

## **Raw Diets. Do They Make You Want To BARF?**

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Undoubtedly, if you are in small animal practice, you have encountered pet owners who are feeding raw diets, and these owners tend to be very passionate about this practice of feeding raw foods. If questioned as to why they choose to feed a raw diet, they often quote information from the internet and believe that it is scientifically sound. The internet is filled with web sites that discredit commercial pet foods and often do so in an unethical and tabloid fashion. Many of these web sites seem to be very convincing, and it is understandable how some pet owners could be influenced by them. There are also numerous anecdotal testimonials of pets whose lives were saved by feeding a raw diet. Unfortunately, these same sites fail to include patients who were harmed by raw diets. Efforts to educate clients on the risks of feeding raw diets are sometimes met with resistance. This lecture will discuss some of the common myths that clients believe about raw diets and commercial pet foods and will present information to assist veterinarians with educating clients about these diets.

#### **Claim: Raw Diets Are The Evolutionary Diet of Dogs and Cats**

Raw diets are the evolutionary diet of all creatures, including humans. Archeological evidence of fire and cooking dates back only ~800,000 years, although some argue biological evidence shows that fire dates back to ~1.8 million years. Nonetheless, humans did not always cook their food, yet few, if any of us, would want to go back to eating only raw food, especially meat.

#### **Claim: Cooking Destroys The Nutritional Value of Food**

There are as many truths as there are exceptions to this statement. It is true that overheating protein can lead to reduced protein digestibility, as well as amino acid destruction. However, these are not the kinds of temperatures that are used to manufacture pet foods. The temperatures that most pet foods are cooked at are similar to the temperatures we use to cook our own food. If cooking completely destroyed the nutritional value of protein, then why isn't there widespread protein malnutrition in humans in this country since most of us cook our meat? In a study by Claudia Kirk, cats were fed identical diets, except one was heat processed and one was a frozen (raw) diet. Protein digestibility decreased by ~5-7% in the cooked food compared to the raw diet, but carbohydrate and fat digestibility improved with the cooked diet. It is well known that antioxidants are more available in cooked foods, such as tomatoes or carrots, compared to the same foods that are uncooked. In addition, moderate heating with moisture destroys anti-nutritive enzymes, such as trypsin inhibitors, present in some protein sources.

### **Claim: Protein Used in Commercial Pet Foods include Euthanized Dogs and Cats**

There are two types of rendering plants in the US. **Integrated rendering plants** are plants that operate in conjunction with animal slaughterhouses or poultry processing plants. These types of plants normally process only one type of raw material (i.e. poultry or beef, etc) from USDA inspected meat-packing plants. Therefore, euthanized dogs and cats would not be processed in one of these plants. In contrast, **independent rendering plants** collect their materials from a variety of offsite sources and obtain animal by-product materials, including grease, blood, feathers, offal, and entire animal carcasses from the following sources: butcher shops, supermarkets, restaurants, fast-food chains, poultry processors, slaughterhouses, farms, ranches, feedlots and animal shelters. As a result, products from independent rendering plants could contain euthanized dogs and cats. Therefore, it is possible that euthanized dogs and cats could be found in some pet food, but reputable pet food manufacturing companies will only obtain their products from integrated rendering plants and not from independent rendering plants. All members of the Pet Food Institute (PFI), which includes 95% of US pet food manufacturers, avoid use of rendered meals that may include dog and cat remains. A 2002 investigation by the USDA and CVM (<http://www.fda.gov/cvm>) confirmed NO presence of dog and cat genetic material in pet foods.

### **Claim: Commercial Pet Foods Include By-Products, Which Have No Nutritional Value**

**Meat by-products** are “the non-rendered, clean parts, other than meat, derived from slaughtered mammals. It includes, but is not limited to, lungs, spleen, kidneys, brain, livers, blood, bone, partially defatted low temperature fatty tissue, and stomachs and intestines freed of their contents.” **Poultry by-products** are “the non-rendered, clean parts of carcasses of slaughtered poultry, such as necks, feet, viscera, free from fecal content and foreign matter except in such trace amounts as might occur unavoidably in good factory practice. Meat by-product meals or poultry by-product meals are the rendered, dried and ground version of the above.

