

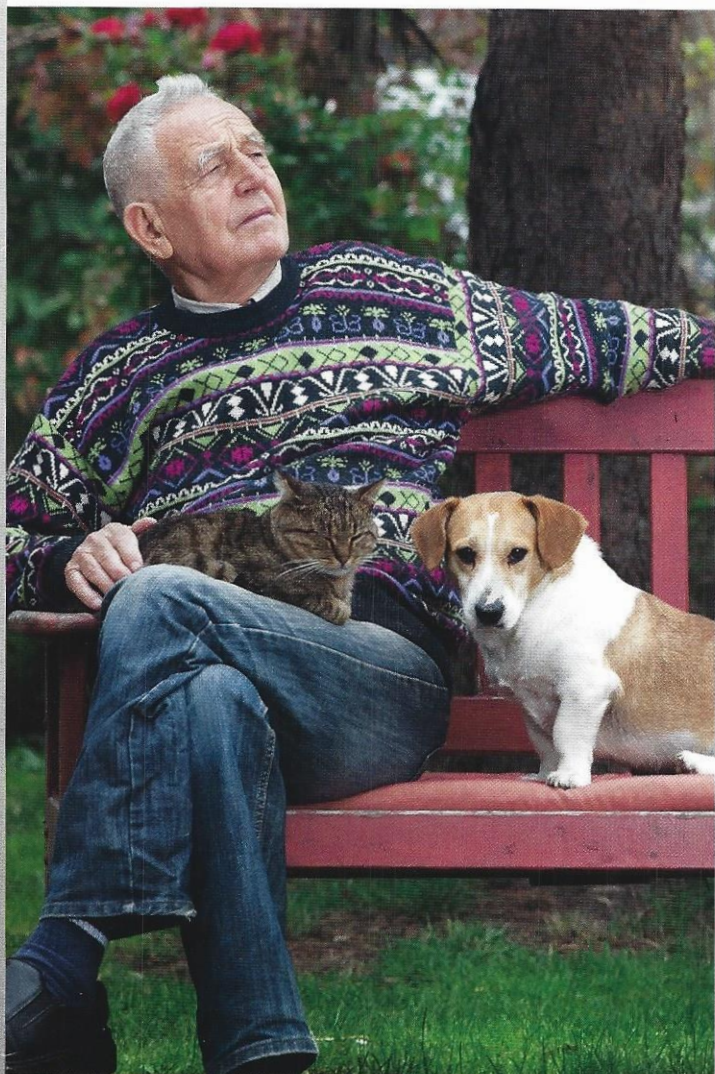
# OBEESITY

## A GROWING PROBLEM IN DOGS AND CATS

The Association for Pet Obesity Prevention reports that a staggering 54 percent of dogs and 59 percent of cats in the United States are overweight or obese according to its 2016 survey of veterinary healthcare professionals and pet owners.

As veterinary professionals, the numbers confirm what we see every day. As our patients become overweight, associated diseases become all too common.

Researchers are turning their attention to this “growing” problem, and new theories, strategies, and risk factors are challenging long-standing beliefs, as well as presenting new solutions.



### *New theories on the hows and whys of overweight pets*

Current research indicates that the causes of obesity are more complex than originally thought. Although the basic equation of energy intake versus expenditure is still valid, other factors also appear to play a role in the development and maintenance of obesity.

A tendency towards obesity also might be inherited. Studies suggest that Labrador retrievers have the highest obesity prevalence, and a study by Raffan et al. found that a deletion in the canine *POMC* gene was associated with weight, adiposity and food motivation in Labrador retrievers and flat coated retrievers. Interestingly, the deletion was more common in dogs from service dog lineages, and the research team theorized that dogs that were more food motivated were easier to train as service dogs, which in turn perpetuated obesity.

Two studies from the Netherlands (Corbee et al.) showed a strong breed predisposition in both dogs and cats towards being overweight. They postulated that not only genetic, but breed standards, could explain why certain breeds tend to be overweight.

