## PURINA Institute

## HOT TOPIC

## Feeding pets for weight loss



## In focus

Up to 63\% of pet cats and 59.3\% of pet dogs are overweight or obese, and this condition is linked with serious health risks. However, many pet owners do not recognize their dog or cat is overweight or how nutrition can help manage healthy weight-and a healthier life-for their pet., ${ }^{12}$

The Purina Institute provides the scientific facts to support your nutritional conversations.

## takeback <br> the conversation.

## Healthy weight management matters

Managing excess weight in pets is vital for their health.
Studies show that overweight or obese pets do not live as long as their leaner counterparts. Obesity is also associated with chronic inflammation in the body, which contributes to diseases such as osteoarthritis and feline diabetes-but weight loss can help improve these adverse weight-related conditions. ${ }^{13,3}$


## Advancing Science for Pet Health

## What makes a weight loss plan successful?



Factors that contribute to successful and sustainable weight loss in cats and dogs include ${ }^{2,6}$ : - Ensuring the pet eats fewer calories than it uses. For healthy weight loss, calorie restriction needs to be based on a pet's target (ideal) weight, using tools for dogs and cats that calculate total daily calories needed based on a pet's metabolic energy rate (MER). As weight loss progresses, calorie restriction may need to be increased as the pet's body becomes more efficient at using fewer calories.

- Aiming for a gradual weight loss-not rapid weight lossthat does not exceed $1-2 \%$ of body weight per week, to prevent loss of lean body mass and rebound weight gain.
- Regularly monitoring weight loss and body condition score to help ensure pets are losing weight from fat, not lean body mass.
- Accounting for the pet owner's lifestyle and bond with their pet when making dietary and other weightrelated recommendations (such as exercise plans or treat restrictions).


## What do commercial weight loss diets provide that feeding less of 'regular' pet foods do not?

Although calorie restriction is the cornerstone of managing weight loss, it is important to avoid excessive restriction of essential nutrients.

Commercial weight loss diets provide all the nutrients the pet needs, in the right amounts and balance, while providing fewer calories.

## COMMERCIAL WEIGHT MANAGEMENT DIETS USE <br> SEVERAL NUTRITIONAL STRATEGIES FOR SUCCESSFUL, SUSTAINABLE WEIGHT LOSS



## Increased dietary protein

- Studies show that increased dietary protein to calorie ratios can significantly increase the amount of fat lost, and reduce loss of lean body mass in dogs and cats undergoing weight loss. ${ }^{6,7}$
- High protein diets have also been shown to improve the body's response to blood glucose (insulin sensitivity), reduce inflammation, reduce damage to the body's cells and tissues caused by oxidative stress, and may also improve feelings of fullness (satiety). ${ }^{1}$
- Higher dietary protein to carbohydrate ratios in overweight pets can result in gut bacteria populations that favor weight loss. ${ }^{8,9}$


## Increased fiber

- Fiber contributes fewer calories to the diet, so pets can eat more of a high fiber diet without getting many more calories. ${ }^{10}$
- Fiber can also contribute to a pet's feeling of fullness
(satiety), so they eat less. ${ }^{11}$


## Soy isoflavones

■ Studies show including these natural compounds in the diet can reduce fat accumulation and increase energy metabolism in dogs, and help cats maintain healthy weight. ${ }^{12,13}$

## Carnitine

■ This nutrient plays a key role in energy production for cells. Research shows that carnitine may help overweight cats undergoing weight loss keep up their metabolic rate ${ }^{14}$ and, in dogs, may help preserve lean body mass for weight management.


## References

1. German, A. J., Ryan, V. H., German, A. C., Wood, S., \& 1. German, A. J., Ryan, V. H., German, A. C., Wood, S., \& Trayhurn, P. (2010). Obesity, its associated disorders and Veterinary journal (London, England: 1997), 185(1), 4-9. 2. Larsen, J. A., \& Villaverde, C. (2016). Scope of the Problem and Perception by Owners and Veterinarians. The Veterinary clinics of North America. Small Animal Practice, 46(5), 761-772.
2. Eirmann, L.A., Freeman, L.M., Laflamme, D.P., Michel, K.E., \& Satyaraj, E. (2009). Comparison of adipokine concentrations and markers of inflammation in obese versus lean dogs. International Journal of Applied Research in Veterinary Medicine, 7(4), 196-205.
3. Laflamme, D. P. (2012). Obesity in dogs and cats: What is wrong with being fat? Journal of Animal Science, 90 , 1653-1662.
4. Laflamme, D. P. (2006). Understanding and managing obesity in dogs and cats. Veterinary Clinics of North America: Small Animal Practice, 36, 1283-1295.
5. Hannah, S.S., \& Laflamme, D.P. (1998). Increased dietary protein spares lean body mass during weight loss in dogs. Journal of Veterinary Internal Medicine, 12, 224.
6. Laflamme, D.P., \& Hannah, S.S. (2005). Increased dietary protein promotes fat loss and reduces loss of lean body mass during weight loss in cats. International Journal of Applied Research in Veterinary Medicine, 3(2), 62-68.
7. Li, Q., \& Pan, Y. (2020). Differential Responses to Dietary Protein and Carbohydrate Ratio on Gut Microbiome in
Obese vs. Lean Cats. Frontiers in Microbiology, doi: 10.3389 fmicb.2020.591462
8. Xu, J., Verbrugghe, A., Lourenço, M., Cools, A., Liu, D., Van de Wiele, T., Marzorati, M., Eeckhaut, V., Van mmerseel, F., Vanhaecke, L., Campos, M., \& Hesta, M 2017). The response of canine faecal microbiota to increased dietary protein is influenced by body condition. BMC Veterinary Research, 13(1), 374.
9. Jewell, D.E., \& Toll, P.W. (1996). Effects of fiber on food intake in dogs. Veterinary Clinical Nutrition, 3, 115-118.
10. Jackson, J.R., Laflamme, D.P., \& Owens, S.F. (1997) Effects of Dietary Fiber Content on Satiety in Dogs. Veterinary Clinical Nutrition, 4, 130-134.
11. Cave, N.J., Backus, R. C., Marks, S.L., \& Klasing, K. C. (2007). Oestradiol and genistein reduce food intake in overweight male and female cats. New Zealand Veterinary Journal, 55, 113-119.
12. Pan, Y. L. (2012). Soy germ isoflavones supplementation reduced body fat accumulation and enhanced energy metabolism in dogs. Journal of Veterinary Internal Medicine, 26(3), 812-813.
13. Center, S. A., Warner, K. L., Randolph, J. F., Sunvold, G. D., \& Vickers, J. R. (2012). Influence of dietary supplementation with (L)-carnitine on metabolic rate, fatty acid oxidation, body condition, and weight loss in overweight cats. American Journal of Veterinary Research, 73(7), 1002-1015.
