

Low Heels in Horses: New Grading System and Targeted Treatment

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We know these problem hooves by a variety of names: low heels, crushed heels, collapsed heels, underrun heels, long-toe/low-heeled feet. Regardless of what they're called, we've probably all known a horse that had them, the less-than-fluid gait and/or lameness that often accompanies them, and the farrier/vet bills that come with trying to fix them.



Foot with grade II negative palmar angle syndrome (red line shows palmar angle)



The above foot after trimming and application of a full rocker shoe. Note the palmar angle is now even (zero degrees) with the shoe and positive relative to the ground.

However, a veterinarian in Virginia will soon be the first to publish a grading system and treatment guidelines for low-heeled feet (which she terms negative palmar angle syndrome or NPAS) in the veterinary literature. Andrea Floyd, DVM, of Serenity Equine in Evington, Va., described her four-level grading system and treatment strategies/success with more than 100 cases in a paper scheduled for publication in the November 2010 issue of the *Journal of Equine Veterinary Science*.

The distinguishing feature of affected horses is a negative palmar angle (PA) of the coffin bone within the hoof, meaning that the tip of the bone (nearest the toe of the foot) is higher than the wings ("heels") when viewed on a lateral radiograph (an X ray image shot from the side). In a healthy horse, the palmar angle is usually positive to a small degree (with the wings higher than the toe).

Floyd reported that less severe NPAS grade 1 can be restored to proper alignment with specific trimming, and Grade 2 can be addressed with the same trim and full rocker shoes. The more severe Grades 3 and 4 require additional orthopedic measures and up to two years of treatment, but Floyd reported restoring soundness and healthy feet in all cases of all four grades except for one, which was lost to follow-up.

"The low-heel foot shape is so common that many of us have come to view it with the dismissive contempt of long familiarity," Floyd said. "It is hoped that this report will promote the realization that the Grade 1 foot with mild NPAS is already revealing pathology and represents the top of a slippery slope. Prompt and appropriate action at this early stage can forestall further deterioration in heel mass and resolve any associated gait abnormalities and performance issues."

See the November 2010 issue of the *Journal of Equine Veterinary Science* for the complete paper.



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