

The Principles That Make Up The Practice of Natural Balance

By Gene Ovnicek, RMF

The skills and understanding that are required for the overall practice of hoof care in horses covers a broad spectrum. From blacksmithing and metal work, to horse handling and customer care, a farrier's job is multifaceted. With that in mind, the tools and information that farriers use on a day to day basis need to be dependable, practical and applicable for every horse in their care. Being able to effectively evaluate the horse, its movement and each foot as an individual, and then use their tools and knowledge to service the needs of that horse throughout its life, is of paramount importance. The principles and guidelines that make up the practice of Natural Balance offer some tools and solutions to common problems that can benefit most horses and most farriers.

The overall objective of Natural Balance is to utilize the latest and most practical scientific information for the welfare of the equine foot. An important and more specific goal of Natural Balance is to recognize and treat hoof capsule distortion before these distortions create pathologies that in turn result in lameness, or before hoof distortion negatively effect performance. In

order to recognize, treat and/or ultimately avoid these distortions from happening, we have found it important to establish landmarks from the solar surface that are static in their relationship to the Distal Phalanx (DP) for the purpose of achieving lateral/medial and dorsal/palmar hoof balance. Recent radiographic and MRI studies have shown that the widest part of the foot maintains its relationship to the DP. From that static reference, as well as results from recent histological and anatomical studies, a trimming and shoeing protocol has been developed that will maintain the dorsal aspect of the hoof wall with respect to correcting and avoiding hoof capsule distortion, protecting the fragile border of the DP, maintaining equilibrium within the Distal Interphalangeal (DIP) joint, and optimally supporting the DP. At the same time, it is equally important to optimize the efficiency of the caudal aspect of the hoof and create maximum surface area by removing heel distortions which cause heel pain and other pathologies that in turn lead to a toe-first landing. As previously suspected and current research has supported, a toe-first landing is a primary cause of DIP joint, distal sesamoid bone and impar ligament trauma. With that in mind, the guidelines of Natural Balance place the primary focus on utilization of the frog buttresses, digital cushion and lateral cartilages

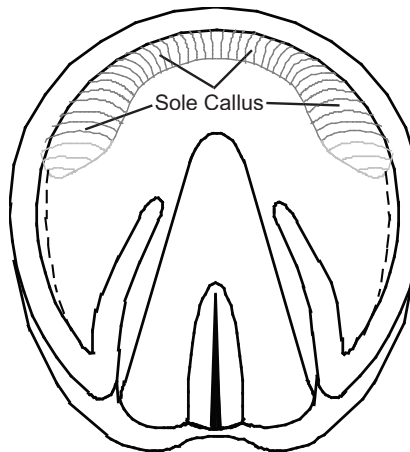
for the assistance in proprioception, supporting and aligning the DIP joint, and optimizing energy dissipation upon landing and loading.

Natural Balance trimming and shoeing consists of understanding that the sole is uniform in depth laterally medially distal to the DP, thus making it a good guide for M/L balance of the DP to the ground. The first step in Natural Balance hoof preparation consists of identifying the functional sole plane by removing chalky material from the sole, while preserving functional structures. We then identify the widest part of the foot, which is an important static reference relative to the DIP joint as well as the location of immobile bone structure into which curled heels can traumatize soft tissue. The hoof wall caudal to the widest part of the foot is trimmed first and to a level close to the functional sole, equal in depth on both sides. The bars are trimmed to straight horn to prevent crushing of the lateral cartilages against the static structures in the widest part of the foot. The hoof wall cranial to the widest part of the foot is trimmed to a level equal with the sole callus at the toe. Natural Balance

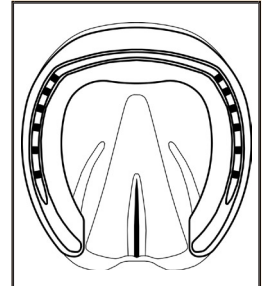
utilizes certain areas of the sole callus to load share with the inner portion of the hoof wall. Using reliable references, the point of breakover of the shoe, or a rocker that is produced on a trimmed barefoot, is placed with respect to the tip of the DP, usually ranging between 5mm and 10mm cranial to the distal border of the DP, depending on the size of the foot. The foot is then finished so the dorsal wall is an equal thickness from the dorsal aspect of the distal phalanx and forms a straight line from the coronary band to the ground surface.

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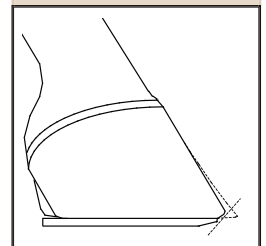
Preserve the Sole Callus!
It is an adaptive sole structure that is necessary to support & protect the distal border of the coffin bone, and the circumflex artery & vein.



The article to the left is an abstract that was submitted for an upcoming conference. It is a good summary of *Natural Balance*, and I've published it here because I feel it is important to refresh, update and revisit goals on a regular basis.



The distance from the frog apex to the inside border of the shoe should be between 1/8" - 7/8" depending on the size of the shoe (00 to 5). All shoes should extend to the end of the frog, which usually means that some shoes will extend beyond the heel buttress.



When finishing the foot, only remove the flares that are obvious from the mid portion of the hoof wall down. Undercut any remaining hoof left over the shoe. DO NOT over rasp the dorsal wall to meet the shoe. This can weaken the integrity of the wall if it is taken beyond just distortion removal.

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