

**Sean J. DELANEY**

BS, MS, DVM,  
Dipl DACVN



**Andrea FASCETTI**

DVM, PhD, Dipl  
ACVIM, ACVN



# Integration of nutrition into clinical practice

<b>1 - Maximizing space</b> .....	<b>495</b>
<b>2 - Feeding hospitalized patients</b> .....	<b>498</b>
<b>3 - Advice on diets</b> .....	<b>500</b>
<b>4 - Dietary training</b> .....	<b>503</b>
References .....	505
Royal Canin Nutritional Information .....	506
Table of composition of the main ingredients used for the preparation of home-made diets .....	508

# Integration of nutrition into clinical practice



## **Sean J. DELANEY**

BS, MS, DVM, Dipl DACVN

*Dr. Delaney holds a Bachelor's degree in Zoology from the University of California, Santa Barbara, a Master's degree in Nutrition and a Doctorate degree in Veterinary Medicine from the University of California, Davis. He attained Diplomate status with the American College of Veterinary Nutrition following completion of a clinical nutrition residency at UC Davis. He is currently a lecturer in small animal clinical nutrition at the Veterinary Medical Teaching Hospital at UC Davis. He is also the founder of Davis Veterinary Medical Consulting, Prof. Corp., which specializes in nutritional consulting for the pet food industry.*



## **Andrea J. FASCETTI**

DVM, PhD, Dipl ACVIM, Dipl ACVN

*Andrea Fascetti graduated from the University of Pennsylvania School of Veterinary Medicine. Following graduation she completed an internship and medicine residency at The Animal Medical Center in New York City. She holds a doctoral degree in nutrition from the University of California, Davis. She is a diplomate of the American College of Veterinary Internal Medicine and the American College of Veterinary Nutrition. Andrea is currently an Associate Professor of Nutrition at the University of California, Davis. She is also the service chief for the Nutrition Support Service in the Veterinary Medical Teaching Hospital of the University of California, Davis. Her current research interests are trace mineral metabolism in dogs and cats, improvement of pet foods and taurine bioavailability and metabolism in the dog.*

**I**n the past, when veterinary medical knowledge was limited, husbandry issues including diet were the predominant focus for patient care. As new diseases were described, nutritional issues did not become any less vital to successful patient care, but their importance was slowly diluted by the sea of new diagnostics and therapeutics that became available to veterinary medicine. Fortunately, our knowledge of nutrition has not remained static as the rest of veterinary medicine has advanced, and thus, the wisdom of integrating diet into a patient's therapeutic management has been proven in a growing number of disease states. Given the importance of nutrition in veterinary medicine, the goal of this chapter is to illustrate how nutrition can be successfully integrated into any clinical practice.

Veterinary medicine is transitioning into a two tier system of providing medical care. The first tier in this system is the primary care provider (PCP). The second tier in the system is the referral practice (RP). In addition, it is assumed that a RP inherently sees more complex and refractory cases as a percentage of its caseload.

Size is not necessarily related to the type of activity; some of the recommendations in this chapter for a RP may be more appropriate for a PCP with a large number of veterinarians. However, this assumption may not hold across all practices, and therefore the reader is encouraged to review and consider all of the following recommendations.

Regardless of practice type or size, there is an inherent need to dedicate space to nutrition. The ability to store and provide more dietary options is somewhat dependent on the quantity of space that a practice allocates for that purpose. Since a significant percentage of a practice's earnings are frequently from food sales, this allocation of space is most likely economically justified. As there are always limitations on the amount of space available, the following section discusses strategies to maximize available space and recommends the minimum inventory necessary to treat the majority of cases.

## 1 - Maximizing space

If space is limited, the amount of stock on hand will inherently need to be limited. A small inventory demands either one of two management strategies – frequent delivery or limited sales.

Clearly, limiting sales either intentionally or unintentionally is less than desirable. Limited sales can frequently mean that the importance of nutritional management in patient care is under-recognized. This can have a deleterious effect on both patient and practice health.

Orders cannot be placed once a week or month, but rather may need to be made daily in order to prevent prohibitively long delays in providing patients or clients with needed diet. Inevitably, there is a cost associated with having a small inventory. The cost of a small inventory may not be realized if the only cost recognized is the expense associated with the additional square footage and not lost sales or increased labor costs.

