



JAVMA_{news}

January 15, 2017

Assessing pet supplements

Use widespread in dogs and cats, evidence and regulation lacking

By Katie Burns

Posted Jan. 4, 2017

A third of all U.S. households with dogs use supplements, as do about a fifth of households with cats, according to a report on pet supplements from market research source Packaged Facts.

Two-thirds of pet owners stated that they purchased at least some of their supplements from a veterinarian, according to the report. How often pet owners consult veterinarians about supplements is another matter.

Then there are the questions about the evidence for the efficacy of supplements in pets and regulation of the market for animal supplements.

Market reports give some sense of how pet owners are using supplements. The AVMA until recently had a policy specifically supporting the availability of glucosamine for nonfood animals but currently offers no guidance about supplements.

The American College of Veterinary Nutrition does not have a position on supplements, but the FAQ section of the ACVN website offers this statement: "If your pet is eating a complete and balanced commercially available pet food, supplements are not recommended unless specifically prescribed by your veterinarian."



Diplomates of the ACVN suggest veterinarians should be aware that animal supplements fall into a regulatory gray area and should consider what evidence there is for the efficacy of supplements in pets.

Snapshot of pet supplements

The Packaged Facts report “Pet Supplements in the U.S., 5th Edition” came out in February 2015. In 2014, the market for pet supplements reached \$541.3 million in sales.

Joint health supplements remain the most commonly purchased condition-specific pet supplement according to Packaged Facts’ January 2015 survey of pet owners, followed by those supporting heart health and skin and coat health, then digestive health/hairball prevention, and omega fatty acid supplements.”

Packaged Facts report,

“Pet Supplements in the U.S., 5th Edition”

The report states: “Joint health supplements remain the most commonly purchased condition-specific pet supplement according to Packaged Facts’ January 2015 survey of pet owners, followed by those supporting heart health and skin and coat health, then digestive health/hairball prevention, and omega fatty acid supplements. Probiotics, senior formula supplements, and omega fatty acid supplements were more popular with cat owners, while more dog owners than cat owners give their pets joint health supplements.”

Also according to the report: “A rising interest in pet supplements with consumers has not translated into significant market gains. Another

factor causing sluggish supplement sales is the shift towards functional treats and away from supplements in traditional capsule, tablet, and powder forms. A third factor is the tendency for veterinarians to prescribe medications with clinical evidence supporting their efficacy rather than supplements, which have less scientific support for their health benefits.”

Glucosamine and beyond



The defunct AVMA policy on glucosamine stated the following: “The AVMA encourages enforcement discretion by state and federal officials with respect to the marketing of glucosamine products to non-food producing animals because of their common and long history of use in the management of osteoarthritis and the absence of significant safety concerns.”

The AVMA Board of Directors rescinded the policy in November 2016 on recommendation of the AVMA Council on Biologic and Therapeutic Agents and the AVMA Clinical Practitioners Advisory Committee. According to the background to the recommendation, the council and committee “determined that advocating for enforcement discretion for unapproved drug products based (on) a long history of use without significant safety concerns, but without efficacy data does not reflect the AVMA’s science-based perspective.”

Dr. Jennifer L. Buur, who represents clinical pharmacology on COBTA, heads the subcommittee that reviewed the policy. “We’ve also recognized that there might be a need for a broader policy about the use of nutritional supplements in general,” said Dr. Buur, an associate professor of veterinary pharmacology at Western University of Health Sciences College of Veterinary Medicine in Pomona, California. The subcommittee is looking at drafting such a policy.

Supplements in veterinary medicine

It’s important for veterinarians and pet owners to understand that supplements don’t have the same oversight as drugs approved by the Food and Drug Administration, Dr. Buur said.

The Dietary Supplement Health and Education Act of 1994 allows supplements to make a statement of nutritional support, including a statement that “describes the role of a nutrient or dietary ingredient intended to affect the structure or function in humans.” The wording must include the following: “This product is not intended to diagnose, treat, cure, or prevent any disease.”

The FDA has taken the position that the act does not apply to animals. An AVMA policy still in effect supports that position and adds that the AVMA does not believe the act should be modified to include animals.

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In practice, pet supplements are marketed similarly to human supplements, and pet owners also use human supplements. Dr. Buur said there can be concerns about the safety, efficacy, and quality control of supplements. Nevertheless, she believes, “They are an important part of our integrative veterinary medical care.”

She teaches veterinary students that supplements are like other therapeutics; therefore, veterinarians need to use

evidence-based medicine. With the paucity of evidence on supplements, strategies include examining evidence in other species and examining evidence of toxicity.

