

Ringworm

- Ringworm is a fungal infection of the skin, hair, and/or nails in dogs and cats.
- It is a zoonotic disease, meaning that it can be transmitted from animals to humans.
- The infection is also contagious among animals.
- Ringworm is transmitted by direct contact with an infected animal or by touching objects that have been exposed to the animal.
- The condition is usually diagnosed with a fungal culture.
- Some infections may resolve on their own without treatment, but topical and/or oral treatment can lead to faster resolution of the infection and limit the spread of infection to other animals and people in the household.
- Environmental treatment is important to eliminate the source of infection.

What Is Ringworm?

Despite the name, ringworm is not caused by worms, but by a fungus. Most infections in pets are caused by one of three types of fungi, the most common being *Microsporum canis*. The fungi invade the superficial layers of the skin, hair, and/or nails. Because fungi thrive in moist environments, these organisms are especially persistent in humid climates and damp surroundings.

Is Ringworm Contagious?

Ringworm is not only contagious to other animals, it is considered a zoonotic disease, meaning that it can be transmitted from animals to humans. Children and those with compromised immune systems are most at risk. In people, ringworm infection may appear as red, raised and itchy lesions on the skin.

What Are the Signs of Ringworm?

In pets, the fungal infection causes the hair to become brittle and break off, resulting in hairless patches of skin, most commonly on the face, ears, and legs. Within these hairless patches, the skin may

be crusty or mild inflamed. Nails that are infected may become deformed.

Typically, the infection is not itchy, although secondary (associated) bacterial infections may cause pets to scratch at the lesions. Some animals may have no signs but may be sources of infection, shedding spores into the environment.

How Is Ringworm Transmitted?

Ringworm is typically spread by contact with an infected animal. Because animals can shed fungal spores and infected hairs into the environment, touching objects the infected animal has been in contact with, including bedding and brushes, can also lead to infection. Organisms that are shed into the environment can remain infectious for months.

Some infections may resolve on their own without treatment, but topical and/or oral treatment can lead to faster resolution of the infection and limit the spread of infection to other animals and people in the household.

How Is Ringworm Diagnosed?

The best way to diagnose ringworm infection in an animal is by fungal culture. The veterinarian will pluck a few hairs from several lesions and place them on a culture medium, where the organism can grow. Because it takes time for fungal growth, results may not be available for 2 weeks or more.

Veterinarians may also examine skin lesions under a Wood's lamp. In some cases—but not all—the organism may fluoresce (glow) a yellow-green color. Because this test is not always accurate, a fungal culture is still the preferred method of diagnosis.

In cases in which people are diagnosed with ringworm, all animals in the household should be tested

Common Conditions

because some animals may be infected but show no signs. The same goes for multi-pet households in which one pet has been diagnosed with ringworm. Other pets should be tested and treated if positive in order to eliminate sources of ongoing infection.

How Is Ringworm Treated?

In healthy animals, the infection may be self-limiting, meaning that it will eventually resolve without treatment. However, treatment can hasten resolution of the problem and limit the spread of infection to other animals and people in the household.

Pets may be treated with topical shampoos or dips, oral medications, or both. Before applying a topical treatment, your veterinarian may recommend shaving or clipping the infected area. Topical treatments include lime sulfur dip or anti-fungal shampoos.

There are a number of oral medications for ringworm, such as griseofulvin and itraconazole. Griseofulvin should never be given to pregnant animals because it may cause birth defects in developing puppies or kittens. It may also cause bone marrow suppression in cats, especially those with feline immunodeficiency virus (FIV) or feline leukemia virus (FeLV). Administration of griseofulvin may require periodic blood monitoring tests. Itraconazole is becoming the preferred treatment for cats because it has fewer side effects.

Thorough cleaning and treatment of the home environment is important to prevent recurrence and spread of the infection to pets and people. To eliminate fungal organisms in the environment:

- Clip affected areas on the pet and dispose of all hairs
- Confine infected pets to one area of the house
- Thoroughly vacuum any areas that were highly trafficked by the pet, and dispose of the vacuum bag outside
- Wash all bedding and toys in hot water
- Dispose of any carpets or rugs, if possible
- Clean exposed areas and kennels with chlorine bleach that has been diluted 1:10 or with an anti-fungal spray recommended by your veterinarian
- Repeat vacuuming and surface treatment at least monthly until infection is resolved

Treatment may be required for 6 weeks or longer. Once skin lesions have resolved, fungal cultures should be performed again. Treatment should not be stopped until fungal cultures are negative. Discontinuing treatment based only on resolution of lesions may result in recurrence of the infection.