

HOT TOPIC

Supplements for Pets





In focus

Pet owners are increasingly interested in supplements for their pets. Since all supplements are not the same, their use and selection for an individual pet should be considered carefully. Veterinarians should ask about the use of supplements as part of a pet's diet history.

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What are supplements?

Supplements are broadly defined as "non-main meal products" and are intended to be fed as an addition to the pet's main meal. While relevant in North America, the term "supplement" is not defined within the EU or UK pet food (feed) regulations. Such products are regulated and covered under the term "complementary pet food," i.e., pet food that is not complete and balanced.¹ (Within this Hot Topic, "supplement" will be used.)

Healthy dogs and cats that eat a complete and balanced commercial pet food appropriate for their life stage do not need a supplement to meet their nutritional requirements. However, owners of pets fed homemade diets should consult with a board-certified veterinary nutritionist for supplement guidance. Supplements can provide pets with more personalized nutrition by targeting a specific body system or can support overall health and wellness. Supplements include functional ingredients such as glucosamine; pre-, pro-, and postbiotics; fish oil, providing omega-3 fatty acids EPA and DHA; vegetable oils, providing omega-6 fatty acids; vitamins; minerals; and beta-glucans, among many others.



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What should be considered when recommending a supplement?

Quality may differ among manufacturers, thus recommending a supplement from a trusted company with experience in companion animal nutrition and a known reputation of quality and safety is essential. Ingredient purity, which can vary among suppliers, and the supplement manufacturing process may influence ingredient digestion and absorption and thus a supplement's overall effects.

Since toxicity or side effects are possible with excessive levels of some nutrients, including some vitamins and minerals, over-supplementation should be avoided. All sources of a nutrient, including the complete and balanced diet, should be considered.²

As supplements intended for humans may contain artificial sweeteners, e.g., xylitol, or other unsuitable ingredients, pet supplements are generally the best option. Formulated to appeal to pets, e.g., available as palatable powders or chewable tablets, their administration can be easier—important as many supplements are administered long term and/or to animals that have disease conditions that may affect appetite.

When using a supplement to support a specific body system, it is prudent to seek out a supplement, if available, with scientific support³⁻¹² in that area in the target species.

When obtaining a diet history at each visit, veterinarians should ask whether supplement(s) are administered. Pet owners should be advised proactively about proper use of supplements, i.e.:

- The supplement is indicated (and not specifically contraindicated, e.g., a flavored chewable supplement for a pet beginning a diet elimination trial).
- The owner is administering a safe, efficacious, and quality supplement from a reputable supplement manufacturer.
- The owner is administering the supplement in the correct amount and frequency.

How are pet supplements regulated?

Supplement regulations vary worldwide. Veterinarians should understand their local regulatory environment. In general, disease claims are not permitted.^{1,2,13}



Only approved or listed pet food ingredients are permitted in Europe and must follow pet food regulations. Medicinal claims cannot be made. Supplements are generally regulated under

the pet food category in Asia if no medicinal claims are made and nutritional composition is provided on the label. In Latin America, pet supplements are also regulated. In Australia, supplements are defined as "excluded nutritional or digestive" (END) products. They are normally not required to be registered with Australian Pesticides and Veterinary Medicines Authority (APVMA) unless they make claims about preventing, curing, or treating a disease. In the U.S., the National Animal Supplements Council (NASC) provides labeling guidance, developed in discussion with the FDA and AAFCO, on supplement products for companion animals. To use the NASC "quality seal" on packaging, NASC member supplement manufacturers must comply with strict guidelines for quality assurance, adverse event reporting, and labeling standards. Canada is currently the only country with a specific regulation for pet supplements—the Veterinary Health Products (VHP) Regulation. All ingredients must be found within the VHP permitted substance list; all supplements must be registered.

References

- FEDIAF The European Pet Food Industry. (2021, October). Nutritional guidelines for complete and complementary pet food for dogs and cats. https://europeanpetfood. org/wp-content/uploads/2022/03/Updated-Nutritional-Guidelines.pdf
- Association of American Feed Control Officials. (2012). Supplements. Retrieved January 24, 2023, from https://talkspetfood.aafco.org/supplements
- Moreau, M., Troncy, E., del Castillo, J. R. E., Bedard, C., Gauvin, D., & Lussier, B. (2012). Effects of feeding a high omega-3 fatty acids diet in dogs with naturally occurring OA. Journal of Animal Physiology & Animal Nutrition. doi: 10.1111,1439-0396.2012.01325.X
- Mueller, R. S., Fieseler, K. V., Fettman, M. J., Zabel, S., Rosychuk, R. A. W., Ogilvie, G. K., & Greenwalt, T. L. (2004). Effect of omega-3 fatty acids on canine atopic dermatitis. *Journal of Small Animal Practice*, 45(6), 293–297.
- 5. Hielm-Björkman, A., Tulamo, R.-M., Salonen, H., & Raekallio, M. (2009). Evaluating complementary therapies for canine osteoarthritis part 1: Green-

- lipped mussel (Perna canaliculus). Evidence-Based Complementary and Alternative Medicine, 6(3), 365–373.
- McCarthy, G., O'Donovan, J., Jones, B., McAllister, H., Seed, M., & Mooney, C. (2007). Randomised doubleblind, positive-controlled trial to assess the efficacy of gluosamine/chondroitin sulfate for the treatment of dogs with osteoarthritis. The Veterinary Journal, 174(1), 54–61.
- Ruff, K. J., Kopp, K. J., Von Behrens, P., Lux, M., Mahn, M. & Back, M. (2016). Effectiveness of NEM® brand eggshell membrane in the treatment of suboptimal joint function in dogs: A multicenter, randomized, double-blind, placebo-controlled study. Veterinary Medicine: Research and Reports, 7, 113–121.
- Van den Abbeele, P., Duysburgh, C., Rakebrandt, M., & Marzorati, M. (2020). Dried yeast cell walls high in beta-glucan and mannan-oligosaccharides positively affect microbial composition and activity in the canine gastrointestinal tract in vitro. Journal of Animal Science, 98(6), 8ka173.
- 9. Fries-Craft, K., Kilburn-Kappeler, L. R., Aldrich, C. G., & Bobeck, E. A. (2023). Dietary yeast beta 1,3/1,6

- glucan supplemented to adult Labrador Retrievers alters peripheral blood immune cell responses to vaccination challenge without affecting protective immunity. *Journal* of Animal Science, 101, skado29.
- 10. Bybee, S. N., Scorza, A. V., & Lappin, M. R. (2011). Effect of the probiotic Enterococcus faecium SF68 on presence of diarrhea in cats and dogs housed in an animal shelter. Journal of Veterinary Internal Medicine, 25(4), 856–860.
- Benyacoub, J., Czarnecki-Maulden, G. L., Cavadini, C., Sauthier, T., Anderson, R. E., Schiffrin, E. J., & von der Weid, T. (2003). Supplementation of food with Enterococcus faecium (SF68) stimulates immune functions in young dogs. The Journal of Nutrition, 133(4), 1188-1162.
- Webb, C., & Twedt, D. (2008). Oxidative stress and liver disease. Veterinary Clinics of North America: Small Animal Practice, 38(1), 125–135.
- Association of American Feed Control Officials. (2012). The business of pet food. Retrieved January 24, 2023, from https://petfood.aafco.org/Definition-of-Food-Drugs