NUTRITION

How to Address Common Misconceptions About Nutrition

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Nutrition is unique in small animal medicine because it is a topic about which many veterinary clients have strong opinions, often based on marketing rather than science. In addition to strong opinions, some clients perceive that they also have extensive knowledge of pet nutrition and that they know more about the topic than their veterinarian.[1] Although a client is unlikely to argue with a veterinarian over suture choices for an elective surgery or the interpretation of imaging or laboratory tests, it is relatively common for clients to ask even a board-certified veterinary nutritionist to justify their recommendations because a pet store employee or other non–veterinary professional provided contrary suggestions. Much of what it takes to have meaningful discussions about nutrition with clients has little to do with knowledge of essential nutrients, species' needs, and metabolism and more to do with the ability to identify and communicate about nutrition myths and misconceptions.

Some of the common myths and misconceptions in small animal nutrition include excessive focus on the concept of "natural ingredients," the effects of processing on pet food, and the assumption that cost directly represents quality.

MYTH: CERTAIN INGREDIENTS (E.G., BY-PRODUCTS, GRAIN, SOY) ARE HARMFUL

Ingredient-associated myths are particularly prevalent in pet food marketing. It is as common for pet foods to

Abstract

Choosing the optimal food for one's pet can evoke many emotions. Love, confusion, fear, guilt, and complacency are just some of the feelings evoked by pet food industry marketing. Navigating which concerns are valid or fabricated is challenging for pet owners and veterinarians alike. Common misconceptions with regard to pet food involve harmful ingredients, natural and clean diets, food processing, and cost. Ultimately, the most important factors are safety and nutritional balance, and high-quality pet foods can be found in every form and for every budget.

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Take-Home Points

- Pet owners will encounter myths and misconceptions about pet foods on the Internet and in pet food advertising.
- Quality pet foods are available in many different forms and at different prices.
- The most important factors with regard to pet food are safety and nutritional balance.

advertise what their foods do not contain as to advertise what they do contain. The perception is that when a diet is marketed as containing "no ingredient x," there must be a valid reason why one would want to avoid ingredient x. However, the science is rarely that simple, and many ingredients are excluded from diets without a reasonable scientific rationale. Except for patients with food intolerance, or an even rarer food allergy, there is seldom a reason to strictly avoid certain ingredients in food for a healthy dog or cat, whether that ingredient is a by-product, a grain, soy, or any other common pet food ingredient.

Many ingredient fears focus on misinformation about what the ingredient includes as well as the nutritive properties that it may have. For example, many consumers shun pet foods that contain by-products, erroneously believing that they contain euthanized animals, roadkill, or other waste, and not recognizing that by virtue of the organ meat they contain, various poultry, fish, and meat by-products are richer nutrient sources than corresponding muscle meats. Grains have often been maligned as being common causes of allergies or being poorly digestible, although properly cooked grains are actually highly digestible and are uncommon allergens in dogs or cats.[2]

Client concerns about ingredients can often be allayed by asking what is concerning about the ingredient and then correcting misinformation by explaining what is and is not allowed to be in the ingredient of concern and providing more detail on the nutritive qualities and the purpose of the ingredient. A useful resource for ingredient definitions (although not written for a lay audience) is the Association of American Feed Control Officials (AAFCO) manual, and some manufacturers also provide ingredient glossaries on their websites or in their product guides that can be useful for client discussions about the purpose of various ingredients. The new pet food labeling guidelines approved by AAFCO may be helpful for addressing some ingredient concerns because they will allow manufacturers to group vitamin and mineral supplements in parentheses after "vitamins" and "minerals" and list common names of vitamins after their more chemical names in the ingredient list (aafco.org/pfIm).

MYTH: "NATURAL" AND "CLEAN" INGREDIENTS ARE BETTER

Another prevalent misconception involves the concept of "natural." There is a definite gap between what consumers consider a natural pet food to be and what regulators know it to be. To the consumer, "natural" represents healthy, beneficial, and good. To the pet food regulator, "natural" simply means containing no synthetic ingredients, or more commonly in pet food, using only synthetic supplemental nutrients but not synthetic preservatives, flavors, or colors.[3] Years of demand for natural foods have resulted in essentially all pet foods in the "premium" space meeting the definition of "natural with added vitamins and minerals," and natural foods are becoming more common in the mass market as well.

