



BRIARPOINTE VETERINARY CLINIC

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FEVER OF UNKNOWN ORIGIN IN CATS

What is a fever of unknown origin?

Fever is a term that refers to an elevated body temperature. The normal body temperature range for cats is between 100.0°F and 102.5°F (37.9°C to 39.2°C). To be classified as a fever of unknown origin (FUO), the body temperature must be above 103.5°F (39.7°C) on at least four occasions over a fourteen-day period, accompanied by an illness of fourteen days' duration without an obvious cause.

What causes a fever?

A fever is initiated by the presence of the body's own (endogenous) or an outside (exogenous) source of a pyrogen (a fever-producing substance). This then causes the release of substances from the body such as interleukin-1 and prostaglandins that reset the body's temperature regulation mechanism (which is located in the hypothalamus). This resetting to a higher temperature activates physiologic responses within the body to elevate the temperature.

If this is a natural process, why is it a problem?

Generally speaking, a fever is beneficial to the body because it hampers the ability of bacteria to reproduce and improves the immune system response. However, if the fever remains above 105°F (40.5°C) for more than a day or two, dehydration, anorexia and depression often result. If the fever persists above 106°F (41.1°C), cerebral edema (swelling around the brain), bone marrow suppression and clotting disorders may develop.

When a fever persists, several consequences occur within the body. Among these are increased metabolic demands, increased fluid and caloric requirements and increased breakdown of muscle tissues.

What are the clinical signs of fever of unknown origin?

Most cats with a fever of any sort are lethargic, have a loss of appetite, have increased heart and breathing rates, and are dehydrated. With a fever of unknown origin, these clinical signs are present but there is no obvious cause for them.



How is FVO diagnosed?

If your cat has a fever, we will perform a thorough physical examination, looking specifically for evidence of bite wounds, lacerations, punctures or other signs of trauma. Diagnostic blood tests will usually include a complete blood cell count (CBC), a serum biochemistry panel, feline leukemia virus (FeLV) and feline immunodeficiency virus (FIV) testing, and urinalysis. Urine cultures are often performed to search for an underlying urinary tract infection. Additional tests that may be recommended, based on your cat's clinical signs, include Feline Infectious Peritonitis (FIP) and *Toxoplasmosis* titers or thyroid function tests.

What causes FVO?

As the name suggests, this is a fever without a demonstrable cause. Most cases of fever are caused by a viral infection such as FeLV, FIV, FIP, feline parvovirus, herpesvirus or calicivirus. Unusual bacterial infections that are secondary to bites wounds may also cause a fever, such as *Yersinia*, *Mycobacteria*, *Nocardia*, *Actinomyces* and *Brucella*. Infection in the chest cavity (pyothorax) is also relatively common. Other causes include kidney infections (pyelonephritis), blunt trauma, penetrating intestinal injury resulting in low-grade peritonitis, oral infections and tooth root abscesses, systemic fungal infections, lymphoma and other tumors.



It is important to tell us about any recent travel, any potential exposure to unknown or infected animals, any supplements or medications that you are administering or any other abnormalities you may think of.

How is FVO treated?

It is important to understand that the diagnostic workup may be quite involved so that it can be correctly treated and that an accurate prognosis can be given. In cases where a diagnosis is unobtainable, it is reasonable to make a diagnosis of FVO and initiate treatment based on the information that is available. Antibiotics are often prescribed to treat any underlying bacterial infection or to prevent bacterial infections from occurring as a secondary problem. On rare occasions, medications to reduce the fever will be given. Unlike humans, cats do not tolerate most non-steroidal anti-inflammatory drugs (NSAIDs) well. Aspirin and acetaminophen (Tylenol®) are extremely toxic to cats and should **never** be administered by an owner without the explicit direction of a veterinarian.

What is the prognosis for a cat diagnosed with FVO?

The prognosis depends on the cause of the fever. If the exact cause is unknown, an accurate prognosis cannot be given. Most cats respond well to basic supportive care, providing plenty of water and nourishment, and administering antibiotics when indicated. Cats that have persistent fever must be given a thorough workup so that the cause of fever can be discovered and treated before irreversible damage occurs. It is important to note that many viral infections will wax and wane before resolution.