

Nutritional Concepts for the Veterinary Practitioner



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KEYWORDS

- Pet food labels • Nutritional assessment • Body condition score • Muscle condition
- Nutritional myths

KEY POINTS

- Diet may help treat, or decrease the risk of, disease, or cause it if there are problems with the food or feeding management.
- To evaluate pet foods, practitioners should be aware of what nutrient requirements have been used to formulate the diet and if it has been tested by computer, chemical analysis, and/or feeding trials.
- The nutrient analysis on pet foods may be used to compare foods if they are compared on an energy or dry-matter basis.
- When recommending a diet to the owner, the practitioner should ensure that it is complete and balanced, have adequate digestibility, and is safe. High-quality diets may have ingredients with added health benefits.
- A screening nutritional assessment should be performed for every pet at every veterinary visit.

INTRODUCTION

Nutrition for the general veterinary practitioner is often not fully incorporated into veterinary or veterinary nursing school curriculums or recognized by the profession. Every practitioner and nurse have seen how nutrition can make a difference for their patients, but they often lack the tools needed to make an informed recommendation because there is often a confusing mix of, or insufficient, information available.

To complicate things further, veterinarians often sell certain brands of diets and the profits may contribute significantly to the practice income. Thus, recommendations for that particular veterinary practice-carried diet, no matter how appropriate, may be met with suspicion from the public, who are also confronted with confusing and sometimes misleading nutritional information.

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Compounding this is the fragmentation of the profession surrounding nutritional concepts: for example, some favoring raw-food or homemade diets versus commercially prepared foods, and some favoring or discounting foods based on retail location or type, such as grocery stores or veterinary practices.

DISEASES AND NUTRITION

Many diseases are influenced by nutrition. These diseases can include nutrient-sensitive diseases, diet-induced diseases, and food or feeding management problems. A nutrient-sensitive disease is one in which the pet's disorder may benefit from a special diet as part of the therapy, for example, chronic kidney disease, some hepatopathies, feline diabetes, and many types of gastrointestinal disease (**Box 1**).¹ A diet-induced disease is a problem that is caused by the diet. This problem can be caused by formulation errors resulting in deficiencies or excesses of nutrients, a problem very common in homemade diets that have not been balanced (**Fig. 1**),² and also occurs in commercial diets. Processing errors may also occur, resulting in destruction of nutrients or inappropriate addition of excessive or deficient amounts of nutrients. These processing errors also include the presence of toxins and bacterial contamination, which have been especially reported in raw diets (commercial or homemade) but also in commercial cooked pet foods.³

One of the best known cases of diet contamination was in 2007, when unscrupulous suppliers in China added the contaminants melamine and cyanuric acid to increase the apparent protein levels in food-grade wheat gluten and rice protein concentrate. The adulterated ingredients ended up in foods and treats made by 12 different pet food manufacturers, according to court documents. Tens of thousands of animals ate the contaminated foods, and many became sick, some fatally. Although neither melamine nor cyanuric acid is toxic individually, the combination of melamine and cyanuric acid forms crystals in the kidneys, potentially leading to kidney failure. The pet food industry reacted quickly by calling for the biggest pet food recall in history and

Box 1

Common disorders that may be nutrient sensitive

- Dental disease
- Diabetes mellitus
- Hyperlipidemia
- Obesity
- Gastrointestinal disorders
- Pancreatitis
- Liver disorders
- Heart disease
- Kidney disease
- Dermatopathies
- Urolithiasis
- Osteoarthritis
- Cognitive disorders
- Feline thyroid disease

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