

RINGWORM IN CATS (DERMATOPHYTOSIS)

What is ringworm?

“Ringworm” is the common name given to a fungal infection of the superficial layers of the skin, hairs and nails. The name comes from the classical appearance of C-shaped red raised ‘ring’ marking the boundary of inflammatory lesions of the infection in people. The fungi responsible for ringworm belong to a specialized group known as dermatophytes, and these can cause disease in both humans and animals. There are many distinct species within the group. Some species of dermatophytes will only infect humans or only infect certain animals, whereas others can be spread from animals to man.

In cats, one type (species) of dermatophyte called *Microsporum canis* is responsible for almost all ringworm infections, and this species is infectious to both cats and dogs, and also man. Occasionally ringworm infections in cats may be caused by species such as *Trichophyton mentagrophytes*.

What does ringworm look like?

The lesions of ringworm in cats may be very mild or even undetected. A ‘cigarette ash’ scaling in the depths of the coat may be the only visible indicator. In other cases there are discrete, circular, thickened plaques with hair loss (alopecia) that occurs due to the increased fragility of infected hairs. The main sites for these lesions are the skin of the head, chest, forelegs and along the ridge of the back to the base of the tail. These lesions are not usually itchy. Occasionally infection of the claws (onychomycosis) may occur. Claws become rough and pitted with a scaly base. The claw may become deformed. Ringworm may sometimes cause a more generalized disease where a much larger area of the body is affected often with patchy hair loss.

How do you diagnose ringworm infection?

The majority of cases of feline ringworm caused by *M. canis* will show-up as a yellow-green fluorescence when the skin and coat are examined in a dark room with a special ultraviolet lamp. However, not all cases show clear fluorescence and some other dermatophytes like *Trichophyton mentagrophytes* do not fluoresce. In addition, some skin ointments and other materials will fluoresce and may give a false positive result.

Confirmation of ringworm requires culture of the fungus in a laboratory. For this a sample of hair and skin scrapings are taken. Culture results take up to four weeks but there is usually an indication within a few days if the result is positive.

Because there are a number of causes of hair loss in cats these other causes may have to be ruled out by additional tests.

Treatment of ringworm

Although in many cats ringworm is a self-curing infection (with resolution typically taking 3-5 months), treatment of the disease is *always* indicated to minimize the risk of spread of infection to humans (particularly children) and other pets.

Two forms of treatment can be used for cats with ringworm - topical therapy (application of creams, ointments or shampoos) and systemic therapy (administration of anti-fungal drugs by mouth). In addition, attention must also be given to cleaning the environment.

1. Topical treatment

Occasionally, topical therapy is used alone for treatment of ringworm, but more commonly it is used in combination with oral dosing. Various creams and ointments are available to apply to localized areas of the skin affected by ringworm, or if there is more generalized disease your veterinarian may advise the use of a shampoo. It is extremely important *only* to use preparations that have been specifically provided or recommended by your veterinarian for topical treatment of cats.

2. Oral treatment

For most cases of ringworm effective treatment will require administration of an oral anti-fungal drug. The most widely used drug for this purpose is griseofulvin, although newer alternative drugs are becoming available. The response of individual cats to treatment varies, and it is important that therapy is not stopped too soon, otherwise the disease may recur. Treatment must usually be continued for a minimum of six weeks, and in some cases much longer therapy is required. If there is more than one cat in the household, try to separate infected from non-infected cats and just treat the infected ones. In some situations, it may be preferable to treat all of the cats. Your veterinarian will be able to advise you regarding your own circumstances.

3. Environmental cleaning

Hairs infected with ringworm contain numerous microscopic fungal spores that can be shed into the environment. Infection of other animals and humans can occur, either by direct contact with an infected cat, or through the environmental contamination with these fungal spores. In addition to minimizing direct contact with an infected cat, it is therefore also important to attempt to keep the environment free of spores. Topical treatment of affected skin, and clipping of infected hairs (with careful disposal) may help to reduce environmental contamination, and it is also worthwhile considering restricting the cat to certain rooms of the house that are easy to clean. Thorough vacuum cleaning of rooms where the cat has access to is the best way to minimize environmental contamination, and this should be done as frequently as is possible (e.g. daily or every other day). In addition, the use of diluted bleach is recommended in areas that can be readily disinfected.

Will my cat recover?

The vast majority of cats, if treated appropriately, will recover from ringworm infection within a few weeks. While the appearance of the lesions may not change much during the first week or so of treatment, some improvement should be evident within 2-3 weeks. Occasionally, despite appropriate treatment, the infection persists, and in this situation your veterinarian may have to try alternative anti-fungal drugs.

The risk to humans

Ringworm can be transmitted quite readily to humans (particularly children) and it is important to take appropriate steps to minimize exposure to the fungus while the cat is being treated (see 'Environmental Cleaning' above). If any humans in the house develop skin lesions (small patches of skin thickening and reddening, typically sharply demarcated with raised scaly edges) early medical attention should be sought. Ringworm in humans generally responds very well to treatment.