

Pastern Dermatitis:

Signs and symptoms:

Pastern Dermatitis is a skin reaction in horses that affects their lower legs. It is most frequently known as Scratches, but other common names include rain rot, grease-heel and mud fever. In the initial stage crusts form at the heels, pasterns and/or fetlocks. The crusts are caused by blood or serum (the liquid part of the blood) seeping through the skin at the area of irritation. There is often redness, swelling and significant pain, lameness or even itchiness. As the condition progresses, a secondary bacterial infection frequently occurs. This exacerbates the problem causing a cycle of lameness, swelling, discharge and crusting which leads to further infection. If left untreated, severe skin sloughing, proud flesh formation or 'grapes', and permanent damage can result.

Causes:

In most cases, Pastern Dermatitis is a management problem. It is commonly seen in horses kept in wet, muddy and unhygienic conditions. Wet skin provides easy access to bacteria and other pathogens normally found in the environment, leading to infection and irritation. However, there are some horses and breeds of horses that are predisposed to the condition and other factors can play a role. Horses with weaker immune systems tend to have more severe cases and repeat episodes of pastern dermatitis than horses with stronger immune systems. Draft breeds with feathers such as Shires and Clydesdales are genetically predisposed to immune-mediated vasculitis. This can be triggered by Pastern Dermatitis causing it to quickly cascade out of control if treatment is not immediate. In some cases, Pastern Dermatitis is started by trauma. An example is sand can be sharp and abrasive. Exercises such as sliding stops or jumping in sand footing can irritate the skin. If this type of trauma to the skin is causing the problem, then abrasive surfaces need to be avoided or the legs need to be protected during exercise by wrapping them with clean, dry leg wraps.

Diagnosis:

Pastern Dermatitis can also be a secondary condition, or resulting because of an underlying primary problem such as Chorioptic Mange (mites), Photosensitization, Pemphigus foliaceus or allergic dermatitis. Working with your veterinarian to find a definitive diagnosis is important so that appropriate treatment is initiated. Diagnosing the condition early gives the best prognosis for successful treatment. If a diagnosis is not made in the early stages, chronic changes occur and it can be difficult to tell what the primary cause was. History, living environment and clinical signs can be enough for a veterinarian to make a presumptive diagnosis. However, a biopsy, skin scrape, and/or culture may need to be performed to rule out other possible primary conditions and to make a definitive diagnosis.

Treatment:

The most important factor in successfully treating Pastern Dermatitis is moving the horse to a clean, dry environment. This may require boarding or temporarily locking the horse in a clean dry stall until the paddock and pasture can be addressed. Next the hair on the legs must be clipped and the affected areas cleaned. This must be done gently and carefully and may require sedation, as it can be painful for the horse. If the crusts are dried/hard, they need to be softened prior to treatment. This can be done by covering the affected areas with a generous amount of an antibacterial ointment and wrapping the legs with standing wraps. Plastic wrap can also be used under the standing wraps in severe cases for short periods of time to help soften the crusts. Once the hair is clipped and the loose crusts are removed, the affect area must be dried then treated with an antibacterial product and wrapping as needed so any further crusts that develop can be removed. Treatment should be daily to twice weekly

depending on severity and environment. If crusts are not removed, the topical treatments can't reach the bacteria causing the problem. If significant pain and inflammation is present, a topical steroid may also be needed. There are many products available for treatment of Pastern Dermatitis, so talk with your veterinarian about what may be best for your horse. I prefer using a chlorhexidine based shampoo daily (allow 5-10 minute contact time before rinsing) followed by toweling dry and applying Animax (antibiotic+steroid) ointment. Try to stay away from Furacin/Nitrofuizone ointments as they are known to be carcinogenic. In some cases additional oral antibiotics and steroids are also needed.

If other causes are involved, specific treatments will be recommended by your veterinarian. Mites and allergic dermatitis are a good example. If mites are the primary cause, they are commonly treated with lime sulfur applications twice weekly for four weeks. They can also be treated with fipronil spray (Frontline) with a second treatment 3-4 weeks later. If the mites are not properly diagnosed and treated, the condition will not resolve with routine Pastern Dermatitis treatment. If allergic dermatitis is the primary cause, determining and eliminating the allergen is essential to successful treatment.

Alternative treatment options:

Supporting the horse's immune system as they fight off the infection can help speed up the process. Echinacea (such as Equinacea from Equilite) and/or Vitamin C can be used as an immune boost. If the horse has to be put on oral antibiotics, Probiotics (such as Dynapro from Dynamite) can be used to reduce the risk of complications and to support the beneficial bacteria in the GI tract. Continue treatment with Probiotics for at least one week beyond the duration of the antibiotics. If oral steroids must be used, then a liver cleanse/detox (such as Dynamite's Herbal Tonic) can be helpful afterwards.

Acupuncture is also helpful to support the immune system and aid in circulation and healing. In most cases Pastern Dermatitis is given a Chinese medicine diagnosis of Damp-Heat accumulation in the skin, so treatments are aimed at clearing the heat and toxins and invigorating the blood and Qi. Treatments intervals are case dependent but often started at twice weekly intervals then spread out to weekly until healed. Owners interested in stimulating points with acupressure between treatments may want to focus on points such as ST-36, GV-10, and SP- 6. More information on acupressure for horses can be found in Nancy Zidonis, Amy Snow and Marie Soderberg's book: *Equine Acupressure: A Working Manual*.

Prevention:

Prevention is a key ingredient for a holistic approach and to help avoid unnecessary antibiotic and steroid use in your horse. Plan ahead for the rainy season. The best time of year to make the necessary management changes for mud prevention is in the summer when paddocks are dry. Jaime Jackson's book *Paddock Paradise: A Guide to Natural Horse Boarding* is a good place to start. You can also contact your local conservation district for more information or a referral to a paddock specialist in your area. All paddocks have different needs, but many paddocks and high traffic areas do well with the following:

- Grade to create a 1-2% slope away from the barn or high traffic area
- Geo-textile fabric or Hoof Grid for ground cover/barrier
- 4-6 inches of 1 ¼" minus gravel compacted for base layer
- 4-6 inches of sand, pea gravel or 5/8's clean (no fines) for top footing
- Manure clean up once or twice daily is a must to maintain a mud free paddock

If the mud management project has to be put off until next year, the horse must be kept somewhere clean and dry (such as a stall or arena) for at least 8 hours each day after its legs are hosed and toweled dry. All horses should have their legs checked during routine grooming and hoof picking so small wounds and early Pastern Dermatitis can be found early on. Horses prone to Pastern Dermatitis also

need to have their legs clipped and bathed in a medicated shampoo with Betadine or Chlorhexidine (allowing 5-10 minute contact time before rinsing) regularly for prevention. These horses may not be able to have turnout in any muddy or wet conditions at all.

Prognosis:

If diagnosed and treated early, there is a good chance of full recovery from Pastern Dermatitis. There are individual horses that are prone to the condition, however, and recurrence is likely if preventative measures aren't strictly enforced. If the condition cascades out of control and chronic infection occurs, permanent damage such as thickening of skin, 'grapes', scar tissue formation, and limb swelling can occur. If Pastern Dermatitis is suspected, it is important to contact your veterinarian immediately so a definitive diagnosis and treatment plan can be established.