

Feeding Unconventional Diets

Adapted from a nutrition conference given by Lisa M. Freeman, DVM, PhD, DACVN

There are a growing number of people who are using unconventional diets for their dogs and cats, whether with the objective of preventing disease or treating an existing condition. Because of this, we are increasingly confronted with clients who have concerns about commercial pet foods and it is not always easy to intelligently answer these questions. There are a number of practices currently being touted that have unproven and even questionable benefits and also may pose some risk to the patient who receives them.

TYPES OF UNCONVENTIONAL DIETS

Vegetarian Diets

Some owners wish to feed vegetarian diets to their dogs and cats. Aside from the issues discussed above, in many cases people choose vegetarian diets due to ethical concerns. There are a number of commercial vegetarian diets available on the market, but many people make their own homemade vegetarian diet. There are major concerns over feeding a vegetarian diet to a cat. Cats are obligate carnivores; this means they must have meat in their diet. Vegetarian diets cannot meet feline requirements.

One commercial vegan cat food states on the label that it is not complete and balanced for cats but this may not be readily apparent to owners. Even commercial vegan cat foods that are intended to be complete and balanced may not be so. One study that analyzed two commercial vegan diets showed that neither met the minimum nutrient amounts in the Association of American Feed Control Officials (AAFCO) Cat Food Nutrient Profiles and thus were not appropriate as a sole source of nutrition for cats.

Most feline vegetarian diets are homemade and many recommend the addition of a nutritional supplement intended to provide the nutrients missing in a vegetarian diet. Even with this supplement however, the nutritional adequacy of vegetarian diets has not been proven and is highly questionable.

Some authors will admit that a vegetarian diet is not ideal for cats but claim that dogs are easily able to adapt to a vegetarian diet. There are several vegetarian diets on the market for dogs. The long-term nutritional adequacy of these diets is unclear. Other dog owners who wish to feed a vegetarian diet formulate a homemade diet for their dogs. One survey study of homemade and commercial vegetarian diets for dogs and cats in Europe showed that nutritional problems were nearly universal with these diets.

Homemade Diets (cooked)

Some owners elect to feed a homemade diet to their pets. Knowing the reasoning behind the desire to feed a homemade diet can be helpful in addressing the positive and negative properties of these diets. There are hundreds of recipes available for homemade diets. These recipes may be based on an owner's perception of a pet's nutritional requirements (i.e. a random combination of meat, grains, and vegetables) or may be

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obtained from books, magazine articles, or the Internet. In addition, some credentialed veterinary nutritionists will formulate nutritionally balanced homemade diets at the request of an owner. Unfortunately, many times owners make substitutions, additions, or subtractions and end up with even worse nutritional balance.

While a nutritionally balanced homemade diet can be formulated, most of the recipes used by pet owners are unbalanced – some extremely so. Studies and the clinical experiences of veterinary nutritionist support the fact that most homemade diets, unless very carefully designed and executed, are nutritionally unbalanced. Some of these imbalances are severe enough that they could cause serious health problems when used long-term. The most common deficiencies are of calcium, zinc, iron, and other trace minerals but can vary widely between diets; deficiencies can cause heart failure (from taurine deficiency), bone fractures (from too much phosphorous or not enough calcium), susceptibility to infection, eye and respiratory disease, and other problems! Excesses also can occur but depend upon the type and amount of supplementation used.

Raw Food Diets

A variety of different types of raw food diets are currently being fed to dogs and cats. The main three categories of raw food diets are as follows:

1. Commercially available “complete” raw food diets: These diets are intended to be complete and balanced without the need for additional supplements. These diets typically are sold in a frozen form but sometimes are dehydrated.
2. Homemade complete raw food diets: Many recipes for homemade raw food diets are available in books, articles, and the Internet. The most popular homemade raw food program is the Bones and Raw Food or Biologically Appropriate Raw Food (BARF) diet but there are many others, such as the Ultimate diet and the Volhard diet. The BARF diet advocates a diet “consisting of 60% raw, meaty bones,” with the rest being made up of a “wide variety of foods, based on the type and quantity of foods a wild dog would eat.” Those other foods would include “lots of green vegetables (to mimic stomach contents of prey), some offal (liver, kidneys, etc.), meat, eggs, milk, brewer’s yeast, yogurt, and small amounts of grains and legumes.” The diet is expected to be balanced overall, but each meal is not balanced. For instance, the diet recommends feeding green leafy vegetable meals, starchy meals, grain and legume meals, meat meals, milk meals, offal meals, and food scrap meals during a period of 2 to 3 weeks. A typical schedule could include 10 meals of bones combined with 4 meals of green leafy vegetables, 1 meal of starchy food, 1 meal of grains and legumes, 1 meal of meat alone, 2 meals of milk, and 1 or 2 meals of offal during the period of 2 to 3 weeks.
3. Combination diets: These consist of commercially available grain-and-supplement mixes. The grain mix is to be fed in combination with raw meat.

