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1 Weber M, Bissot T, Servet E, et al. A High-Protein, High-Fiber Diet Designed for Weight Loss Improves Satiety in Dogs. *J Vet Intern Med* 2007;21:1203-1208.

2 Pan Y. Soy germ isoflavones supplementation reduced body fat accumulation and enhanced energy metabolism in dogs. *J Vet Intern Med* 2012; 26: 812-813.

Pound for Pound: How Diet Makes a Difference in Healthy Weight Loss

Q As a nutrition scientist, what have you learned about the ideal components of a canine weight-management diet?

A While all weight-management diets are designed to reduce a dog’s daily intake of calories, there is more to successful weight loss than calorie reduction. The nutritional composition of the ideal diet should also address the following objectives:

- **Facilitate fat loss while minimizing loss of lean body mass.** A **high-protein diet** is key to a dog losing fat without also losing muscle. If a dog loses significant amounts of muscle when losing weight, the effort will be counterproductive, because lean body mass is more metabolically active and expends more energy than fat tissue.
- **Promote satiety.** A combination of high protein and fiber can lead to better satiety-promoting results than either component alone.¹ Because the amino acids from protein digestion are absorbed slowly, little insulin is induced and hypoglycemia—which contributes to feelings of hunger—is delayed. Increased **dietary fiber** also promotes satiety by reducing the caloric density of the food (thus allowing the dog to eat more food without consuming more calories) and triggering a “full” feeling.
- **Reduce inflammation.** Obesity is associated with low-grade, chronic inflammation, which can lead to common canine diseases like osteoarthritis, as well as other inflammatory diseases such as diabetes and cancer. A weight-management diet rich in omega-3 fatty acids may help reduce inflammation.
- **Manage key parameters of metabolic health.** Along with reducing glucose and insulin, an ideal weight-management diet should reduce levels of leptin, cholesterol and triglycerides.
- **Address weight rebound.** Maintenance of

healthy energy expenditure is important both *during* and *after* weight loss, to reduce the risk of weight regain. Unfortunately, rebound is common after weight loss, which means that weight easily *increases* when pre-weight-loss habits are resumed. In dogs, adding soy germ meal containing compounds known as isoflavones to the diet can increase energy metabolism and help reduce the risk of weight rebound.²

Q You recently studied a new metabolic weight-management diet. What did you learn?

A The six-month study included two groups of overweight dogs with an average body condition score (BCS) of 7.8—a control group and a group that consumed the metabolic test diet. The test diet had a 3:1 protein/starch ratio, while both diets had similar energy densities as measured in kcal/kg ME. Caloric restriction was 25% MER for months 1-4 and 40% MER for months 5-6.

Although there was no significant difference in the amount of weight lost between the two groups at the conclusion of the trial, there were significant differences in body composition and other metabolic parameters that are vital to healthy weight loss. For example, dogs on the metabolic test diet lost significantly more body fat than the control dogs but did not lose significant lean body mass; dogs in the control group, however, lost significant amounts of lean body mass compared with baseline.

- Postprandial glucose was significantly lower in the dogs fed the test diet versus control at the study’s end.
- After six months of weight loss, the average change in fasting serum insulin from baseline was 4 times lower in the dogs fed the test diet compared to the change in insulin from baseline in dogs fed the control diet.
- Serum cholesterol decreased 45% and triglycerides 35% in the dogs fed the test diet over the six-month study.
- Dogs eating the metabolic test diet had reduced select pro-inflammatory cytokines after six months of weight loss.

BENEFITS OF AN IDEAL CANINE WEIGHT-LOSS DIET

ABDOMEN OR MID-SECTION

Decreased body fat, maintenance of lean body mass

HEAD AND STOMACH

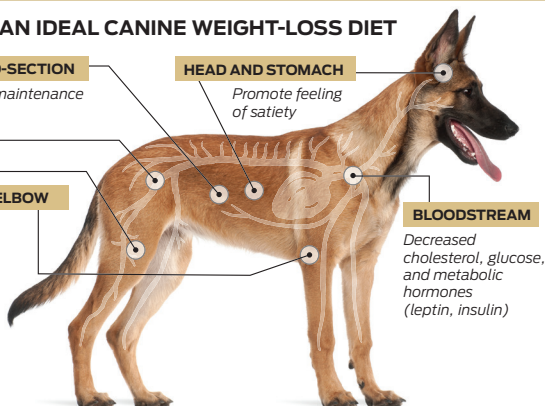
Promote feeling of satiety

HIP, STIFLE, ELBOW

Decreased pro-inflammatory mediators

BLOODSTREAM

Decreased cholesterol, glucose, and metabolic hormones (leptin, insulin)



Achieve Compliance Through Effective Obesity and Osteoarthritis Management



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Obesity is a leading risk factor in dogs for the development and progression of osteoarthritis (OA). Not only does this “dreaded duo” of obesity and immobility rob patients of quality of life; it can also shorten life span.

