

## **NEW TOOLS IN MANAGING YOUR OVERWEIGHT PATIENTS!**

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Pet obesity has reached epidemic proportions in the US and other industrialized countries. It is estimated that 35% of adult pets and 50% of pets over age 7 are overweight or obese.<sup>1</sup> Obesity can be defined as an increase in fat tissue mass sufficient to contribute to disease. Dogs and cats weighing 10-19% more than the optimal weight for their breed are considered overweight; those weighing 20% or more above the optimum weight are considered obese. Obesity has been associated with a number of disease as well as with a reduced lifespan. A combination of excessive caloric intake, decreased physical activity and genetic susceptibility are associated with most cases of obesity and the primary treatment for obesity is reduced caloric intake and increased physical activity. Obesity is one of the leading preventable causes of illness/death and with the dramatic rise in pet obesity over the past several decades, weight management and obesity prevention should be among the top health issues healthcare team members discuss with every client.

### **Causes of Obesity**

Obesity is caused by an imbalance of energy intake and energy expenditure - too much in, too little out! There are several risk factors that affect energy balance. In today's society, indoor pets (in North America) are typically neutered. While there are many positive health benefits associated with neutering, it is important that metabolic impacts are addressed as well. Studies have demonstrated that neutering may result in decreased metabolic rate and increased food intake, and if energy intake is not adjusted, body weight, body condition score and amount of body fat will increase resulting in an overweight or obese pet. Other recognized risk factors for obesity include breed, age, decreased physical activity, and type of food and feeding method.<sup>2,3</sup>

Specific breeds of dogs and cats are more likely to become overweight. In dogs these include Shetland Sheepdogs, golden retrievers, dachshunds, cocker spaniels, Labrador retrievers, Dalmatians, Rottweilers and mixed breeds. In cats, mixed breeds and Manx cats have been found more likely to be obese compared to most purebred cats. Veterinary technicians should begin discussions on maintaining appropriate/optimal weight in pets, particularly in at-risk breeds, during the initial puppy/kitten health and wellness examination.

### **Health Risks Associated with Obesity**

There are many health conditions associated with obesity in pets including arthritis, diabetes mellitus, cancer, skin diseases, lower urinary tract problems, hepatic lipidosis and heart disease. Obese pets are also more difficult to manage in terms of sample collection (blood, urine) and catheter placement and may be more prone to treatment complications including difficulty intubating, respiratory distress, and slower recovery time and delayed wound healing. It is widely believed that obesity affects quality of life and leads to reduced life expectancy. The dramatic impact of excess body weight in dogs and cats has been demonstrated. In cats, it is estimated that 31% of DM and 34% of lameness cases could be eliminated if cats were at optimum body weight. In dogs, lifespan was increased by nearly 2 years in dogs that were maintained at an optimal body condition.<sup>3</sup> It's important to recognize and to communicate to our clients that fat tissue is not inert...obesity is not an aesthetic condition that only affects our

pet's ability to interact with us on a physical activity level. Fat tissue is metabolically active and in fact is the largest endocrine organ in the body and has an unlimited growth potential. Fat tissue is an active producer of hormones and inflammatory cytokines and the chronic low-grade inflammation secondary to obesity contributes to obesity related diseases.<sup>3,4</sup>

### **Evaluating Weight and Nutrition**

Most pet owners do not recognize (or want to admit) that their pet is overweight. The entire healthcare team needs to commit to understanding and communicating the role of weight management in pet health and disease prevention. In particular, the veterinary technician is the primary source for client education; the interface between the client, the doctor and the rest of the hospital team; and is the key advocate for the patient.

The healthcare team should assess every patient to establish nutritional needs and feeding goals. These goals will vary depending on the pet's physiology, obesity risk factors and current health status. Designing and implementing a weight management protocol supports the team, the client and most importantly the patient.<sup>2</sup>

A complete history including a detailed nutritional profile and a complete physical examination including a complete blood count, serum chemistry and urinalysis, are the first steps in patient evaluation. Signalment data should include species, breed, age, gender, neuter status, weight, activity level and environment. The nutritional history should determine the type of food (all food) fed, the feeding method (how much, how often), who is responsible for feeding the pet and any other sources of energy intake (no matter how small or seemingly insignificant).

