

WSAVA Nutritional Assessment Guidelines



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Objectives Careful assessment of the nutritional needs of cats and dogs must be taken into consideration in order to maintain optimum health, be part of a treatment regimen for a diseased state, or to maximize the quality of life in all animals. The goal of these World Small Animal Veterinary Association (WSAVA) Guidelines is that a nutritional assessment and specific nutritional recommendation is made for every patient on every visit. This will become known as the 5th Vital Assessment (5VA), following the four vital assessments of temperature, pulse, respiration and pain that are already addressed on each patient interaction.

Evaluation of nutritional status A brief screening evaluation of nutritional status can be routinely and seamlessly performed during the history-taking and physical examination of every patient. Nutrition-related risk factors that can be easily identified from the history and physical examination include age (growing or old), suboptimal body condition score (overweight or thin), muscle loss, atypical or homemade diet, medical conditions or changes in appetite. An extended evaluation would follow if one or more risk factors is identified on screening. These guidelines provide criteria with which to evaluate the animal and the diet, as well as key feeding and environmental factors. In addition, recommendations for interpretation, analysis and action are included so that a plan for optimizing the animal's nutritional status can be instituted.

Team approach Client compliance with nutritional recommendations requires input from the veterinarian, veterinary technicians/nurses and hospital staff. A team approach to continuous nutritional education, implementation of appropriate protocols, and focused client communication, utilizing these WSAVA Nutritional Assessment Guidelines, is key to reaching this 5VA goal.



Nutritional evaluation – the 5th Vital Assessment

The WSAVA has developed a global initiative to standardize five vital signs (see box) as part of the standard physical examination for all small animals.

Good nutrition enhances pets' quality and quantity of life. The WSAVA 5th Vital Assessment Group (V5) has utilized the science-based Nutritional Assessment Guidelines from the American Animal Hospital Association (AAHA) to develop global Nutritional Assessment Guidelines as an easy-to-use tool for veterinarians around the world for optimizing the health and well-being of pets, as an integral part of optimal patient care. Incorporating nutritional assessment into regular patient care is critical for maintaining pets' health, as well as their

Standard physical examination: five vital signs

- 1 Temperature
- 2 Pulse
- 3 Respiration
- 4 Pain assessment
- 5 Nutritional assessment

response to disease and injury. Incorporating the screening evaluation described in these guidelines as the fifth vital sign in the standard physical examination requires little to no additional time or cost. Moreover, incorporating nutritional assessment and recommendations into the care of small animals helps to develop a partnership between the owner and veterinary healthcare team, resulting in healthier pets.

The specific goals of this article are to provide:

- ❖ Awareness of the importance of nutritional assessment in cats and dogs.
- ❖ Guidelines for nutritional evaluation of cats and dogs to promote optimal health and response to disease.
- ❖ Evidence and tools to support recommendations.



The positive impact of proper nutrition on health and disease is well established in all animals. Appropriate feeding throughout all life stages can help prevent diet-associated diseases, as well as assist in the management of other diseases. For example, foods formulated for cats and dogs with chronic kidney disease have been shown to provide significant benefits.¹⁻³

The National Research Council (NRC) of the US National Academy of Sciences is the leading provider of nutrient recommendations for cats and dogs,⁴ and countries have developed nutrient guidelines and regulations for cats and dogs (eg, Pet Food Industry [FEDIAF], Association of American Feed Control Officials [AAFCO]).^{5,6} Assurance of proper nutritional health, however, entails more than meeting nutrient profiles; additional factors must be considered. Nutritional assessment considers several factors that are described in detail in this article. An iterative process, in which each factor affecting the animal's nutritional status is assessed and reassessed as often as required, provides a thorough nutritional assessment of the small animal patient.⁷⁻⁹

The factors to be evaluated include the animal, the diet, and feeding management and environment.

Animal-specific factors

Animal-specific factors include the age, physiological status and activity of the pet. Problems related to animal factors are referred to as nutrient-sensitive disorders (eg, intolerances, allergies and organ-specific diseases). Diet choices for these animals should be restricted to those formulated to meet the disease-associated nutritional limitations of the specific patient.

Diet-specific factors

Diet-specific factors include the safety and appropriateness of the diet fed to the animal in question. Problems related to diet factors are referred to as diet-induced disorders (eg, nutrient imbalances, spoilage, contamination, adulteration). Patients with these disorders may be treated by feeding a diet known to be appropriate for the individual.