For many years, I felt powerless to change this trajectory. When an overweight, arthritic canine patient limped into my exam room, it was easy to assume they were “too far gone.” This view, however, became unacceptable to me. Over the years, some amazing patients and pet owners have inspired me to try new strategies and adopt new ideas for managing pets with these comorbidities. Why? Because I believe that inside every obese, arthritic dog is a lean, active dog waiting to be discovered. These dogs only need motivated pet owners and veterinary teams who together are committed to helping them become healthier. As veterinarians, we need to adopt a mindset of *opportunity* to give the gift of well-being back to these dogs and their families.

No laughing matter

Canine obesity must be taken seriously and treated like the potentially life-threatening condition it is. I frequently use the findings of the Purina Life Span Study as a learning tool for clients with obese dogs. This 14-year study revealed the lifetime benefits of feeding dogs to an ideal body condition*. In the study, 48 eight-week-old Labrador Retrievers—24 pairs of littermates—were paired according to gender and body weight and randomly assigned to

a control or a lean-fed group, with dogs in the lean-fed group fed 25% less food than their paired littermates.

Study findings demonstrated that feeding to an ideal body condition over a lifetime can significantly extend a dog’s healthy years.

- The lean-fed dogs experienced **extended healthy years, by an average of 1.8 years** for the dogs in the study.¹
- The average age at which 50% of the lean-fed dogs required treatment for OA was **3 years later** than the control dogs (13.3 versus 10.3 years of age).¹
- The **prevalence of OA was lower in the shoulder joints and severity of OA was lower in the elbow joints** in the lean-fed dogs. At 8 years of age, the prevalence of OA in two or more joint types was 77% among control-fed dogs and only 10% in lean-fed dogs.²

Help patients reach the weight-loss tipping point

A weight loss rate of 1% to 2% of body weight per week is usually best for dogs. However, improved patient mobility is often not noted until at least 10% of weight loss is achieved. Dogs predictably show improved mobility, activity, energy and comfort as weight loss plans progress, and owners tend to be encouraged by the time their dogs reach this milestone. In the meantime, owners who are questioning the value of their efforts can be reminded that improved quality of life for their pets may be just weeks away.

Maintaining a Healthy Weight

Once ideal body weight and body condition score (BCS) are attained, daily caloric consumption may need to be increased 10% to 20% to prevent continued weight loss. Continuing to feed the current weight-management diet or transitioning to an evidence-based, omega-3 fatty acid-enriched diet for joint support may be recommended. Continued serial monitoring of body weight and BCS is advised to ensure that rebound weight gain does not occur because the pet may maintain a lower-than-average daily energy requirement.

Nutritional management combined with an exercise plan is likely to be more effective than dietary management alone, especially when the goal is to preserve lean muscle mass. Additionally, pain management is central to the restoration of life quality for dogs suffering from both obesity and OA. I recommend in-clinic physical rehabilitation and therapeutic exercise, combined with training the pet owner how to perform at-home therapies. Here again, pet owners may need extra support from the veterinary team early on, as it often takes three to six weeks of comprehensive nutritional and physical rehabilitation management before improvements in patient activity, mobility and weight loss are seen. Once achieved, this observable increase in enthusiasm for activity often serves as a tipping point within the program.

- 1 Kealy RD, Lawler DF, Ballam JM, et al. Effects of diet restriction on life span and age-related changes in dogs. *J Am Vet Med Assoc.* 2002 May 1;220(9):1315-20. doi: 10.2460/javma.2002.220.1315. PMID: 11991408.
- 2 Kealy RD, Lawler DF, Ballam JM, et al. Evaluation of the effect of limited food consumption on radiographic evidence of osteoarthritis in dogs. *J Am Vet Med Assoc.* 2000 December 1;217(11):1678-1680.

*Lean or ideal body condition refers to the evaluation of body physique in pets as an indicator of their overall health and well-being, generally falling into three categories: too heavy, ideal and too thin.

Tips to Facilitate Effective Weight-Loss Conversations



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Every relationship between a pet and his or her family is unique, and success in weight management lies in understanding this complex dynamic. Here are some tips that can help set both pet and family up for success.

