

# Report says dietary supplements for horses, dogs and cats need better regulation

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The growing use of animal dietary supplements has raised several concerns, including the safety of specific supplements and the approaches taken to determine their safeness. A new National Research Council report, requested by the Center for Veterinary Medicine of the U.S. Food and Drug Administration, assesses whether the addition of three dietary supplements -- lutein, evening primrose oil, and garlic -- to the diets of horses, dogs, or cats may cause significant adverse health effects.

The committee that wrote the report concluded that because of inadequate data, it could not clearly define a safe upper limit for lutein, evening primrose oil, or garlic, but it could cite historical safe intakes (HSI) and estimate presumed safe intakes (PSI) based on available research findings. The committee added that current regulations addressing animal dietary supplements are in "disarray."

The report stresses that clear and precise regulations need to be established so "only safe animal dietary supplements are allowed on the market." An improved adverse event reporting system for animal dietary supplements would help, because existing systems have various deficiencies, including limited public access, passive rather than active solicitation of adverse events, and unclear discrimination of minor versus serious adverse events.

Additionally, the "generally recognized as safe" designation used for both human and animal ingredients is helpful in determining safe intake

levels, but safety in humans does not guarantee safety in animals, the committee noted. For example, excess garlic intake can cause hemolytic anemia in horses, dogs, and cats, but this adverse effect has not been reported in humans.

The passage of the Dietary Supplement Health and Education Act (DSHEA) in 1994 amended the way in which dietary supplements for humans are regulated, but FDA concluded that DSHEA should not apply for animals. As such, animal dietary supplements are typically regulated as "food" without the special consideration afforded to supplements marketed for humans. The Association of American Feed Control Officials also sanctions the ingredients used in animal feeds, which states typically use as guidelines, but it does not dictate minimum or maximum amounts of nutrients allowed in a product.

The daily PSI and HSI, given in milligrams per kilogram of body weight (mg/kg BW), determined by the committee for the three dietary supplements are:

### **LUTEIN**

- For horses, the PSI is 8.3 mg/kg BW when obtained from forage or natural sources; no data exist to support recommendations regarding supplements.
- For dogs, the PSI is 1.8 mg/kg BW, with an HSI of 0.45 mg/kg BW.
- For cats, the PSI is 7.2 mg/kg BW, with an HSI of 0.85 mg/kg BW.

### **EVENING PRIMROSE OIL**

- For horses, the PSI is 400 mg/kg BW, which assumes the intake of total fat will not exceed 23 percent of the diet, including any quantity of evening primrose oil added.
- For dogs, the PSI is 424 mg/kg BW, which is the upper level used in clinical trials. Most likely the upper safe intake is higher than this.
- For cats, the PSI is 391 mg/kg BW. It is also likely that cats could

tolerate higher levels.

## **GARLIC**

- For horses, the PSI is 90 mg/kg BW, with an HSI of 15 mg/kg BW.
- For dogs, the PSI is 56 mg/kg BW; garlic has a long history of safe use as a supplement, with mean levels of 22 mg/kg BW being reported without serious adverse events.
- For cats, there are insufficient data to support a generic recommendation that covers all garlic preparation types, and the committee was not able to establish a PSI of garlic for cats. However, mean intake levels of 17 mg/kg BW have been reported with apparently no serious adverse events.

Source: National Academy of Sciences

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