Feeding management and environmental factors

Feeding factors include the frequency, timing, location and method of feeding, while environmental factors include space and quality of the pet's surroundings. Problems related to feeding and environmental factors are referred to as feeding-related and environment-related disorders (eg, over- or underfeeding, excessive use of treats, poor husbandry, competitive eating, or lack of appropriate environmental

stimulation). In these situations effective communication is required to produce the appropriate behavioral changes in the client.

Nutritional assessment

Nutritional assessment is a two-part process (see box below):

❖ **Screening evaluation** This first part of the process is performed on every patient. Based on the screening, pets that are healthy and without risk factors need no additional nutritional assessment.

❖ **Extended evaluation** When one or more nutrition-related risk factors are found or suspected based on the screening evaluation, an extended evaluation is performed.

The interview portion of the evaluation should be performed by a person trained to elicit required information from the caregiver most knowledgeable about the pet(s). A detailed nutritional history should be obtained. A variety of forms are available for recording these findings.^{10,11}

Screening evaluation

Nutritional screening is part of the routine history-taking and physical examination of every animal. Information collected should include assessment of factors specific to the animal, diet, and feeding management/environment.

Certain life factors, by themselves, may not call for an extended evaluation if the animal is otherwise healthy. Low or high activity level, multiple pets in the home, gestation, lactation, or age < 1 year or > 7 years all create a need for closer scrutiny. Although these factors by themselves may not trigger an extended evaluation, they should cause the veterinarian to scrutinize the pet's situation more closely.

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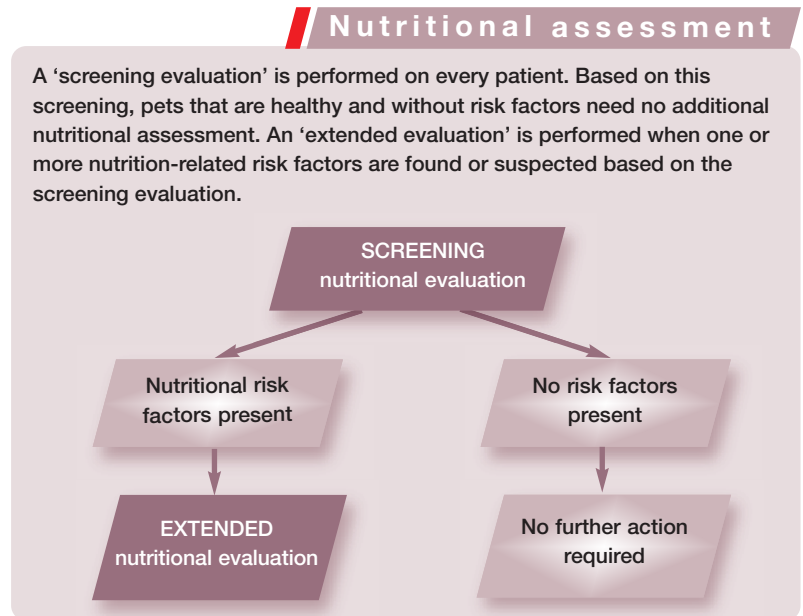


TABLE 1 Nutritional screening risk factors

	Check (✓) if present
History	
Altered gastrointestinal function (eg, vomiting, diarrhea, nausea, flatulence, constipation)	
Previous or ongoing medical conditions/disease	
Currently receiving medications and/or dietary supplements	
Unconventional diet (eg, raw, homemade, vegetarian, unfamiliar)	
Snacks, treats, table food > 10% of total calories	
Inadequate or inappropriate housing	
Physical examination	
Body condition score (9-point scale): any score less than 4 or greater than 5	
Muscle condition score: mild, moderate or marked muscle wasting	
Unexplained weight change	
Dental abnormalities or disease	
Poor skin or hair coat	
New medical conditions/disease	

Specific risk factors known to influence nutritional status include those listed in Table 1. When features are identified that raise one's 'index of suspicion' for a nutrition-related problem, an extended nutritional evaluation may be indicated. The importance of an extended nutritional evaluation increases as the number of risk factors and their severity increases. Moreover, sufficient concern about any one parameter may be enough to warrant an extended evaluation.