However, despite the conventional wisdom, natural diets have not been shown to offer health benefits to dogs or cats compared with their "unnatural" counterparts. "Natural" does not correspond to the commonly held definitions of safe or good; mycotoxins, bacteria, and rancid fat are all very natural but can be quite harmful if included in pet foods. Although it can be argued that artificial flavors and colors are unnecessary in pet foods, artificial preservatives are generally more effective than natural preservatives at preserving nutrients and preventing fat oxidation; the switch to natural preservatives often means a shorter shelf life and may make foods more susceptible to inappropriate storage. Although some clients worry about unsubstantiated risks from artificial preservatives, they typically do not worry about the real risks from nutrient degradation or rancid fat.

For clients who express concerns that particular diets are not "natural," it can be helpful to ask them to explain what they mean by "natural" and either reassure

them that the diet meets the regulatory definition of natural or otherwise address their specific concerns. "Natural" may very well mean different things to clients than to the veterinarian.

"Clean" is a buzzword that has recently entered the pet food marketing lingo and follows the human trend of trying to eat less processed, more whole-food ingredients with minimal use of chemical additives and preservatives. AAFCO has no definition for "clean" ingredients; therefore, this term can be used indiscriminately and holds no real value in judging pet food quality.

MYTH: PROCESSED PET FOODS ARE UNHEALTHY

Food processing involves transforming raw materials from plant and animal origins into a product that is suitable for consumption. Many processing techniques, such as pasteurization, have increased the safety and stability of foods.

Recently, processing within the human food market has focused on producing highly palatable products that contain high levels of salt, saturated fat, and sugar. Overconsumption of ultra-processed foods (UPFs) is associated with myriad health consequences, such as increased risk for obesity, type 2 diabetes mellitus, cardiovascular disease, and cancer.[4] In addition, consuming a large portion of daily calories from UPFs results in deficiencies of protein, vitamins, and minerals.[5]

Given the large body of evidence that UPFs are unhealthy, why do we feed our pets processed kibble and canned foods? We do so because feeding a complete and balanced pet food is very different from eating potato chips and snack cakes. Our pets are filling up on nutrient-rich diets that meet their body's physiologic needs. Most pet foods contain whole grains rather than simple sugars, and sodium is typically moderate. To date, there are no studies indicating that feeding a fresh prepared diet is superior to feeding a complete and balanced traditional pet food.

However, feeding a commercially available fresh food that is nutritionally balanced and produced according to stringent manufacturing protocols is a viable option for clients concerned about preservatives or wanting food that has a more natural appearance.

MYTH: A GOOD-QUALITY PET FOOD HAS TO BE EXPENSIVE

The cost of owning a pet is on the rise; the average U.S. dog owner spends nearly $30 000 over the life of their pet and $446 dollars per year on pet food alone.[6] The cost of feeding a complete and balanced diet to a 40-lb dog is highly variable, ranging from about $0.35 to $15 per day. Unfortunately, spending more on a pet food does not guarantee a high-quality product; nutritious foods can be found in every budget range.

So, how should pet owners choose the best food for their pet and their budget? Creating a quality pet food revolves around 4 core principles: nutrient balance, nutritious ingredients, quality control, and safety. A valuable first step for assessing a diet is looking for an AAFCO statement that a food is complete and balanced for a pet's life stage. Unfortunately, assessing a company's ingredient sourcing and manufacturing protocols is more difficult. Contacting a pet food manufacturer directly to determine if they employ a pet nutritionist (with a PhD or DVM degree and advanced nutrition training) who has manufacturing experience can determine if the company has invested in the necessary expertise to develop sound diets.

One should also inquire about the manufacturer's quality control and safety procedures for raw ingredients and finished products. A reputable manufacturer should have answers readily available and describe multiple testing steps, including nutrient analyses of final products. Larger, more established companies often have the resources to ensure sound nutrition and safety of their pet foods, even at lower prices.

SUMMARY

Unfortunately, the pet food industry is mired in opinions and misinformation, making it difficult for pet owners to discern truth from marketing propaganda. Vilification of certain ingredients or processing techniques and veneration of concepts such as high digestibility and clean ingredients leave many pet owners feeling confused about how to feed their pets or guilty about their diet choices. High-quality pet foods are available in every form and for every budget. Ultimately, the cornerstones of feeding pets are safety and nutritional balance, and these concepts must take higher priority over marketing and fearmongering. TVP

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Zenalpha®

(medetomidine and vatinoxan hydrochlorides injection)
Sedative, Analgesic
For Use in Dogs Only

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

BRIEF SUMMARY: (for full prescribing information, see package insert)

DESCRIPTION: Zenalpha is a combination of medetomidine and vatinoxan hydrochlorides. Each mL of Zenalpha contains 0.5 mg medetomidine hydrochloride, 10 mg vatinoxan hydrochloride, 32.5 mg mannitol (USP), 4.16 mg citric acid monohydrate (USP), 1.8 mg methylparaben (NF), 0.2 mg propylparaben (NF).

