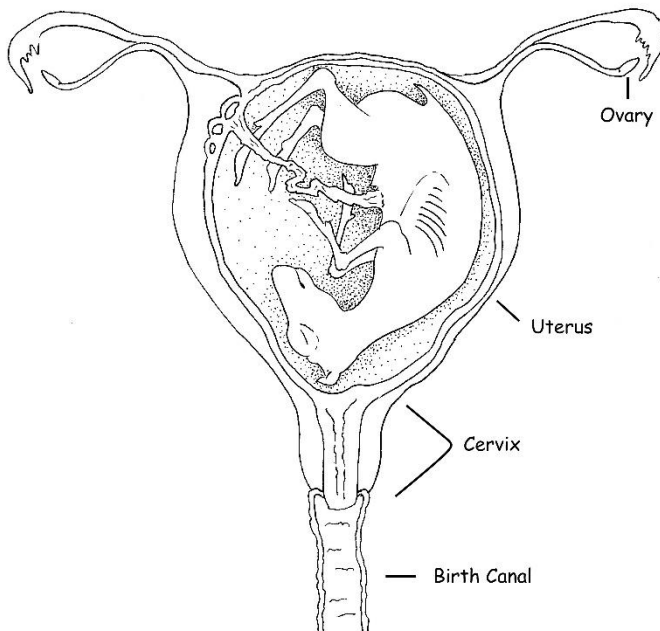


Diagram showing location of the cervix. Always cut on the birth canal (toward vagina) side of the cervix. *Diagram by Jessica Jennings-Gaines.*

Treatment

- The symptoms of brucellosis may take up to 6 weeks to appear and include a fever that tends to rise and fall (undulant fever), lower back pain, headaches, alternating chills and fevers (especially in the evening), night sweats, and insomnia. Immediately see your physician for an examination and treatment. Recommend that your physician contact the Wyoming Department of Public Health for further information and guidance on treatment/monitoring of brucellosis.

More Information

- Contact the WGFD Wildlife Health Laboratory at (307) 745-5865, or see our website at: <https://wgfd.wyo.gov/Wildlife-in-Wyoming/More-Wildlife/Wildlife-Disease/Brucellosis-Info-and-Maps> or scan the QR code below.



Wyoming Game & Fish Department
Wildlife Health Laboratory