A large inventory allows a practice the luxury of having infrequent deliveries and/or high diet demand. This system allows the workload to reduce due to frequent ordering. The downside to this is the added space that such an inventory requires.

### ► Managing incoming stock

Several companies have developed control systems that allow product sales to be tracked in addition to assisting with inventory management. This type of sales data allows the practice manager to better assess the practice's needs and to stock a practice-specific diet inventory. Whatever management tool is used, it is necessary to decide:

- the quality offer available to clients;
- the minimum volume to be stocked for each reference.



Veterinary caduceus of the Netherlands.



Veterinary caduceus in France.

- Below, from top to bottom:
- Veterinary caduceus of United States
  - Veterinary caduceus of South Africa
  - Veterinary caduceus of Germany.



Every veterinary practice is different whether that be due to geographic, socioeconomic or practice style differences. Therefore, any guideline that is created cannot anticipate every specific need that a particular practice may have. However, certain significant differences between practices are likely to be universal based on practice size and type.



A practice that deals with many obese patients may wish to carry a higher percentage of diets designed for weight loss than a practice that focuses on oncology.

### > Selecting available products

In an effort to address space limitations a priority should be placed on stocking diets that are used frequently. Diet selection should be based on disease prevalence and the proven importance of nutrition in disease prevention and treatment (Table 1).

TABLE 1 - THE LIST OF MAIN THERAPEUTIC FOODS AVAILABLE TO VETERINARIANS	
DIET TYPE	INDICATION
Low energy diet	Obese prone/obesity
High moisture diet/diet that induces thirst with adjusted concentrations of crystallogenic precursors	Urolithiasis
Protein hydrolysate diet or novel antigen diet(s)	Adverse reactions to food
Low phosphorous/low protein diets	Acute/subacute/chronic renal failure; hepatic encephalopathy
High energy density diet	Volume intolerance, unintended weight loss, inappetance
Low fat diet	Pancreatitis, reduction of delayed gastric emptying, fat intolerance
Highly digestible diet	Non-specific acute gastroenteritis, fiber non-responsive constipation/diarrhea
Liquid diet	Enteral feeding through a feeding tube
Dry diet targeting oral hygiene	To help reduce the development of plaque and calculus
Low carbohydrate OR high fiber diet*	Diabetes mellitus
High energy density diet with concurrent sodium restriction*	Third space fluid accumulation secondary to heart failure or decreased oncotic pressure
Parenteral nutrition solutions*	Intractable vomiting or diarrhea, pancreatitis when it is impossible to place a jejunostomy tube, recovery from gastrotomy or enterotomy

The list above of therapeutic diets should meet the canine dietary needs of most practices.

\* If space permits, it is also possible to stock these kinds of diets.

The list of therapeutic diets should meet the canine dietary needs of most practices.

Other diets are available for growth and maintenance, degenerative joint disease support, hepatic and cardiac disease support that are not listed in the table, but may be useful depending upon the practice preferences and demographics.

Although a single commercial diet for each category above may be adequate for the majority of patients, there are times when palatability, learned aversions or other qualities will necessitate the use of a diet that is not in stock. To facilitate identifying diets that may serve as adequate surrogates, practices should keep up-to-date product guides for all available manufacturers. These product guides can also serve as references for nutrient data for patients with extensive diet histories.

Almost all patients can be managed through the use of commercial diets; however, a small subset of patients may require specially formulated, home-cooked diets. In these cases special training in veterinary nutrition is recommended to ensure all situations can be handled correctly.

> **Keeping inventory at a minimum**

The minimum inventory is equal to the quantity that will theoretically be sold between the order date and the delivery date. If orders are made daily and the delivery time is 24 hours, the minimum inventory must constitute 1/6 of weekly sales. This inventory can of course be supplemented by a safety margin to offset a delay in delivery or increased consumption for a limited period.

An order must be triggered when the stock reaches a minimum threshold. The quantity to be ordered depends on the quantity of products that can be put on the shelves. For various references, it is also important to take into account the potential growth of the sales.

