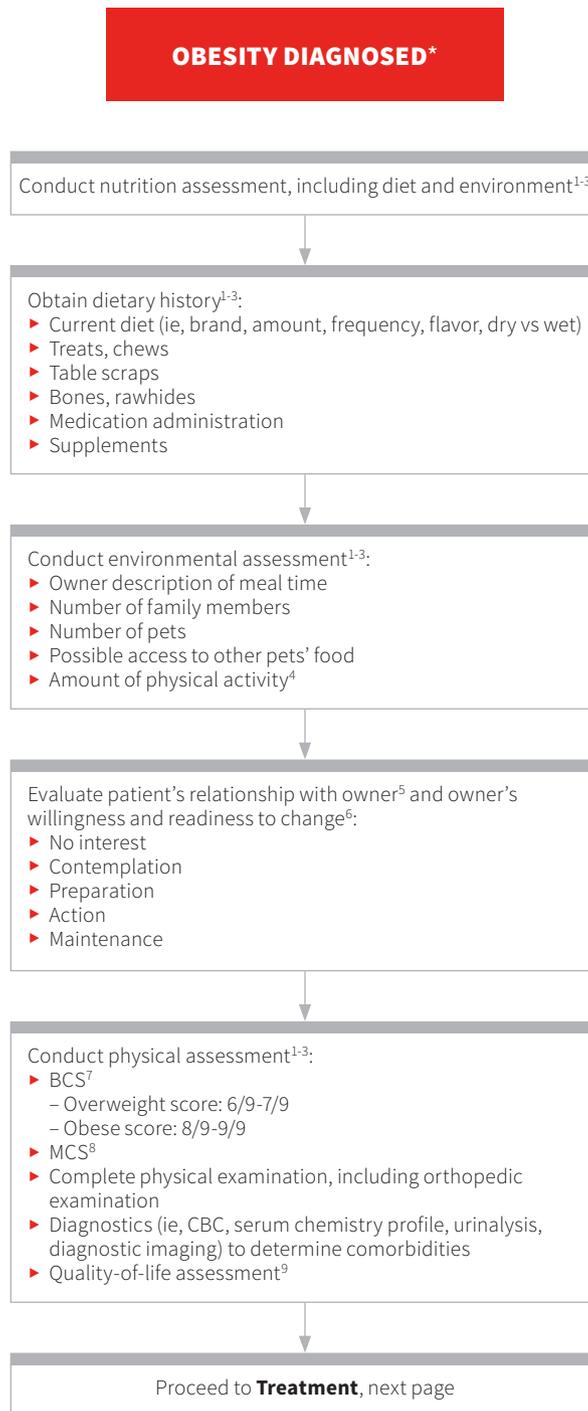


# Obesity in Dogs

Deborah E. Linder, DVM, MS, DACVN  
 Tufts University



\*The AAHA Weight Management Guidelines define obesity as having a BCS 8/9 or above,<sup>1</sup> although the guidelines, as well as this algorithm, may be helpful for any pet that is above ideal body weight.

MCS = muscle condition score

**TREATMENT**

Design a weight-loss program that includes<sup>1</sup>:

- ▶ Ideal body weight (IBW)
- ▶ Calorie restriction
- ▶ Diet selection
- ▶ Treat allowance
- ▶ Feeding strategies
- ▶ Activity plans
- ▶ Behavior strategies
- ▶ Monitoring and follow-up

Determine target weight with owner<sup>1</sup>:

- ▶ Check medical record for previous IBW and/or BCS
  - Consider that each whole BCS change above 5 (on a 9-point scale) or half of a BCS change above 3 (on a 5-point scale) equals approximately 10% overweight
- ▶ Use IBW or alternate goal as target weight based on medical history (eg, comorbidities) and owner expectations/readiness to change

Set initial caloric restriction<sup>1</sup>

Caloric intake known

Caloric intake unknown

Feed 80% of current caloric intake

Feed 80% of RER based on target weight  
 $0.8 \times 70 (\text{target weight}_{\text{kg}})^{0.75}$

Select a diet<sup>1,10</sup>

- ▶ Consider veterinary therapeutic diet if:
  - Patient has >20% of body weight to lose
  - Comorbidities are present
  - Patient requires <80% RER to lose weight
- ▶ Nutrient profile considerations<sup>11-13</sup>:
  - Appropriate calorie density (dry food, <3100 kcal/kg; wet food, <950 kcal/kg)
  - Protein levels (>2.5 g/kg of body weight, or  $\geq 6$  g per 100 kcal of diet if restriction is 80% RER)
  - Increased fiber for satiety, if patient is tolerant and owner can provide frequent walks
- ▶ Canned diet, if greater satiety from increased moisture is desired and if a more cost-effective diet is a client consideration

Create treat allowance plan with owner<sup>1</sup>:

- ▶  $\leq 10\%$  of daily caloric intake
- ▶ Include medication administration
- ▶ Include non-negotiables
- ▶ Consider compromises if adherence is a concern

IBW = ideal body weight  
 MCS = muscle condition score  
 RER = resting energy requirement



## UNBEATABLE PARTNERSHIP...

EVO<sup>®</sup>, the gold standard in portable veterinary ultrasound, has partnered with FASTVet<sup>™</sup> to offer quick diagnostic protocols to companion animal practices.

