

Raw Food Diets – FAQ's and Position Statement

Raw food diets have become increasingly popular in recent years and are a controversial topic in the veterinary nutrition industry. Raw food diets can include whole food diets (uncooked organs, bones, and meats fed directly to an animal), freeze dried diets, and frozen diets. Raw food diets increased in popularity in the 1980's with the introduction of the BARF diet and has grown to encompass dozens of pet food companies that market home prepared and commercial raw diet options.

This handout will outline the claims made by raw food companies and examine the evidence behind these claims to aid you in making an informed decision about your pet's diet.

Claim: A raw meat diet is the ancestral diet of dogs and cats.

Domesticated dogs and cats have lived alongside humans for thousands of years. A study by Axelsson et al. (2013) found that domestic dogs have thirty-six genetic mutations that are likely related to their domestication. These mutations included ten genes that target starch and fat digestion, allowing modern dogs to easily digest a diet that contains more carbohydrates than a prey-only diet.

Claim: A raw meat diet contains enzymes, vitamins, and nutrients that are destroyed by heating/cooking the meat.

All the digestive enzymes the body needs are produced by the pancreas. Any digestive enzymes that are contained within food are degraded in the stomach due to stomach acid. Healthy animals do not need additional digestive enzymes in their diet. Additionally, commercial pet food companies take into account heat degradation during commercial food production and incorporate sufficient amounts of vitamins in their diets. Some nutrients are more available to be absorbed by the intestinal tract after cooking, such as amino acids and fat soluble vitamins.

Claim: Do-it-yourself or whole food diets will contain all the vitamins and minerals my pet needs if I rotate the proteins being fed.

Raw meat commercial diets and home prepared diets are notoriously unbalanced. In fact, a study by Stockman et al. (2013) found that more than 99% of the recipes collected from websites and cookbooks were deficient in essential nutrients. Additionally, animal meats are poor sources of minerals, such as calcium. The addition of calcium from bones or egg shells is often not sufficient to meet an animal's needs. This is because the calcium found in these ingredients is bound to other proteins and minerals and is poorly absorbed by the intestinal tract. The low levels of available

calcium in home prepared raw diets can be very harmful for developing puppies and kittens, and will cause skeletal abnormalities.

Raw meats and organs can also contain potentially toxic levels of vitamins and minerals. For example, liver can contain high levels of vitamin A and fish oils can contain excessive vitamin D and vitamin E.

Raw fish can contain an enzyme that degrades thiamine (vitamin B1). Cats fed raw fish for long periods of time have developed thiamine deficiencies. Raw eggs contain an enzyme called avidin. This enzyme binds to the vitamin biotin, making it unavailable to be absorbed by the intestines. Long-term feeding of raw eggs can lead to a biotin deficiency.

Claim: Raw meat diets do not contain “by-products” or “fillers”, which are unnecessary for dogs and cats.

“By-products” is a commonly misunderstood term in animal nutrition. A by-product is simply an ingredient that is produced in addition to the main product in the food industry. Most commonly by-products are organ meats, such as lungs, livers, kidneys, and pancreas. By-products are very nutritious and can be a source of essential nutrients in commercial diets. Many raw food manufacturers imply that by-products include undigestible ingredients, such as hair or hooves. Pet food regulations prohibit the use of hair, hide, hooves, and feathers in pet foods. Reputable manufacturers would not include these ingredients in their diets.

“Fillers” is a marketing term used in the pet food industry. Ingredients such as corn and grains are important sources of amino acids, vitamins, and minerals in commercial diets. Additionally, these ingredients are a source of fibre in the diet, aiding in digestive tract health.

Claim: Raw meat diets lead to smaller and firmer stools (poops).

Animals fed raw diets indeed have smaller stools. This is because raw food diets rarely have sources of fibre, which increases stool size. As mentioned previously, fibre is essential for the digestive tract as it feeds the bacteria in the intestines and helps move the stool along the digestive tract. Fibre also tends to soften stool, to aid in defecation.

Claim: A raw meat diet does not cause or can cure food-related allergies.