Dr. Buur tries to impart on students that, as veterinarians, they will need to take the lead in helping clients with supplements. She said, "You can find any information online that you want, and clients won't have the expertise needed to recognize incorrect or misleading information."

Regulatory gray area

The regulation of animal supplements is quite a confusing arena, said Dr. David A. Dzanis, ACVN secretary and chief executive officer of the consulting firm Regulatory Discretion Inc.

He said most vitamins and minerals and certain oils that deliver fatty acids fall in the realm of food. Many herbs, metabolites, and other substances would be considered unapproved food additives or unapproved animal drugs.



The National Animal Supplement Council, a nonprofit coalition of manufacturers of supplements for companion animals, including horses, has its own labeling system for animal supplements similar to labeling on the human side.

"They are given low priority by regulators," Dr. Dzanis said. Because they are not labeled as feeds, state feed control officials don't regulate them. He said, "Technically, they're unapproved drugs, and FDA can assert some authority."

He said the FDA Center for Veterinary Medicine is willing to exercise enforcement discretion, allowing animal supplements on the market as long as the center is comfortable with them. Animal supplements can be subject to action if there is an issue, and the center has access to the NASC Adverse Event Reporting System.

Dr. Dzanis believes better oversight of animal supplements would be ideal, but manufacturers would have to invest a lot of time and money to get a supplement approved as a food additive and even more time and money to get a supplement approved as an animal drug (see ["Supplement companies made changes after facing crackdown."](#))

Clinical considerations

"The big picture about dietary supplements is, while there are ones that hold promise, however, there are many more that have absolutely no effect or have potential harm," said Dr. Lisa M. Freeman, an ACVN diplomate who is a professor of clinical nutrition at Cummings School of Veterinary Medicine at Tufts University. She said the lack of regulation leads to concerns regarding safety, dosage, and quality control.

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All these factors make supplements difficult to use, she said. A veterinarian must think about whether a supplement will have a benefit, decide on the correct dosage in a particular animal with a particular condition, and, finally, recommend a specific product with good quality control.

*Dr. Lisa M. Freeman,
professor of clinical nutrition,
Cummings School of Veterinary Medicine
at Tufts University*

The supplements that hold promise can differ from those that are most used, Dr. Freeman said. Some of the most common are multivitamins, chondroprotectives such as glucosamine, and fatty acids, but multivitamins are not particularly useful if the pet owner is feeding a balanced diet.

Regarding the use of glucosamine, Dr. Freeman said, "There is some evidence in dogs that it may have some modest benefits in the treatment, although not the prevention, of osteoarthritis. However, as a nutritionist, I would say that the effects are much smaller than if an animal (that) is overweight with arthritis loses weight."

Long-chain fatty acids from fish oil have some potential benefits in terms of anti-inflammatory effects and might be helpful in heart, kidney, and skin diseases.

Dr. Freeman emphasized that supplements do have potential adverse effects. Adverse effects of glucosamine include gastrointestinal upset and problems with glucose regulation, for example.

Many supplements fail quality tests for potency and contaminants, Dr. Freeman said. She recommends using products with independent quality-control testing, saying the quality control for both human and animal supplements has been shown to be questionable.

Of practitioners, Dr. Freeman said, "A nutritional assessment should be performed on every pet at every visit. In addition to the diet, treats, and other foods, we should also ask owners about dietary supplements to first find out if they're giving them at all, and then to make sure that they're giving ones that have potential benefit and don't have potential harm, that they're giving them in appropriate doses, and are using products with good quality control."

She said, "What we can do as a profession is to carefully assess the nutritional status of our patients, determine if dietary supplements are warranted, make specific recommendations for products that have had independent testing, and do more research to better understand these supplements."

Supplemental resources

- *Consumerlab.com*—Site with a small subscription fee that independently evaluates supplements, primarily human supplements but including some pet supplements [here](#).
- *Food and Drug Administration*—Regulatory and safety issues of supplements, reporting of adverse events [here](#).
- *Mayo Clinic*—Fact sheets on human supplements [here](#).
- *United States Pharmacopeia Dietary Supplement Verification Program*—Independent testing of human supplements [here](#).
- *National Institutes of Health's Office of Dietary Supplements*—Fact sheets, safety notices, resources on how to evaluate supplements and how to evaluate online health information [here](#).
- *Department of Agriculture's Food and Nutrition Information Center*—General supplement and nutrition information with links to a variety of supplement websites [here](#).
- *World Small Animal Veterinary Association*—Nutrition toolkit, including tools for pet owners on selecting the best diet for a pet and tools for veterinarians on taking a pet's diet history [here](#).

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