

# EQUISTRO®



**Description:** The K vitamins exist naturally as K1 (phylloquinone) in green vegetables, K2 (menaquinone) produced by intestinal bacteria and K3 is synthetic menadione.

**Function:** Vitamin K is a cofactor for the glutamine metabolism producing proteins that are essential for blood clotting and its regulation whereas others have a role in the regulation of tissue mineralization and cell proliferation.

**Sources:** Green vegetables and intestinal bacteria synthesis. Forage contains the greatest concentration and cereals contain relatively low concentrations. Vitamin K is absorbed from the intestine in the presence of bile salts and other lipids and there is tissue storage.

**Daily Requirements (NRC, 2007):** Have not been determined for the horse.

## Deficiency:

Disruption of blood clotting due to the decrease of vitamin K-dependent coagulation factors. There is however little evidence of deficiency in horses.

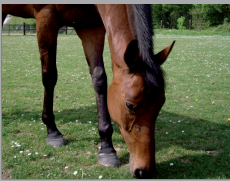
## Excess:

Toxicity is also rare, if not unknown, in natural diets. Excessive intake of the synthetic vitamin K3 can however lead to toxicity in the form of acute renal failure, colic and haematuria, in experimental conditions or intravenous injections.

## When problems may occur?

Vitamin K2 is synthesized by functioning gut microorganisms in amounts that should normally meet the horse's requirements. However, this source may be inadequate during the first couple of postnatal weeks, or during extended treatment with sulfonamides (antibiotics). A vitamin K antagonist, the dicoumarol, produced in moldy sweet clover hay, and other coumarin derivatives can impair blood coagulation, according to a single report in one horse.

# VITAMIN K



**Vétoquinol**  
 *Signe de Passion*