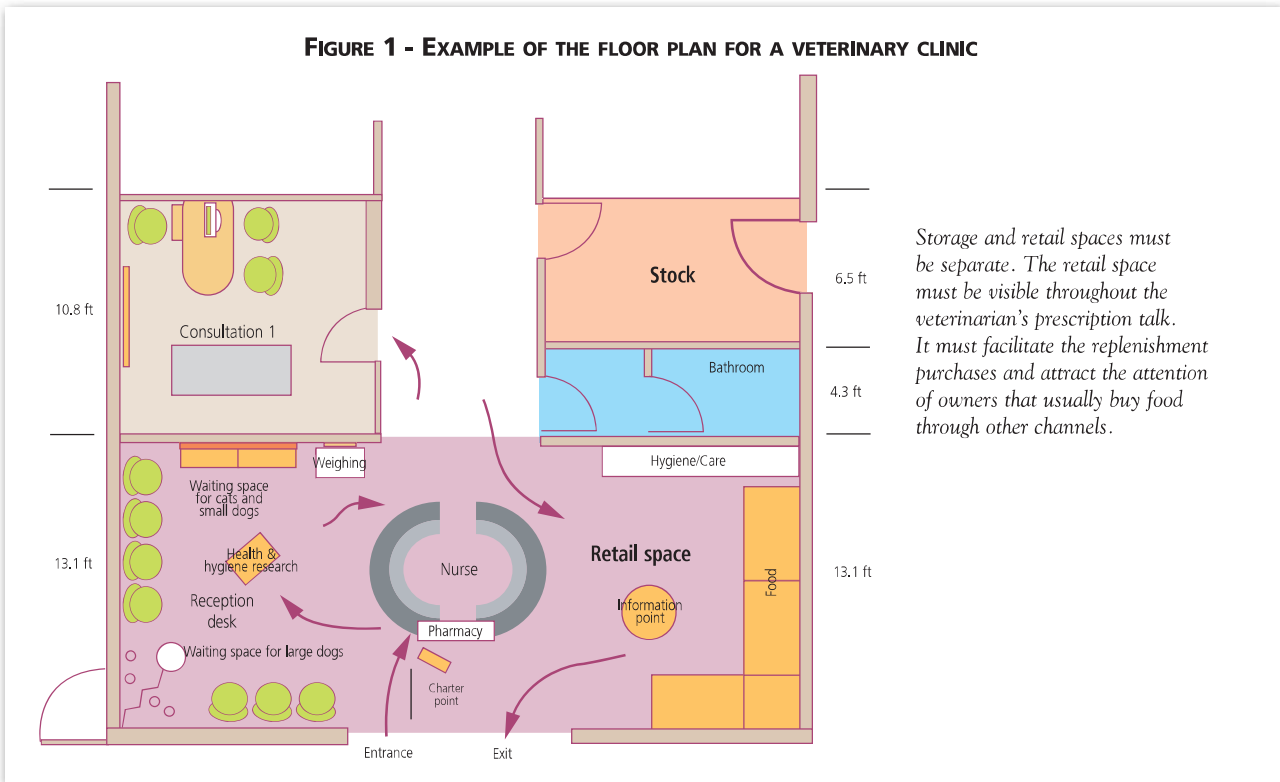


Consistent product usage has the benefit of allowing product performance for a particular disease state to be determined and adjustments in recommendations to be made when indicated. Usage that is too inconsistent may limit the practitioner's ability to recognize a product's effectiveness.

► **Storage**

> **Retail space**

Stock must be arranged neatly, separate from the storage zone (Figure 1) and as clearly as possible for the client. Arrange according to species (with a visual for fast identification), then by brand and lastly by product family to help clients find what they want. Labels to the front will make them easier to read.



Large packs mean you have to have a lot of space between shelves. Since the number of diets that a practice wishes to stock will often exceed the amount of available space, stocking smaller sized





© Dents Nutrition Center

Frequent replenishment will facilitate a rapid response to the request of owners, but will increase the workload for staff.

bags can allow for increased storage. Using small bags for dietary trials allows the hospital to need less space for food storage and a larger bag can be subsequently special-ordered when the diet's palatability and performance has been proven. Moreover, due to the decreased mass of smaller bags, higher (and easier) shelving can be employed, increasing storage capacity.

Initiating a policy that encourages clients to bring their pet's typical diet from home when the dog is to be hospitalized can also limit the amount and variety of maintenance foods that need to be stocked and prevent the risk of aversion.

