



RINGWORM (Dermatophytosis)

What is Ringworm? - Ringworm is a skin fungus disease. Because it often appears as a spot on the skin with the edge of it reddened and raised, it was given the name “ringworm” many centuries ago before the real cause was known. There are several types of ringworm seen in animals. One of them (*Microsporum gypseum*) is a normal soil inhabitant. Others are suited only to infect man (*Microsporum audouinii*) and others only infect animals (*Microsporum canis*, *Trichophyton equinum* & *T. verrucosum*). Usually the agent only grows in the dead superficial skin or in the nails (claws) and nailbeds.

How Could My Pet Catch Ringworm?

Transmission occurs mainly through direct contact with the infectious fungal spores on the skin of an infected animal or person. Also contaminated objects and the soil can lead to infections. Whether infection occurs with exposure depends on a number of factors, such as age, immunity ability, skin health, concurrent disease, and nutritional and hormonal status. Abraded skin is more susceptible than intact skin. Exposure to or contact with a dermatophyte does not necessarily result in an infection, and infection may not result in clinical signs.

Dermatophytes grow in the keratinized (dead) layers of hair, nail and skin. They do not thrive in living tissue nor persist in the presence of severe inflammation. The incubation period is 1-4 weeks. An infected animal which is not showing signs may remain in this inapparent carrier state for a prolonged period of time. Some may never show signs.

What are the Symptoms of Ringworm Infection?

The skin lesions are usually roundish spots where the hair is thin or lost. The skin may be dry and crusty or reddish and irritated. There may be a single spot or many (possibly covering the entire animal). If the nails become infected they become whitish and brittle. The nailbeds will become swollen and inflamed.

Typically young animals (and people) are more susceptible than adults. Lesions may begin as a bald spot or poor haircoat. Signs may range from an inapparent carrier state to baldness which may be patchy or circular. The classic sign of circular bald spots is more common in cats. Scales, redness, pigmentation, and itching are variable.

How is It Diagnosed? - The history and physical examination may be suggestive. A fungal culture is the best means of confirming the diagnosis of dermatophytosis. If hairs exhibit a positive apple green fluorescence with

Wood's lamp (ultraviolet light) examination, these are considered ideal candidates for culture. Microscopic examination of hair can help provide a more rapid diagnosis. Generally Wood's lamp examinations are not very useful as a screening tool because many dermatophytes do not fluoresce and false fluorescence is common. A true positive reaction associated with *M. canis* consists of apple green fluorescence affecting the hair shaft. **How is It Treated?** - Treatment will vary according to the degree of involvement. There are creams and ointments that may be used topically. In advanced cases antifungal agents are given by mouth. The treatment can take months in severe cases because the oral medicine is deposited in the skin and as the skin grows outward the medicine pushes the ringworm out too. Griseofulvin is the most widely prescribed systemic drug for the treatment of dermatophytosis. It is often used for 4- 6 weeks. Griseofulvin's absorption is enhanced by dividing the dose twice per day or giving it with a fatty meal. A recent study described the use of an anti-flea medicine (“Program” or lufenuron) as a very effective, single-treatment to eliminate ringworm on dogs and cats within three weeks. Topical therapy and clipping of infected animals was once strongly advocated in treating animals with dermatophytosis. These measures may be helpful in preventing environmental contamination, but are often associated with an early exaggeration of signs after the procedures are initiated. However, studies indicate that lime sulfur (1:16) or miconazole shampoo are the most effective topical agents, and may be used without clipping the pet.

What If I Have Some Suspicious Spots Myself?

You can give your pet the ringworm fungus or your pet can give it to you. You should see your own doctor if you may be infected.

CLIENT EDUCATION

- Many dogs and short-haired cats in a single cat environment will undergo spontaneous remission. The treatment of dermatophytosis can be both frustrating and expensive, especially in multianimal households or recurrent cases.
- Dilute bleach (1 part bleach in 10 parts water) is a practical and relatively effective means of providing environmental decontamination.
- In a multianimal environment or cattery situation, treatment and control of this disease can be very complicated.

Thank you for this opportunity to serve you!