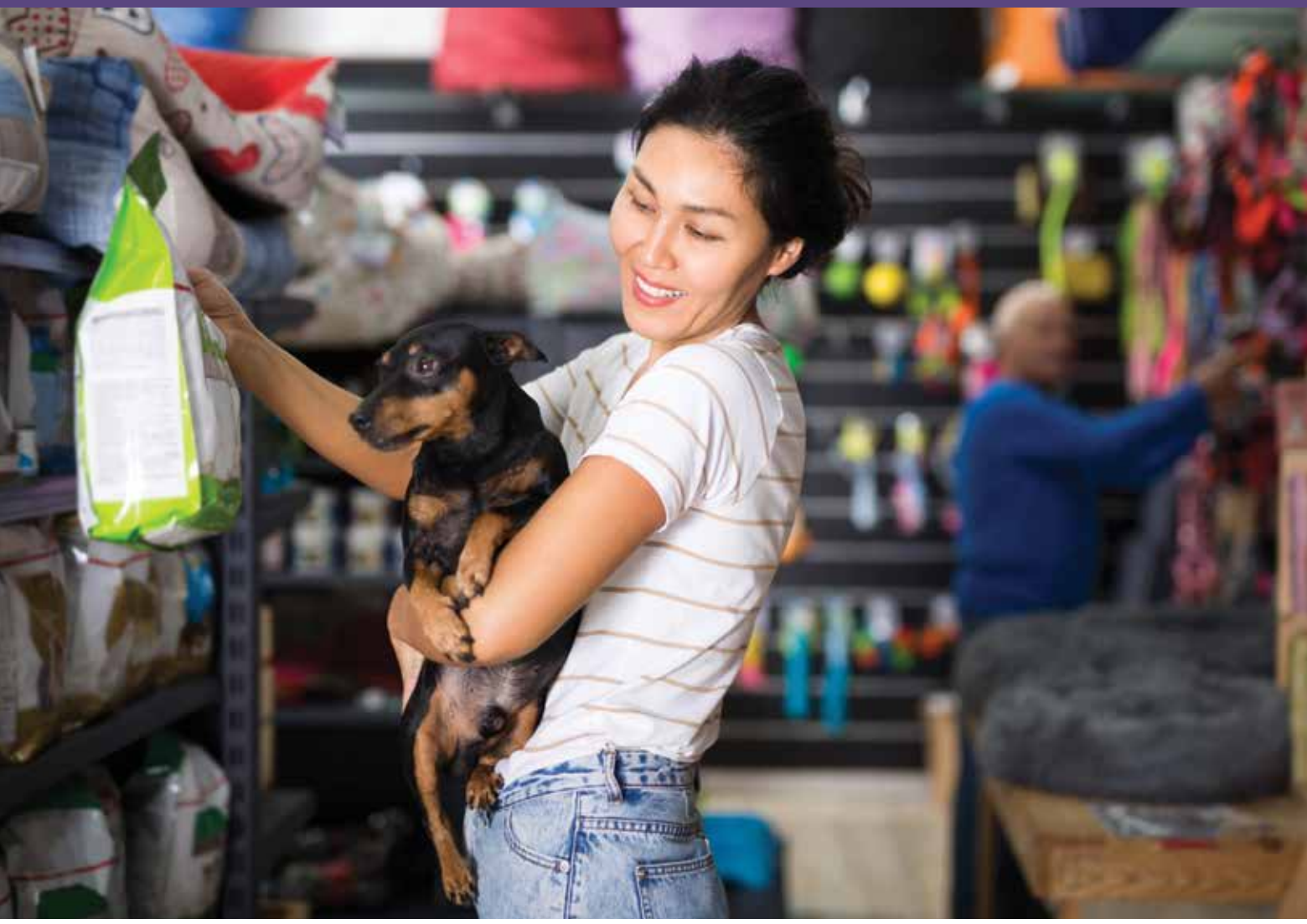

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NUTRITION CONVERSATIONS

Dispelling Nutrition Myths

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Abstract

Nutrition is a multifaceted topic, encompassing the effects of food on the ability to grow, regulate, promote body functions, and maintain health. The study of nutrition focuses on balancing a range of nutrients, calories, and principles to achieve optimum results. However, widespread opinions and misinformation make finding credible information much more difficult; more than ever, clients need guidance to help them understand which diets will best keep their pets healthy.

