How do you treat ringworm?
By Dr. Michelle Husulak, DVM, MVetSc

Ringworm is a disease of skin and hair, and contrary to its name, it's caused by a fungus rather than worms. In North America, various species of two genera — *Microsporum* and *Trichophyton* — are the most common sources of infection in horses. These fungi can also infect small animals and people. Ringworm is a zoonotic disease, meaning that it can be transmitted from animals to humans.

Ringworm is spread through direct contact between infected animals, as well as by fungal spores found in the environment. The spores can be found on tack, brushes and other equipment. These spores are very resilient, and they can survive in an environment for many years. Horses that are most commonly affected by ringworm include young animals under three years old and those that have compromised immune systems from disease or poor nutrition. Healthy adult horses can also contract the fungus.

While ringworm is often seen in hot, high humid areas such as in the southern United States, the fungus can also exist in colder regions where horses' long winter coats create a warm and sweaty environment that's perfect for the fungus to develop. In Western Canada, we often see ringworm lesions developing in the horse's girth area or on a horse's back after being blanketed in cold weather. The risk of ringworm increases when horse owners share tack between horses without cleaning after use.

Ringworm is classically characterized by a circular pattern of hair loss with redness, inflammation and flaking dry skin. There may also be new hair growth in the centre of the ring pattern. But the pattern of hair loss can also be irregular and the lesions can spread across the horse's entire body.

If the horse has ringworm-like lesions, we will typically take samples of hair and/or skin — we may even take a biopsy. In the lab, skin and hair shafts from the sample are examined for the presence of tiny fungal elements as well as fungal hyphae forming within the hair shaft. To confirm the diagnosis, the sample is submitted for a culture where the fungus is grown to determine its species. Since the fungal culture can take a long time to complete, we will often begin treatment based on clinical findings and the absence of pathogenic bacteria.

Depending on the horse's initial condition, we may need to clip and wash the animal with regular shampoo to remove crusts, dead skin cells and excess debris. Next, we use a leave-on shampoo containing enilconazole — the only antimycotic (antifungal) product available in Canada that's labelled for use on horses. It's advisable to initially cover the horse's entire body with the antifungal product because the spores may exist all over — not just in the areas with lesions.

If it's during the winter months, spot treatments can be done if only a small area is infected. However, if a large area is affected or the animal is immunocompromised, we recommend bringing the horse to a veterinary clinic where it can be fully washed and properly treated.

Since ringworm can be transmitted to people, it's important to wear gloves while washing the horse. It's also important to disinfect any brushes, clippers and washing tools that come in contact with the infected horse.

Treatment time depends on the antifungal product being used as well as the response to treatment. Some products suggest treating the horse at three- to four-day intervals while others require weekly treatments. As the treatment progresses and the lesions become smaller, the treatment can be reduced to spot washes.

If the topical treatments aren't working, if the horse is immunocompromised or if the lesions are widespread, systemic antifungal medication may need to be administered. Systemic antifungal products are used off-label in horses at the discretion of the veterinarian. They are not used as a first-line treatment option as safety studies for use in horses have not been performed on these products.

Since ringworm is contagious, it's a good idea to isolate the affected horse and keep its tack and other equipment separate. Another way to prevent the spread of ringworm is to clean and disinfect all tools and equipment throughout the treatment process. The best way to disinfect is to use an accelerated hydrogen peroxide product or a dilute bleach.

Although the lesions can look like they're clearing up after a period of treatment, it can take time to clear the skin and hair of the fungus. A decrease in inflammation and redness, as well as no more flaking or expanding lesions, are signs that the fungus is clearing up. New hair growth also indicates that the treatment is working, but it's season-dependent since hair growth doesn't usually occur in the middle of winter.

Ringworm is self-limiting, and it can heal on its own, but it can often take one to six months or even longer for the lesions to heal. During that period, the affected horse can spread the fungus and infect many other horses in the herd, so it's worthwhile to be proactive in calling your veterinarian, diagnosing the problem and treating ringworm as early as possible.

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