

Daniel P. Keenan, DVM
Ron McAlister, DVM
Lynsey D. Makkreel, DVM



SOLE ABSCESS

What is a sole abscess?

Infection in the foot is, by far, the most common cause of acute lameness in the horse. Infection results in painful inflammation and pus (abscess) formation. The hoof is a relatively rigid structure and abscess formation increases pressure within the sensitive structures, which, like infection or bruise under a human finger nail, is very painful. This condition should be excluded first in all horses that become suddenly lame on one leg before other diagnoses are considered.

What causes sole abscesses?

Infections are caused by one or more of the many types of bacteria which normally live in the environment or on the foot. Infection is introduced most commonly through the sole of the horse's foot by a bruise or puncture wound to the sole, by a nail 'bind' or 'prick' at shoeing, through a hoof crack or by tracking through the white line.

What does a sole abscess look like?

Characteristically, lameness develops suddenly, from slight to severe, over 24-48 hours, involving one leg only. When the pain is severe, the horse may sweat and blow and refuse to bear weight on the affected foot. The foot may feel warm and the pulse in the heel blood vessels (digital pulses) may bound. The shoe should be removed from the affected foot to allow thorough investigation and treatment. A discrete area of pain on the sole can usually be found with hoof testers or sometimes even finger pressure.



Infected hoof cut out to reveal under run sole

When the shoe has been removed and the sole cleaned and searched, there may be signs of a puncture wound, crack or area of discoloration at the white line, corresponding to the area of pain. Pressure from hoof testers may cause pus to ooze from the wound. Further searching with a hoof knife usually results in an ooze or spurt of pus and/or gas from the abscess, initially painful but subsequently resulting in dramatic improvement.

Where the abscess cannot be located immediately, the foot should be poulticed overnight, to help the abscess to 'ripen' and the foot to soften, before trying again to find the abscess. If the abscess still cannot be found, a radiographic examination of the foot may be made to look for a pocket of pus/gas and to rule out other possibilities, such as fractures.

Occasionally, in deeper-seated abscesses, the infection may track upwards through the hoof laminae to eventually break out at the coronary band (called a 'gravel') rather than at the solar surface of the foot. In other cases, infection may track along under the sole ('under-run sole').

How can a sole abscess be treated?

As soon as the site of pain is accurately established with hoof testers, the sole should be searched with a hoof knife to locate the abscess and then pared away over the abscess to allow efficient

drainage. The hole can be flushed and then the foot should be poulticed to encourage thorough drainage of pus through the hole. Tetanus vaccine or antitoxin must be given if the horse is not fully vaccinated. The hoof should be kept covered until the horse is much more comfortable and there is no more drainage of pus. In some more extensive cases, further bandaging will be necessary to protect the hoof while it heals.

The horse should be kept in clean dry conditions until the hole is completely healed and then the foot may be re-shod.

How can sole abscesses be prevented?

You should pick out and examine your horses' feet every day. Make sure that your horses' feet are regularly trimmed and shod by a good farrier, to keep the hoof balanced and prevent hoof cracks. Hoof dressings or packings may help if your horse has brittle feet.

All puncture wounds to the sole are veterinary emergencies, and your veterinarian should be called immediately.

The degree of lameness should improve rapidly within 12-24 hours after the abscess is opened and the pus is drained and there should be steady improvement every single day. If not, the veterinarian should be called for follow-up treatment.



Searching a foot for signs of abnormality