Take-Home Points

- Always prioritize nutrition science over trends or marketing.
- Every physical examination should include the patient's nutrition history and assessment (diet and eating habits).
- Refer clients to a veterinary nutritionist if they believe they are more knowledgeable about nutrition than their veterinarian.
- Educate clients that nutritional adequacy of a diet is more than ingredients—it is about nutrient balance, digestibility, and bioavailability.
- Give clients credible nutrition resources that focus on safety, nutrient balance, and quality.

At first glance, nutrition seems to be a rather simple topic. Nutrition is mentioned frequently online, with many trends purporting the benefits of maintaining optimum nutrition. But what is it really? Essentially, nutrition is the body's process of taking in, processing, and using food.

The topic of pet nutrition is sensitive, complicated, and full of conflicting opinions and misinformation. Everyone seems to have had experience with their own pet's nutrition and the associated difficulties. Those opinions are perpetuated by popular media, numerous online forums, and marketing tactics. Although most clients are well-intentioned, many base their pet's diet decisions on the current flood of misinformation, not realizing it is often based on myths and opinions rather than sound science. As veterinary professionals, it is our responsibility to help educate clients by giving them evidence-based information that can guide them in making optimal health and wellbeing choices for their pets.

This article covers some of the most common myths believed by clients today; counters them with scientific evidence; and provides information, resources, and insights that can be used for discussions with clients.

MYTHS

Myth 1: Dogs Descended From Wolves and Should Therefore Be Fed Like Them

The myth of feeding pet dogs like wolves is based on the concept of evolution. Although it is true that domestic dogs (*Canis lupus familiaris*) share a common ancestor with wolves, approximately 20 000 years of domestication have led to significant changes to their anatomy, natural behavior, and genetic coding. Dogs evolved beside humans and thrived on human care, and their nutritional needs transitioned because of the addition and abundance of food shared with humans. Thus, their nutritional needs evolved to an omnivorous diet.[1] Over time, dietary adjustments promoted changes between domestic dogs and their wolf ancestors in the function and composition of the gut microbiotas.

The evolution of dogs' diets is best understood through gene sequencing and studies of the gut microbiota of domestic dogs. Domestication of dogs was accompanied by notable genetic adaptations in their digestive physiology. One of the most prominent adaptations involves the pancreatic amylase gene (*AMY2B*), which encodes the enzyme responsible for breaking down dietary starch into maltose within the small intestine. Whereas wild canids (e.g., wolves, coyotes, golden jackals) typically possess only 2 copies of this gene, domestic dogs often possess multiple additional copies, sometimes several-fold higher.[2] The increased gene copy number leads to greater production of pancreatic amylase and consequently a markedly greater capacity to digest and use starch than that of their wild relatives.[2] α-Amylase 2B is an enzyme encoded by the *AMY2B* gene.[3] These changes indicate significant differences not only in the bacterial composition of domesticated dogs' microbiota but also in microbiota function.

Client talking point: Domesticated canids transitioned from carnivores to omnivores; they are no longer the carnivorous wolves from which they descended.

Myth 2: Cats Can Be Fed a Vegetarian Diet

The myth regarding cats and vegetarian diets is also

based on evolution. However, the role of cats beside their human and canine counterparts differs. Cats have historically been associated with humans due to an influx of available prey, and in turn, cats provided humans with vermin control. Thus, cats maintained their obligate carnivore status because of a steady stream of live prey.[4] As obligate carnivores, domestic cats (*Felis catus*) evolved to rely on nutrients found exclusively in animal tissues; therefore, they cannot synthesize specific essential nutrients from plant-based ingredients (**BOX 1**). Cats must get these nutrients from animal protein. When animal tissues are eliminated from their diet, the potential for nutritional deficiencies increases (**BOX 2**).[5]

As obligate carnivores, domestic cats have limited capacity to modulate many metabolic enzymes in response to dietary composition. In particular, the urea cycle, which adapts to the diet in dogs and other species, does not adapt in cats and thus operates continuously. Additional metabolic characteristics of cats include the absence of salivary amylase, relatively low (compared with canids) pancreatic and intestinal amylase activity, markedly reduced glucokinase activity, lack of fructokinase activity, and reduced activities of several small intestinal disaccharidases.[6]

