

## “HEALTHY” HOOF CONTRACTION

On the other hand, there are “healthy” definitions of contraction too, but these shouldn’t be confused with the “unhealthy” ones. For example, there is contraction by *adaptation*: the hoof becomes smaller naturally in order to adapt to a specific environment for which a smaller hoof is more propitious or favorable to the animal’s survival. Another concerns that phase of the *hoof mechanism* when the hoof is in flight and not subject to the weight-bearing force.

This paper however does not focus on the “healthy” forms of contraction, but a specific “unnatural” form thought to be caused by horseshoeing.

### CONTRACTION AND SHOEHING: A STUDY

In 1998 I began a personal research project to evaluate the long term effects of de-shoeing on hoof size. For my study, I sampled four horses, all of which had been in shoes continuously for three or more years.

A very big assumption underlying this project was that the sample hooves, if indeed they were contracted, could be “de-contracted” by basic natural trimming and 24/7 barefootedness.<sup>1</sup> Accordingly, the horses were given natural trims at regular four week intervals between 1998 and 2002, and were managed barefoot except when ridden in some instances with hoof boots.

Some of the objectives of my study included determining: 1) *How* hooves were contracted by shoeing –

in other words, what parts of the hoof (volar profile, coronary band, the entire hoof, etc.) had gotten smaller? 2) To what degree the hooves had contracted: a centimeter from side-to-side, less than a centimeter, more? 3) If the hooves were contracted, how long would it take to de-contract them in a barefoot/natural trim program? 4) Can a definitive statement be made concerning the relationship of contraction caused by shoeing and hoof health?

### Research Parameters

The horses at the outset of the study were shod and had been so previously for three or more years (Figure 1, *below*). With the shoes removed, I trimmed and measured changes in hoof size, shape, and proportion at four week intervals, from 1998 to early 2002. I also fitted each horse with Swiss Horse Boots, although only one horse (#4, Figure 1, *below*; see also Figure 3, page 4) was booted immediately following de-shoeing.

The terrain/environment in which the horses were evaluated is of the Ozark Plateau type. All horses were boarded in large pasture/paddocks (5 to 40 acres) with other horses and were never stalled or otherwise kept in close-confinement.

### Hoof Measurement Data

Figure 2 (*facing page*) summarizes data taken for Hoof Width (HW), a measurement of the widest ex-

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<sup>1</sup>My “natural trim” method is based on the wild horse hoof and has very specific guidelines and parameters. These are detailed in two of my published books, *The Natural Horse* (1997) and *Horse Owners Guide To Natural Hoof Care* (2002, rev. ed.), and in the numerous articles in this SRP Natural Hoof Care Series.

Horse ID	Sex	Age	Hoof Issues	Time Shod
#1	Gelding	8 yrs.	None	3+ yrs.
#2	Mare	17 yrs.	None	10+ yrs.
#3	Gelding	12 yrs.	Apparent hoof contraction	3+ yrs.
#4	Mare	8 yrs.	(toe crack/Supercorriaitis)	3+ yrs.

Figure 1 Summary of vitals for horses in study.