Although the American College of Veterinary Nutrition (ACVN) has existed for close to a quarter of a century, it remains a relatively small specialty, with diplomates spread out internationally in academia, industry, government, and clinical practice. As such, many small animal general practitioners may not have much experience working with a veterinary clinical nutritionist, either during their academic training or in practice. They, like the public, may even be misled by individuals who call themselves “nutritionists” with little, if any, training. Therefore, unlike much larger veterinary specialties, such as surgery or internal medicine, clinicians may be unfamiliar with the services an ACVN diplomate can provide. They may also be unaware that working with a board-certified veterinary nutritionist or resident in training can help them enhance their own nutrition-related services and expand their practice. This article provides practitioners with examples of services that could benefit from referral to, or consultation with, an ACVN diplomate.

### Detailed Diet Evaluation

All veterinarians should collect a detailed diet history on all patients (see the January 2009 *Compendium* article “Using a Diet History to Improve Adherence to Dietary Recommendations” and associated diet history form). At a minimum, clinicians can follow the recent American Animal Hospital Association (AAHA) nutritional assessment guidelines for dogs and cats, which recommend conducting a screening assessment on every patient and reserving detailed history taking for those with identified risk factors. The complexity of the dietary information collected may make evaluation and interpretation difficult. Thus, in cases in which the accuracy of the caloric intake or the overall diet’s nutrient profile, including its caloric distribution (amount of calories from protein, fat, and carbohydrate), is important to patient management, referral to or consultation with a board-certified veterinary nutritionist may be indicated.

For example, some overweight or obese patients fail to lose weight despite reported intentional food restriction that seems extreme. In such cases, an ACVN diplomate can calculate an average pet’s energy requirement based on body weight and compare that to a very careful evaluation of the patient’s reported food intake. This will enable the referring veterinarian and diplomate to determine if there is a likelihood that the pet is too calorically restricted, the client is underreporting food intake, and/or an underlying disease is playing a role. This evaluation can also determine whether the degree of caloric restriction puts the patient at risk for other nutrient deficiencies, especially if a diet that is not specifically formulated for weight loss is being used.

In other cases, such as animals with pancreatitis or hepatic encephalopathy, determining dietary fat or protein intake, respectively, at the time(s) clinical signs are exhibited can be very important for optimal management. Feeding methods can also play a contributing role in other diseases, such as feeding excessive treats in obesity, higher-fat table foods in pancreatitis, and raw foods in gastrointestinal disease. Incomplete and unbalanced diets can contribute to many diseases. Therefore, a careful diet evaluation by a veterinary nutritionist can assist with setting specific thresholds for any necessary fat or protein restriction.

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**Abstract:** Diplomates of the American College of Veterinary Nutrition (ACVN) can provide clinicians with a variety of nutrition-related services that can enhance patient management and owner satisfaction. Patients with chronic or acute disease can often benefit from client or clinician consultation with an ACVN diplomate. Services offered by board-certified veterinary nutritionists include detailed diet evaluations, commercial diet counseling, weight loss program creation, guidance on nutritional management monitoring and adjustments, feeding tube placement, and parenteral and homemade diet formulation.

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*Dr. Delaney discloses that he is a co-owner of DVM Consulting, Inc., and has worked for Natura Pet Products, Inc.*
A customized approach to restriction based on diet history can be very helpful in keeping a wider range of diet options open; avoiding unnecessarily severe restriction increases the number of appropriate commercial diets that can be used. An in-depth diet review can also provide insight as to why previous attempts at management have been unsuccessful, especially given a diplomate’s expertise and experience with similar cases, and may lead to exploring alternatives such as homemade food.

