

Equine White Line Disease

The white line of the foot can be seen by looking at the sole of your horse's hoof. The area (that looks whitish) between the outside hoof wall and where it meets the sole is the white line. When this becomes damaged, it allows fungus and/or bacteria to invade and separate the layers of the hoof wall. When that happens, the infection can spread around the hoof and up the inside of the wall to gradually "eat away" at the hoof, making a horse very lame. White line disease is actually a misnomer, as the white line is not actually involved, but rather the deepest layer of the non-pigmented stratum medium. White line disease has many other names: stall rot, hollow foot, wall thrush, and seedy toe. For ease of our discussion in this article, we'll refer to this problem as white line disease. What You See White line disease is characterized by progressive hoof wall separation that occurs in the non-pigmented horn of the hoof at the junction between the stratum medium (middle layer of the hoof capsule) and laminar horn. The separation is usually progressive, and it typically involves the toe and quarters of the hoof. Hoof Review To understand how this pathogen invades the hoof, it's important to understand the hoof structure. A hoof is layered from the outside in (hoof wall, hoof horn, laminae). The hoof wall supports the brunt of the horse's weight rather than the sole of the foot. The hoof wall is similar to your fingernail in that it's made of dead cells that are unable to heal; they must be regrown when damaged, such is the case with horses affected with white line disease. Beneath the hoof wall is the hoof horn, which is attached to the laminae, which are attached to the third phalanx (P3 or coffin bone). At the top of the hoof is the coronary band, the source of nutrition for the hoof wall, which is similar to the cuticle of your fingernail. The front of the hoof is called the toe, the sides are called the quarters, and the back of the hoof is called the heel. The hoof wall and hoof horn meet the sole at the bottom of the hoof. The rubbery, V-shaped tissue that protrudes from the middle of the sole to the back of the hoof is the frog, which acts like a shock absorber. The frog also helps promote blood circulation in the hoof through a pumping action as the hoof hits the ground.

Treatment Options

Treatment options for white line disease will depend on the severity of the damage to the hoof. If caught early, white line disease is very manageable. The horse can return to work without a layoff. However, if the fungi and bacteria are allowed to make headway in the hoof wall, treatment can become much more problematic, requiring special shoes, boots, or even a cast, not to mention several months to grow out the hoof. When the hoof wall is severely damaged the best method of treatment is to remove (debride) the affected hoof wall. Soaking the hoof in a chlorine-based agent once or twice a week and keeping the hoof as clean as possible is recommended. We recommend using either CleanTrax or White Lightening, which are two commercially available products for treating white line disease. Movement will also promote blood circulation that can increase hoof growth. If the horse is comfortable moving around and is not in pain, it's recommended that he be put on some kind of exercise program, turnout, hand walking, or light riding. "By far the best thing to do is to catch it early" "Farriers that are knowledgeable can catch early signs of white line disease. Little cavities in the white line, or a seedy-looking toe, are signs of the onset of white line disease."



Prevention

Keeping horses' hooves well-balanced and trimmed regularly will prevent tearing of the hoof wall, which can create cavities for fungi and bacteria to invade. White line disease can often be a secondary complication to another hoof disorder. White line disease is an opportunistic pathogen. One of the best ways to help your horse avoid contracting white line disease is by practicing proper hoof hygiene. Simple steps such as picking your horse's feet daily can help reduce the risk of contracting this potentially debilitating disease. Extreme weather conditions are thought to increase the hoof's uptake of these fungi. So during overly wet or drought conditions, greater care should be taken to ensure proper hoof hygiene.

Take-Home Message

White line disease, if caught early, can be managed. Good hoof hygiene and recognizing early signs of the disease are essential to controlling the problem. Treatment for white line disease is generally successful, but it can be very time consuming since the hoof wall must grow out and replace the damaged area. If you suspect your horse might have white line disease, consult your veterinarian or farrier.