

# Don't Get Stuck in the Mud

## Dealing with Pastern Dermatitis

by Dr. Hannah Mueller, DVM

Riders dread the mud seasons. Our horses seem to make the best of it, coming in caked head to toe in the stuff. For many, however, pastern dermatitis can be a real concern.

### Mud Fever

Pastern dermatitis is a skin reaction that affects the horse's lower legs. It is most frequently known as scratches, but other common names include rain rot, grease-heel, and mud fever. In the initial stages, crusts form at the horse's 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, significant pain, lameness or even itchiness. As the condition progresses, a secondary bacterial infection frequently occurs. This exacerbates the problem, causing a vicious 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.

### Why Horses Get It

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. Some horses and breeds are predisposed to the condition. Those with weaker immune systems tend to have more severe cases and repeat episodes than horses with stronger immunity.

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 without immediate treatment. In some cases, pastern dermatitis is started by trauma such as performing sliding stops or jumping in abrasive sand footing, which 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. Pastern dermatitis can also be a secondary condition, or the result of an underlying primary problem such as chorioptic mange (mites), photosensitization, pemphigus foliaceus, or allergic dermatitis.

It's important to work with your veterinarian for a definitive diagnosis so your horse will receive appropriate treatment. Early diagnosis gives the best prognosis for successful treatment. Otherwise, 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 be needed to rule out other possible primary conditions and to make a definitive diagnosis.

### Conventional 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 antibacterial ointment and wrapping the legs with standing wraps. In severe cases, plastic wrap can be used for short periods under the standing wraps to help soften the crusts.

Once the hair is clipped and the loose crusts removed, the affected area must be dried, treated with an antibacterial product, and wrapped 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 there is significant pain and inflammation, a topical steroid may also be needed. Many products for treating pastern dermatitis are available, so talk with your veterinarian about what may be best for your horse. I prefer using a chlorhexidine based shampoo every day (allow five to ten minutes of contact time before rinsing) followed by toweling dry and applying Animax (antibiotic and steroid) ointment. In some cases, additional oral antibiotics and steroids are also needed.

#### **HINT**

Try to stay away from furacin and/or nitrofurizone ointments; they are known to be carcinogenic.

If other causes are involved, your veterinarian will recommend specific treatments. 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 three to four 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 Options**

Supporting the horse's immune system as he fights 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 booster. If the horse has to be put on oral antibiotics, probiotics (such as DynaPro from Dynamite) can reduce the risk of complications and support the beneficial bacteria in the GI tract. Continue the probiotics for at least one week after finishing 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 useful for supporting the immune system and aiding 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. Treatment intervals are case dependent, but often start at twice a week then change to once a week until the horse has healed. Owners interested in stimulating acupoints 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 *Equine Acupressure: A Working Manual* by Nancy Zidonis, Amy Snow and Marie Soderberg.

### **Preventing Mud Fever**

Prevention is a key ingredient in the holistic approach and helps avoid unnecessary antibiotic/steroid use in your horse. Plan ahead for the rainy season. The best time of year to make 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 do well with the following:

- Grading to create a 1% to 2% slope away from the barn or high traffic areas.
- Using geo-textile fabric or Hoof Grid for ground cover/barrier.
- Applying 4" to 6" of 1¼" minus gravel compacted for base layer.
- Using 4" to 6" of sand, pea gravel or 5/8's clean (no fines) for top footing.

#### HINT

Manure cleanup once or twice daily is a must for maintaining 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 eight hours every day after his legs are hosed and towed dry. All horses should have their legs checked during routine grooming and hoof picking so small wounds and early pastern dermatitis can be quickly detected. Horses prone to the condition also need to have their legs regularly clipped and bathed in a medicated shampoo with betadine or chlorhexidine, for prevention. You may not be able to give these horses any turnout at all in muddy or wet conditions.

### What's the Prognosis?

When pastern dermatitis is diagnosed and treated early, there's a good chance of full recovery. Susceptible horses may suffer recurrence if preventive measures aren't strictly enforced. If the condition cascades out of control and chronic infection occurs, permanent damage such as skin thickening, "grapes", scar formation and limb swelling can occur. So if you suspect pastern dermatitis, contact your veterinarian immediately for a definitive diagnosis and treatment plan.

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