If no concerns are raised by the screening evaluation, then the nutritional assessment is complete.

Condition scoring – BCS and MCS

Use a consistent method and scale to measure body weight (BW), body condition score (BCS) and muscle condition score (MCS), to assess current status and changes over time. Although different scoring systems may have situation-specific merits, the panel recommends that practices choose, and all doctors and staff consistently use, one system and record the total points on which it is based (ie, the denominator).

The BCS evaluates body fat (Fig 1). A variety of BCS systems are used to evaluate cats and dogs (eg, scales of 5, 6, 7 or 9).^{7,12-14} However, these guidelines will use a nine-point scale.^{13,14} Although some extremely obese

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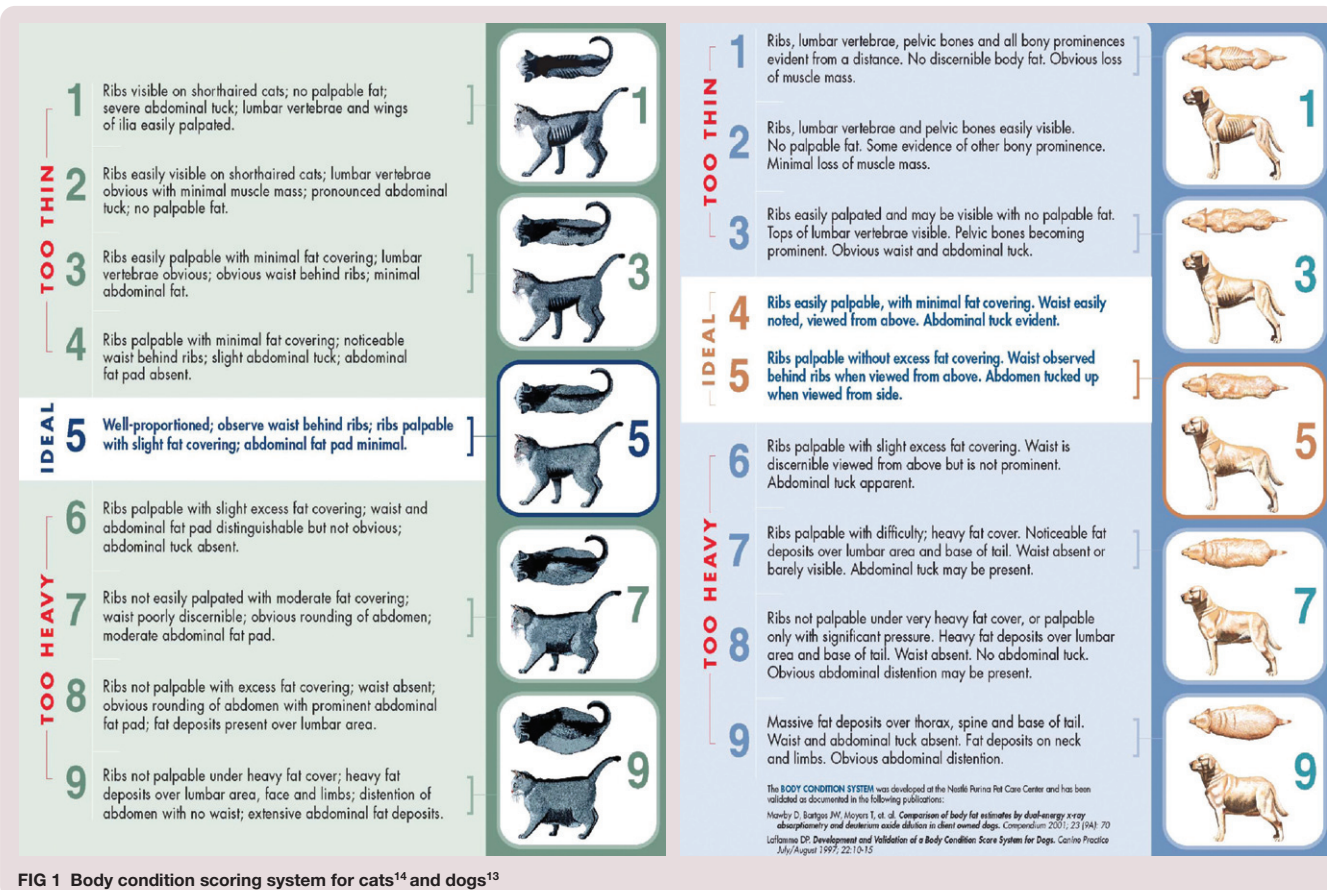


FIG 1 Body condition scoring system for cats¹⁴ and dogs¹³



patients exceed the BCS of 9/9, there is presently no validated scoring system that extends beyond that point.

