



About Vitamins

by Cada McCoy

Vitamins are fat or water-soluble organic compounds that the body does not produce in sufficient quantities but which are critical in minute amounts to maintain metabolism. These micronutrients are needed for normal growth and activity and obtained naturally from foods. Many of the vitamins a horse needs are produced in the digestive system. In the past, a healthy horse getting high quality hay or pasture grass did not need a vitamin supplement; however, the same reasons - depleted soils and geographical and environmental factors - that make other dietary enhancements necessary, make particular and proper vitamin supplementation sometimes necessary. Vitamins A, D and E are most commonly added to equine diets, and, sometimes, B complex vitamins may be necessary.

Vitamin A is the vitamin most likely needed in a horse's diet. Vitamin A's natural source is beta-carotene from green forages and new, properly cured hays. Vitamin A is frequently supplemented because horses inefficiently convert beta-carotene to active Vitamin A. The sun's ultraviolet rays turn a compound (7-dehydrocholesterol) in the skin into vitamin D (the "sunshine vitamin"). Vitamin D is needed to absorb and use calcium and phosphorus and several other minerals used for building bone.

Vitamin E is found in most natural feedstuffs and is needed to maintain cell and membrane stability and integrity. It is linked with selenium for normal muscle function. Many B vitamins work as coenzymes in energy pathways. Microflora in the horse's cecum synthesizes B vitamins for absorption, so good quality feedstuffs and a healthy intestinal system are essential for proper B vitamin manufacture and assimilation.



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