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PEER REVIEWED

The OBESITY EPIDEMIC in Our Patients

National Pet Obesity Awareness Day is October 10, 2012. Visit the Association for Pet Obesity Prevention's website, petobesityprevention.com, for weight loss tools, information on calories in pet foods, and latest news about the fight against pet obesity.

Emphasis on the human-animal bond has had greater importance in recent years. Companion animals have increased in popularity and many household dogs and cats are now regarded as beloved family members and not just used for protection, rodent control, and working duties. These animals now have the role of friend.

With this new title come the perks of affection seen in the form of designer clothes, organic foods, gourmet treats, and high tech toys. A 2005 study reports that dog owners in the United States spend more than 1.7 billion dollars on their pets, and cat owners spend 2.34 million dollars a year on their feline companions.¹

It is not surprising that this role change has resulted in a need for consumer knowledge. Clients are looking for ways to include their companions in their everyday lives, and consider information on optimal nutrition and environmental enrichment as components of responsible pet ownership.² Veterinary studies have addressed many issues of disease physiology and treatment; however, there has been very little research on the role of our companion animals' emotional well-being and how it can relate to their health.³

OBESITY PREVALENCE & FACTORS

Many clients often associate excessive feeding and treat rewards with the affection their pets desire. This, along with a decrease in physical activity as well as spaying/neutering, has led to obesity in companion animals. It is estimated that the overall prevalence of overweight and obese dogs is between 24% and 30% and prevalence of obese cats between 25% and 35%.¹

Obesity in dogs is attributed to several factors, including:

- Predisposition determined by genetics
- Reproductive status
- Dietary and exercise components determined by human management.⁴

According to retrospective surveys performed by multiple practice owners, 3% of obesity cases could be attributed to dog specific factors and 97% to human specific factors, such as diet, exercise, and owner compliance.⁴

CONSEQUENCES OF OBESITY

Deleterious effects of excessive body weight include:

- Metabolic alterations
- Endocrinopathies
- Functional alterations and mechanical stress
- Overall lifespan reduction.^{1,5}

Not only is the animal affected physically when it is overweight or obese, but studies have linked excessive food intake to diminished mental well-being and increased discomfort, specifically joint pain.³ Additionally, decreased joint mobility and activity due to obesity can prohibit the amount of environmental enrichment experienced by the animal, leading to boredom and potentially destructive behaviors.³

HUMAN FACTORS RELATED TO PET OBESITY

It is reported that human socioeconomic and lifestyle factors play a major role in the emerging obesity problem of animals.^{4,6} Positive correlations between the weight of owners and weight of their dogs has been shown as well.⁷

Body Condition Score

Further compromising pet health is a lack of knowledge about proper body condition. A recent study assessing overweight and obese animals and the owners' perceived appreciation of obesity found a poor correlation between the owner's and veterinarian's body condition score, with the owner's score lower than the veterinarian's score.⁸ However, it is noted that if obesity and associated conditions are addressed, an owner is likely to seek the aid of a veterinarian prior to attempting to decrease his or her dog's weight.⁴

Home-Cooked Meals

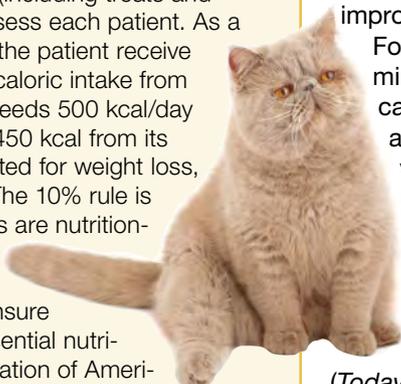
Media attention on the epidemic of human obesity has led to more interest in nutrition and exercise and, with it, a demand for high-quality nutritional products for companion animals.⁹ Despite developments in companion animal nutrition, some pet owners still prefer to formulate food and treats at home.

Some owners believe that a home prepared diet is less expensive and more nutritious or that the act of cooking

CALCULATING TREAT CALORIES

An appropriate dietary history (including treats and table foods) is important to assess each patient. As a general rule, recommend that the patient receive no more than 10% of its daily caloric intake from treats.¹ For example, if a dog needs 500 kcal/day for weight loss, it can receive 450 kcal from its food, which should be formulated for weight loss, and up to 45 “treat calories.” The 10% rule is important because many treats are nutritionally deficient in multiple areas.