### > The storage zone itself

There are four must-dos to use the storage zone optimally:

- **Space optimization:** reduce the distance between shelves by laying large packs flat;
- **Product accessibility:** label the shelves to make products easier to find. Large bags should be nearest to the ground.
- **Respect storage conditions:** products must be kept dry and must not be subjected to extreme temperatures or humidity
- **Respect expiration dates:** new stock should be placed behind older stock on the shelves.

### ► Managing outgoing stock

Outgoing stock should normally trigger three actions:

- Billing and payment or charging
- Stock is updated automatically by the computer system
- A new order to replenish the stock at required levels.

## 2 - Feeding hospitalized patients

### ► Preparation of the meals

Space dedicated solely for diet preparation is vital to facilitating the application of nutrition in clinical practice. This area can be as simple as a small counter to allow cans to be opened and bowls to be filled, along with an adjacent sink equipped with a garbage disposal. A few additional items can increase the efficiency of a food preparation/kitchen area. A brief list of items that all practices should consider is provided in **Table 2**.

**TABLE 2**  
**BASIC EQUIPMENT FOR THE PREPARATION OF MEALS FOR HOSPITALIZED DOGS**

- Refrigerator dedicated to diet storage
- Blender
- Microwave
- Can opener
- Measuring cups
- Knives
- Bowls
- Plastic lids to cover opened cans
- Gram scale
- Rice cooker

#### Additional Equipment to Consider

- Sterile hood or admixture compounder for parenteral nutrition
- Commercial dishwasher

### ► Choice of diet

A fundamental question in the management of every hospitalized patient is whether to feed or not. If the answer is to feed the patient, the next decision concerns the route of administration and the type of food. This topic is explored further in Chapter 14; however, the subject will be discussed as it relates to the logistics of providing nutritional services to the client and patient.

As a policy, clients should be encouraged and instructed to bring the patient's typical diet for feeding during hospitalization. Clearly there are exceptions which should be considered based on the underlying disease and the reason for hospitalization. However, when practical and not contraindicated, feeding the patient's own diet should minimize any potential gastrointestinal distress that may occur due to sudden dietary changes.

When the patient's typical diet is not available, another diet will have to be selected. Highly digestible diets are usually well accepted and tolerated; however, care should be taken to ensure that the diet is not concurrently too high in fat. Although fat can increase palatability and the likelihood of acceptance, it is the experience of the authors that sudden increases in dietary fat appear to be one of the most consistent and least recognized causes of gastrointestinal distress. In addition, although diets higher in moisture are often found to be more palatable, this is not always the

case and the patient may have a texture preference for dry food and will reject diets higher in moisture. Therefore, a highly digestible and low fat diet may be the best food to use as a standard hospitalized diet and should be stocked in an amount to meet this need.

### > Meeting a hospitalized patient's energy needs

For many hospitalized patients, voluntary consumption of food will adequately meet a patient's energy needs. However, nutritional support may become necessary and, thus, should be an available procedure at all practices. A variety of enteral feeding tubes to meet diverse patient needs can be placed without special equipment beyond the appropriate feeding tubes and diet (i.e. nasoesophageal, esophagostomy or jejunostomy feeding tubes).

Percutaneous endoscopic gastrostomy (PEG) tubes require the use of more expensive and advanced equipment, but all practices should be able to provide adequate nutritional support to their patients without the use of an endoscope.

The use of parenteral nutrition may not be practical at many clinics and, thus, may be limited to RPs. However, as peripherally administered parenteral nutrition solutions with lower osmolality and higher energy density become more common place and more proven, the use of parenteral nutrition may be more widely used in the future. For further discussion on critical care nutritional support please see **Chapter 14**.

#### HOW TO ENSURE OWNER COMPLIANCE AFTER A DIET PRESCRIPTION IN DOGS

A recent study commissioned by the American Animal Hospital Association (AAHA) reviewed client compliance in a variety of clinical areas, including the use of veterinary therapeutic diets. More than 350 veterinary practices throughout the United States participated through interviews and medical record reviews. The goals were to determine compliance levels, identify opportunities to provide better health care for pets through compliance, understand the barriers to compliance and lastly, how to promote compliance.

