MONTANA FISH, WILDLIFE & PARKS

Trichinosis in Montana Bears

What is Trichinosis?

Trichinosis is caused by eating raw or undercooked meat of animals infected with the larvae of a species of worm called *Trichinella*. Infection occurs commonly in certain wild carnivorous animals such as bear or cougar, or omnivorous animals such as domestic pigs or wild boar.

What are the signs and symptoms of a *Trichinella* infection?

The signs, symptoms, severity and duration of trichinellosis vary. Nausea, diarrhea, vomiting, fatigue, fever, and abdominal discomfort are often the first symptoms of trichinellosis. Headaches, fevers, chills, cough, swelling of the face and eyes, aching joints and muscle pains, itchy skin, diarrhea, or constipation may follow the first symptoms. If the infection is heavy, patients may experience difficulty coordinating movements, and have heart and breathing problems. In severe cases, death can occur.

For mild to moderate infections, most symptoms subside within a few months. Fatigue, weakness, muscle pain, and diarrhea may last for months.

How does infection occur in humans and animals?

When a human or animal eats meat that contains infective *Trichinella* cysts, the acid in the stomach dissolves the hard covering of the cyst and releases the worms. The worms pass into the small intestine and, in 1-2 days, become mature. After mating, adult females lay eggs. Eggs develop into immature worms, travel through the arteries, and are transported to muscles. Once in the muscle, the parasite develops into an encapsulated cyst. The life cycle repeats when meat containing these encysted worms is consumed by another human or animal.

For more information on Trichinosis please visit:
http://www.cdc.gov/parasites/trichinellosis/gen_info/faqs.html

If you would like to speak with someone from Montana Fish, Wildlife & Parks Wildlife Laboratory please feel free to call 406-994-6357. For further information about testing meat for *Trichinella*, see page 2.

Trichinella Testing Options

As of 2015, FWP no longer offers *Trichinella* testing for bear and lion hunters. FWP recommends that all bear and lion meat be thoroughly cooked to an internal temperature of 165 degrees F before consumption by humans or pets. For hunters who still desire *Trichinella* testing, they may send a tissue sample to the Montana Department of Livestock's diagnostic lab. **The hunter is responsible for the collection, submission and fee required to complete the testing.**

PRICE: 1-4 Samples **$80.00 per sample**
5-10 Samples **$65.00 per sample**

Submission Instructions:

1.) The sample required is a **4x5 inch piece of tongue or diaphragm**

2.) Refrigerate sample, unless storage is to be greater than three days. If greater than three days, **freeze or salt** the sample.

3.) Complete the **diagnostic lab submission form** (form SV43**)** as thoroughly as possible and send with the sample. This form can be found on the Montana Department of Livestock Diagnostic Laboratory website http://liv.mt.gov/lab/forms.mcpx

a. On the SV43 form, check the '**Parasitology'** box then check the '**Other'** box and write **'*Trichinella*'** in the blank.

4.) Package samples in a shipping container so they DO NOT LEAK. Some packaging tips are…

a. Double bag sample
b. Use only fabricated ice packs NOT ZIPLOCS FULL OF ICE
c. Place enough absorbent material in the package that any fluid that leaks may be absorbed

5.) Send sample AND submission form with payment to the Montana Department of Livestock Diagnostic Laboratory

a. US Postal Service:
Montana Department of Livestock Diagnostic Laboratory
PO Box 997
Bozeman, MT 59771

b. FedEx or UPS:
Montana Veterinary Diagnostic
1911 Lincoln Street
Bozeman, MT 59718

Test Results:

Only a small section of meat can be tested, so it is possible that *Trichinella* may not be detected even if the parasite is present in some of the muscle tissue of the animal. Such "false negative" results are most likely to occur in animals with low level infections. A "negative" test result is not a guarantee that the meat does not contain *Trichinella*. Therefore, we recommend that meat be cooked to an internal temperature of 165 degrees Fahrenheit regardless of the *Trichinella* test result.

IMPORTANT:

The test result will be accompanied by **the following disclaimer:**

"As with most testing procedures, false negatives can occur especially with low infection levels. Despite a negative test result, it is recommended to cook all meat thoroughly to at least 165 degrees F. Other types of meat processing, such as smoking, do not kill *Trichinella* sp in meat."