With a probe designed specifically for small animals, EVO<sup>®</sup> + FASTVet<sup>™</sup> offers veterinary practices the ability to perform fast, critical ultrasound exams *every day, for every patient*.

Built-in procedural videos provide immediate assistance in performing FASTVet<sup>™</sup> protocols. In emergencies, no other tool offers such unparalleled, exigent diagnostic assistance.

## IMAGE QUALITY

Designed exclusively for use with the EVO<sup>®</sup>, the G6E probe provides image quality never before seen in portable veterinary ultrasound... including color doppler! Improved imaging allows faster, more accurate exams for any small animal species.

With EVO<sup>®</sup> + FASTVet<sup>™</sup> you can:

- evaluate fluid score and volume status in trauma patients
- monitor changes in geriatric patients and those with chronic disease
- screen for hereditary conditions in predisposed breeds
- identify neoplasia, uroliths, and other anomalies in the ADR patient without an exploratory celiotomy
- screen preoperative patients
- monitor cardiac patients and identify pulmonary changes
- perform other, routine preventative exams

Contact us today for more information...

866.365.6596

info@eimedical.com

Encourage active lifestyle<sup>1,4</sup>:

- ▶ Walks
- ▶ Food-dispensing toys
- ▶ Chase balls or treats
- ▶ Underwater treadmill
- ▶ Agility course
- ▶ Active play or walking
- ▶ Obedience classes

## FOLLOW-UP

Develop monitoring plan with owner<sup>1</sup>:

- ▶ Weigh-ins every 2-4 weeks
- ▶ Determine adherence
  - Revisit diet history
- ▶ Record body weight, BCS, MCS
- ▶ Calculate rate of weight loss
  - Aim for 1%-2% of body weight/week
- ▶ Slow rate of weight loss if:
  - Rate >2%/week
  - Comorbid condition
  - MCS decreases at all (ie, there should be no palpable muscle wasting)
- ▶ Reduce caloric intake by 10% if:
  - Owner is adherent and rate is <1%/week

Troubleshoot with owner in cases of<sup>1,5</sup>:

- ▶ Begging behavior
  - Try autofeeders
  - Try increased fiber for satiety
- ▶ Multipet households
  - Separate pets with baby gate or by room
  - Try microchip reader feeders (ie, devices that only allow access to pets by scanning microchip)
- ▶ Weight-loss plateau
  - Increase physical activity
  - Consider food with lower calorie density
- ▶ Owner guilt/emotional concerns<sup>5</sup>
  - Discuss concerns with open-ended questions
  - Brainstorm treatment strategies with owner
  - Consider all members of household
  - Discuss alternatives to *food is love* method of care
    - Walking, grooming, interactive play

## References

- Brooks D, Churchill J, Fein K, et al. 2014 AAHA weight management guidelines for dogs and cats. *J Am Anim Hosp Assoc*. 2014;50(1):1-11.
- Baldwin K, Bartges J, Buffington T, et al. AAHA nutritional assessment guidelines for dogs and cats. *J Am Anim Hosp Assoc*. 2010;46(4):285-296.
- Freeman L, Becvarova I, Cave N, et al. WSAVA nutritional assessment guidelines. *Compend Contin Educ Vet*. 2011;33(8):E1-E9.
- Ellis SL, Rodan I, Carney HC, et al. AAFCO and ISFM feline environmental needs guidelines. *J Feline Med Surg*. 2013;15(3):219-230.
- Linder D, Mueller M. Pet obesity management: beyond nutrition. *Vet Clin North Am Small Anim Pract*. 2014;44(4):789-806.
- Churchill J. Increase the success of weight loss programs by creating an environment for change. *Compend Contin Educ Vet*. 2010;32(12):E1.
- Laflamme DP. Development and validation of a body condition score system for cats: a clinical tool. *Feline Pract*. 1997;25(5):13-17.
- Michel KE, Anderson W, Cupp C, Laflamme DP. Correlation of a feline muscle mass score with body composition determined by dual-energy X-ray absorptiometry. *Br J Nutr*. 2011;106(Suppl 1):S57-S59.
- German AJ, Holden SL, Wiseman-Orr ML, et al. Quality of life is reduced in obese dogs but improves after successful weight loss. *Vet J*. 2012;192(3):428-434.
- Linder DE, Parker VJ. Dietary aspects of weight management in cats and dogs. *Vet Clin North Am Small Anim Pract*. 2016;46(5):869-882.
- Association of American Feed Control Officials. Model regulations for pet food and specialty pet food under the model bill. In: Association of American Feed Control Officials, ed. *AAFCO 2017 Official Publication*. 2017:136-149. <http://www.aafco.org/publications>. Accessed on March 1, 2017.
- Linder DE, Freeman LM, Morris P, et al. Theoretical evaluation of risk for nutritional deficiency with caloric restriction in dogs. *Vet Q*. 2012;32(3-4):123-129.
- Linder DE, Freeman LM, Holden SL, Biourge V, German AJ. Status of selected nutrients in obese dogs undergoing caloric restriction. *BMC Vet Res*. 2013;9:219.