**Commercial Diet Counseling**

The number of available commercial over-the-counter and veterinary therapeutic foods can be overwhelming. Pet food is a multibillion-dollar industry, and many marketing ideas and approaches are attempted to capture market share. Consequently, clients can become quite confused and, sometimes, misinformed about pet nutrition. This confusion and misinformation may translate into adverse health consequences for pets or, at the least, many questions that a clinician may not have the time or training to address. An ACVN diplomate can serve as a resource (formal or informal) to help address client questions about pet nutrition. It is not uncommon for clients who have healthy pets, but many concerns and questions, to be referred to a veterinary nutritionist for consultation. Veterinary nutritionists’ initial client interaction time is typically longer than other practitioners’ because the main service being provided is the sharing of expert knowledge. The outcome of such appointments may simply be a more informed client or may be a dietary change. Dietary changes are often the result of identifying commercial foods that more closely match the needs of both the client and the patient. At times, potentially harmful products and/or practices are identified and can be addressed, thus preventing potential health issues. These products and practices often are taken from human nutrition without an awareness of their risks or irrelevance when applied to pets.

Some clients specifically request guidance about the optimal diet for their pet based on a particular disease(s) or condition(s). An ACVN diplomate can provide specific, unbiased recommendations on the type and amount of food to be fed; assist with the transition to a new diet; address questions about appropriate treats; provide tips for handling multipet household feeding issues; and provide follow-up, often via a phone call, to improve compliance. These appointments can be very helpful in animals with newly diagnosed diabetes; renal, hepatic, or heart disease; food allergies; pancreatitis; or urolithiasis and for patients with newly diagnosed diabetes; renal, hepatic, or heart disease; food allergies; pancreatitis; or urolithiasis and for patients with renal failure may also be improved with feeding tubes, not only to deliver adequate amounts of an appropriate diet but also to provide fluids and medications. Critically ill patients also benefit from feeding tubes. Many compliance challenges can be minimized early on through better client education on nutrition’s role in managing the disease(s).

**Weight Loss Programs**

Refractory obesity cases can also benefit from a “client education appointment” with an ACVN diplomate. Given the high prevalence of overweight and obese dogs and cats, general practitioners should be well equipped to handle weight loss programs. However, in some cases, compliance issues or undetermined reasons prevent needed weight loss. For refractory obese patients, especially those with weight-related comorbidities such as respiratory disease or osteoarthritis, a weight loss program established by a veterinary nutritionist can often be very helpful. Like all specialists, ACVN diplomates typically have more experience and training in handling difficult cases; thus, referral for challenging weight loss cases is common. As part of the referral service, the diplomate can (1) create a detailed plan with specific, unbiased food recommendations for the referring veterinarian and client to follow, (2) serve as a resource throughout the weight loss program, and (3) provide needed advice after weigh-ins at the referring veterinarian’s facility.

**Nutritional Management Monitoring and Adjustment**

Monitoring the effectiveness of nutritional management of disease is another arena in which veterinary nutritionists can assist clinicians. For example, a diplomate can help interpret data from blood glucose monitoring in diabetic patients, urinalyses and imaging studies in patients prone to forming uroliths, blood urea nitrogen and creatinine in renal failure patients, urine protein:creatinine ratio in patients with protein-losing nephropathy, albumin and clinical signs in encephalopathic patients, and fasting triglycerides in lipidemic patients. For these patients and many others, monitoring may reveal poor or inadequate response to the dietary therapy (or concurrent medical therapy). Many practitioners find it beneficial to refine the nutritional management of such patients with guidance from a board-certified veterinary nutritionist. This approach of adjusting the patient’s diet based on measured response should result in far better clinical outcomes. Importantly, better patient response leads to higher client satisfaction and generally improved compliance as clients see a direct cause-and-effect relationship with dietary management.

