

## Problems With Your Horses' Feet .... Why Do Hooves Need Nutritional Help?



Hoof growth and regeneration is very much an “inside out” process. The hoof must receive nutrients from the blood in order to stimulate growth and repair. The wall of the hoof is a dermal tissue, much like skin and hair. Dermal tissue is considered an organ, and it is one of the hungriest when it comes to nutrients. Like every other part of a horse’s body, the hoof is a living structure that depends on nutrients provided through the blood for its growth, strength and repair.

Grand Hoof formulas were based on research by a number of university studies conducted over the last 20 years. These studies all showed that Biotin supplementation significantly improved the hoof horn condition of horses. Biotin is a B vitamin that stimulates keratin production in the hoof

laminae and coronary band, strengthening and improving the periople, hoof wall, sole, frog and white line. Like all B vitamins, Biotin is water soluble, and not stored in the body. It must be taken in on a daily basis.

Studies emphasized the beneficial effects of a Biotin based supplement of 12-15 mg/day for 1,000 lb horse for improving the hoof integrity within 3-5 months and having maximum benefit up to one year of supplementation:

- Increased tensile strength the entire hoof wall
- Less cracking and splitting of horn
- Significant improvement of the hoof horn hardness and thickness
- Improved condition of the white line
- Improved hoof growth after 90 day period
- Horses with tender feet moved more freely and confidently
- After 6-9 months additional improvement in stronger perioples, better hoof horn surface, depth of heels and hoof shape, and easier shoeing with a stronger hoof horn to work with.

## ***Much More Than Just Biotin . . .***

**Contrary to popular opinion, Biotin is not the magic answer to every hoof problem. Growing healthy hooves is a complex process requiring a therapeutic formula of high levels of Biotin, Methionine, Lysine, Methylsulfonylmethane (MSM), Vitamin B-6 and correct ratios of chelated minerals.**

**Methionine and MSM, are natural, organic sources of important sulfur bearing nutrients, and are key players along with Biotin. The protein structure of the hoof contains large amounts of sulfur. These sulfur-bearing nutrients stimulate the production and improve the keratinous tissue in the hoof wall development. Keratin is necessary for skin, hair and hoof integrity, giving strength and hardness to these important protein tissues. Sulfur is often marginal or deficient in normal diets when accelerated hoof growth is occurring. Including a sufficient amount of these sulfur-bearing components is critical to aid in the effectiveness of biotin supplementation for maximum improvement of the hoof integrity.**

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