

VITAMINS FOR HORSES



Definition, Imbalances and Horse Health

Vitamins are organic compounds that regulate body functions that are needed in very small amounts. They can be classified as fat-soluble vitamins (A, D, E, and K) or water-soluble (B group vitamins and vitamin C). Horses can produce some vitamins naturally in their body (Vitamins A and E) and if they are fed with balanced rations, it is unlikely that clinical pictures due to vitamin deficiencies or excesses will be seen.

However, the vitamins contained in normal diets may not be sufficient in cases where pasture quality/availability is limited or in hard training horses. For example, optimal Vitamin E supplements made in such cases increase muscular endurance and resistance to diseases.

Most of the commercial mixtures produced for horses contain sufficient levels of vitamins for optimum vitamin intake for the horse.

However, there are some situations where vitamin supplementation may be beneficial:

1. In horses who have taken or have taken oral antimicrobial drug therapy for a long time;
2. Horses fed diets containing high grains (eg racing diets);
3. When giving low quality grass or similar roughage stored for more than one season;
4. When the horse is under stress (such as frequent travel or show/race);
5. Usually a nervous / hyperactive horse;
6. Horses in training or frequent / prolonged physical activity;
7. Horses that eat little for any reason (eg post-operative illness);
8. Anemic horses

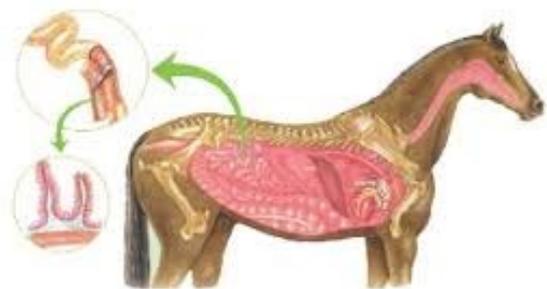


Table 1. Health problems that may be caused by some important vitamin deficiencies and excesses in horse

	Insufficient	Excess
Vitamin A	↓ Feed consumption & growth, anemia, decreased feather quality ↑ Respiratory diseases & diarrhea, ↑ tears, night blindness, ↑ skin and corneal keratin, contractions	↓ Feed consumption & growth, poor quality feather & alopecia (hair loss), anemia, depression, fatigue, ataxia, hyperostosis (excessive bone development), ↑ blood clotting time
Vitamin D	↓ Feed consumption, growth and bone health. enlarged metaphysis, emesis	↓ Performance, feed consumption, & growth, ↑ Resting heart rate, polyuria, seizures
Vitamin E		Excessive anorexia, painful subcutaneous edema, poor quality feather structure, sub-abdominal edema, yellow adipose tissue, wobbler syndrome
Vitamin K		Bleeding and bone health Kidney failure, depression, colic (pain) painful urination, hematuria (blood in the urine)
Vitamin B1		↓ Growth, severe anorexia, ataxia, muscle spasms, cold bones, hemorrhages, & pulmonary edema

Lewis, L.D., *Equine Clinical Nutrition: Feeding and Care*. Ed: Williams & Wilkins, US., 1995.

The main factors affecting the durability of vitamins are:

- sunlight processes in feed production
- heat
- takes place in contact with air.

Horses not only need adequate levels of vitamins, but their ratios with each other also significantly affect their effectiveness. For this reason, the use of vitamin-mineral feed additives without expert advice may harm your horse.



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