The goal for most pets is a BCS of 4 to 5 of 9. (This may appear 'too thin' to some pet owners, so client education is important.) This BCS goal is based on a limited number of studies in cats and dogs,¹⁵⁻¹⁸ as well as those from other species.¹⁹ Disease risk associations in adult animals appear to increase above a BCS of 6 of 9.^{15,16} Similar risk associations for other life stages in client-owned pets have not been reported, but may occur at low BCS in growing puppies based on studies of laboratory-housed animals.¹⁷ Additional research in cats and dogs is needed to more fully evaluate the effects of body condition on disease prevention.

The MCS differs from the BCS in that it evaluates muscle mass (Fig 2). Evaluation of muscle mass includes visual examination and palpation over the temporal bones, scapulae, lumbar vertebrae and pelvic bones. Assessing muscle condition is important as muscle loss is greater in patients with most acute and chronic diseases (ie, stressed starvation) compared with healthy animals deprived of food, when primarily fat is lost (ie, simple starvation). Muscle loss adversely affects strength, immune function and wound healing, and is independently associated with mortality in humans.^{20,21}

A simple MCS scale is currently undergoing development and validation.^{22,23} Those authors' clinical experience suggests that early identification of subtle muscle loss, at the 'mild muscle wasting' stage (Fig 2), is valuable for successful intervention.

Clinically, BCS and MCS are not directly related. An animal can be overweight but still have significant muscle loss. This can make an MCS of mild to moderate look relatively normal if not carefully evaluated. In these cases, although some areas of the body may appear relatively normal or even to have excessive fat stores (especially over the ribs or in the abdominal region), muscle wasting is readily felt over bony prominences.

Palpation is required for accurately assessing BCS and MCS, especially in animals with medium/long hair coats.

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Extended evaluation

Extended nutritional evaluation of animal, diet, feeding and environmental factors is indicated for patients identified from the screening evaluation to be at risk for any nutrition-related problems (see Table 1). Those items suggest that nutrition may play an important role in development or management of the animal's underlying disease, or life stage.

First, review and summarize the history, medical record and information obtained during the screening evaluation. Secondly, obtain additional data, as appropriate, as described below. A more detailed list of potentially relevant historical factors may be found in a variety of references.¹⁰

Animal factors

- ❖ **Changes in food intake or behavior** (eg, amount eaten, chewing, swallowing, nausea, vomiting, regurgitation).
- ❖ **Condition of the integument.** Nutrition-related abnormalities may include variable combinations of dry, easily plucked hair; thin, dry or scaly skin; and reduced resistance to venipuncture (due to loss of normal skin collagen density).
- ❖ **Diagnostic work-up:**
 - ❖ Minimum database/laboratory testing, as appropriate.
 - ❖ Specific testing might include a complete blood count (checking for anemia); urinalysis; biochemistry profile (including electrolytes, albumin); fecal culture; evaluation of other nutrient concentrations that may be low (or high) as a result of an unbalanced diet (eg, taurine, vitamin B₁₂, iron).
 - ❖ Additional work-up as indicated (eg, imaging, endoscopy).
- ❖ **Current medical conditions and medications:**
 - ❖ Assess effects of the disease (eg, thyroid disease) and any treatment plan on the pet's nutritional status.
 - ❖ Some medications (eg, diuretics) or procedures (eg, significant intestinal resection, drain placement) can cause a loss or malabsorption of essential nutrients.

The importance of an extended nutritional evaluation increases as the number of risk factors for a nutrition-related problem and their severity increases.



Diet factors

❖ **Check the caloric density of current pet food** (ie, number of calories per gram, can or cup of food), particularly if the pet is below or above the desired BCS, or if the owner has to feed unusually large or small amounts to maintain the desired BCS (may have to contact pet food manufacturer for this information).

❖ **Evaluate other sources of nutrients:** treats, table food, supplements, food used for administering medication, chew toys (eg, rawhide), etc.

