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The Truth About Unconventional Diets for Dogs and Cats

66TH CONVENTION OF THE CANADIAN VETERINARY MEDICAL ASSOCIATION, 2014

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Pet food selection and feeding practices are more complex than nutritional science and are influenced by the same social and cultural factors that direct the pet owner's personal eating behaviors. Human-animal bonding, ideology, personal identity and investment in the pet's health and wellbeing are reasons why people seek alternatives to conventional pet foods. Pet owners, who are feeding non-commercial foods, appear to reflect greater mistrust of commercial pet foods and pet-food processing than commercial feeders.

Pet Owner's Concerns

A major concern among pet owners seeking alternative options for feeding their pets are the **types and sources of ingredients** used in commercial pet-food manufacturing. Well-known examples are meat byproducts and corn. When choosing a commercial pet food, owners focus on the ingredient list. Still, the ingredient list is a major marketing tool and can be manipulated in many ways. Moreover, the quality of the ingredients is not stated on the ingredient list.

Also of concern is the use of **artificial additives**. Preservatives, colorants and flavors elicit fear about adverse health effects. There have been well-published cases of additives that have been harmful and withdrawn for use. In many instances however, this concern is undeserved. Additives have many positive aspects including organoleptic, technologic and nutritional benefits. Still, the demand for pet foods free of artificial additives or those prepared with ingredients that are perceived by pet owners to be more wholesome and safe has increased. It is important to identify and discuss a pet owner's specific concerns as it is likely that an acceptable, commercial, complete and balanced diet is available.

The Meaning of Natural, Organic, Holistic, Human-Grade

Consumer preference for pet foods free of artificial ingredients has led to commercialization and marketing of **natural pet foods**. Some regulatory oversight of ingredient use and labeling exists as AAFCO defined the term "natural." This definition excludes the use of any synthetic preservatives, flavors and colorants. Formulating pet food free of artificial colorants and

flavors poses little challenge. Preservation, however, is necessary to protect against microbial attack and to prevent oxidation. Naturally occurring antioxidant compounds can be used as an alternative to synthetic preservatives, yet are less effective. It is therefore important that owners choose a food labelled with a "best before" date and that they don't feed the food past the labeled date. Also, because most added trace nutrients are chemically synthetic, AAFCO guidelines allow the use of trace nutrients in "complete and balanced" pet foods with a disclaimer (e.g., "natural ingredients with added vitamins and minerals.")

"**Organic**" is not the same as "natural." The term characterises the procedure by which the ingredients are grown, harvested and processed. The US and Canada have established standards that human foods labelled "organic" must meet. Technically, this makes the production of pet food from certified organic ingredients possible, yet it is currently not clear how the rules originally developed for human food and livestock feed apply for pet food.

The term "**holistic**" has been applied for a wide range of pet foods with a variety of ingredients and characteristics. The term is not legally defined or regulated and is therefore meaningless.

Currently, there are also no standards for designating pet food ingredients as "**human-grade**." A pet food manufacturer is therefore free to interpret and use this designation as it sees fit. Still, the public has often a different perception of what human-grade ingredients consist of.

Cooking at Home

More than 90% of dogs and cats consume complete and balanced commercially prepared pet foods for at least half of their diet. However, the use of non-commercial diets, including homemade and raw food diets, has risen in popularity among veterinarians and pet owners. For 30.6% of dogs and 13.1% of cats, table scraps, leftovers and homemade foods were fed as part of the main diet. 3% of dog and cat owners fed their pets exclusively with homemade foods. The pet owner's motivations for providing these non-commercial diets include a desire to pamper the pet, control over the ingredients, avoidance of artificial preservatives, preservation of natural enzymes and phytonutrients, therapeutic reasons because a veterinary therapeutic diet is unavailable or unacceptable, diagnostic reasons such as food elimination trials, and simply because feeding table food has become a bad habit.

When properly formulated and prepared, these diets can provide complete and balanced nutrition. Yet, major areas of concern with homemade diets that often lead to malnutrition in pets are the use of recipes not designed for pets, failure to follow the recipe, and

deviation from the recipe over time. Each of these can lead to many nutritional imbalances and related health problems, which have been discussed in many case reports. Less than a third of the owners that feed their pet a homemade diet actually use a recipe designed for pets, putting our pets at an enormous risk for nutritional imbalances. Formulating a complete and balanced pet food requires specialized knowledge and owners should be advised not to try this on their own, but to seek help from someone with this expertise. Still, even if the owners use a well-formulated recipe, the overall nutritional adequacy depends on the selected ingredients and how closely the person preparing the food adheres to the recipe. Owners may decide to leave ingredients out of the recipe or to substitute one item by another or even add new ingredients. It is therefore important to advise owners to follow a properly formulated recipe exactly, and not deviate from the recipe, as any alteration in amount or substitution of ingredients may unbalance the diet and may be detrimental for the pet's health, unless the change is permitted. Also owners should be advised to avoid toxic food items such as onions, garlic, grapes, raisins, chocolate etc. When the owner is provided with a complete and balanced recipe and with clear instructions on food preparation, it still remains important to follow up with the owner one or more times a year to monitor owner compliance and to examine the patient for signs of nutrient deficiency or excess.

