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<u>Cat Tips</u>

# **Bobcat Fever Infects Midwest Cat**

Bobcat fever, a tick-borne illness formally known as cytauxzoonosis, was diagnosed in a southern Illinois cat. If your cat spends time outdoors in an area where bobcats or ticks are present, be on the lookout for this life-threatening disease, which can prove to be fatal without early treatment.

#### Analysis by <u>Dr. Karen Shaw Becker</u>

## **STORY AT-A-GLANCE**

- If you live in an area where bobcats are present, and you have a cat who frequents the outdoors, stay vigilant for a tick-borne disease called cytauxzoonosis, commonly known as bobcat fever
- Reports of infection have come from southern Illinois, where at least eight cats were affected in 2018, and one has been reported as of May 2019
- At least 16 other states have also reported cases of cytauxzoonosis
- Fever, lethargy and loss of appetite are among the first signs of bobcat fever
- Sadly, cytauxzoonosis is often fatal in cats, although survival is possible, especially if treatment is started early

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If you live in an area where bobcats are present, and you have a cat who frequents the outdoors, stay vigilant for a tick-borne disease called cytauxzoonosis, commonly known as bobcat fever.

The disease got its name because bobcats are the primary hosts of the Cytauxzoon felis (C. felis) parasite. When a tick feeds on a bobcat infected with C. felis, it can then spread the parasite and related infection to other animals it bites, including domestic cats. While bobcats rarely get seriously ill from C. felis, the infection is often fatal in smaller housecats.

### **Bobcat Fever Detected in Southern Illinois**

While bobcats are the natural host of C. felis, cytauxzoonosis has also been reported in U.S. cougars, panthers and captive tigers.<sup>1</sup> In the U.S., it was first discovered in a feline in Missouri in the 1970s and has been spreading across the U.S. since then. It's now been reported in more than a dozen states, including:

- Missouri
- Arkansas
- Florida
- Georgia
- Louisiana
- Mississippi

- Oklahoma
- Texas
- Kentucky
- Kansas
- Tennessee
- North Carolina
- South Carolina
- Nebraska
- Iowa
- Virginia

Reports of infection have also come from southern Illinois, where at least eight cats were affected in 2018, and one has been reported as of May 2019.<sup>2</sup> Alabama and Ohio have also received anecdotal reports of cytauxzoonosis in domestic cats.<sup>3</sup> With the range of this illness appearing to be spreading, it's important for all outdoor cat owners to be aware of the risks, especially if you live in an area where bobcats are endemic.

### How Do Cats Catch Bobcat Fever?

Cytauxzoonosis is a tick-borne illness, which means it's spread through the bite of a tick — typically the Lone Star tick, although the American dog tick can also transmit the disease.<sup>4</sup> Most infections in cats occur from March through September, when ticks are most prevalent.

While outdoor cats are most at risk of tick-borne diseases, it's also possible for indoor cats to be infected via a tick carried in by another animal who goes outdoors. So while cytauxzoonosis isn't a disease that can affects dogs (or humans), it's possible that a tick carried in on a dog could end up on an indoor housecat, infecting him that way.

## Signs and Symptoms of Cytauxzoonosis

Fever, lethargy and loss of appetite are among the first signs of bobcat fever. According to Susan Nelson, a veterinarian and clinical associate professor at Kansas State University's Veterinary Health Center in a news release:

"First, you're probably going to notice they're going to be really lethargic and tired. Their appetite is going to decrease. They may feel very hot to you as they will tend to run a high fever early in the course of the disease.

As the disease progresses, you might see breathing problems, dehydration and the whites of their eyes or the inside of their ears might start looking yellow as they start getting jaundiced. Their body temperature will start to drop as they near the end stages of the disease."

Keep in mind that a cat can acquire this infection even if you didn't find a tick on him, as the tick may have already fallen off of the animal. After the initial symptoms, cats may experience difficulty breathing and neurologic problems, seizures or coma, as the parasites multiply within the blood, traveling throughout the body and infecting many organs.<sup>5</sup>

Sadly, cytauxzoonosis is often fatal in cats, although survival is possible, especially if treatment is started early. That being said, there are also reports of cats who become infected but do not show signs of illness, possibly because they've somehow developed resistance to the infection or due to the possibility that different strains of C. felis exist, with some being more virulent than others.

The latter theory makes sense, since there are reports of at least 18 cats who have been infected with bobcat fever but who survived, some without treatment. In these cases, the cats did not appear to be as sick as would be expected, did not spike temperatures over 106 degrees F (41 degrees C) and never became hypothermic.<sup>6</sup>

#### **Treatment for Bobcat Fever**

If your cat develops bobcat fever it is often diagnosed with blood smears and polymerase chain reaction (PCR) testing, which can confirm the identity of the parasite.

Treatment with a combination of antifungal/antiparasitic (sometimes used to treat malaria) and antibiotic drugs has been shown to improve survival rates to about 60%,<sup>7</sup> but supportive care, including intravenous (IV) fluids, blood thinners and sometimes a feeding tube, will also be required.

Integrative vets also treat these patients with ozone therapy, hyperbaric oxygen treatments and natural antimicrobial defense herbs (used in human tick-borne infections).

It's important to know that cats who recover from cytauxzoonosis may still carry the parasite and can suffer a recurrence of the infection. However, the disease cannot be spread through physical contact, so other cats in your home are not at risk just from living with your kitty.

### How to Keep Your Cat Safe From Tick-Borne Illness

Once your kitties are indoors for the night, do a thorough check for ticks, and if you find one, remove it with tweezers or a tick removal tool, being careful to remove the entire tick, including the head. Disinfect the area after removal and be sure to wash your hands thoroughly (and avoid touching it directly if possible).

While I don't recommend the use of topical flea and tick chemical preventives or collars, which can be toxic to cats, if you know your cat is in a high-risk area for ticks, use a **natural tick deterrent** to make your pet a less appealing host. An herbal pest repellent collar can add an extra layer of protection, as can sprinkling him with diatomaceous earth,

#### avoiding his face and head.

Be sure your cat also has a strong immune system, which can be achieved by feeding a nutritionally balanced, fresh food diet and giving your pet opportunities for regular exercise. Finally, in the area where your cat frequents, keep grasses trimmed short, as tall grasses are a favorite hiding spot for ticks.

#### Sources and References

<sup>1,3,6</sup> Merck Manual, Cytauxzoonosis

<sup>2</sup> WSIL May 10, 2019

<sup>4,5</sup> VCA Hospitals, Cytauxzoonosis in Cats

<sup>7</sup> Journal of Veterinary Internal Medicine December 10, 2010