❖ **If disease conditions exist that may be the result of tainted or spoiled food, submit the diet for testing.**²⁴ Questions about having food analyzed or tested for potential toxins may be referred to the state feed control official (listed at www.aafco.org).

❖ Evaluate commercial foods:

❖ Specific type, formulation, flavor variety, when purchased, where purchased, storage conditions.

❖ Requirements for label information vary by country. However, it is important also to be aware of the label's role as advertisement.²⁵ In many countries, the AAFCO adequacy statement provides several important facts:

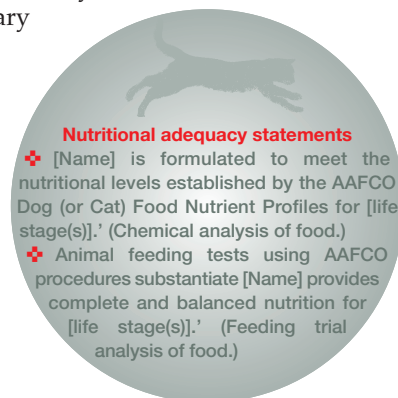
- Whether the diet is complete and balanced, and, if so, for what life stage(s). All foods should be complete and balanced. If it says 'intermittent or supplemental use only', the food is not complete and balanced. That may be acceptable if it is a veterinary therapeutic diet and is being used for a specific purpose – eg, severe kidney disease.
 - Labels may include one of two statements regarding nutritional adequacy (see right).
 - Formulated foods are manufactured so the ingredients meet specified levels, without testing via feeding trials; interpret with caution. However, the use of feeding trials does not guarantee the food provides adequate nutrition under all conditions.
- ❖ What is the manufacturer's reputation as a food maker? Have you had positive experiences with their products? What objective (not testimonial) information do

they provide about their foods to assist evaluation?

- ❖ The other information provided on the label is of little practical value in assisting nutritional assessment. Since pet owners sometimes base their purchasing decisions on the initial ingredients or on unregulated terms such as 'holistic,' 'human grade' or 'premium', veterinarians and veterinary technicians/nurses must help them make informed decisions.
- ❖ Contact the food manufacturer with any questions or concerns. Consider asking the appropriate questions (see below).

Questions for the food manufacturer

- ❖ Do you have a veterinary nutritionist or equivalent on staff in your company? Are they available for consultation or questions?
- ❖ Who formulates your foods and what are their credentials?
- ❖ Which of your diet(s) are tested using AAFCO feeding trials, and which by nutrient analysis?
- ❖ What specific quality control measures do you use to assure the consistency and quality of your product line?
- ❖ Where are your foods produced and manufactured? Can this plant be visited?
- ❖ Will you provide a complete product nutrient analysis for the cat and dog food of interest, including digestibility values?
- ❖ What is the caloric value per gram, can or cup of your foods?
- ❖ What kinds of research on your products has been conducted, and are the results published in peer-reviewed journals?



❖ Evaluate homemade foods:

- ❖ Ask the client about the specific recipe, preparation, storage, recipe rotation or substitution:
 - Consider sources and amounts of protein, carbohydrates, fats, vitamins and minerals; digestibility; bioavailability.
 - Consider specific needs of cats (amino acids, arachidonic acid, etc).
- ❖ Contact a board-certified veterinary nutritionist or equivalent to evaluate or formulate a homemade diet (Table 2).
- ❖ Evaluate any unconventional diet, whether commercial or homemade, for nutritional imbalances:
 - Evaluate additional risks of raw meat foods (eg, fresh, frozen, freeze-dried, raw-coated or other forms).²⁶⁻²⁸ Pathogenic organisms may cause gastroenteritis and other health problems and can be shed in the feces for a

prolonged period after ingestion of contaminated raw meat, even if the pet is not showing clinical signs. If a patient that has been fed a raw-meat diet is hospitalized, evaluate the risk to hospital staff and other hospitalized animals. In addition, raw foods containing bones can be associated with dental damage and esophageal/gastrointestinal obstruction or perforation.

- Evaluate risks of vegetarian foods, particularly with cats but also with dogs.

Feeding and environmental factors

❖ Evaluate the following feeding factors:

- ❖ Primary feeder of pet.
- ❖ Feeding management (eg, location, frequency).
- ❖ Issues with multiple pets (competition for food, threats).
- ❖ Other food providers and sources.