Vegetarian and Vegan Diets

Pet owners may choose to feed a vegetarian diet to their pet because of several reasons: religious beliefs, ethical concerns, health considerations and because conventional commercial diets are perceived as unwholesome. In one study all persons who were feeding a vegetarian diet to their cats also reported being vegetarian themselves. Because selecting this type of feeding is a conscious choice for the pet owner, it should be relatively easy to enter into a dialog about the appropriateness and nutritional adequacy of this kind of diet. Many owners may assume that they have to cook if they want to feed a vegetarian diet. However, commercial vegetarian foods for dogs and cats do exist and can be well balanced. Home-cooked vegetarian diets can also be complete if these include eggs and milk products. Vegan diets are a bigger challenge and should be carefully checked because plant-based diets may be deficient in several essential nutrients unless synthetic additives are added. At-home preparation of vegetarian or vegan foods for cats should be discouraged, as without adequate synthetic supplementation, cats are at high risk for many deficiencies. Formulating vegetarian and vegan pet food is extremely challenging and AAFCO feeding trials and a high level of quality assurance are needed to ensure confidence in the finished product. Because the nutritional adequacy of some vegetarian and vegan pet foods can be questioned, it is advised

to follow up with the pet owner on a regular basis.

The Truth About Raw Foods

The use of raw food diets for household pets as an alternative for conventional diets is a fairly recent development. In 2008, 8% of dog owners and 4% of cat owners fed raw meat with or without bones to their pet. Raw food can be fed as homemade food, but also commercial raw products are available, ranging from complete frozen foods to grain and supplement mixes, which are combined with raw food.

Advocates of raw food claim that dogs should be fed raw meat because their wild canine ancestors survived on uncooked food. Still, no scientific data exist to support that dogs should eat uncooked food as did wild canids. Claims that dogs are carnivores are due to confusion, as dogs belong to the order Carnivora taxonomically, but their eating habits are those of an omnivore. Raw food diets are promoted enthusiastically because of the purported benefits. There is, however, no objective scientific evidence with regard to disease prevention and resolving or amelioration of preexisting conditions.

Advocates of raw food also emphasize the importance of ingredients with less emphasis on nutrient balance and claim that nutrients from commercial dry and canned food are less or not available or even absent when compared to feeding raw ingredients. No studies are available that compare the digestibility of the different types of food. Reservations have also been expressed with regard to nutritional adequacy. Many home-prepared raw food as well as commercial raw-food diets are not complete and balanced and, therefore, inappropriate for long-term feeding. To date, no scientific evidence exists that demonstrates raw food diets provide additional or exceptionally unique nutrients that cannot be obtained from cooked food.

Another important concern is the potential for bacterial contamination and risk for foodborne illness. *Salmonella* was isolated from 80% of raw-meat canine and feline diets prepared by Canadian pet owners. Of 25 commercial raw-meat diets of eight different manufactures in Canada, 64% were positive for *Escherichia coli*, 20% for *Salmonella* spp. and 20% for *Clostridium perfringens*. Advocates of feeding raw meat, bones and eggs claim that pathogenic organisms in raw meat do not affect dogs and cats due to the lower stomach pH and shorter gastrointestinal transit time. In fact, these are very similar among humans, dogs and cats and do not lower the risk to pets. Dogs and cats succumb to foodborne pathogens and exhibit clinical signs similar to those in humans. It is important to point out that meat and eggs supplied for human consumption are contaminated with microorganisms and feeding raw meat increases the exposure of

owners and pets to foodborne bacterial diseases. Pet owners may not realise that infected dogs may shed bacteria capable of infecting people, yet remain clinically normal. Several studies have demonstrated a link between faecal excretion of organisms in dogs and the presence of the same organism in their raw-meat diet. Furthermore, transmission of *Salmonella* infection from pets to people has been documented. Safe handling of food, work surfaces and feeding containers is therefore of extreme importance. Extra caution should be emphasized when elderly persons or young children are living in the household or when persons in the household have immunosuppressive infections, are undergoing chemotherapy or are being treated with anti-inflammatory medications. Veterinarians recommending commercial or homemade foods containing raw meat or eggs have an ethical responsibility to fully inform pet owners of this increased potential risk for foodborne pathogens, not only to the pet, but to the entire household.

Overall, the diet history should be used to understand the pet owner's attitudes towards commercial pet food, feed ingredients, nutrition and nutritional therapy. Furthermore, it is important that veterinarians obtain the client's beliefs and understanding about how his or her pet should be fed and obtain the pet owner's viewpoint regarding the need to change feeding practices. When formulating a plan for dietary modification, veterinarians should take into account the pet owner's beliefs, cultural background, lifestyle, and abilities and assess any concerns that may arise from the proposed dietary modifications. By anticipating problems, the veterinarian should be able to craft the dietary interventions in a way that is more acceptable for the household or look for compromise when the recommendations and the pet owner's preferences are in conflict. Also communication with the pet owner about the rationale for the dietary changes could be more effective and the veterinarian should be in a better position to explain why the proposed changes are in the best interest of the pet.

SPEAKER INFORMATION

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