The following questions should be part of every nutritional assessment:

- What brand of food do you feed your pet (try to get specific name)?
- Do you feed moist or dry or both?
- How do you feed your pet – feeding method (how much, how often)?
- Does your pet receive any snacks or treats of any kind? If so, what and how often?
- Do you give your pet any supplements?
- Is your pet on any medications, including chewable medications? If so, obtain name and dosage.
- What type of chew toys does your pet play with?
- Do you feed your pet any foods or treats not specifically designated for pets (such as human foods)? If so, what and how often.
- Does your pet have ANY access to other sources of food (neighbor, trash, family member, etc)

Obtaining a complete nutritional history supports consistent and accurate patient information, provides key insights to barriers in client compliance, guides client discussion, and supports the optimal weight management program for the pet.

Be sure to weigh the pet and obtain a body condition score at every visit and record the information in the patient's medical record. It's helpful to use the same scale and chart the findings for the client. Body condition scoring (BCS) is important to assess a patient's fat stores and muscle mass. A healthy and successful weight management program results in

loss of fat tissue while maintaining lean body mass and consistent and accurate assessment of weight and BCS are important tools to track progress. The use of body condition charts and breed charts are helpful tools in discussing the importance of weight management with clients and helps them visualize what an optimal weight would look like on their pet.

Body fat indexing utilizing morphometric measurements is the newest tool in obtaining an accurate fat percentage on the pet's body. This method of obtaining a more accurate body fat percentage has been utilized and confirmed by veterinary nutritionists and provides a better method for pinpointing the amount of fat on a specific pet. This in turn will aid in accurately calculating an amount to feed for an overweight pet, better identifying the pets' ideal body weight, to insure proper weight loss, and increased success in a weight management program.

### **Weight Management Program**

As with many aspects of healthcare, designing a successful weight management program is not a 'one program fits all' for our patients. The components of a successful weight management program include consistent and accurate weight measurement/patient monitoring, effective client communication, identification of compliance gaps and utilization of tools to reinforce compliance, client and patient support and program re-structure as needed.

Setting a goal for weight loss and calculating the appropriate energy intake starts with determination of the pet's ideal body weight. Ideal body weight is a starting goal that is adjusted for appropriate body condition as the pet loses weight. It is important to determine the number of daily calories that will result in weight loss while providing adequate protein, vitamins and minerals to meet the pet's daily energy requirement (DER). The DER reflects the pet's activity level and is a calculation based on the pet's resting energy requirement (RER).

There are a couple of basic formulas that all technicians should memorize or have on laminated note cards in every exam room (along with a calculator)! The most accurate formula to determine the RER for a cat or a dog is:

$$\text{RER kcal/day} = 70(\text{Ideal Body Weight in Kg})^{0.75}$$

or

$$\text{RER kcal/day} = (\text{kg} \times \text{kg} \times \text{kg}, \sqrt{\quad}, \sqrt{\quad}) \times 70$$

Once RER is determined, DER may be calculated by multiplying RER by 'standard' factors related to energy needs. The calculations used to determine energy needs for obese prone pets or for pets needing to lose weight are<sup>2</sup>:

<b>Obese prone dogs</b>	<b>DER = 1.4 x RER</b>
<b>Weight loss/dogs</b>	<b>DER = 1.0 x RER</b>
<b>Obese prone cats</b>	<b>DER = 1.0 x RER</b>
<b>Weight loss/cats</b>	<b>DER = 0.8 x RER</b>

Gathering the above information takes only a few minutes and is the foundation for developing a weight loss program that includes: 1) Target weight or weight loss goal, 2) maximum daily caloric intake, and 3) specific food, amount of food and method of feeding. The program should also include specific protocols for monitoring the pet's weight (schedule these before the client leaves and send reminder cards), adjusting the pet's energy intake accordingly and

exercise guidelines/suggestions. There are several specific recommendations that support a successful weight loss program including: 1) emphasizing feeding consistency including feeding the pet from its designated dish only, 2) be sure the client is using an 8 ounce measuring cup, 3) recommend the appropriate weight loss food and calculate the initial feeding amount, 4) discuss the importance of total energy intake (do not feed anything other than the recommended food at the designated amount), 5) if the client wants to 'treat' their pet, make appropriate recommendations and adjust the caloric intake of the base food accordingly, 6) encourage client's to feed their pet's separately if possible, 7) recommend appropriate exercise for the pet, 8) offer your client's suggestions on ways other than food to reward or bond with their pet, and 9) evaluate, adjust, communicate, and encourage on a consistent basis.

### **Summary**

Successful weight management begins with recognition of the importance of weight control in our pets. It is essential that the healthcare team, specifically the veterinary technician, communicate the serious effects that even a few excess pounds can have on the health and longevity of their pet's lives. Weight management should be a cornerstone wellness program in every clinic and the veterinary technician the champion of the program and advocate for the patient.

### **References**

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