❖ Relevant environmental factors include:

- ❖ Extent of enrichment (eg, toys, other pets, housing, food delivery devices).
- ❖ Activity of pet at home:
 - Type (eg, leash walks, backyard, free roaming/spontaneous).
 - Amount (times per day/week).
 - Energy level and amount of activity.¹⁰

❖ Environmental stressors (eg, recent changes in the home, uncontrollable outdoor stimuli, conflict over resources such as food or access to the owner, conflict between animals, etc).^{29–31}

Interpretation, analysis and action

Following the nutritional assessment, interpret and analyze the information that has been gathered in order to devise an action plan.

Animal factors

❖ Evaluate the animal's condition with respect to the current food intake.

❖ **Estimate current energy needs.** For inpatients, resting energy requirements (RER) may be estimated using any of a variety of published formulas.^{4,7} For outpatients, label recommendations or a formula may be used as a starting point for energy allowance since energy requirements can vary by 50% in either direction for cats, and by 30% in either direction for dogs (particularly the maintenance energy requirement [MER]).⁴

Pet owners sometimes base their purchasing decisions on unregulated terms such as 'holistic,' 'human grade' or 'premium', so veterinarians must help them make informed decisions.



The MER depends on BCS, sex and neuter status, life stage, activity and environment variables.

❖ **Create a monitoring plan.** Teach the client to monitor BW, BCS and/or MCS, as appropriate. Adjust intake as required to match changing needs over time.

❖ **Adjust or include dietary supplements if necessary,** recommending specific types and amounts.

❖ **A diet change is sometimes necessary.** Preferences for and recommendations about diet transition methods vary, with no clear evidence showing any one method is superior. Clinicians should use and recommend techniques based on their individual assessment of client and patient. Some animals tolerate an abrupt change in diet with little problem; others appear to have fewer gastrointestinal issues if food is gradually changed over a 7–10 day period.

Diet factors

❖ **Determine if current amount and type of food is appropriate,** based on life stage, lifestyle/activity, disease, body condition, concurrent medications and/or medical procedures.

❖ **If diet factors are determined to be inadequate, prepare a plan for food and treats** that provides appropriate calories and nutrient content for the patient.

❖ **Consider other food sources in total intake recommendations,** if relevant.

❖ **Recommend a specific feeding plan** that incorporates pet food, treats, table food, feeding method, frequency and location.

Feeding management and environmental factors

❖ **Determine any changes in feeding management and any necessary environmental changes:**^{33,37,38}

- ❖ Whereas some cats and dogs can maintain good body condition when fed free choice, others require meal feeding of appropriate amounts to maintain good body condition.
- ❖ Confirm the use of an appropriate food measuring device (eg, an 8 oz or 237 ml measuring cup), and provide food in measured amounts (whether feeding free choice or meals).
- ❖ Management changes may include provision of feeding toys, and reducing conflict and competition for food.
- ❖ Environmental enrichment may include increased opportunities for activity (play, exercise), as well as efforts to decrease perception of threat from other animals (including humans) and reducing the frequency of unpredictable change in the animal's environment.³²

❖ Create a plan for hospitalized animals:

- ❖ Create a monitoring plan and a feeding plan as discussed under animal factors and diet factors (ie, diet, route, amount and frequency).
- ❖ Offer usual and favorite ('comfort') foods if at all possible to promote food intake. Avoid introduction of novel foods intended for long-term feeding in order to avoid the risk of inducing an aversion to the diet. A food aversion is avoidance of a food that the animal associates with an aversive experience.
- ❖ The optimal route required to achieve nutrient requirements should be reassessed daily, and may include:
 - Voluntary oral feeding.
 - Coax feeding – small changes, such as warming the food, taking the animal to a quiet area for feeding, having the owner feed the animal, or stroking the animal while eating can enhance food intake;
 - Syringe feeding (be careful in animals with nausea, or which are stressed, as this can induce food aversions).
- ❖ Other nutritional support techniques will be required for animals that have not eaten sufficient amounts by the aforementioned routes for 3–5 days (this includes the time of reduced appetite at home before hospitalization), and are not expected to resume reasonable amounts of food intake prior to further compromise of their nutritional status:^{39,40}
 - Use a feeding tube with animals that are not eating adequate amounts voluntarily. Use parenteral nutrition with animals that have gastrointestinal dysfunction or in animals where enteral feeding is associated with increased risk of aspiration.
 - Evaluate closely and watch for complications associated with the route of nutrition used, particularly with recumbent or neurologically impaired patients.

