



**The report notes: "it is clear that safety of the same supplements in humans does not guarantee safety in animals. The clearest example of this is with garlic, where excess intake may cause haemolytic anaemia in horses, dogs and cats."

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Garlic, *Allium sativum*, either fresh or dried, is a popular supplement amongst horse owners by reason of some purported health benefits and the belief that feeding it will help repel flies.

Whether Garlic is suitable for horses or even safe for use in them is questionable, and if fed in large amounts or over an extended period Garlic carry some significant risks.

A report by the National Research Council in 2008 could only give an estimated presumed safe intake of garlic for horses because of the lack of data, and suggested that the threshold above which the "risk of an adverse event will increase significantly" is likely to be between 15 and 200 mg/kg BW dried garlic - 15 mg/kg BW being 7.5 g for a 500 kg horse - and that adverse effects might depend on the health and oxidative status of the horse. Oxidative stress is linked to insulin resistance and PPID (Equine Cushing's Disease). **

Garlic contains organosulphur compounds which can cause oxidative damage to the Haemoglobin in red blood cells. Affected cells may show clumps of Haemoglobin called Heinz Bodies or become misshapen when they delight in the name "Eccentrocytes". Affected cells are removed from circulation causing anaemia and loss of Haemoglobin into the urine. This same group of compounds is what makes Onion, also a member of the Allium family, toxic to dogs and cats.

And that's not all:

Equine Applied and Clinical Nutrition (2013) p357 lists Heinz body anaemia, uterine stimulant, prolong bleeding time, gastric ulcers and urticaria (Hives) under "potential toxicity or interaction" for garlic, and states that there is little if any research to support any potential benefits of garlic specifically in horses, other than the reduction of respiratory signs suggested by Saastamoinen et al. 2010. Garlic has been reported to interact with some medicines in other species, and the chapter on specialized dietary supplements concludes "The fact that certain herbs have been fed for centuries does not mean that they are always safe (e.g. garlic)".

Garlic is also purported to have some anti bacterial properties but what it does to the natural microflora of the equine gut is unknown. We wouldn't feed a daily dose of antibiotics to a horse without good reason, so why would we feed garlic? Just because it's "Natural" doesn't mean it's safe, and the benefits if any, seem to be highly questionable.

On balance it may be better to keep the garlic in the kitchen rather than in the feed room, or at least keep the dose inflicted on horses to a minimum. Most likely the flies won't even notice the difference.