Providing 90% of the patient’s food via a balanced diet will ensure that the animal receives all essential nutrients as set forth by the Association of American Feed Control Officials (AAFCO) standards.



for their pets provides a closer bond.⁹ Home-prepared foods often lack required nutrients and can cause deficiencies, excesses, or imbalances.¹ Along with deficient nutrition, the caloric component of home-prepared meals is often difficult to assess and can lead to obesity as a consequence of excessive energy intake.⁹

Excessive Treats

A 2006 survey performed by petplace.com estimates that more than 90% of owners who purchase specialty dog foods give their dogs treats in the form of table foods or specifically purchased dog biscuits, bones, and chews; 34% of cat owners give treats as well.¹ While treats are an important resource in behavior modification and can contribute to the human–animal bond, it is important to communicate to owners that excessive feeding of treats interferes with appetite and dietary balance and leads to obesity (see **Calculating Treat Calories**).

Lower calorie foods can also be used for treat rewards. For example, 1 tablespoon of peanut butter has the same number of calories as 3 cups of air-popped popcorn without butter. Other low calorie foods that can be used as treats include ice cubes, string beans, melon, carrots, apples, and other fruits and vegetables. When making suggestions for human food treats it is important to advise clients against dangerous items, such as onions, garlic, grapes, raisins, and any food item containing the artificial sweetener xylitol.

ENVIRONMENTAL ENRICHMENT

More research has been committed to the basic needs of our companion animals and how meeting those needs can improve the lives of many family pets. Even though most owners are concerned about the overall emotional well-being of their pets, they are not educated about proper ways to provide environmental enrichment.

Knowing the specific function that a particular breed of dog performs can greatly tailor enrichment recommendations. For example, many breeds of dogs were bred to work and enjoy time-consuming tasks. These dogs are

best suited to activities that require mental endurance, such as agility or tracking. Being able to recognize these individual needs will not only enrich the dog, but also improve the human–animal bond.¹⁰

For cats, environmental enrichment is often aimed at mimicking behaviors that are observed in feral or wild cat populations. Since most feral cats spend time foraging for food, enrichment should be aimed at providing opportunities for the cat to search for and “stalk” food.¹⁰ Visual stimulation, such as windows or enclosed patio areas, has been shown to reduce stress associated with boredom. Alternative forms of visual stimulation can include television and fish tanks when windows cannot be provided.^{11,12}

See **How to Enhance Your Pet’s Environment** (*Today’s Veterinary Practice*, July/August 2012, page 81) for more ideas on how to provide environmental enrichment for pets. This pet owner handout is available at todaysveterinarypractice.com.

IN SUMMARY

As the role of companion animals changes from an animal designed for a purpose to a member of the family, it changes the ways in which we provide optimum care. Recognizing the relevance of the human–animal bond and how it relates to behavior and disease in our patients can help practitioners better provide comprehensive care.

A complete understanding of how food is used to interact with the family pet can provide insight to that animal’s case and provide solutions to its needs. Manipulation of food and treat protocols, as well as environmental enrichment, can enhance the health and emotional well-being of specific patients. ■

PREVENTING OBESITY IN PETS

1. Educate owners on how to evaluate proper body condition score. Body condition score scales can be found at:
 - hillspet.com/weight-management/pet-weight-score.html
 - purina.com/dog/weight-and-exercise/bodycondition.aspx
 - purina.com/cat/weight-control/bodycondition.aspx
 - vetcetera.com/about_bcs.asp
 - vetmed.tamu.edu/services/nutrition/body-condition
2. Take a feeding history when evaluating pets and be prepared to provide feeding recommendations that address the animal’s particular dietary needs.
 - General feeding recommendations: vet.osu.edu/vmc/diet-manual
 - For clients that formulate home-made diets: vet.osu.edu/vmc/home-made-diets
 - Feeding recommendations should take into consideration pets’: age/life stage, activity level, body condition (thin, ideal, overweight, obese), disease state (cardiac disease, atopy, organ dysfunction, etc).
3. Counsel owners on treat rewards; help them determine what types of treats are best as well as the appropriate amount to feed each day.
4. Encourage owners to pursue environmental enrichment and regular exercise with their pets.

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to the phalanges, including the toe nails.

- » The carpus should have the same appearance as when the image is centered on the carpus.
- » The phalanges should be spread apart to avoid superimposition among them.

Phalanges

Each phalanx should be separated to allow visualization of each joint on the mediolateral and dorsopalmar projection of the phalanges. ■

FOV = field of view

Suggested Reading

- Burk RL, Feeney DA. *Small Animal Radiology and Ultrasonography: A Diagnostic Atlas and Text*, 3rd ed. Philadelphia: Saunders Elsevier, 2003.
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- Sirois M, Anthony E, Mauragis D. *Handbook of Radiographic Positioning for Veterinary Technicians*. Clifton Park, NY: Delmar Cengage Learning, 2010.
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11. Ellis SLH. Environmental enrichment: Practical strategies for improving feline welfare. *J Fel Med Surg* 2009; 11(11):901-912.
12. Shyan-Norwalt MR. Caregiver perceptions of what indoor cats do 'for fun.' *J Appl Welfare Sci* 2005; 8(3):199-209.



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