TABLE 2 Useful websites for client and staff education

Resource	Website address
AAFCO: Association of American Feed Control Officials (nutrient profiles, feeding trials, ingredients)	http://www.aafco.org
AAHA: American Animal Hospital Association	http://www.aahanet.org
AAVN: American Academy of Veterinary Nutrition	http://www.aavn.org
ACVN: American College of Veterinary Nutrition (specialty college for board certification; list of institutions that provide consultation; continual updates of links to resources for diet formulation and analysis)	http://www.acvn.org
AVNT: Academy of Veterinary Nutrition Technicians	http://nutritiontechs.org
ESVCN: European Society of Veterinary & Comparative Nutrition	http://www.esvcn.com
FDA Center for Food Safety and Applied Nutrition (regulatory and safety issues, adverse event reporting, meetings, industry information)	http://www.fda.gov/AboutFDA/CentersOffices/CFSAN/default.htm
FDA Pet Food site (information, links, food safety issues, recalls, pet food labels, selecting nutritious foods, handling raw foods)	http://www.fda.gov/AnimalVeterinary/Products/AnimalFoodFeeds/PetFood/default.htm http://www.fda.gov/AnimalVeterinary/NewsEvents/CVMUpdates/ucm048030.htm
FEDIAF: The European Pet Food Industry (nutritional guidelines, guide to good food practice)	http://www.fediaf.org
The Indoor Pet Initiative (comprehensive recommendations for environmental enrichment for cats and dogs)	http://indoorpet.osu.edu
NRC: National Research Council (nutrient requirements of dogs and cats)	http://www.nap.edu/catalog.php?record_id=10668#toc
NRC Downloadable booklets. Your Cat's Nutritional Needs and Your Dog's Nutritional Needs. Versions for pet owners: BANR (Board on Agriculture and Natural Resources) Petdoor Nutrient Requirements of Dogs and Cats	http://dels-old.nas.edu/banr/petdoor.html
NIH Office of Dietary Supplements (evaluating supplements, internet health information, and more)	http://ods.od.nih.gov
University of California, Davis, Diet History Form (downloadable word document)	http://www.vetmed.ucdavis.edu/vmth/small_animal/nutrition/newsletters.cfm
Pet Food Institute (information on ingredient definitions, labeling regulations, etc)	http://www.petfoodinstitute.org/Index.cfm?Page=Consumers
United States Pharmacopeia Dietary Supplement Verification Program (voluntary program)	www.usp-dsvp.org
USDA Food and Nutrition Information Center (general supplement and nutrition information, links to a variety of dietary supplement websites)	http://fnic.nal.usda.gov/nal_display/index.php?info_center=4&tax_level=1&tax_subject=242
USDA Nutrient Database (full nutrient profiles on thousands of human foods)	http://www.nal.usda.gov/fnic/foodcomp/search

❖ Create a plan for non-hospitalized animals:

- ❖ Create a monitoring plan and a feeding plan as discussed under animal factors and diet factors (ie, diet, route, amount and frequency).
- ❖ Clearly inform the client of the recommended feeding management factors to ensure success. The client is part of both the decision process and implementation of the specific action plan.
- ❖ If obesity is present, provide a comprehensive plan to modify the environment (eg, exercise, behavior modification and/or prescription weight control medication).
- ❖ Create a specific schedule for:
 - Follow-up via telephone to elicit questions and verify compliance/adherence to recommended feeding management or environment changes.
 - Repeat examination/assessment.
- ❖ **Consult with a specialist or refer** any time one feels unqualified to take action and monitor a patient (Table 2).

Monitoring

Healthy animals

Adults in good body condition should be reassessed regularly. Decisions regarding specific frequency of visits are made appropriately on an individual basis, dependent on the age, species, breed, health and environment of the pet. Healthy pregnant, lactating, senior and growing animals require more frequent monitoring.

❖ Pet owners should monitor their pet at home, including:

- ❖ Food intake and appetite.
- ❖ BCS and BW.
- ❖ Gastrointestinal signs (eg, fecal consistency and volume, vomiting).
- ❖ Overall appearance and activity.