Just like standard homemade diets, homemade raw food diets are likely to have nutritional imbalances. One study showed a variety of nutritional problems, both deficiencies and excesses, in homemade raw diets based on various recipes. Even commercial complete or combination diets had nutritional imbalances that could put the pet at risk for health problems, especially growing animals.

Additional problems with raw food diets (both homemade and commercial) relate to safety. The raw bones included in many of these diets carry risks of intestinal obstruction, gastrointestinal perforation, gastroenteritis and, most commonly fractured teeth. Finally, uncooked meat carries with it the risk of bacterial contamination. Although proponents of the diets argue that dogs are more resistant to bacteria than are people, this has not proven to be true. Both pets and people can develop severe illness from *E. coli* or *Salmonella*. Raw meat

diets also pose a risk to the pet owners making the diets, especially people who are very young, elderly, or immunosuppressed, because of their potential for bacterial contamination. Salmonella is a very hardy bacterium and can survive dishwashing, making it difficult to remove from dog bowls, spoons, cutting boards, etc.

RECOMMENDATIONS

Think about the reasons why you wish to feed an unconventional diet. If the reasons are based on myths or misperceptions, we would like to have the chance to clear these up. You may still decide to feed an unconventional diet, but the goal is to ensure you make the decision based on facts, rather than inaccurate information. If you decide to feed an unconventional diet, even after knowing the facts, it's also important that you understand the potential risks and know what problems to look for.

If you wish to feed a homemade diet, it should be cooked, it should contain meat, and it should be formulated by a credentialed nutritionist. Qualifications for nutritionists are ill-defined so it is important to check credentials [some board-certified veterinary nutritionists will formulate balanced homemade diets for referring veterinarians or directly for owners – see the American College of Veterinary Nutrition (acvn.org) or the American Academy of Veterinary Nutrition (aavn.org) for information]. The website Balanceit.com is also a helpful resource for veterinarians and clients. Finally, if owners do elect to use a nutritionally balanced, cooked homemade diet, careful monitoring is necessary, as nutritional deficiencies still can occur when used long-term.

RAW FOOD SUMMARY

Risks

- Intestinal obstruction/perforation
- Gastroenteritis
- Fractured teeth
- Bacterial contamination (pet and human)
- Nutritional imbalances

Myths

“Proven” – there isn't a single scientific study proving raw food diets are healthy for animals

Ingredients are “human grade” – human grade has no legal nutritional definition; it is a marketing term

Freezing raw diets kills bacteria – there are bacteria that happily live in Antarctica as well as in volcanoes

As long as bones are raw, it's ok – raw bones will still fracture teeth

Improves coat and skin, treats diseases (food allergies, FLUTD) – the diets are very high in fat, protein, and water; the benefits are from those things, NOT because it is raw

Cooking destroys enzymes needed for digestion – cooking does destroy enzymes, but these enzymes are not needed for digestion. Cooking actually makes other nutrients more available for digestion.

Poor ingredients in pet foods – e.g. “animal by-products”, ground up dogs and cats, etc.; the legal definition of animal by-products is non-skeletal meat (liver, heart, intestines, etc.) which have great nutrient value and are considered delicacies by some humans. As for the myth that there is ground up dog and cat in some foods, this is just plain false.

Pets like it better – many humans like McDonald's and cheesecake better than a

balanced diet too... need we say more?
Dogs are carnivores – actually, they're omnivores
This is what animals eat in the wild – the average life span of a “wild” dog is 3-4 years and you just don't see many Bichons, Poodles, and Min. Pins. in the wild.

Very little of the way we live our lives today is “natural”. Dogs in the wild don't sleep in beds in houses with electricity and plumbing, nor do they ride in cars or visit their veterinarian. Yet unnatural things like refrigeration and sanitation, vaccinations, dental care and health care are what allow us to live into our 80's and our pets to live well into their teens. Instead of trying to replicate a wild diet of the past, we believe we should appreciate, or even celebrate, the research and knowledge we have about nutrition, and take advantage of that information on behalf of our pets. Why try to create a homemade diet that is complete and balanced when companies have incorporated that nutrition information into diet formulas that provide everything your pet needs in all the right amounts?