INDICATION: Zenalpha is indicated for use as a sedative and analgesic in dogs to facilitate clinical examination, clinical procedures and minor surgical procedures.

CONTRAINDICATIONS: Do not use Zenalpha in dogs with cardiac disease, respiratory disorders, shock, severe debilitation, that have hypoglycemia or are at risk of developing hypoglycemia, or are stressed due to extreme heat, cold or fatigue.

Zenalpha is contraindicated in dogs with a known sensitivity to medetomidine or vatinoxan.

WARNINGS:
Human User Safety Warnings
Not for use in humans. Keep this and all medications out of reach of children and pets.

Avoid skin, eye or mucosal contact. Use caution while handling and using filled syringes. Absorption of the active ingredients is possible following exposure via the skin, eye or mucosa. In case of accidental eye exposure, flush eyes with water for 15 minutes, remove contact lenses then continue to flush. In case of accidental skin exposure, wash with soap and water and remove contaminated clothing. If symptoms occur, seek the advice of a physician.

In case of accidental oral intake or self-injection, seek medical advice immediately and show the package insert to the physician. DO NOT DRIVE as sedation, loss of consciousness, and changes in blood pressure may occur.

Persons with cardiovascular disease (for example, hypertension or ischemic heart disease) should take special precautions to avoid any exposure to this product.

Pregnant women should exercise special caution to avoid exposure. Uterine contractions and decreased fetal blood pressure may occur after accidental systemic exposure.

Persons with known hypersensitivity to any of the ingredients should avoid contact with Zenalpha.

Caution should be exercised when handling sedated animals. Handling or any other sudden stimuli, including noise, may cause a defense reaction in an animal that appears to be heavily sedated.

Note to physician: Zenalpha contains medetomidine, an alpha$_2$-adrenoceptor agonist, in combination with vatinoxan, a peripherally selective alpha$_2$-adrenoceptor antagonist. Symptoms after absorption or accidental self-injection may include dose-dependent sedation, respiratory depression, bradycardia, tachycardia, and hypotension.

Animal Safety Warnings
Zenalpha should not be administered in the presence of pre-existing hypotension, hypoxia or bradycardia. Due to the pronounced cardiovascular effects of alpha$_2$-adrenoceptor agonists, only clinically healthy dogs (American Society of Anesthesiologists [ASA] classes I and II) should be administered Zenalpha. Dogs should be monitored frequently for cardiovascular function and body temperature during sedation.

Zenalpha is not intended for use in cats. The use of Zenalpha in cats has been associated with hypotension.

PRECAUTIONS: Dogs should be monitored frequently during sedation for changes in heart rate, blood pressure, respiratory rate and body temperature. Tachycardia may occur in some dogs after recovery from sedation.

In the event of hypoxia or apnea, supplemental oxygen should be administered.

Following administration of Zenalpha, a decrease in body temperature may occur and an external heat source may be needed to maintain body temperature. Hypothermia may persist longer than sedation and analgesia.

The analgesic effect of Zenalpha will not last longer than the sedative effects. Additional analgesic(s) should be administered as needed.

Nervous, excited or agitated dogs with high levels of endogenous catecholamines may exhibit a reduced pharmacological response to Zenalpha (ineffectiveness). The onset of sedative/analgesic effects could be slowed, or the depth and duration of effects could be diminished or nonexistent. Therefore, allow the dog to rest quietly for 10 to 15 minutes after injection.

With the alpha$_2$-adrenoceptor agonist drug class, including Zenalpha, the potential for isolated cases of hypersensitivity, including paradoxical response (excitation) exists.

Repeat dosing with Zenalpha has not been evaluated.

Zenalpha has only been evaluated in fasted dogs; therefore, the effects on fed dogs (for example occurrence of vomiting) have not been characterized.

The concurrent use of anticholinergic medications and Zenalpha has not been evaluated.

Zenalpha may decrease serum glucose in healthy dogs and this effect may persist longer than sedation.

The safe use of Zenalpha has not been evaluated in dogs with hepatic or renal impairment, dogs younger than 4.5 months old, or dogs that are pregnant, lactating, or intended for breeding.

ADVERSE REACTIONS: The most common adverse reactions observed in the field study were decreased body temperature (not requiring external heat support), reduced respiratory rate, diarrhea, muscle tremor, signs of colitis, hypothermia (requiring external heat support).

To report suspected adverse events, for technical assistance or to obtain a copy of the SDS, contact Dechra Veterinary Products at (866) 933-2472. For additional information about adverse drug experience reporting for animal drugs, contact FDA at 1-888-FDA-VETS or online at http://www.fda.gov/reportanimalae.

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