

Thrush in Horses

This common equine foot infection can affect the frog, sole, white line, and sensitive tissues of the hoof

Overview

Thrush is a common infection of the hoof that most often affects the tissues of the frog adjacent to the sulci. In severe cases, thrush can also invade the white line, sole, and sensitive layers of the foot resulting in a potentially permanent lameness.

The bacterium *Fusobacterium necrophorum* is often the invading thrush-inducing microorganism; however, other anaerobic (those that grow in environments with little to no oxygen) bacteria and fungi have been identified as potential culprits.

While widely perceived as a disease of dirty, unhealthy horses or unkempt living conditions, there are actually a myriad of factors thought to contribute to the development of thrush. For example, abnormal hoof growth, inappropriate or lack of trimming or shoeing, poor diet, lack of use/insufficient exercise, chronic lameness issues, and poor circulation to the frog are all possible reasons that a horse could become infected.

Contributing factors encompass anything that can disrupt the horse's innate hoof-cleaning mechanism, such as chronic lameness, improper hoof trimming, and insufficient exercise.

In the normal foot, as weight is borne on the limb, the third phalanx (coffin bone) will descend, causing the sole to flatten. Descent of the coffin joint occurs as the navicular bone gives in a distopalmar direction (from the coffin bone toward the ground), pushing against the navicular bursa and the deep flexor tendon, causing expansion of the frog as it approaches the ground surface. This continuous change in structure prevents the accumulation of material in the bottom of the foot.

Impairment of this hoof cleaning mechanism appears to be the outstanding cause of thrush, as thrush is seen in a large percentage of animals that are kept in immaculate conditions.

Horses with deep sulci (clefts in the



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Treating thrush is a multi-step process that involves trimming away the dead hoof tissue, stimulating the frog with exercise, identifying and correcting any underlying causes of the thrush, as well as picking, cleaning, and medicating the affected foot daily.

foot) or narrow or contracted heels appear to be more at-risk for thrush.

Clinical Signs

Classic clinical signs characteristic of thrush include a thick, black, putty-like, foul smelling material on and in the frog and the collateral and central sulci (the grooves adjacent and in the middle of the triangular-shaped frog). Most horses with thrush are not lame unless the bacteria invade the sensitive layers of the foot, as happens in severe cases.

Diagnosis

Diagnosing thrush is usually straightforward and is based on clinical presentation. If you are unfamiliar with thrush and you notice your horse's foot has a foul odor or

a black material around the frog, ask your veterinarian or farrier for treatment options and guidance.

Treatment

In general, thrush is easy to manage. Successful management is a multi-step process and involves:

- Trimming away the away the dead, infected tissue (contract your farrier for assistance if you are not comfortable performing this technique);
- Stimulating the frog through regular exercise;
- Identifying and correcting the underlying cause of the thrush (work together with your veterinarian and farrier to complete this step), and;
- Picking, cleaning, and medicating the

affected foot/feet at least daily.

To clean the foot, place your horse in a clean area of the barn, or place a sheet of plywood on the ground or floor to create a clean working space. After picking the feet, gently scrub the feet out with water and a stiff brush. Dry the entire foot with a towel, then let the foot air dry for approximately 10 minutes. Once dry, the foot is ready to be medicated.

A large variety of medicated thrush products are readily available for purchase in a variety of formats such as liquids or aerosols. Some horse owners have their own tried-and-true home remedy, such as sugardine, which is a combination of sugar and Betadine scrub (i.e., povidone-iodine). Bleach and hydrogen peroxide are also widely used in the field, but these products are not universally endorsed as they can damage healthy tissue and prolong healing time.

Feet can either be simply treated with the desired medication and the foot kept clean and dry afterward, or the affected feet can be packed with medicated-soaked gauze squares for one to three days. Alternately, the feet can be soaked in medicine

either in bucket or a special medicine boot (available at local tack shops or online).

For more severe cases and for horses that do not appear to be responding to treatment, consult your veterinarian or farrier for additional advice.

Prognosis

In uncomplicated cases that are diagnosed early in the course of disease, the prognosis for a full recovery is excellent. This is, of course, assuming that the underlying cause of the thrush is identified and managed, as well as treating the thrush itself. If only the thrush is treated, recurrent bouts of infection are likely to occur.

Complicated cases in which the infection has invaded the foot require veterinary attention, take longer to resolve, and might result in permanent lameness.

Prevention

The most important component of prevention is understanding that thrush does not mean that your horse is living in a dirty environment or is being mismanaged (although that certainly can be a

FAST FACTS

- Thrush is an infection of the horse's foot most commonly affecting the frog and sulci.
- Classic clinical signs are the foul odor and black, putty-like debris in the affected regions.
- Diagnosis is based on the presence of these clinical signs.
- Treatment is aimed at the thrush and the underlying causes or contributing factors.
- Well-managed cases have an excellent prognosis, and future infections can be prevented with proper foot care.

cause and should be addressed). Thrush can occur in virtually any horse, regardless of living conditions. Picking and inspecting each foot each day is important. Work with your veterinarian and farrier to ensure your horse's entire foot, including the frog, is healthy. This—along with good daily management—will help you prevent most, if not all, cases of thrush. 🐾

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