

Answering Common Pet Owner Nutrition Questions: Evaluating nutrition information and making recommendations

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Pet owners are exposed to information regarding pet nutrition from a variety of sources. However, the veterinarian continues to be regarded as the primary source of information regarding pet care and nutrition.¹⁻² Our responsibility as veterinarians includes answering pet owners' questions regarding nutrition and providing dietary recommendations for healthy and ill pets based on medical knowledge and familiarity with an array of dietary options. Since pet owners seek pet nutrition information from many sources, we also have an opportunity to educate clients regarding critical evaluation of information from resources such as the internet. Referring clients to websites such as the National Institute of Health Office of Dietary Supplements can help your clients learn how to critique websites and other resources by considering the source of the information (reviewing credentials of the information provider), considering conflicts of interest (funding sources), and looking for scientific evidence rather than testimonials to support claims.³ In addition, the World Small Animal Veterinary Association (WSAVA) Global Nutrition Committee has resources including recommendations for pet owners seeking information on the internet (<http://wsava.org/nutrition-toolkit>).

Owners may seek veterinary advice regarding selection of a commercial pet food. In order to make a recommendation or to provide the client with tools to select an appropriate diet, the veterinarian should begin with a nutritional assessment of the pet.⁴ Factors such as species, life stage, neuter status, activity level, body condition score, and concurrent health issues all influence the nutrition plan for that individual. Owner factors including finances (how much can the owner spend on pet food?) and logistics (can the owner readily obtain the food?) must also be considered. Owner preferences for certain types of food or feeding philosophies should be discussed and if appropriate incorporated into the recommendation. With pet and owner factors in mind, the veterinarian can make nutrition recommendations tailored to an individual pet in a specific household.

In addition to specific recommendations, veterinarians can provide a valuable service to pet owners by educating and providing accurate and credible information regarding nutrient requirements of dogs and cats, feeding behaviors of each species, and information regarding commercial pet foods to help the pet owner make appropriate fact-based decisions. Often what the pet owner will literally have "in hand" is the pet food label. The pet food label is both an advertising piece designed to grab the potential buyer's attention as well as a legal document that is regulated at the national (FDA) and state (state feed control officials) level. FDA regulations require proper product identification, net quantity, manufacturer or distributor name and place of business, and a listing of all ingredients in the product by descending order of weight.⁵ States enforce their own labeling regulations. Many states base their regulations on the Association of American Feed Control Officials (AAFCO) Model Bill and Regulations for Pet Food and Specialty Pet Food. These regulations include label requirements for complete and balanced products such as the nutritional adequacy statement, feeding directions, guaranteed analysis, and calorie statement. More detail can be obtained on the "AAFCO Talks Pet Food" website (<http://talkspetfood.aaftco.org/>).⁶ Showing clients the AAFCO nutrition adequacy statement and

explaining the difference between foods that have been formulated to meet a nutrient profile versus those that have undergone feeding trials will help them select an appropriate diet and avoid inadvertently feeding a potentially unbalanced food designed for supplemental feeding.

Pet food ingredients are often the subject of questions or concerns for some pet owners. In an online survey with 1309 respondents, 63% of respondents reported that ingredients were the most important factor in choosing a pet food.⁷ The FDA is responsible for ensuring that all ingredients used in pet foods are safe and have appropriate function.⁵ Each ingredient serves a purpose. The claim that pet food has useless ingredients (or fillers) is a misconception.⁸ Ingredient names and definitions can be a source of confusion to pet owners. For example, the biochemical names for many vitamins and minerals found on pet food labels can be intimidating and may lead to owner concern if these terms are not familiar. The term “by-product” may have a negative connotation in the pet owner’s mind. In fact, by-products can be a highly nutritious ingredient.