Several studies in people document a difference between the composition of the gut microbiome of obese and overweight individuals and their leaner counterparts. Now veterinary researchers are reporting similar findings in dogs. Studies on the cat microbiome also indicate differences between the microbiomes of obese and lean individuals. Most of these studies are descriptive, and to date, no causal association has been established.

Intriguing studies in mice show that giving fecal transplants from the gut of lean mice into obese mice appears to lead to weight loss in obese mice, and the opposite also appears to be true. The possibility of manipulating resident microbes in the gut to assist in weight loss is a tantalizing concept. In the future, it may be possible to administer either a fecal transplant or an oral probiotic mixture to overweight animals to facilitate weight loss.

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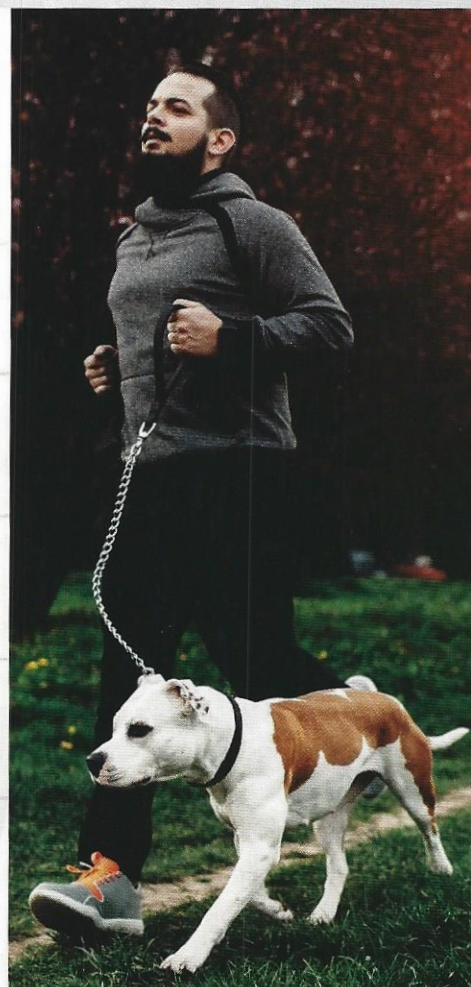


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Finally, most of us know that weight loss is difficult to maintain. Scientists are finding that our bodies have a certain weight “thermostat,” and that our body will attempt to maintain a consistent weight. Learning how to “set the thermostat” to maintain a leaner body type is the subject of ongoing study in people and ultimately could help our veterinary patients.

### **Obesity risk factors**

A study published in 2010 (Courcier et al.) looked at environmental risk factors associated with canine obesity. They found that increasing owner age, decreased weekly exercise hours, and lower owner income levels were all associated with a higher risk for pet obesity. The researchers concluded that owner-related factors were more important in the development of obesity than dog-related factors such as breed, age, or reproductive status.

Unfortunately, another risk factor for obesity appears to lie with our clients. In a commentary published in 2015, Dr. Alexander German points to the link between parenting styles and obesity in children, and proposes a similar link between pet “parenting” and obesity.

### **The obesity paradox**

Although we know that overweight and obesity are associated with serious diseases and compromised quality of life, there are studies that demonstrate a beneficial effect of obesity for certain disease conditions, and this is referred to as the obesity paradox.

Veterinary studies show improved survival times in both obese cats and dogs with heart failure when compared to lean patients. A similar effect was noted in obese dogs with kidney disease. In cats, the effect of body weight on long-term survival was more complicated. Low body weights and very high body weights were associated with a poor prognosis, but cats of normal to slightly increased body weight had greater survival times.

In a recent review, Dr. Lisa Weeth discussed possible causes for the obesity paradox, which may include protective neuroendocrine factors produced by fat tissue, greater body reserves in times of stress and decreased food intake, as well as a lack of cachexia. However, she cautions against over-interpreting this effect, and points to the many problems associated with obesity as reasons to encourage weight loss in overweight pets.

