



UNDERRUN HEELS

Underrun heels are considered to be low heel or having no heel at all. On occasions this is caused due to the long toe that will create an incorrect, broken hoof pastern axis. One must understand the structure and process in which the hoof works. The hoof wall at the heel is somewhat softer horn, making it less rigid hence more flexible when compared to the hoof wall in the toe area. This increased flexibility (softness) allows the normal physiology of the foot in the form of expansion to take place, but in return makes the heels more vulnerable to damage.

The long toe low heel will set up a mechanical lever arm, which exerts an abnormal bending force causing the hoof wall at the toe to deform, hence the appearance of a concavity, flared, dished hoof. Moreover a dished toe can affect a horse's movement and long term soundness, by causing the toe of the shoe to be too far forward. This makes it more difficult for the hoof to break over smoothly and increasing more pressure on the heels. Internally, the lamina stretches or on some occasions tears, allowing the sole to flatten.

To control / minimise the hoof with underrun heel condition, it's imperative to visit the farrier regularly, not longer than four weeks in between shoeings. Avoid the use of straight-bar shoes; straight-bar shoes will crush the heels furthermore. Also keep in mind that wedge pads tend to sustain the problem by maintaining pressure on the collapsing heel structure.

The causes of underrun heels are several:

 Hoof / limb conformation, horses with forelimb conformation such as long pasterns may be more likely to develop this type of condition.

 Prolonged stabling whether dry and hard or wet and soft conditions may play a role. On a hard surface, a foal will wear its feet normally as opposed to soft ground where the foot sinks in.

 Moisture content of feet, horses that are subjected to continuous and excessive moisture may be affected due to softening of the hoof.

 Diseases of the feet.

 A genetically weak foot, that is, there may be a genetic basis for this problem.

 Breed, this problem is particularly common in Thoroughbred but is present in all breeds.

 Type of terrain on which horse is exercised.

 Amount of daily work and turnout.

 The irregular hoof care (trimming / shoeing).

 Furthermore the farrier professional practice applied to the horse's hooves is of utmost importance. It's common that farriers in an attempt to prevent shoe pulling up front, will use a shoe that is smaller than necessary. This places the bearing surface of the foot in front of the vertical axis of the limb, therefore creating the same mechanical effect. Over time the foot grows in this configuration, underrun heel.



Recommended Shoeing Procedure:



The farrier must trim the foot so that it resembles, as closely as possible, the angles of a normal hoof.



Egg-bar and heart-bar shoes are a common choice, but may cause a counter reaction if not fitted with a lot of caution. An egg-bar shoe is the best of the bar shoes because it gives the most support. Meanwhile heart-bar shoes are also very useful in some cases. Although on some occasion it seen that minimal positive results develop in treating this condition.



A useful treatment for improving underrun heels is glue-on shoes. *Locally* (i.e. Malta), the drawback of this method is that it can be expensive and time consuming to fit. Moreover the wear and tear in a short period of time on this type of shoes is significant, due to hard terrain conditions (tarmac, concrete, sharp sand) horses are exercised on.



Full Support Pad has been specially developed for the treatment of heel pain, associated with under run heels. It allows weight transfer from the wall to the frog, which relieves pain instantly in cases of under run. Using these pads will keep the horse sound, while helping to correct heel problem in the long term.



It is not a practical choice for horses with underrun heels condition to be maintained bare foot.



Hooves with under-run heels do poorly in flip- flops.