The report determined that 27% of pets with a medical condition that would have benefited from a therapeutic diet did not receive or follow such a recommendation from the veterinary provider. These findings equated to 11.6 million dogs with one of six diagnosed conditions that could have been helped by the use of a prescription diet that were not fed a therapeutic diet at all, or were not fed a therapeutic diet for an appropriate amount of time.

There are a number of factors that may contribute to a reduction in compliance when it comes to the use of therapeutic diets in our patients:

- The veterinarian's misconceptions about the client's willingness to act
- Cost of the diet
- Convenience
- Willingness of the pet to eat the food
- The owner's nutritional philosophies

- The veterinarian's lack of confidence in their own recommendations
- The possibility that the client may not clearly understand the benefits of the recommendation.

There are steps that we can take to increase compliance when it comes to ensuring that our clients follow a recommendation to use a therapeutic diet:

1. Ensure that you and your staff have confidence in your recommendations.
2. Create understanding and shared expectations through client communication and education.
3. Make the solution easy.
4. Continuous communication.

Compliance with respect to a diet prescription begins with the veterinarian and their staff. When there is a universal understanding and consistency with regard to ensuring client compliance, the patient, client and your veterinary practice all benefit.

References:


- AAHA Compliance Study. Available at: [www.aahanet.org](http://www.aahanet.org).
- Client Compliance. DVM Best Practices, July 1, 2003. Available at: [www.dvmnewsmagazine.com/dvm](http://www.dvmnewsmagazine.com/dvm)

## 3 - Advice on diets

### ► Nutritional advice at every appointment

At the very least, a diet history should be collected and a brief discussion of the patient's performance on its current diet should be completed at every appointment. A diet history must be detailed enough that the patient could be fed the correct diet and amount with the recorded information.

The veterinarian should strive for a diet history that would enable tracking of every calorie consumed by the patient (i.e. main diet, secondary diets, dog treats, human treats, etc.), but often this level of detail is reserved for patients that have undergone unintentional weight loss or gain. The use of a standardized form (**Table 3**) may prove useful in collecting detailed and accurate information on a patient's diet. Having a form available for clients to take home enables them to

TABLE 3 - DIET HISTORY FORM		
Patient Name: ...	Client Name: ...	Date: ...
Features: ...		
<p><b>Below to be completed by client</b></p> <p>Is your pet fed in the presence of other animals? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, please describe: ...</p> <p>Does your pet have access to other unmonitored food sources (i.e. food from a neighbor, cat food etc.)? <input type="checkbox"/> Yes <input type="checkbox"/> No If so, please describe: ...</p> <p>Who typically feeds your pet? ...</p> <p>How do you store your pet's food? ...</p> <p>Please list below the brand or product names (if applicable) and amounts of ALL foods, snacks, and treats your pet eats: ...</p>		
<p><b>Amount Fed</b></p> <p>Brand/Product/Food: Form: Per Meal: Number of Meals: Fed Since:</p> <p>Please list other diets your pet has received in the past, indicating the approximate time period when they were fed:</p> <ul style="list-style-type: none"> <li>- Brand/Product/Food</li> <li>- Form:</li> <li>- Quantity served per meal:</li> <li>- Number of meals per day:</li> <li>- Reason Stopped:</li> </ul> <p>Please list the name of each additional supplement your pet receives, indicate how much and how often your pet receives it (i.e. herbal product, fatty acid, vitamin or mineral supplement): ...</p>		





*Numerous services can be provided on an outpatient basis to the client and patient. These services vary in their complexity and the amount of effort that is required to provide them.*

complete the diet history at home where the specific diet name and amount can be more readily determined. The form also can easily be filed into the patient's medical record for later review and comparison. It has been the experience of the authors that such forms elicit more truthful and complete answers than simply questioning the client.

### ► Commercial diet recommendations

Every veterinarian should feel comfortable making recommendations to clients regarding commercial diets for healthy patients. As veterinarians focus more on preventative medicine, dietary recommendations will play a more important role in every patient's overall wellness plan. When recommending a diet, two important aspects to consider are nutritional adequacy and the ability of the diet to maintain the patient in an appropriate body condition.

Nutritional adequacy is constantly evolving as nutrient requirements are defined and refined. In the U.S., the non-profit organization, Association of American Feed Control Officials (AAFCO), has developed testing protocols and nutrient profiles in an effort to ensure nutritional adequacy of animal feeds including commercial pet foods. Diets that have undergone feeding trials are often preferred since they may provide better evidence that a diet's nutrients are available. In comparison, diets that simply meet nutrient profiles have not established that their nutrients are available and, thus, may not perform as anticipated based solely on recommendations.