The Association of American Feed Control Officials (AAFCO) specifically excludes certain things from by-products. What will you not find in meat by-products? Hair, horns, hooves, teeth, and feces. What will you not find in poultry by-products? Feathers, feces. Therefore, critics that claim that by-products contain these types of materials fully do not understand AAFCO regulations of pet food.

The nutritional value of by-products can be very high. Many by-products are edible parts that are consumed by humans, including liver as well as those in other cultures. For example, it is not uncommon for Hispanic cultures to consume intestines (tripe). In addition, it would be a shame to waste all the by-products from slaughtered mammals and poultry.

**Claim: Grains, such as Corn, Wheat, and Soy are Cheap Fillers That Are Not Digestible by Dogs and Cats**

A filler is “an ingredient that provides no nutritional value.” Grains definitely do not fall into this category. In fact, properly processed and cooked grains are highly nutritional and digestible. For example, corn is a good source of many essential amino acids with the exception of lysine. In addition, corn is a source of an essential fatty acid, linoleic acid, which is required in the diet of both dogs and cats. If one considers that corn was a main staple in the diet of Native Americans for many years, it is difficult to understand how critics can claim that corn is a filler used in pet foods.

**Claim: The GI Tract of Dogs and Cats are Resistant to Pathogens, such as Salmonella**

If one compares the GI tract of humans to that of dogs and cats, there are remarkably similar morphologically and pathophysiologically. Raw food advocate contend that dogs and cats have a more acid stomach and shorter gastrointestinal tracts than do humans which protects them from pathogenic bacteria. However, there is no difference among these species in regard to gastric pH and no evidence to suggest the difference in length of the gastrointestinal tract is protective to dogs and cats. All three species manifest similar clinical signs after ingesting food contaminated with pathogens.

**Claim: We Only Use Human-Grade Meat, and Therefore It Is Safe**

Even if pet owners feed their pets raw meat labeled for human consumption, it may contain bacteria, parasites and protozoa that can potentially cause disease in both pets and humans when not properly cooked. For example, approximately one-third of poultry sold for human consumption has tested positive for Salmonella.

**Claim: As Long As Pet Owners Are Careful When Handling Raw Meat, There Is No Risk of Infection to Humans**

Although careful handling of raw meat is important irregardless of who it is intended for, this does not prevent pets from acquiring infections from raw meat. Household transmission of food-borne pathogenic organisms from dogs to humans has been documented, and even if a dog does not get clinically ill from Salmonella-contaminated meat, it still can shed this organism in its feces and potentially act as a source of infection for humans. In a study by Joffe, et al, Salmonella was isolated from 80% of BARF (i.e., bones and raw food) diets sampled and from 30% of stool samples from dogs fed the diet.

**Lawyers Consider Veterinarians As An Untapped Resource**

To date, most veterinarians have stayed under the radar of lawyers, and lawsuits involving veterinarians are rare when compared to lawsuits involving MDs. However, lawyers now consider veterinarians an untapped resource for lawsuits, and the number of lawsuits against veterinarians is likely going to increase in the future. Currently pets are considered property, so the monetary awards associated with lawsuits against

veterinarians are relatively small compared to our human counterparts. However, zoonotic transmission of diseases from pets to humans has the potential to change that dramatically, resulting in much most costly settlements. Veterinarians who recommend feeding raw meat or eggs without giving full disclosure of the risks and precautions may face legal ramifications.

### **Summary**

Claims made for raw diets by its champions include improved immune function and overall health, increased energy, improved coat and skin condition, and decreased body odor for dogs that are on it, yet other than anecdotal testimonials, there is no scientific evidence that raw diets are superior to any commercial canned or dry diets. In contrast, the literature is full of decades worth of research supporting the health benefits of commercial pet foods. In addition, more and more examples of health risks associated with feedings pets raw food are making their way into the scientific literature. As a result, this practice is associated with health risks to pets and family with no demonstrable benefit.