In a systemic review in 2023, Dominguez-Oliva et al demonstrated that only a limited number of studies—approximately 16—have examined the actual health outcomes of dogs and cats fed vegan diets rather than simply evaluating nutrient profiles.[7] Most of those investigations used small sample sizes and short feeding periods, which limits the strength of their conclusions. Although some studies used stronger designs (e.g., randomized or experimental trials), their reliability is reduced by issues like inadequate randomization, lack of blinding, and small study groups. Overall, current evidence is insufficient to draw firm conclusions about the health effects of vegan diets in companion animals, highlighting the need for larger, longer, and more rigorously controlled studies.

Clients who choose vegan diets for themselves and their pets are typically motivated by concerns about health, animal welfare, and environmental effects, although some make the change because their pets reject

BOX 1

Nutrients of Greatest Concern in Cats Not Fed Animal Protein

- **Arachidonic acid:** Deficiency of this essential fatty acid (found in animal fats) can cause poor skin and coat quality, delayed wound healing, reproductive issues, and impaired kidney function.
- **Arginine:** Deficiency of this essential amino acid leads to a rapid accumulation of ammonia in the blood (hyperammonemia), which can cause neurologic signs and death within hours.
- **Taurine:** Cats cannot synthesize sufficient taurine from plant proteins. Deficiency of this essential amino acid can lead to dilated cardiomyopathy, retinal degeneration, reproductive failure, and impaired immune function.
- **Vitamin A (preformed retinol**): Cats cannot convert β-carotene from plants into active vitamin A. The lack of dietary animal sources of vitamin A can result in vision problems, poor growth, and reproductive failure.
- **Vitamin B_3 (niacin):** Cats have limited ability to synthesize niacin from tryptophan, making dietary animal protein essential. Niacin deficiency can result in gastrointestinal lesions, dermatitis, and lethargy.
- **Vitamin B_{12} (cobalamin):** Deficiency of this vitamin, naturally found only in animal tissues, can cause anemia, gastrointestinal dysfunction, and neurologic problems.

BOX 2

Consequences of Cats Not Eating Animal Protein

- Severe malnutrition, including muscle wasting and weight loss
- Organ dysfunction, particularly heart, eyes, liver, and kidneys
- Reproductive failure and developmental abnormalities in kittens
- Shortened life span

traditional foods. These clients often perceive vegan diets as beneficial, reporting easier weight management, fewer health issues, and reduced need for veterinary care—although these perceptions may reflect personal bias rather than objective outcomes. Interest in vegan pet diets appears to be growing along with societal trends toward plant-based eating, yet reliable data on how many pets are fed vegan diets remain scarce. Surveys suggest that a small percentage of dogs and cats consume such diets, although many owners express willingness to switch if nutritional adequacy, veterinary approval, and product availability were assured.[8]

Client talking point: Due to their nutritional physiology, cats cannot live solely on plant-based protein. Any supplementation of missing essential nutrients typically provided by animal tissues would need to be supervised by a board-certified veterinary nutritionist.

Myth 3: Feeding Trials Are Not Necessary

Feeding trials provide real-world evidence of a food's ability to support pet health over time.[9] AAFCO provides a model of regulations for pet food, including nutritional adequacy standards.[9] Pet food companies can demonstrate that a diet meets these standards in 1 of 2 ways: nutrient profiles or feeding trials (**TABLE 1**). Scientifically, computed analyses may determine that a diet meets nutrient minimum requirements; however, the diet may fail to support growth, maintenance, or reproduction due to poor nutrient bioavailability or digestibility. Feeding trials test whether a diet will support a pet's health when fed as the only source of nutrition; thus, they are critical for demonstrating that a diet can maintain the health of pets.

Client talking point: Feeding trials add valuable and credible support for pet food products.

