

# Ettinger & Feldman – Textbook of Veterinary Internal Medicine

## Client Information Sheet

### Coccidioidomycosis

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#### What is coccidioidomycosis?

Coccidioidomycosis is the medical name for a disease also called “valley fever.” This disease is caused by the fungal organism *Coccidioides immitis* (“cocci”). Dogs, cats, horses, llamas, and humans living or traveling in areas where the cocci organism thrives in the soil can become infected. Cattle and sheep are much more resistant.

Cocci is found in the lower Sonoran life zone (desert areas of California, Texas, Arizona, Nevada, Utah, New Mexico, Mexico, and South America). The cocci fungus lives in the dry, alkaline soil of these regions, proliferating after rains and transforming into an airborne, infectious form during the dry season. Cocci cannot normally be caught from an infected animal or human.

#### What are the symptoms of coccidioidomycosis?

The most common way animals and humans become infected is by inhalation of the airborne cocci spores. The spores enter the lungs and cause an infection (pneumonia). Many people (80%) overcome this infection and never know they had cocci. Their symptoms were flu-like. A smaller group of people experience complicated infections, with either spread of the fungus throughout the body or the development of serious abscesses within the lungs.

In dogs, the initial pneumonia is usually serious enough to cause fever, loss of appetite and coughing, precipitating a visit to the veterinarian. Cocci can spread into almost any organ in dogs, most commonly to skeletal bone, central nervous system, and skin. Cats often have an asymptomatic initial lung infection, but later develop signs of illness after the cocci has spread into other tissues (skin and bone most commonly).

#### What tests are needed?

The diagnosis of coccidioidomycosis is usually made by chest radiographs and serology, a blood test measuring antibodies against the organism. Intradermal skin testing is used in humans as a measure of immunity, but this is unreliable in dogs and cats. The higher the serum antibody level the worse the prognosis and more serious the cocci infection. Less commonly, the diagnosis is made by biopsy or culture.

## What treatment is needed?

Coccidioidomycosis is almost always treated in dogs and cats once it is diagnosed, despite the fact that most people recover from the disease without medication. This is because of the perception that dogs and cats are sicker from the disease when it is diagnosed. Untreated, coccidioidomycosis can cause death.

Some treatments for coccidioidomycosis include the following:

- Most commonly, oral antifungal drugs called *azoles* (ketoconazole, itraconazole, fluconazole) are used.
- Serious cases may require hospitalization for intravenous antifungal drug administration. Some cases require the use of more potent drugs, such as amphotecerin-B.
- Uncommonly, coccidioidomycosis is treated surgically, but usually the affected areas cannot be removed.

Sometimes, coccidioidomycosis is lethal even when treated. Humans who recover from cocci are generally considered to be immune; this may be true for dogs and cats but has not been proved. Immunosuppression (from anti cancer drugs, infectious disease, immunosuppressive drugs, pregnancy or genetic problems) makes cocci a much more serious disease.

## Contacts for Further Information



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