Unfortunately, neither quality of ingredients nor quality of the complete pet food product can be determined by reading a pet food label. The American Animal Hospital Association Nutritional Assessment Guidelines for Dogs and Cats provides a list of questions to ask a pet food manufacturer to help assess the quality of a product.⁴ Remember that ingredients are the source of nutrients. The goal for either a commercial or home-prepared diet is to meet the nutrient requirements of the cat or dog by using ingredients in the correct amounts and proportions such that the final product provides complete and balanced nutrition. There are many factors to consider beyond simply looking at the ingredient list in order to determine if the product is appropriate for a given pet. Factors such as the cooking process and storage of the product can affect nutrient availability and palatability. An interested pet owner can contact the manufacturer and ask if feeding trials, digestibility trials, and storage testing are conducted on the product of interest.⁴ Several terms on some pet food labels including holistic, ancestral, and ultra-premium have no standard definition nor does the FDA hold these products to any additional nutritional guidelines other than those of all other complete and balanced pet foods. In contrast, AAFCO has developed guidelines for natural claims:

“A feed or ingredient derived solely from plant, animal or mined sources, either in its unprocessed state or having been subject to physical processing, heat processing, rendering, purification, extraction, hydrolysis, enzymolysis or fermentation, but not having been produced by or subject to a chemically synthetic process and not containing any additives or processing aids that are chemically synthetic except in amounts as might occur unavoidably in good manufacturing practices.”⁹

Owners may seek veterinary advice to properly home cook for a pet. There are many reasons that an owner may wish to prepare the pet’s meal. The motivation may be driven by concerns over the safety or wholesomeness of commercial pet foods, belief that the pet finds commercial diets unpalatable, or a desire to pamper the pet and enhance the pet: owner bond.¹⁰ Sometimes, there is no commercial diet that meets the desired nutrient profile for a pet with multiple medical conditions, or the pet will not consume a commercial diet in sufficient quantity to meet nutritional needs. Seeking the owner’s motivations for home cooking is a critical part of the nutrition assessment. Home cooking involves a financial and time commitment on the part of the owner and requires proper monitoring of the pet by the veterinarian. The veterinarian should

ensure the recipe the owner is using meets the nutritional needs of the pet. Unfortunately, studies have shown many recipes are nutritionally inadequate.¹¹⁻¹⁵ While complete assessment of a recipe takes time and expertise often using a formulation software program, a quick review in the exam room may reveal obvious deficiencies. The recipe should include a protein source, a source of essential fatty acids, an appropriate vitamin and mineral supplement, and most likely a carbohydrate source. In addition, for cats, the recipe must have the specific nutrient supplements such as taurine to meet this species' unique requirements. Consultation or referral directly to a veterinary nutritionist (www.acvn.org to find a specialist) or via the web-based services offered by board certified veterinary nutritionists (e.g. www.balanceit.com or www.petdiets.com) is indicated to both completely evaluate an existing recipe and/or formulate an appropriate recipe and feeding plan for that pet. Owners need to be counseled regarding careful and consistent ingredient selection, recipe preparation (including precise weighing/measuring of ingredients and proper cooking), appropriate storage, and detailed feeding guidelines. Follow-up monitoring of pets on home-prepared diets is critical since these recipes have not undergone any feeding trials. Careful history taking will reveal any omissions or substitutions to the original recipe that may occur with time ("recipe drift"). In fact, a survey conducted to evaluate adherence to home-cooked diet recipes for dogs formulated by the nutrition service at a veterinary teaching hospital reported only 13% of respondents demonstrated exact adherence to the prescribed recipes.¹⁶ The pet should have physical examinations with laboratory diagnostics on a regular basis while on a home prepared diet plan.

Clients may seek advice regarding unconventional diets such as raw food diets. There are many internet sites and books touting the benefits of raw food diets but published peer-reviewed trials are currently limited. A review presenting current knowledge on the risks and benefits of raw meat-based diets for dogs and cats in addition to presenting a summary of research on the topic addresses owner motivations and provides some clinical recommendations.¹⁷ However, the authors are clear to point out the paucity of good data from high-quality studies. The same criteria utilized to evaluate a diet for nutritional adequacy applies to unconventional diets. In addition, the pathogenic risk factors of feeding uncooked meat including zoonotic risks should be discussed. For instance, a 2-year study conducted by the FDA Center for Veterinary Medicine reported that after screening over 1000 pet foods for pathogenic bacteria, raw pet foods were more likely contaminated with pathogenic bacteria with 15/196 raw pet food samples testing positive for *Salmonella* and 32/196 samples testing positive for *Listeria monocytogenes*.¹⁸ References for pet owners such as the FDA website's "Avoid the Danger of Raw Pet Food" can be helpful.¹⁹