Ideally, all food producers should have feeding test results for the food they are selling. Product quality also depends on the producer's vigilance with respect to the raw ingredients used and the end products sold.

One approach to help ensure the likelihood that a particular product is nutritionally adequate is to recommend feeding commercial diets that have a long-term history of use. Smaller companies often lack the same level of experience and expertise in diet formulation, employ few, if any, full-time nutritionists, and rarely have active research and development programs. Larger companies have many more "sentinels" for potential diet problems due to the increased number of dogs fed their products. Thus, if problems do arise, they are less likely to be missed or overlooked as an isolated incident.

The veterinarian's product range must be split into three distinct groups: Health Nutrition (for healthy animals), Feed & Secure Nutrition (to address specific risks) and Clinical Nutrition, to support the treatment of some pathologies.

The only intervention proven to delay the onset of disease and extend lifespan is maintenance of an optimal body condition (Kealy & al, 2002). Therefore, it is important that each client be counseled on the importance and health benefits of maintaining a lean body condition in their pet. It is also important to remember that in every feeding equation there are three major factors that affect the final outcome; the animal, the diet and the husbandry/environmental conditions in which the animal is maintained. Therefore, the ability of the client to use a diet to maintain a lean body condition in their pet is an important indicator of how that diet performs in any given situation. In many instances, diets designed for maintenance or all life stages can be used successfully. However, sometimes a diet that is less energy dense may be necessary. At the same time, a less energy dense diet should have increased concentrations of all nutrients per unit of energy, as the delivery of nutrients may be artificially limited when fed to maintain a lean body condition.

### ► Nutritional supplements

The act of selecting a diet that is nutritionally adequate should negate the need for additional supplementation. Veterinary medicine suffers from anthropomorphism in many areas, and one of the most extensive areas where this occurs is nutritional supplementation. Clients are inundated by the media and the human medical community about the beneficial effects of increasing their own intake of selected nutrients. Many of these beneficial effects would be blunted or lost if the daily diet of the client was as balanced as their pet's commercial food. Unfortunately, this point is often lost on clients and the perception that additional supplementation is in the best interest of their pet continues. This perception is difficult to counter, especially when supplementation is seen as innocuous and only beneficial. This is clearly not the case, and the client may need to be educated on the potential risk of adding nutrients into an already complete and balanced diet.

Beyond education, the veterinarian should provide guidance regarding the proven efficacy of the product. Efficacy studies rarely exist in the veterinary literature. Any research that has been done is often not in vivo studies, but rather in vitro work where the concentrations used exceed the amount physiologically possible. Alternatively, the amount of the nutrient being supplemented is quite possibly a fraction of the amount already in the diet and thus of little additional benefit. Clients' energies and finances may be better spent on the selection and purchase of a complete and balanced maintenance diet that maintains optimal body condition. Additional supplementation of any nutrient should only be advised in conditions where an increased requirement has been shown and where the amount provided in the diet is known in order to avoid dietary excesses. If a diet is found to be low in a particular nutrient, selection of an alternative diet with appropriate levels of the nutrient in question is a more prudent course of action rather than supplementation.

### ► Home prepared diets

*An all-meat diet is imbalanced and especially leads to calcium deficiency.*



Some clients choose to prepare food at home out of a concern that commercial pet foods are not as wholesome or nutritious as a diet they make themselves. Others have allowed their dogs to develop a fixed-food preference, usually based around home-cooked ingredients. Some clients are required to prepare their dog's meals out of medical necessity. Some dogs have multiple concurrent disease states, which cannot be managed using a commercially available pet food.

Whatever the underlying cause, all of these clients are equally at risk of feeding a diet that is inappropriate, incomplete or unbalanced. Although these diets are unlikely to cause a problem in the short term (2-3 months), there is a risk of clinical signs developing over the long term in the healthy adult and most likely sooner in the growing or unhealthy dog. Evaluation of the client's home prepared diet should be offered and recommended.