Animals with disease conditions and/or recommended nutritional changes

Non-hospitalized animals for which extended nutritional evaluation was indicated may require more frequent monitoring of nutritional assessment parameters. Monitoring should include the risk factors shown in Table 1.

Frequent monitoring of BCS and MCS is important as many diseases are associated with suboptimal scores. Also, animals with medical conditions are more likely to receive dietary supplements and to have medications administered with food, so specific attention to and review of these issues, with an update of the dietary plan, are important at each visit to ensure that the overall nutritional plan is optimized. Animals that are not in optimal

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body condition require frequent monitoring and adjustment of intake in order to achieve and maintain optimal body condition.

Hospitalized patients

Daily monitoring of hospitalized patients includes the items in Table 1, and evaluation of the following additional items:

- ❖ **Specific feeding orders** – including diet, route, amount and frequency.
- ❖ **Fluid balance** – assessment of clinical signs (eg, BW changes, pulmonary crackles) or diagnostic tests (eg, central venous pressure).
- ❖ **Optimal route of intake** – the optimal route required to achieve nutrient requirements could change during hospitalization and should be reassessed daily (see above).
- ❖ **Nutrient intake** – the patient's nutrient intake (via all routes) should be quantified and documented.

Many hospitalized patients are discharged prior to complete resolution of their underlying disease. Document and communicate to the client the feeding method, caloric intake, diet, frequency and specific monitoring parameters, and the schedule for rechecks and reassessment.

Discuss with the client any issues that may limit adherence to dietary recommendations (eg, feeding schedule issues, complex instruc-

Client education

Client communication and rapport is important for achieving desired outcomes.^{41–43} Technicians/nurses should be involved in the nutrition evaluation process when they have knowledge and skills in both nutritional concepts and in communication.

Engage the client in decision making and defining expectations. Recommendations may be modified by the client's time, lifestyle and financial limitations. Use communication techniques that include a variety of forms based on client preferences. Use a variety of educational approaches and tools.

Demonstrating and teaching the client to evaluate the BCS and MCS is effective in engaging the client in their pet's care. Expectations and goals should be specific, achievable, and include explicit follow-up in order to monitor progress and compliance, and to adjust recommendations.

Inform clients about specific foods, and potential advantages, risks and concerns.

Include recommendations on amount and frequency of diet fed, accounting for snacks, treats, table food, foods used for medication administration, and dietary supplements. Clients may enrich their pet's nutritional experience by interacting with them at feeding, providing food toys, and playing and exercising with their pet.

Demonstrating and teaching the client to evaluate the BCS and MCS is effective in engaging the client in their pet's care.

tions, financial restrictions) and address appropriately (eg, offer over-the-counter options for appropriate foods if financial restrictions will prevent the owner from consistently feeding the prescribed diet). Create a specific schedule for follow-up via telephone to elicit questions and verify compliance/adherence.

Provide choices in foods that meet nutrient goals. Create a plan with the client about what to do if calorie/nutrient goals are not achieved.

When abnormal parameters have returned to normal or stabilized, the patient may continue on a therapeutic diet or be transitioned to a non-therapeutic diet. If a new diet is necessary, it may be introduced gradually, as previously described.

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KEY POINTS

- ✦ Assurance of proper nutritional health entails more than meeting nutrient profiles. Nutritional assessment is, thus, an important aspect of optimal patient care.
- ✦ This article provides guidance for appropriate, effective assessment, evaluation, action monitoring and education.
- ✦ This approach can be efficiently incorporated into daily practice with little to no additional time or expense.
- ✦ Stay tuned for further developments and expanding knowledge!



Definitions and acronyms

Screening evaluation Initial evaluation performed on all patients

Extended evaluation In-depth information gathering based on issues of concern identified during initial screening

Iterative process Each factor is assessed and reassessed as often as required

Life stage Life stages of cats and dogs refer to periods of life that may influence nutritional needs; for example, growth, reproduction and adult, for which AAFCO provides nutrient profiles^{5,44}

Satisfactory diet Complete (all nutrients present), balanced (nutrients present in proper proportions), digestible (nutrients in the diet are available to the animal), palatable (animal eats willingly), sufficient (amount, see text), and safe

MER Maintenance energy requirements

RER Resting energy requirements

BW Body weight

BCS Body condition score – an evaluation of body fat

MCS Muscle condition score – an evaluation of muscle condition

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