Any protein in the diet can lead to an adverse food reaction. Raw food diets tend to be very simple with only one source of protein. This may be the reason animals have fewer symptoms of adverse food reactions while on a raw diet. There is no evidence that cooking proteins increases the risk of an adverse food reaction.

Claim: Raw meat diets and bones help keep teeth clean.

Feeding raw and cooked bones and antlers are a significant risk to animals for several reasons. Bones and antlers commonly cause teeth to fracture, leading to painful dental extractions. The constant grind of the teeth against bones can also cause significant wear and damage to tooth enamel. Bones and antlers can also fracture into sharp pieces, which can cause obstructions and perforations to the esophagus, stomach, and intestines.

Claim: Raw meat diets help keep pets thin and reduce obesity.

Proportionally, raw meat diets are very high in calories coming from fat, with often 50% or more of the calories coming from fat. This means that pets eating raw food diets tend to need a smaller volume of food than those eating a commercial diet. Many owners do not realize how energy dense raw diets can be and will over-feed their pets.

Raw treats, such as pizzles, jerky, and freeze-dried liver pieces are also proportionally high in fat and can add a significant number of calories to the diet.

Claim: Dogs and cats can handle the bacteria in raw food diets, it is safe to feed undercooked meats to them.

While many animals are not symptomatic when eating raw food diets, these diets promote significant hazards to humans. Raw food diets are commonly recalled due to contamination with bacteria such as *E. coli*, *Salmonella*, *Listeria*, *Clostridium*, *Staphylococcus*, *Tuberculosis*, as well as other pathogens like *Toxoplasma*. When an animal being fed a raw diet licks itself, other animals, humans, or objects in the environment they can spread harmful bacteria. The feces of pets eating raw foods is also commonly contaminated with potentially harmful bacteria (Davies et al. 2019)

The feeding of raw pig ears has been implicated in human outbreaks of *Salmonella* (FDA, 2019) and raw diets have been implicated in human outbreaks of *Tuberculosis* (O'Halloran et al. 2019) and *E.coli* (Kaindama et al. 2021). Additionally fecal samples from dogs eating raw diets revealed a high proportion of antibiotic resistant strains of bacteria (Mounsey et al. 2022). This is concerning for immunocompromised people living with dogs and cats who eat raw diets, such as infants, the elderly, and the immunosuppressed.

A study found that the food bowls of dogs being fed raw diets contained bacterial contamination after cleaning with hot water and bleach (Weese et al. 2006). Plastic food bowls were particularly susceptible to harbouring bacteria after washing. This is concerning and food bowls may cause contamination of sinks, dishwashers, and kitchen surfaces in houses where animals are fed a raw diet.

Raw Diet Position Statement

Following the recommendations of organizations such as the Canadian Veterinary Medical Association (CVMA), American Veterinary Medical Association (AVMA), the US Food and Drug Administration (FDA), it is not recommended to feed raw or undercooked foods to companion animals. Diets advertised as raw, or home prepared raw diets, lead to an increased risk of exposure to food-borne pathogens for pet owners. These diets are also notoriously not complete and balanced.

If a raw diet is to be fed, it is highly recommended to feed a raw diet that has been formulated by a manufacturer that employs a veterinary nutritionist to ensure the diet is complete and balanced. The safest method of decontamination for raw foods is high-pressure processing (HPP).

Resources

Please find below some resources regarding raw foods. Please note that the most trustworthy resources are current (written within the past 5 years) and authored by an academic expert.

Worms and Germs blog (Dr. Scott Weese, Ontario Veterinary College)
<https://www.wormsandgermsblog.com/>

Petfoodology (Tufts Clinical Nutrition Team, Tufts School of Veterinary Medicine)
<https://vetnutrition.tufts.edu/petfoodology/>

CVMA Raw Food Position Statement
<https://www.canadianveterinarians.net/policy-and-outreach/position-statements/statements/raw-meat-based-diets-for-pets/>

FDA Recalls (Filter by “Animal & Veterinary”)
<https://www.fda.gov/safety/recalls-market-withdrawals-safety-alerts>