

Canine & Feline Obesity: Managing Weight Loss



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Overview:

According to the Association for Pet Obesity Prevention's most recent data, over 50% of dogs and cats in the USA are overweight or obese. The causes of obesity in pets are complex and include lack of owner recognition, gonadectomy, and possibly unidentified environmental factors.¹⁻³ Obesity in cats and dogs is associated with osteoarthritis, diabetes mellitus, neoplasia, and several other conditions in dogs and cats.¹ As our understanding of obesity and the metabolic activity of adipose tissue improves, it is becoming increasingly clear that obesity drives inflammation, and excess adipose tissue has endocrine functions that are pathological.^{1,4,5} These associations between obesity and deleterious conditions justify treating obesity as a disease in its own right.

Management:

The first step in addressing obesity in pets is recognition. Once a clinician determines a patient is overweight or obese, tailored client communication is key to helping pet owners recognize their pet's weight problem and understand the consequences of obesity. Accurately assigning a body condition score (BCS) and recording weight will establish a baseline to help monitor weight management programs. The author recommends the 9 scale BCS system,^{6,7} where a BCS of 4/9 to 5/9 is ideal. Using this BCS system, patients 6/9 to 7/9 are typically considered overweight, while 8/9 to 9/9 are obese. Clinicians should obtain a thorough diet history and discuss their patient's weight in the context of severity. For example, a patient with a BCS of 6/9 that the client feeds an excessive amount of treats may prompt a simple discussion regarding appropriate treats and adjusting the current diet. In contrast, a dog with a BCS of 9/9 will likely benefit from a regimented weight loss plan that includes a veterinary therapeutic weight loss diet.

Once a clinician identifies the need for weight loss, the first step in devising a plan is determining the pet's ideal body weight. Many experienced clinicians can make this estimation based on breed and other patient characteristics; however, a general rule of thumb is that for every one BCS greater than 5, the patient is at least approximately 10% overweight. For example, a dog with a BCS of 8/9 is at least 30% overweight. Using ideal body weight, calculate the patient's resting energy requirement (RER) and metabolizable energy requirement (MER). The MER of most de-sexed dogs is approximately 1.3 x RER and essentially equivalent to RER in the case of spayed or neutered indoor cats. Variability in MER

in dogs and cats is summarized elsewhere.¹ In nearly all cases, the patient's caloric intake will exceed their calculated MER. If this is not the case, the clinician may consider hypothyroidism or other metabolic disorders that cause obesity. Rarely is this the case, as most cases of obesity in companion animals are simply due to excess calories! In some instances, revisiting diet history can disclose calorie sources that a pet owner previously omitted.



Once confident that caloric excess is the cause of a patient's obesity, implementing a weight loss plan is essential. The American Animal Hospital Association's Nutrition and Weight Management Guidelines are an excellent in-depth resource. If initial attempts at weight loss fail or the pet is severely obese, the author recommends targeting a daily caloric intake of 60-70% RER for obese-prone dogs and approximately 70-80% RER for indoor cats. Choosing a therapeutic weight loss diet has several advantages:

- Stricter manufacturing processes leading to more consistent calorie density and macronutrient profiles across batches.
- High protein assures adequate dietary protein intake in the face of caloric restriction.
- Nutrient profiles account for caloric restriction to ensure the proper vitamin and mineral intake.
- Features that improve satiety and thus compliance.
- Some may contain additional nutritional factors that may promote weight loss, such as L-carnitine.
- Clinical trials or research conducted with some therapeutic weight loss diets further supports their benefits.

Footnotes:

1 <https://petobesityprevention.org/2018>

2 <https://wsva.org/global-guidelines/global-nutrition-guidelines/>

3 <https://www.aaha.org/aaha-guidelines/2021-aaha-nutrition-and-weight-management-guidelines/home/>



