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## RINGWORM

### *What is ringworm?*

Ringworm is a skin infection caused by a dermatophyte ('skin loving') fungus of which there are several different species. The fungi which cause ringworm in horses include the *Microsporum* and *Trichophyton* species, and can infect other animal species, including humans. The skin lesions usually start as small raised spots that lose hair. These spread and usually become scurfy or a thick dry crumbly scab may form. Sometimes the lesions are sore and sometimes itchy. In many cases there may only be a couple of lesions, but if left untreated and especially if spread by grooming, the condition can become extensive. The infection is highly contagious and whole groups of horses can become affected in an outbreak.



Ringworm infection on neck

### *How does it occur?*



Ringworm spores in chains in a horse's hair under the microscope

Ringworm is transmitted from horse to horse by direct contact between horses, tack, grooming equipment, and clothing. The fungi are quite resistant to environmental factors and can remain on fence railings and timber structures for long periods. The most common method of spread is on tack such as bridles, boots, girths and grooming equipment. The fungi can remain on the skin for up to three weeks before clinical signs develop so the disease can be spread before there are signs of infection. Very often it is a new horse that introduces the condition to a barn. Younger animals are more likely to be affected than older ones, although very old or debilitated animals are also susceptible. Infection produces immunity which is quite long-lasting.

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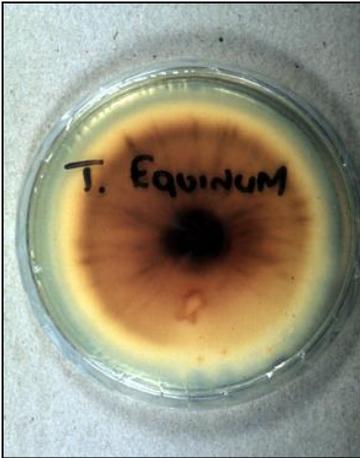
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Ringworm growing on a plate in the laboratory

### ***How is it diagnosed?***

The skin lesions are sometimes but not always characteristic and may look similar to other skin conditions such as rain rot (dermatophilosis), and some cases of folliculitis. Your veterinarian can confirm the diagnosis by collecting a skin scraping in order to collect skin cells, debris and hair. This material is examined under a microscope and the ringworm spores, which are found in damaged hair shafts, can be identified by their typical appearance. The fungus can be grown in the laboratory to identify the species involved, which sometimes helps with treatment. Unlike most bacteria, which grow very rapidly, fungi take several weeks to grow and in many cases the horse has been successfully treated before the results of the culture are known. This may nevertheless be helpful for cases that are not responding to treatment and for the treatment of other horses in contact.

### ***How is ringworm treated?***

If left untreated, most ringworm cases 'self cure' in 6 to 12 weeks. In most cases, this is too long a time to wait because of the risk of spread to other horses. Horses with ringworm are also prohibited from competing or racing and are unable to travel abroad. Therefore, apart from the need to relieve the horse's discomfort, it makes sense to treat cases as soon as they become apparent.

There are two main forms of treatment. Most commonly, treatment is by washing or rinsing the affected areas with specific anti-fungal solutions. There are several available but no one product will successfully cure all cases and it may be necessary to try two or more different treatments before one is successful. Most of these solutions are applied on two or more separate occasions over a week or two. It is important that all scabs, scurfy skin and debris are removed before treatment is applied or the fungi will be protected from the effects of the medication. This can be achieved by washing the area with a mild detergent and gently using a nylon scouring pad to carefully lift the scabs and debris. If the skin is raw, extensive scab removal may need to be delayed until after the first few treatments. Rinse the skin well and allow to dry, as any water on the coat will dilute the solutions further. Apply the treatment according to the directions on the box or as instructed by your veterinarian. Most of these solutions and washes are not rinsed off.

At the end of a course of treatment, the lesions should have stopped spreading, no new lesions should appear and the skin should look healthy, if bare. New hair grows quite quickly. If there is any doubt, or if proof of freedom from infection is required for racing or transport reasons, your veterinarian will collect a follow-up skin scraping. In severe, generalized cases, treatment with oral antifungals can be administered for 10-14 days. These take up to six weeks to be effective and should be used in conjunction with topical (skin surface) treatments as described above.

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## **Prevention and control**

Where possible, new horses should be kept in isolation for 2-3 weeks and closely monitored for signs of suspected ringworm, coughing and other signs of infectious or contagious disease. If you suspect ringworm, ensure that the affected horse is treated and that it has its own grooming kit and tack, which should not be used on any other horse. Treatment should commence immediately and the grooming kit, rugs and tack thoroughly disinfected during and after treatment. Equipment used for treating the affected horse should not be used on other horses and should be disinfected or disposed of after treatment has ceased. Handlers should use gloves when dealing with affected horses and, where possible, these should be dealt with last.

### ***Can I catch ringworm from my horse?***

It is possible but uncommon for people to catch ringworm from horses. The lesions are usually itchy and red patches or 'rings' may form and can occur anywhere on the body. Your doctor should be consulted to confirm the diagnosis and for a suitable treatment.