1. Assess the client’s readiness for or resistance to change. A weight-loss program can entail major lifestyle adjustments, and spending time understanding the family’s needs can guide conversations and your recommendations. Before starting the weight-loss discussion, consider whether the client is interested in making changes to how they feed their pet—or whether they have made changes in the past and stopped after encountering challenges. Using open phrases to initiate the conversation can be useful, such as, “It sounds like you’re concerned about your pet’s weight affecting his ability to jump and play. Tell me more about that.” If families seem resistant to change or defensive about their pet’s weight, discussing quality-of-life and health-related outcomes as a primary goal can help. Instead of monitoring body weight, consider outcomes like ability to groom for cats, or pain or quality-of-life scales for any pet. Meeting families where they are will help you work with them to set realistic goals.

2. Support the human-animal bond. The strong emotional bond owners have with their pets can make them reluctant to withhold food or treats that they feel define their relationship. Asking about the relationship between the pet and all members of the household can help uncover the “non-negotiables” that need to be discussed and included in the nutritional plan. Asking questions such as, “Is there anything you feel strongly about including in the plan?” or “What is your pet’s favorite part of the day?” can help you develop a plan that both owner and health care team feel comfortable with. Plans that enhance (and don’t threaten) the bond that families have with their pets can improve adherence and minimize attrition.

3. Discuss evidence-based weight management. We’ve all had clients ask for our opinion about diets, supplements, treats or other products with health claims, including weight-management products. If a company is making claims about product benefits without evidence from peer-reviewed studies, they should be asked for supporting data about how they determined their claims and considered carefully if this evidence cannot be provided. Likewise, when you are recommending a therapeutic



Talking with owners about weight management and listening to their concerns is the first step toward success.

diet or supplement, explaining how that product was formulated and what specific outcomes can be expected will help families understand the rationale behind evidence-based medicine and why you are recommending a particular product for their pet.

4. Make the experience relatable. Illustrating your points with a story can be quite impactful. For example, I recently had to say goodbye to my 16-year-old dog. I tell families that had I not paid careful attention to her weight throughout her life, I might have lost her earlier. I emphasize how pets’ lives can be negatively affected if they’re even mildly overweight, and empower families with tools and knowledge to monitor their pets proactively from the very first clinic visit.

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PURINA Institute

Advancing Science for Pet Health

Tips to Get the Weight Conversation Started

Pet obesity can be a sensitive topic, but it’s critical to address. In this video, weight-loss Board Certified Veterinary Nutritionist® Dr. Julie Churchill offers 4 minutes of practical steps and scenarios to help guide you through the process.



Visit purinainstitute.com/obesity or scan the QR code.



SCAN ME

NEW

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 VETERINARY DIETS

TRANSFORM HIS
 METABOLISM AND
 PROMOTE MOBILITY

OM METABOLIC RESPONSE JOINT MOBILITY

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Weight-loss programs that focus on traditional caloric restriction and physical activity may not be appropriate or successful for all families. Incorporating strategies that enhance and support the family-pet relationship can help you create a customized—and successful—plan.



Online Resource

A full nutritional assessment, as described in the 2021 AAHA Nutritional and Weight Management Guidelines, will result in obtaining not only a diet history but also an assessment of the pet, family and environment. This can be used to guide conversations and create effective weight-loss strategies for patients.



SCAN ME

Key Takeaways

An ideal weight-management diet should be designed to facilitate fat loss while preserving lean body mass; promote satiety; reduce inflammation; reduce insulin, leptin, cholesterol and glucose; and reduce the risk of weight rebound.

Restricted caloric intake benefits quality of life. Sharing this with clients can help them understand that by overfeeding their pets, they are diminishing life quality.

Incorporate strategies that consider the human-animal bond to individualize weight-loss plans and increase adherence.

PURINA
PRO PLAN
VETERINARY DIETS

New OM Metabolic Response + Joint Mobility
uses a unique 3:1 protein-to-starch ratio and was shown to reduce body fat while minimizing loss of lean body mass in a 6-month weight loss study.*

Shown to reduce select pro-inflammatory cytokines after 6 months of weight loss*

Helps improve select metabolic health indicators

High level of omega-3 fatty acids (EPA) to help nutritionally manage dogs with joint conditions

* Caloric restriction @25% MER for months 1-4 and @40% MER for months 5-6; on package feeding instructions reflect 40% restriction. Nestlé Purina PetCare Internal Data (2022).

Learn more at PurinaProPlanVets.com/MetabolicResponse.

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