Initiating a successful consultation with a board-certified nutritionist usually requires that a very detailed and accurate diet and medical history be provided, along with the patient's current weight and body condition score, as well as the client's goals and concerns regarding the patient's diet. For puppies, the owner should be encouraged to regularly update the weight gain curve.

If specific, but uncommon ingredients (for which little nutrient data is known) are utilized by the client, determining their willingness to change the ingredient or their reason for using the ingredient can be very useful. It can be quite difficult to determine the overall caloric distribution, let alone specific nutrient concentrations, by simply looking at the ingredients. However, the veterinarian should feel comfortable identifying simple and obvious nutrient deficiencies in home prepared diets.

The following items should be identifiable in every home prepared diet:

- **Protein source** – usually from an animal or a concentrated vegetable protein (i.e. tofu);
- **Essential fatty acids** – especially linoleic acid – animal-source proteins rarely provide adequate levels of this fatty acid, thus a vegetable oil should be included;
- **Calcium and phosphorus** – these minerals are required in high concentrations and therefore are often provided in the form of bone meal or a calcium supplement;
- **Other minerals and vitamins** – unless liver or whole egg is provided in relatively high amounts, a source of other minerals and vitamins is necessary;

The presence of each of these components does not guarantee completeness or balance, but their absence can serve as an easy indicator to the practitioner and client that the diet should be evaluated.

## 4 - Dietary training

### ► Training for veterinarians

The importance of expertise in this field cannot be overemphasized. Competency requires extensive training in nutrition, and in cases where the diet will be used therapeutically, veterinary medical training is a must. Caution should be exercised when consulting individuals who do not have the appropriate training and credentials to formulate diets. Diplomates of the ACVN or ECVCN that provide this service have the necessary skills and training, and should be consulted.

Most veterinary nutritionists reserve the use of a home-cooked diet for:

- clients that cannot be dissuaded from home preparing their pet's food
- and for patients with multiple, concurrent disease processes that cannot be appropriately managed using commercially available diets.

Home-cooked diets have the disadvantage of being more expensive than commercially prepared food, labor intensive and prone to "diet drift". "Diet drift" refers to the tendency of some clients to slowly adjust diets over time without realizing, or considering the consequences of adding more of a particular ingredient or eliminating a necessary supplement. These concerns aside, home-cooked diets are often the only option in instances where a commercial product is unacceptable to the patient, or there is not one product that can meet that animal's needs. In addition, home-cooked diets also allow for the use of novel ingredients, can be formulated to take advantage of recent research that has not found its way into a commercial formulation, or that may not be economically practical to mass produce.

Proteins are composed of twenty or so amino acids, only half of which are indispensable to the dog and must be provided in the food.

Essential fats are polyunsaturated fatty acids. They are more sensitive to oxidation and must therefore be stored with care.

The calcium and phosphorus requirement is particularly important in growth and lactation. These two minerals should be properly balanced.

Technicians and nurses can also be trained to provide client education on the specific nutrient differences between therapeutic and maintenance diets.

It may be difficult enough evaluating the total calorie content, never mind conducting a nutritional analysis of the diet solely on the basis of a list of ingredients. A veterinarian must however be able to identify nutritional deficits in home-made diets to recognize the need to enlist the assistance of a trained veterinary nutritionist.

### ► Training for clinical staff

Integration of nutrition into clinical practice is dependent on fully utilizing a practice's support staff. Support staff can assist beyond stocking diet, feeding hospitalized patients and selling food. Technicians and nursing staff should be trained to monitor daily food intake in all patients. This requires that feeding orders be clearly provided for each animal. An American study showed that in 22% of hospitalized dogs presenting an undernourished condition, the problem is simply due to a poor understanding of written recommendations (*Remillard et al, 2001*).

Follow-up monitoring of dietary performance can become the responsibility of the technical staff. Many support staff would welcome the additional responsibility of weigh-ins for weight loss programs or monitoring urine pH or specific gravity in patients with a history of urolithiasis. Receptionists should be trained to recognize the appropriate use of therapeutic diets so that client purchase inconsistencies can be quickly identified and addressed.

## Conclusion

Without question, nutrition is a vital component to providing optimal patient care. Clinics that have not already integrated nutritional management, monitoring and counseling into the care of each animal, must begin to do so in order to provide the highest standard of care. Additional resources and expertise that can help any practice achieve these goals may be found in the references listed in **Table 4**.