Myth 4: Byproducts and Grains Are Bad for Pets

Predominant among nutrition myths is the vilification of ingredients. Over the decades, single ingredients have been deemed "bad" with little understanding of whether the claims are scientifically based, anecdotal, or the result of marketing/misinformation. Certain ingredients (e.g., byproducts, preservatives, grains) can trigger fearful and emotional reactions from clients, falsely believing, despite no evidence, that these ingredients are unhealthy, allergenic, and/or fillers (i.e.,

TABLE 1 AAFCO Feeding Trial Requirements[a,b]

LIFE STAGE	DURATION	ANIMALS REQUIRED	COMPLETION[c]	KEY MEASURES
Adult maintenance	26 weeks (6 months)	Minimum 8 healthy adult dogs/cats	At least 6 must finish	• Body weight changed by <10% • Veterinary examinations performed at trial start and end • Hematology and blood chemistry values within normal ranges
Growth (puppies kittens)	10 weeks (after weaning)	Minimum 8 weaned puppies/kittens	At least 6 must finish	• Weekly body weights must show adequate growth. • Clinical health observations • Veterinary examination at trial start and end • Hematology and blood chemistry at trial end
Gestation/lactation	Covers entire cycle: breeding → gestation → lactation → weaning of offspring	Minimum 8 breeding females	At least 6 must finish	• Ability to deliver and rear healthy offspring to weaning • Body condition of dam • Clinical health observations
All life stages (growth + reproduction combined)	Same as above; must meet both growth and reproduction protocols	Minimum 8 animals per trial	At least 6 must finish	• Growth and gestation/lactation protocols

[a]*Adapted from Association of American Feed Control Officials. AAFCO dog and cat food nutrient profiles. In:* 2026 Official Publication. *AAFCO; 2026:160-207.*
[b]*A concurrent control group must also be used.*
[c]*Dogs/cats that start the study can only be removed for non-nutritional reasons.*

Contrary to common misconceptions, byproducts do not include hair, horns, teeth, or intestinal contents, and their use in pet foods is carefully defined by AAFCO.[11]

no nutritional value) and will harm their pet. However, current pet foods are formulated to provide balanced and complete nutrition—including byproducts and grains—that fully supports the health of dogs and cats.

Byproducts

In veterinary nutrition, byproducts are ingredients that remain after parts commonly consumed by humans are removed.

- **Animal byproducts** include organs (e.g., liver, kidney, lungs, spleen), bone meal, and other nutrient-dense tissues.
- **Plant byproducts** encompass any part of the plant that is removed before use (e.g., the outer leaves of cabbage, the ends of carrots, seeds from oranges).

Byproducts are not low-quality scraps but rather are carefully processed parts that provide essential proteins, vitamins, minerals, and fatty acids. Byproducts are more nutrient dense than skeletal muscle. Byproducts are a component of whole prey, and wild animals prioritize their consumption over any other part of the prey animal.[10] Contrary to common misconceptions, byproducts do not include hair, horns, teeth, or intestinal contents, and their use in pet foods is carefully defined by AAFCO.[11] Many common dog treats are made from animal byproducts, which are safe, nutritious, and highly appealing to dogs (e.g., liver, lung, heart, tripe, tendons, ears, cartilage). Rather than being "waste," these ingredients are valuable sources of nutrition that make excellent, natural treats for pets when properly processed and regulated.[11]

Grains

Grains, too, are often vilified as fillers or allergens. Grains and other plant ingredients provide valuable carbohydrates, fiber, and essential nutrients that help maintain digestive and overall health. Despite these benefits, grain-free diets—those formulated without common cereal grains such as wheat, rice, barley, or corn—have become increasingly popular, largely driven by marketing claims about being more natural or hypoallergenic and by widespread consumer misunderstandings about the role of grains in pet nutrition.[12]

The grain-free myth may be partially based on current human health trends that vilify carbohydrates. Some carbohydrates are associated with health problems, such as celiac disease in humans, which does not affect dogs or cats. Trends in human nutrition have led to client bias about grains in their pet's diet and sometimes resistance to having them as an ingredient at all, believing that they are just fillers.

In pet nutrition, fillers typically refer to ingredients that add bulk without contributing meaningful nutrients.[13] In contrast, grains such as rice, oats, barley, and corn are nutrient-dense components that provide digestible carbohydrates for energy; dietary fiber for gastrointestinal health; and essential vitamins and minerals like B vitamins, iron, and magnesium. Dogs efficiently digest and process cooked grains, and even cats can benefit from small, processed amounts as part of a healthy diet. Grains also contribute to a balanced caloric content and can support healthy blood sugar regulation. Rather than being useless or wasteful, grains in pet foods are carefully selected to complement proteins and fats, ensuring a complete and balanced diet.

