

Unconventional Diets

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You have asked...
How should I advise clients who inquire about trendy and raw diets?

The expert says...

Clients may choose to feed unconventional diets (eg, home-prepared, raw, vegetarian) for multiple reasons, including having negative feelings about commercial pet foods and positive ideas about alternative diets. Negative beliefs include concerns or misconceptions about ingredients (eg, fillers, by-products, roadkill, carbohydrates) and toxicities. Other clients may prefer to feed so-called “natural” (eg, what a wild canid or felid would eat, not containing synthetic ingredients) or raw foods, to prepare food for their pet, or to avoid triggering a real or suspected food intolerance or allergy.

Ingredients in Commercial Foods

Pet foods often contain by-products (ie, secondary products) from human-food processing. These include offal (ie, organ meats) and parts that are nutritious but may be unappealing to humans, at times dependent on cultural or religious beliefs. For example, stomach or intestines may be included in pet food, and although these may be considered undesirable in some cultures, they are regularly consumed by humans in others. These products are often nutritious and result in good use of the carcass. Commercial diets may also contain antioxidant preservatives to prevent nutrient degradation and fat rancidification. Some contain coloring to make food more visually appealing to clients; this coloring is the same as that added to processed human food and is generally considered safe.

There is misconception that fillers, such as sawdust or other indigestible or nutrient-poor products, are included in commercial pet foods. However, pet foods do contain fiber (ie, indigestible ingredients), which serves many functions (eg, as probiotics for bacteria, to promote colonocyte health). Otherwise, ingredients in commercial diets typically have nutritional function.

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The concept that roadkill or dead pets are included in U.S. commercial diets is unfounded. On the other hand, toxins (eg, melamine) that can be found in pet foods resulted in a recall of many pet products in 2007.¹ This incident exemplifies adulteration of a food product with a previously unknown toxin and as such would have been nearly impossible to predict. The industry took action during the recall, and the FDA has improved reporting of suspected contaminated food ingredients in response.

Perceived Benefits of Natural or Vegetarian Diets

Feeding dogs a diet similar to that of wild dogs or wolves (ie, low in grains or carbohydrates) has a popular following. Some clients opt to feed bones and raw foods, thought to be similar to a wolf eating a carcass or a cat catching prey. Clients should be reminded that dogs have been domesticated over the past 10,000 to 15,000 years, during which time their diet involved greater consumption of grains. Their genetic makeup evolved to accommodate this increase in dietary carbohydrates, and today dogs are genetically dissimilar to wolves in several key genes that involve starch digestion and glucose uptake.² Many other



metabolic traits were unaffected by domestication, and dogs as well as cats select a rather low-carbohydrate diet by choice, although both species can digest carbohydrates. Cats are obligate carnivores, requiring higher protein (generally meat, fish, or poultry) levels than do dogs.



Tipping the Balance: Homemade Feeding Programs

Essential Nutrient Needs

Clients should understand that homemade and raw-food feeding programs are meant to balance pets' diets over weeks, rather than after an individual meal. This can be achieved with correct ingredients, but almost no homemade diet recipes (when tested) were found to be balanced, whether fed via a single diet or several rotating diets, for all essential nutrients.³

One nutritional study of the *bones and raw-food* (BARF) diet showed it to be deficient in calcium, phosphorus, potassium, and zinc and excessively high in vitamin D.^{4,5} Varying foods would unlikely balance the deficiencies in homemade diets; recipes, regardless of ingredients, were deficient in the same nutrients.

Some adult pets can cope with some imbalances for months to years before clinical signs become apparent,

but these imbalances may have serious effects on growing animals, even if the diet is fed for only a short time.

Global Resources

To ensure essential nutrient needs are met, all diet nutrient profiles (analyzed or computer calculated) should be checked against nutrient requirements, such as those published by the Association for American Feed Control Officials (aafco.org), the National Research Council

Canada (nrc-cnrc.gc.ca/eng), or the European Pet Food Industry Federation (fediaf.org/self-regulation/nutrition). Clients can also be directed to the WSAVA Global Nutrition Toolkit (wsava.org/nutrition-toolkit).

Safety of a Raw Diet

Clients may be misinformed about the safety of raw diets. Studies on bacterial contamination of raw foods found that 20% to 35% of raw poultry and 80% of raw food diets for dogs tested positive for *Salmonella* spp, and 30% of stool samples from dogs fed these diets were positive for *Salmonella* spp.⁴ Raw food diets also have tested positive for *Escherichia coli* and *Yersinia enterocolitica*.⁴ Some otherwise healthy dogs may be able to cope with ingestion of these bacteria, but very young, old, or immunocompromised dogs may not. Furthermore, their feces can contaminate the environment, posing a risk to humans and other animals.

The close proximity of pets to human beings is an important zoonotic concern, and small children, the elderly, and the immunocompromised could become desperately ill secondary to exposure to pathogens that can be found in raw meat.

Parasites that may be present in raw meat include *Echinococcus* spp, *Neospora caninum*, *Sarcocystis* spp, *Toxocara canis*, *Toxoplasma gondii*, and *Taenia* spp.^{4,6,7} When handling raw food, the preparer must practice scrupulous hygiene, washing all surfaces and hands before touching anything or anyone else.

Bones: Dental Health & Safety Hazards

Some advocates of feeding bones to dogs claim that bones are beneficial for their oral and dental health. A study in African wild dogs found that they had dental diseases similar to those of domestic dogs⁸; many of the wild dogs had periodontitis without signs of dental tartar, so although their teeth may have appeared cleaner, their gums were not necessarily healthier. Studies of large wild cats also have shown feline odontoclastic resorptive lesions similar to those found in domestic cats.⁹



Tips for Discussing Unconventional Diets with Owners

1. Obtain a complete dietary history, including treats, table foods, and food used to administer medications.¹⁰ If treats or table scraps comprise 10% or less of the caloric intake with at least 90% being a good-quality, balanced diet, this is likely adequate for nonreproducing adult dogs and cats. Diets should not include potentially toxic foods such as onions, chocolate, grapes, or raisins.
2. Explore the reasons for the owners' food choice and concerns about a diet change. Palatability is often cited as a cause for not wanting to change diets (many overweight dogs [and cats] are picky eaters). It is not necessary for the pet to eat all the food when it is first offered.
3. Use care and tact when discussing the diet, presenting evidence-based facts, and recognizing that not all owners will be willing to stop feeding an unconventional diet, even when it is not a complete or balanced option.

A bone large enough that it cannot be chewed into pieces is unlikely to cause GI obstruction; however, bone chewing is a frequent cause of fractured teeth. Smaller or splintered bones are at risk for obstructing the esophagus, stomach, or intestines. There is a conception that feeding raw bones may be safer than feeding cooked bones, although there is no evidence for or against this concept. Raw bones can carry the same inherent risks for pathogen contamination as does consumption of raw meat. Furthermore, bones that become stuck in the stomach or intestine may perforate the gut, potentially causing fatal peritonitis. ■ **cb**

See **Aids & Resources**, back page, for references & suggested reading.