

Your Pet's Cough Might Hide a Deadly Secret

A dramatic rise in cases of a deadly fungal infection is alarming pet owners and veterinarians alike. Originating from the dust and soil of the southwestern US, this stealthy predator is more prevalent than ever, attacking unsuspecting pets with devastating consequences.

Analysis by [Dr. Karen Shaw Becker](#)

STORY AT-A-GLANCE

- Valley fever, or coccidioidomycosis, is a potentially deadly fungal disease that occurs in hot, dry climates; Tucson, AZ veterinarians are warning pet parents that cases of the infection are on the rise
- Dogs acquire valley fever from inhaling the soil-borne fungus, and susceptible animals can develop the infection from as few as 10 fungal spores; symptoms include fever, coughing and difficulty breathing
- Tucson integrative veterinarian Dr. Randy Aronson has seen several dogs and cats with the infection so far this year; he encourages local pet owners to help strengthen their animal companions' immune systems in the event they're exposed to the fungus
- Treatment depends on the extent of the infection and clinical symptoms, and can involve antifungal drug therapy for up to a year or more
- In valley fever endemic areas, there's no foolproof way to prevent infection; however, there are steps dog parents can take to reduce the risk of exposure

Veterinarians in the Tucson, AZ area are warning pet parents that cases of valley fever, a fungal disease, are on the rise. The scientific name for valley fever is coccidioidomycosis, and it has historically affected only dogs in the southwestern U.S. However, it may become more common across the country as increasing numbers of homeless pets are transported long distances to improve their chances of adoption.

Valley fever, also known as California fever and desert fever, is caused by the *Coccidioides immitis* fungus. It's a potentially deadly disease that occurs in dry, hot climates in the western and southwestern U.S., especially Southern California, Arizona, southwest Texas, New Mexico, Nevada, and Utah, as well as in Central and South America.

The condition can affect many types of mammals, including humans. It occurs more often in dogs than cats. The condition is not zoonotic, meaning it can't be passed from animal to human or human to animal.

The Current Situation in Tucson

*"Valley Fever in our area is incredibly prevalent," Dr. Randy Aronson, an integrative veterinarian in Tucson and owner of **PAWS Veterinary Center**, told 13 News Tucson. "Sometimes the disease will go quiet, and owners won't see those signs, or aren't picking those up. And then it has the ability to get into the body and go just about anywhere. We've had it in the brain, heart, kidney, it's very common in bone."¹*

Aronson reassures pet owners that valley fever doesn't have to be a death sentence or require medication for the rest of a pet's life. When diagnosed early, most dogs recover within 6 months to a year. Aronson also has several feline patients with the disease.

"And the reason is they're exposed to a lot of the same spores through open windows, even screened windows, HVAC units or evaporative cooling units. So, they get the same type of exposure and people aren't aware of it. But we've seen enough of it that we're in tune for looking for it," he explains.

As for limiting a pet's exposure to valley fever, Aronson believes "a dog and a cat need to be a dog and a cat."

"So, it's very difficult to say don't let your dog dig outside," he says. "Don't let your cat go near an open window. So as long as they're feeding high quality food, helping them with supplementation, that gives their immune system the best chance for fighting this."

Most Arizona Dogs Have Been Exposed

The *Coccidioides immitis* fungus is found in upper layers of soil, but several inches deep where it can withstand high temperatures and lack of moisture. The fungus works its way to the surface after a rainy period or soil disturbance of some kind.

Once on the soil's surface, the fungus forms spores that are spread by wind and dust storms. Arizona's summer monsoons and haboobs (violent dust storms) create an ideal environment for the fungus to thrive and spread, which means most dogs in the state have been exposed.

Dogs acquire coccidioidomycosis from inhaling the soil-borne fungus, and those who are susceptible to the infection can become ill from as few as 10 fungal spores. In Arizona, estimates are that about 70% of dogs successfully fight off the infection, but the remaining 30% go on to acquire the disease and require long-term treatment with antifungal medications.

The infection starts in the respiratory tract and then frequently spreads to other body systems. In the lungs, the spores are round globules that exist as parasites until they grow big enough to break open, releasing hundreds of endospores that travel to other tissues, and continue the process of growing, rupturing, and spreading throughout the body.

If the endospores get into the lymphatic and circulatory systems, they create a systemic infection. Coccidioidomycosis sets in from one to three weeks after exposure.