Grain-free diets, particularly those high in legumes, have been potentially linked to dilated cardiomyopathy in dogs, and some grain-free foods may increase metabolic burden due to their elevated protein or fat content.[14] Determining if a grain-free diet is right depends on the individual. Current studies have not found them to be universally beneficial or universally detrimental and should be chosen according to patient needs, such as confirmed allergies and disease-specific nutritional requirements.

Food allergies are relatively rare. Although 20% to 30% of owners believe their pet has food sensitivities or allergies, the scientific literature reports that food allergies were diagnosed for only 0.4% of dogs and 0.2% of cats seen at universities for skin conditions.[15]

Client talking point: Byproducts and grains contribute key nutrients that support gastrointestinal and overall health and are part of a healthy balanced diet for most patients.

DISPELLING THE MYTHS

Our ability to help clients navigate the often-confusing world of pet nutrition requires an open mind, empathy, patience, and clear communication; in short, active listening. By addressing common misconceptions with evidence-based explanations, veterinary professionals can empower clients to make informed choices that genuinely support their pet's health and longevity.

Give the Client Your Full Attention

- Let the client explain their beliefs and concerns without interruption.
- Stop multitasking and give the speaker your focus.
- Maintain eye contact (if culturally appropriate) and nod or use subtle gestures to show engagement.

Reflect and Paraphrase

Repeat back or summarize what the client said to let them know you understand and are listening.

> **Example:**
> "So what I hear you saying is that you're concerned about your pet's diet causing allergies, correct?"

Clarify Questions

Ask open-ended questions to ensure understanding.

> **Example:**
> "What else can you tell me about the diet you're feeding?"

Empathize and Validate

Acknowledge feelings without judgment.

> **Examples:**
>
> "I understand why that would be worrying for you."
>
> "It makes sense to want the best for your pet."

Ask Questions

> **Example:**
> "What sources influenced your feeding decision?"

Avoid Interrupting or Judging

- Let the client finish speaking before responding.
- Keep your tone neutral and not defensive.

Recommended Reading

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Educate

After you fully understand the client, respond thoughtfully, addressing both content and emotion.

> **Example:**
> "Based on what you've shared, here is what we know about these diets and why there is cause for concern."

- **Myth 1:** Explain domestication and physiologic differences with regard to enzyme changes and starch digestion.
- **Myth 2:** Explain that cats are obligate carnivores and need the essential nutrients in animal products.
- **Myth 3:** Explain how feeding trials offer real-world evidence that a diet supports lifelong health.
- **Myth 4:** Explain that byproducts include nutrient-rich organs and tissues; that grains provide fiber, energy, and nutrients; and that food allergies in pets are rare.

SUMMARY

Dispelling myths about pet nutrition is essential for ensuring pet health. Nutrition should be evidence-based, species-appropriate, and confirmed by feeding trials, not shaped by marketing or ideology. Veterinary professionals should guide clients toward diets proven safe, therapeutic, and complete and balanced and should educate them about the value of nutrient balance and quality over popular perception. TVN

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Samantha earned her CVT credential in 2002. Her early focus was working in feline specialty medicine, after which she transitioned to emergency and critical care (ECC) in 2005. After dedicating 17 years as an overnight intensive care unit/critical care technician, Samantha joined the internal medicine services at BluePearl in Boston. Samantha received VTS certification in ECC in 2011, internal medicine certification in 2016, nutrition certification in 2022, and most recently a bachelor's degree in applied mathematics and certification as a RECOVER instructor. Outside of work, Samantha enjoys spending time with her boyfriend, 2 cats, and a yellow-naped Amazon parrot; reading; hiking; traveling; and pursuing international veterinary projects where she can use her skills outside of the hospital.

Into Practice

- ☑ Determine if the patient's diet is balanced or could be lacking vital nutrients based on diet history
- ☑ Communicate any concerns with the client and offer individualized recommendations for their pet.
- ☑ If a diet imbalance is indicated, work with the client on a nutrition plan and offer nutritionist referrals when needed.

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