**TABLE 4 - SOURCE OF POTENTIAL INFORMATION IN CANINE NUTRITION**

American Academy of Veterinary Nutrition	<a href="http://www.aavn.org">www.aavn.org</a>
American College of Veterinary Nutrition	<a href="http://www.acvn.org">www.acvn.org</a>
Association of American Feed Control Officials	<a href="http://www.aafco.org">www.aafco.org</a>
Center for Veterinary Medicine at the FDA	<a href="http://www.fda.gov/cvm/default.html">www.fda.gov/cvm/default.html</a>
Comparative Nutrition Society	<a href="http://www.cnsweb.org">www.cnsweb.org</a>
European College of Veterinary and Comparative Nutrition	<a href="http://datamartcomputing.hopto.org/EBVS/colleges/ecvcn.htm">http://datamartcomputing.hopto.org/EBVS/colleges/ecvcn.htm</a>
European Society of Veterinary and Comparative Nutrition	<a href="http://www.vet-alfort.fr/esvcn/esvcn.html">www.vet-alfort.fr/esvcn/esvcn.html</a>
National Research Council	<a href="http://www.nas.edu/nrc">www.nas.edu/nrc</a>
Pet Food Association of Canada	<a href="http://www.pfac.com">www.pfac.com</a>
Pet Food Manufacturer's Association	<a href="http://www.pfma.com">www.pfma.com</a>
Pet Food Institute	<a href="http://www.petfoodinstitute.org">www.petfoodinstitute.org</a>

## References

---

Kealy RD, Lawler DF, Ballam JM et al. - Effects of diet restriction on life span and age-related changes in dogs. *J Am Vet Med Assoc* 2002; 220:1315-20.

Remillard RL, Darden DE, Michel KE et al. - An investigation of the relationship between caloric intake and outcome in hospitalized Dogs. *Vet Ther* 2001; 2(4): 301-10



© Royal Canin

*In a veterinary clinic, the organization of the food storage shelves should help clients understand the nutritional goals, highlight all exclusive veterinary diets, and facilitate management by the clinic's staff.*

### Key Points

to remember:

## Selected basic merchandising concepts in the veterinary clinic

The goal of merchandising is to grow sales to clients. In quality terms, merchandising should also:

- **Improve the client's impression of the clinic**

A sober, discreet and rational presentation of the products is a significant benchmark for owners that expect personalized advice.

- **Underscore the difference between a clinic and a retailer**

Owners expect the veterinary clinic to differentiate itself from other dog food outlets by offering high-end specialist products.

- **Recruit new clients**

Whatever the reason for the consultation, nutritional recommendations are always welcome. They are especially appreciated:

- when the patient is a very young puppy, a puppy at the end of growth or a dog that starts to show signs of aging.

- when the reason for consultation must entail a nutritional prescription, like obesity or neutering.

- during routine visits: Health Nutrition helps accentuate the food's preventive role and increases visits to the clinic.

- **Reassure owners and develop their loyalty**

All communication tools should focus on the major arguments: a well nourished animal is healthy and a good diet has a positive effect on the animal's longevity. Samples or small trial packs encourage the owner to try a food without risk.



### Goals of retail space and shelf organization

If the clinic's staff has a key role in providing nutritional advice, the products' placement in the shelves should help owners understand the indications. The four keys points are:

- **The species**
- **The aim:** preserving the health of the dog, preventing selected specific risks or adapting to a specific pathological state
- **The brands**
- **The segmentation criteria by brand:** age, size, breed, lifestyle, etc



© M. Lecharloty. With kind permission of T. Hecan.

*It is preferable for the owner to have ready access to brochures that convey the veterinarian's instructions.*

TO SUMMARIZE, MERCHANDISING IS ABOUT:	
<b>The right product</b>	carry a range of nutritional products
<b>In the right place</b>	organize your space to present the products optimally
<b>At the right time</b>	take account of the seasonal nature of sales
<b>At the right price</b>	be consistent in your pricing policy
<b>In the right quantity</b>	avoid gaps in stock
<b>With the right information</b>	make instructional material available

Ideally, the space should be organized in such a way that owners are led to buy a new supply of food for their dog, and even to buy new products for the dog that they have not seen before (e.g. chewing bars for dental hygiene).