Dogs who spend a lot of time outdoors are at highest risk — especially if they have plenty of space in which to roam or dig. Large dogs seem more at risk, perhaps because they tend to spend more time outdoors than smaller dogs.

Signs and Symptoms of Valley Fever

Dogs whose immune systems are able to fight off the infection often show no symptoms, especially younger dogs. When symptoms do appear, they can include:

- Fever
- Lameness

- Skin ulcers and draining sores
- **Coughing**
- Swelling of bones or joints
- Inflammation of the cornea or iris of the eye
- Difficulty breathing
- Significant weight loss and muscle wasting
- Seizures
- **Lethargy**
- Enlarged lymph nodes
- Heart failure

It's not unusual for valley fever to spread throughout the body, affecting bones and joints, eyes, skin, liver, kidneys, lungs, central nervous system, cardiovascular system, and reproductive organs (specifically the testes).

Cats usually don't exhibit the same symptoms as dogs do, and frequently show no symptoms at all until the infection has spread significantly. In cats, the deeper layers of skin tissue are more often affected, so symptoms like masses, abscesses, and lesions with draining are more common in kitties.

Diagnosis and Treatment Options

As with most diseases, early detection offers the best outcome for dogs with valley fever, so if you live where the infection is prevalent (or you've recently traveled with your dog to the southwest or adopted a dog from that area of the country) and your pet is showing possible symptoms, it's critical that you get him to your veterinarian as soon as possible.

Your vet will perform a careful physical exam and order a complete blood count, chemical blood profile and urinalysis. You'll need to provide a history of your dog's health and symptoms, including possible opportunities for exposure to the fungus. If your vet suspects valley fever, serologic testing for the fungus will be performed.

Treatment of valley fever depends on the extent of the infection and clinical symptoms. If the condition is widespread, traditional treatment involves aggressive antifungal therapy for up to a year. Other drugs, including cough suppressants, may also be prescribed to treat individual symptoms.

In dogs who aren't responding well to drug therapy, a drug level measurement test can be performed to determine how well the medication is being absorbed.

The University of Arizona's Valley Fever Center for Excellence (VFCE) estimates valley fever infections cost Arizona dog owners \$60 million per year in treatment expenses.² The cost of the most commonly prescribed antifungal, fluconazole, is about \$50 a month for smaller dogs, and can be in excess of \$150 for large dogs. In addition, the necessary blood tests average around \$200.

And while Dr. Aronson didn't mention it during his interview with 13 News Tucson, integrative veterinarians often combine traditional antifungal therapy with more natural modalities such as intravenous (IV) vitamin C therapy, hyperbaric oxygen therapy, and ozone therapy. Some pet parents are also using **CBD oil** to reduce pain and inflammation in dogs with the disease, along with immune-stimulating protocols.

Affected dogs should be fed a high quality, nutritionally optimal, minimally processed diet to help maintain body weight. Activity should be restricted until symptoms begin to subside, and antibodies should be monitored every three to four months until they return to a normal level.

Valley fever is a dangerous fungal disease, and the prognosis for most dogs is guarded. Unfortunately, while many improve following an extended course of antifungal drug therapy, relapse is common.

Recommendations to Help Keep Your Pet Safe

Valley fever endemic areas are some of the fastest growing regions in the U.S., which means more pets (and humans) are being exposed to the fungus. If you live in one of those areas, there's really no foolproof way to prevent infection in your pet. To reduce the likelihood of exposure to the fungus, the VFCE recommends:

- Keeping dogs indoors more than outdoors
- Avoiding activities that generate dust
- Minimizing dog digging behavior
- Preventing sniffing in rodent holes

I also agree with offering immune support, in the form of supplemental antioxidants and beta-glucans. It's not useful to try to treat the soil because the fungus is found in spotty areas rather than in multiple large locations and can live up to 12 inches deep in the ground. Ground cover, such as grass, deep gravel or another dust-controlling cover can reduce dust, which is beneficial.

If you don't live in a region where the infection is prevalent, but you and your dog hunt or travel or spend time in endemic areas and he begins to show symptoms of infection, let your veterinarian know he may need to be tested for valley fever. I recommend all pets that weren't born in endemic areas but move to high-risk environments stay on immune support for the first year they live in areas with valley fever.

Sources and References

[Fosters.com, January 21, 2020](#)

¹ [13 News Tucson, March 7, 2024](#)

² [Valley Fever Center for Excellence](#)