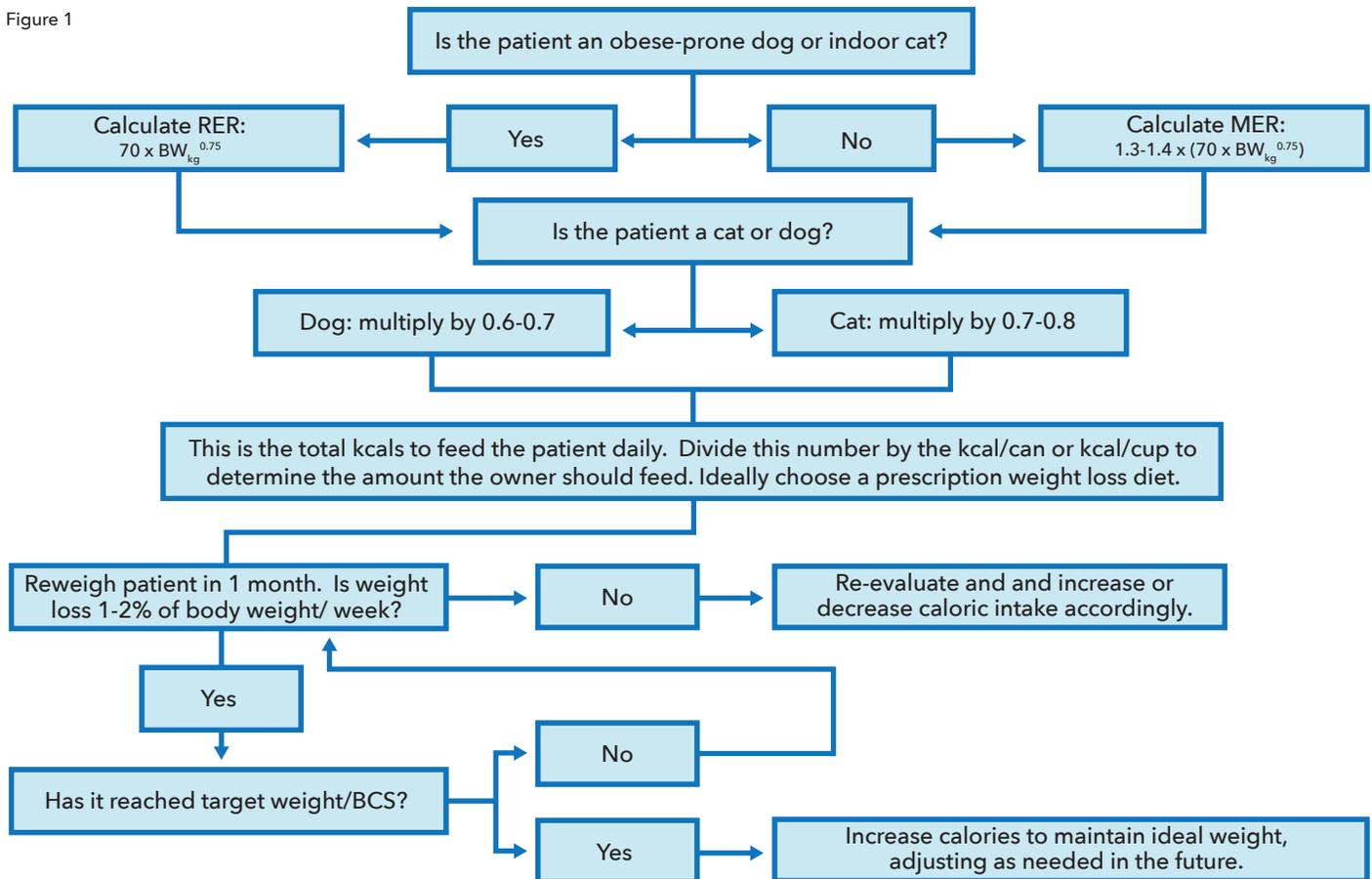
Tips:

- Canned diets may help with satiety; the water content improves gastric fill.
- Exercise is a valuable part of a weight loss program but alone does not promote significant weight loss.
- Instruct clients to encourage water consumption, particularly in cats.
- Implement a strong client communication and follow-up plan. Drs. Linder and Mueller have written an excellent manuscript on the subject.⁸
- Recommend limiting treats, typically to about 10% of their total calories. In many cases, reserving some of the pet's kibble for treats works well. Fresh or frozen (not canned) green beans given fresh, cooked, or still frozen are great low-calorie treats that many dogs will enjoy. Cats may like zucchini or winter squash (cooked, mashed, or shredded) as a low-calorie treat!

Considerations for selecting a therapeutic weight loss diet may include macronutrient profiles, other diet characteristics such as various mobility features (e.g., omega-3 fatty acids), veterinarian experience and access to specific diets, and client preferences. Veterinary therapeutic weight loss diets include Blue Buffalo Weight Management diets, Hill's Science Diet Metabolic and other formulas, Purina OM, and Royal Canin Satiety diets. A weight loss plan should clearly specify

the amount of food the client should provide daily, determined by the caloric target divided by the caloric density of the diet. Company product guides readily provide this information, and can help guide choosing specific formulation if certain nutritional characteristics are desired. An ideal weight loss goal for patients is to lose about 1-2% of their body weight weekly and should be evaluated by weighing the patient monthly (Figure 1).

Figure 1



References:

1. Loftus JP, Wakshlag JJ. Canine and feline obesity: a review of pathophysiology, epidemiology, and clinical management. VMRR 2014;6:49-60.
2. Laflamme DP. Nutrition for aging cats and dogs and the importance of body condition. The Veterinary clinics of North America Small animal practice 2005;35:713-742.
3. Cave NJ, Allan EJ, Schokkenbroek SL, et al. A cross-sectional study to compare changes in the prevalence and risk factors for feline obesity between 1993 and 2007 in New Zealand. Preventive veterinary medicine 2012;107:121-133.
4. German AJ, Ryan VH, German AC, et al. Obesity, its associated disorders and the role of inflammatory adipokines in companion animals. Veterinary journal (London, England: 1997) 2010;185:4-9.
5. Trayhurn P, Wood IS. Adipokines: inflammation and the pleiotropic role of white adipose tissue. The British journal of nutrition 2004;92:347-355.
6. Laflamme DP. Development and validation of a body condition score system for dogs: a clinical tool. Canine Pract 1997;22.
7. Laflamme DP. Development and validation of a body condition score system for cats: a clinical tool. Feline Pract 1997;25.
8. Linder D, Mueller M. Pet obesity management: beyond nutrition. Vet Clin North Am Small Anim Pract 2014;44:789-806, vii.