Veterinarians are often asked about dietary supplements. 78.5% of respondents to an online public survey answered that senior dogs should receive dietary supplements such as joint supplements, fatty acids, antioxidants, or multivitamins.⁷ Since many of these novel ingredients are not legally considered food or drug, they are not subject to the same regulatory oversight. Therefore, it becomes imperative for the pet owner and veterinarian to be cautious and consider both safety and efficacy of these products as well as any contraindications for the individual patient such as drug-supplement interactions. Review the label for inclusion of basic details such as lot number, expiration date, ingredient list, and directions for use.²⁰ However, one cannot assume the label information is accurate. The manufacturer may voluntarily participate in the National Animal Supplement Council (www.nasc.cc) or voluntarily submit products for USP

verification (www.usp.org/USPVerified/dietarySupplements/). The USP verified dietary supplement mark indicates that the product meets label claims for ingredient amount and potency, does not contain harmful levels of specified contaminants, meets recognized dissolution standards, and has been made using safe, sanitary and well-controlled manufacturing practices according to FDA and USP guidelines.²¹ Pet owners can also check to see if the product has been evaluated by third party testing providers.

“How much to feed” a pet is as critical as “what to feed.” Studies report 25-40% of adult dogs and cats are overweight or obese with informal studies indicating greater than 50%.²² Obesity is a risk factor for several conditions including diabetes mellitus, osteoarthritis, and reduced median lifespan.²³⁻²⁴ Owners are not always aware that their pet is overweight and would benefit from a veterinary professional discussing body condition scoring and optimal body condition during the patient’s nutritional assessment. The wide range in individual energy requirements makes providing specific daily caloric recommendations challenging. A complete diet history to include all food sources (meals, treats including edible chew treats, table foods, supplements, and foods used to hide medications) enables the veterinarian to estimate a pet’s current daily caloric intake and also reveals if the pet is on an appropriate nutrition plan (as a general rule of thumb, treats should not exceed 10% of total daily caloric intake). When a detailed diet history is not possible, standard energy calculations can provide a starting point. Periodically weighing the pet and adjusting feeding amounts accordingly will enable the clinician and owner to determine that pet’s daily caloric needs. Consider the desired caloric density of the diet based on whether the individual needs to gain, lose or maintain weight. Less caloric dense diets are desirable when owners wish to feed more volume whereas more caloric dense diets may be appropriate for animals that only eat a small quantity of food but need to gain weight. The clear goal for every pet should be to feed the amount of food that individual needs to achieve and maintain an optimal body condition while delivering all essential nutrients.

Lastly, pet food safety questions may arise and concerns over pet food recalls may prompt some owners to prepare food for their pets without proper guidance and supervision. The veterinarian can educate owners about the regulation of commercial pet foods and the food safety laws that apply to pet foods as well as foods for human consumption. The FDA Amendments Act (FDAAA) of 2007 gives the FDA increased responsibility and authority over food safety.²⁵ Among the food safety initiatives, FDAAA directed the FDA to establish the Reportable Food Registry, an electronic portal for industry to report when there is reasonable probability that an article of food including pet food or animal feed will cause serious adverse health consequences. In January 2011, the Food Safety Modernization Act (FSMA) was signed into law. This law aims to ensure the U.S. food supply is safe for our consumption but also applies to pet food. It provides the FDA with a legislative mandate to focus on prevention by utilizing risk-based food safety standards and inspections. It gives the FDA more authoritative response by allowing the FDA to utilize mandatory recalls if needed.²⁶ The practitioner plays a critical role in pet food safety by identifying and diagnosing food related illness. A complete history including a detailed diet history may suggest a food related illness. Clinical signs correlating with feeding a new bag of food or multiple pets with similar clinical signs consuming the same diet may raise the index of suspicion. Exploring all differential diagnoses, ruling-out non-food related causes, collecting appropriate food and/or biological samples to confirm a diagnosis, and maintaining detailed medical records are required. As soon as a food related issue is suspected, the veterinarian should

notify the pet food manufacturer and either call the appropriate FDA district office consumer complaint coordinator or utilize the Safety Reporting Portal.²⁷ The veterinarian can also be a valued resource during a pet food recall. Several websites keep the busy clinician up-to-date on recalls. AVMA members can download a widget to their clinic website so clients and the clinical staff can view pet product recalls once the FDA issues a recall.²⁸

In conclusion, clients are exposed to a plethora of information and misinformation regarding pet nutrition. The veterinarian and veterinary team are a trusted and reliable source of information. The role of the veterinary health care team includes nutritional assessment and recommendations for the pet and client education. There are many resources available to help pet owners provide proper nutrition for their pets.

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