

Horse fact sheets – Hoof Cracks

What are sand cracks?

This is a general name for cracks in the hoof wall. The cracks can either start at the bearing surface and progress up the foot or start at the coronet and go down. The front and hind feet can both be affected. The cracks are classified by their location. They are termed toe cracks, quarter cracks and heel cracks. Cracks in the hoof wall vary in severity. Quarter and heel cracks are the most serious because they frequently involve the sensitive laminae.

What causes the hoof wall to crack?

Cracks that begin at the top of the foot are the result of disturbances in hoof growth due to coronet injuries, such as wire cuts or interfering. Excessively dry hoof walls, thin walls and improper trimming (such as excessively long hoof walls) cause those cracks initiating at the bearing surface of the hoof wall. All of these factors reduce the strength of the hoof wall making it susceptible to cracking upon concussion. Heel cracks are usually caused when the horse steps on or kicks sharp objects that tear away a part of the back of the hoof wall.

What are the signs of sand cracks?

The split in the hoof wall is obvious. Depending upon the depth of the crack the horse may or may not be lame. If the crack bleeds after the horse has exercised, it is an indication that the crack goes down into the sensitive laminae. Infections in these cracks occur frequently and are marked by a discharge of blood or pus and warmth in the hoof wall around the crack. The lesion is usually quite apparent when an injury of the coronary band causes a crack in the horny wall.

How are these cracks treated?

The treatment of a crack in the horny wall will vary according to the location and severity of the crack, as determined by the veterinarian. Most therapy consists of corrective trimming and shoeing to prevent the portion of the hoof wall around the crack from bearing weight and to limit the progress of the crack.

When a crack does not extend into the sensitive laminae, a notch or groove is cut into the hoof wall at the leading end of the crack. Whether the crack originates at the coronet or bearing surface, this treatment is aimed at preventing the hoof from splitting up or down its entire length. For cracks originating at the bearing surface, the wall on either side of the crack is shortened to help prevent expansion by removing weight from this portion of the wall. Shoes with clips positioned on either side of the crack are frequently used as another measure to prevent expansion of the crack.

Cracks that extend the entire length of the foot, go down into the sensitive laminae, or are accompanied by infection, usually cause lameness. Cracks that are this severe require more extensive treatment. Patching the hoof wall is commonly done to seal the crack and prevent infection of the sensitive structures.

The general procedure is to strip out the crack and fill it with some type of plastic material, epoxy glue, fiberglass, etc. In more severe situations, the crack is drilled out dovetail fashion, with tiny holes drilled on either side of the crack. The crack is laced with stainless steel wire to further hold it together and serve as reinforcement for the plastic material. Then the crack is filled with a plastic.

Diagrams of various sand cracks.
(1) Toe crack and quarter crack originating at bearing surface.
(2) Toe, quarter and heel cracks originating at coronet.
(3) Quarter crack and heel crack originating at bearing surface.



Horse fact sheets – Hoof Cracks continued

Heel cracks may require different treatments. Frequently the hoof wall behind the crack is shortened so that it does not touch either the ground or the shoe. A deep heel crack with accompanying bleeding or exudation will demand relatively radical treatment. The procedure is to remove the segment of horny wall behind the crack down to the sensitive laminae, apply antibiotic powder or ointment to the lesion, and bandage the foot with a pressure bandage for several days. The lesion is then treated with a drying agent such as 10% formalin or 7% tincture of iodine. A bar shoe

may be used to protect the heel until this portion of the hoof wall grows out again.

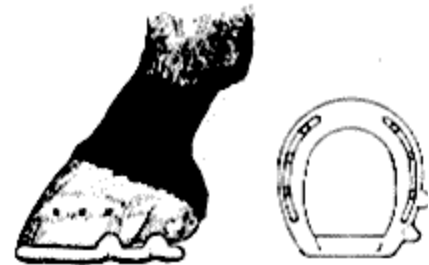
It is important to pay close attention to any crack in the foot until it has completely grown out since it has a degree of weakness that can be likened to a split board. An important adjunct in all foot crack treatment is the liberal use of moisturizing hoof dressing on a regular basis



Treatment of toe crack originating at bearing surface. The hoof wall is grooved or notched to prevent further cracking and the edge of the crack is trimmed short to prevent pressure from the shoe.



Toe clips are used on either side of the crack to support the wall and prevent expansion of the crack under pressure.



View of bar shoe with clips applied to immobilize a bearing surface heel crack