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## Counseling owners about a pet's weight problem

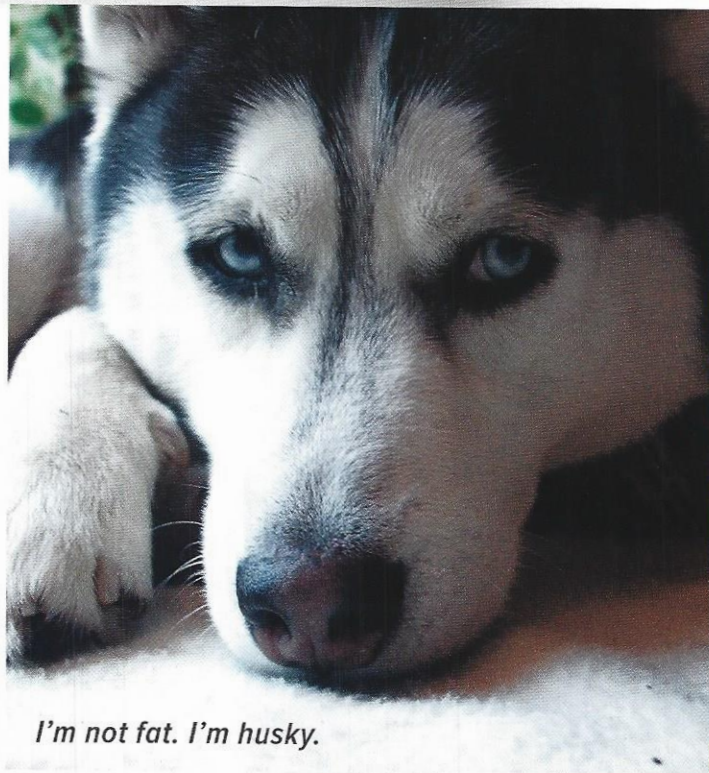
Discussing weight loss with pet owners can be difficult, and a recent review by Drs. Julie Churchill and Ernie Ward indicates that many veterinarians feel they will "offend, upset, anger, or even lose a client" if they bring up the subject. If the owner or the veterinarian is overweight, the situation is even more strained.

Other studies show that many owners often underestimate their pet's body condition. A study looking at obese and overweight dogs from the United Kingdom also showed that pet owners had a variety of justifications for their dog's body conditions, from the use of food to show affection, to preferring that their pet is "happy" even if it means a shorter life, to denial that their pet was overweight (White et al. 2011).

Churchill and Ward suggest enlisting the entire veterinary team to deliver consistent and clear messaging, and they outline strategies for effectively working with pet owners. They found that keys to successful weight loss include continuous, active engagement with owners, and tailoring strategies to fit both the pet's and owner's lifestyles.

Even if we successfully convince our clients on the necessity for weight loss, adhering to a plan can be challenging. A 2015 study (German et al.) demonstrated that in a group of obese dogs referred to a weight loss program, approximately 32 percent dropped out before reaching their weight loss goals. Commonly cited reasons for dropping out included difficulty adhering to weight loss plans, lack of ongoing support, and the development of other illnesses that shifted the owner's focus.

Other causes for lack of owner compliance were noted in an earlier study. Researchers tested the effect of different feeding strategies in a weight loss program for cats (Bissot et al.). They divided the test subjects into three groups, each using different diet strategies, including the use of a new high fiber diet fed ad libitum, a commercial high fiber diet that required owners to measure food portions, and a pre-portioned combination of canned and dry food. Although there were no differences in weight loss between the groups, owners were most dissatisfied when they had to measure the portions themselves. They reported greater hunger in their pets, and noted accompanying behavioral changes (e.g., increased vocalization). The team concluded that convenience and owner perceptions of hunger behaviors could influence compliance when instituting a weight loss program.



*I'm not fat. I'm husky.*

Obesity and overweight body condition are rising. Changing perceptions on body condition, as well as a deeper understanding of the physiologic, psychologic, and environmental factors that lead to weight gain have given veterinarians greater insight into new therapies and weight loss strategies for their patients. ■

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