

Histoplasmosis in Cats – Causes, Symptoms & Treatment

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At a glance:



About: Histoplasmosis is a disease caused by the fungus *Histoplasma capsulatum* which thrives in moist and humid conditions, particularly in areas which have been contaminated with bird or bat droppings.



Transmission: Cats become infected when they inhale or ingest fungal spores from contaminated surroundings.



Symptoms: Once in the cat, the fungal take up residence in the lungs, skin or spread (disseminate) throughout the body. Symptoms vary depending on the location.



Diagnosis: Can be a challenge, a definitive diagnosis is made by finding the fungus from tissue samples.



Treatment: Not all cats require treatment, where indicated itraconazole or ketoconazole are the drugs of choice. The prognosis for cats with disseminated histoplasmosis is poor.

What is histoplasmosis?

Histoplasma capsulatum is a dimorphic fungus responsible for histoplasmosis infection. Dimorphic fungi exist in two forms.

- Filamentous fungi (mould) – Environment
- Yeast – Inside the host

The fungus infects many mammals including cats, dogs, and humans. The distribution of the fungus includes Mississippi, Missouri, Ohio River Valleys and the mid-Atlantic states, Latin America, Africa, Australia and parts of East Asia.

Histoplasmosis thrives in humid and moist conditions and is prevalent in soil contaminated with bird or bat feces. Infection occurs when a host inhales or ingests the spores.

Humans are not at risk of catching the disease from infected cats although they can become infected via the same environmental exposure.

Transmission:

Cats become infected when they inhale or ingest the fungal spores (known as microconidia) from the environment. Once inside the cat, macrophages engulf the spores where they continue to replicate. From this point on, the disease will go one of three ways. It may remain in the lungs, disseminate through the body to various organs or affect the skin.

- **Primary pulmonary histoplasmosis** – This is the most common form of histoplasmosis. The spores are inhaled into the lungs where they cause localised symptoms.
- **Disseminated histoplasmosis** – This is the most lethal form of histoplasmosis. Instead of being remaining in the lungs, the infection spreads throughout the body in the blood and lymph. Affected areas include liver, eyes, bones, skin, spleen and gastrointestinal tract. This form of histoplasmosis is seen mostly in immunocompromised cats.

Disseminated histoplasmosis is broken down by the organs involved:

- Cutaneous histoplasmosis
- Intestinal histoplasmosis
- Ocular histoplasmosis
- Osseous histoplasmosis
- Hepatic histoplasmosis

Most cats who develop disseminated histoplasmosis are co-infected with FIV or FeLV.

Symptoms:

The lungs are the initial site of infection, and non-specific respiratory symptoms may primarily occur. The severity of symptoms can vary depending on the immune status of the cat as well as the number of microconidia inhaled and the form of histoplasmosis your cat has developed.

Symptoms develop in cats with severe infection.

Generalised symptoms:

- Anorexia (loss of appetite)
- Weight loss
- Lethargy
- Dehydration
- Fever

Pulmonary histoplasmosis:

- Coughing
- Pale mucous membranes
- Labored breathing
- Abnormal lung sounds

Disseminated histoplasmosis:

- Enlarged spleen, liver or lymph nodes
- Lameness due to bone infection
- Ocular involvement may lead to uveitis, retinal detachment, blepharitis or conjunctivitis
- Organ dysfunction may vary depending on the affected organs
- Diarrhea
- Neurologic dysfunction
- Subcutaneous (under the skin) weeping nodules (lumps)

Diagnosis:

Diagnosing histoplasmosis can be challenging because the cat will often display vague symptoms with many possible causes. Diagnostic tests will include the following:

- Complete blood counts, biochemical profile, and urinalysis to evaluate organ function and the overall health of your cat. Cats with the disseminated form may have low blood platelets. Elevated liver enzymes may be present in cats with liver involvement.
- Chest x-rays may reveal a pattern in the lungs consistent with histoplasmosis. Abdominal x-rays which may reveal an enlarged spleen or liver.
- Fine needle aspirate or biopsy of subcutaneous nodules, bone, liver, spleen, lungs or lymph nodes.
- Blood smears.
- Rectal scrapings.
- Blood test to check for the presence of antibodies. Immunocompromised cats may be negative for antibodies.
- Cytology – A test to evaluate tissue samples for the presence of fungus.
- Your veterinarian may also want to run tests for FIV and FeLV if your cat has the disseminated form of histoplasmosis.

Treatment:

Mild cases of histoplasmosis may not require any treatment. Itraconazole or ketoconazole will be prescribed to cats who require treatment. Your cat will need to remain on medication for between 4-6 months and occasionally as long as 12 months.

More serious cases may require in-hospital care, including tube feeding and IV fluids.

The prognosis for cats with pulmonary histoplasmosis is fair to good, however, in the

case of disseminated histoplasmosis, it is poor to grave.