



The Digital Cushion: The Key to Soundness

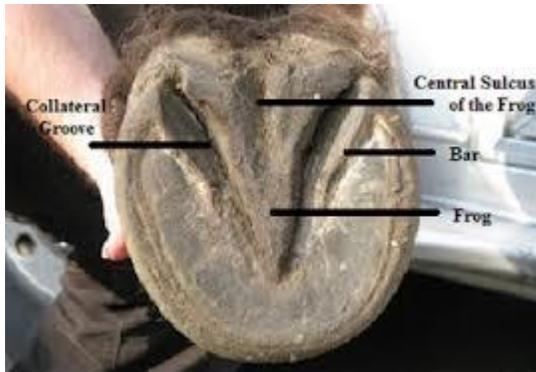
The main goal of natural hoofcare is to develop strong, healthy, resilient feet that move and wear optimally. The key to a hoof's strength and resilience lies in its back third: the frog, heels, and the digital cushion that supports them. The digital cushion is a thick pad of cartilage situated just above the frog. It is pictured in yellow in the diagram below.



Contrary to most assumptions, the back third of the hoof, not the hoof wall, is responsible for bearing the most weight. The main weight bearing, shock diffusing structure in this area is the digital cushion. When a horse is young, this is largely composed of an immature, soft type of cartilage called hyaline cartilage. As the horse moves and grows, they develop strong, thick, springy fibrocartilage. The growth and development of fibrocartilage occurs through the stimulation of fibrocytes. These fibrocytes are only stimulated when the back third of the hoof, namely the frog, is compressed and deformed during movement. Thus, a heel-first landing which compresses and flexes a healthy, weight-bearing frog is needed to stimulate the development of the cushion which comprises most of the strength and soundness of the hoof.

That is why it is paramount to achieve a heel-first landing and develop a healthy, thick frog that bears weight, is not contracted, and is doing its job during movement. DID YOU KNOW: The frog is

supposed to be **just as hard as the sole!** To test this, tap your hoof pick on the frog and the sole consecutively. In a healthy hoof, **the sound should be the same when tapping both.** Unfortunately, the vast majority of horses, particularly those in shoes, have underdeveloped, soft, contracted frogs, leading to a misguided idea of what a normal frog looks like. This is a picture of a healthy frog:



The frog is hard, full, thick, and does not have excessively deep grooves. It is well-formed and ready to do its job.

You can palpate your horse's digital cushion to determine its level of development by pressing just behind the heel bulbs, as pictured:



Well-developed fibrocartilage will feel rather firm and springy. If the feeling you get when palpating is very soft and squishy, or if your horse has soft or contracted heels or deep sulci, then your horse may have an underdeveloped digital cushion. Correct trimming combined with supportive booting if the horse is sore, lots of movement, a dry environment, and a healthy diet will put the horse on the path to developing a firm, strong digital cushion, the foundation for a rock-crushing bare hoof!