**Feeding Tube Placement and Diet**

Some patients managed by veterinary nutritionists require enteral feeding devices. For example, cats with hepatic lipidosis are far better managed with feeding tubes than with forced feedings or chemical appetite stimulants, and dogs with megaesophagus or esophageal strictures are commonly managed long-term with a gastrostomy tube. The management of dogs and cats with renal failure may also be improved with feeding tubes, not only to deliver adequate amounts of an appropriate diet but also to provide fluids and medications. Critically ill patients also benefit from...
enteral feeding to avoid the adverse effects of calorie and other nutrient deficits. Although some diplomates place feeding tubes themselves, their real service is in developing customized diets and feeding regimens. Choices of diets for use with feeding tubes range from veterinary and human liquid diets to commercial or homemade diet slurries. Enteral feeding complications can often be traced back to inappropriate diet selection or slurry formulation and administration. Consulting with a veterinary nutritionist can provide guidance beyond the placement of the feeding tube, particularly for animals with complex medical conditions.

**Parenteral Nutrition**

Some patients may be unable to receive enteral feeding but still require energy and other nutrients for recovery and healing, such as those with severe acute pancreatitis or anorexia with concurrent gastrointestinal dysfunction (i.e., vomiting, regurgitation, or severe malabsorption). The use of parenteral nutrition (intravenous delivery of nutrients) can be critical to the support of these patients. Parenteral nutrition formulations can be created by veterinary nutritionists for either central or peripheral venous administration. Given the many metabolic complications that can be associated with this type of nutritional support, generalists and other specialists generally consult with a diplomate on each case in which parenteral nutrition is needed. Often, diplomates are not only experts in the management and monitoring of patients receiving parenteral nutrition but also trained in compounding of parental solutions, and they may provide compounding as an additional service.

**Homemade Diet Formulation**

In addition to creating parenteral nutrition solutions, diplomats frequently formulate homemade diets to meet specific patient needs. Typically, homemade diets are used when an animal has multiple concurrent diseases that make a commercially available food suboptimal. Veterinary nutritionists provide homemade diet formulations through a variety of methods, including direct consultation, commercial software, or standardized recipes. Custom formulations are often most beneficial for the most complex cases. A full formulation may take several hours of the diplomate’s time, with fees matching the level of effort involved. Generally, these formulations use commonly available human supplements or an all-in-one veterinary supplement to create a complete and balanced diet. Formulations created by a diplomate are superior to static, generic recipes such as those in a book or from “nutritionists” without medical training or credentials. Diplomates provide very specific recommendations for the particular patient as well as incorporate the most up-to-date knowledge on available ingredients’ nutrient profiles and the nutritional management of involved diseases. Given the nature of customized diet formulation, many of the other services listed above may be involved, especially detailed diet evaluation.

**Supplement Review**

One service that may involve a more time-intensive consultation than a homemade diet formulation is the review of a complex supplement and supplementation regimen. Common supplementation combinations with which veterinarians are familiar (e.g., glucosamine and chondroitin sulfate) likely do not need review by a diplomate. However, a few clients have much more involved supplementation regimens for their pets, particularly for pets with specific diseases, such as cancer. These clients are typically very information driven and passionate about nutrition and their pets, and they may wish to have their supplement protocols reviewed for safety and efficacy. Many supplements have multiple ingredients, some novel or uncommon, that require more research and manufacturer contact than clinicians can generally accommodate. A diplomate can collect this information and evaluate it in light of clinical experience as well as other research, including scientific literature review.

These assessments typically focus on safety first and efficacy secondarily, and the findings are generally summarized in a detailed report for both the referring veterinarian and client. As with homemade diet formulation, these consultations can be quite labor intensive, and fees are charged accordingly.

**Conclusion**

ACVN diplomates can provide a variety of nutrition-related services for clients seen in practice and can enrich the wide range of services provided by any veterinary practitioner. Consulting styles vary: some diplomates may provide information strictly through the referring veterinarian, while others may also communicate directly with the client; some work face-to-face, and others provide remote consulting services via the Internet or telephone. However, all ACVN diplomates enjoy working with referring veterinarians on cases to jointly benefit patients. For a list of veterinary nutritionists, please visit the ACVN Web site.

**Reference**