

A Growing Problem: Obesity and Related Health Risks

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Obesity in pets is an increasingly common problem that affects up to 40% of dogs and 30% of cats in the United States.

Understanding the causes of this growing epidemic and establishing successful weight management programs are essential for veterinary clinics today.

Although there is no absolute answer to the cause of obesity in pets, there are some suspected as well as known factors. One research study considers the possibility of genetic influence on obesity, citing that 30% to 70% of the risk was attributed to heredity in dogs. Breeds shown to have a higher risk of becoming obese included Labrador Retrievers, Cairn Terriers, Cocker Spaniels, Dachshunds, Shelties, Basset Hounds, Beagles, and King Charles Spaniels. Other causes that may lead to obesity in pets are overfeeding, including too many treats; allowing the pet to “steal” food; not reducing the food level after the pet is spayed or neutered; and choosing a sedentary lifestyle for the pet. Probably the most important factor leading to obesity is excess intake of calories and/or decreased physical activity, which is referred to as a *positive energy balance* (the energy intake exceeds the energy output).

Energy expenditure in animals varies, depending on the breed, age, sex, neuter status, and life stage. Other factors that should be considered are whether the animal is a performance animal (e.g., sled dog, hunting dog) or is pregnant, lactating, or affected by disease or trauma. Animals utilize energy through basic body functions (e.g., basal metabolic rate), thermogenesis (production of heat), and activity. Throughout the animal’s lifetime, the amount of energy used for these functions

change; thus this factor must be taken into consideration when calculating the correct amount of food to be offered.

There are many misconceptions about obesity and disease. Although the problem of being overweight is common in both veterinary and human medicine, obese animals are not affected by the same problems as are obese humans. This column explores some disease processes that are common to both, humans and animals as well as the health risks that are associated with some life-threatening illnesses.

Diabetes

Insulin-Dependent

Insulin-dependent (type I) diabetes is similar in both humans and animals, except for age of onset. The disease is usually diagnosed in animals older than 6 years of age (e.g., middle age), whereas type I diabetes in humans is referred to as *juvenile diabetes*. In humans, type I diabetes results from the inability of the pancreas to produce enough insulin; in animals, however, the disease is usually associated with injury to beta cells, which are responsible for insulin production. Auto-immune, viral, and genetic factors may play a role in this process. The onset of clinical signs is abrupt and can be life-threatening.

Non-Insulin-Dependent

In humans, non-insulin-dependent diabetes mellitus (NIDDM), or type II diabetes, develops from secondary causes unrelated to the insulin production occurring with type I diabetes. A secondary cause may be related to problems with insulin receptors (which allow transportation of glucose to cells). There are definite differences between animals and humans with type

II diabetes. For example, 60% to 90% of humans with NIDDM are obese and their glucose intolerance has been shown to improve with weight loss. Onset of NIDDM can occur at any age but is more prevalent in humans older than 40 years of age. In contrast, animals with NIDDM may need insulin therapy to survive. In addition, only 40% of the animals diagnosed with NIDDM are obese. Sufficient research shows that obesity modulates glucose and insulin homeostasis in animals.

It is difficult to categorize type II diabetes in animals because most diabetic animals require insulin and are insulin dependent. Because the causes of insulin intolerance in animals are usually secondary in origin, classification can be tricky. No consistent parameters are available to identify animals that may be candidates for oral hypoglycemic therapy and diet modification. Animals with type II diabetes present with glucose intolerance and have all the usual signs of diabetes mellitus, including polyuria (increased urination), polydipsia (excessive thirst). These commonly reported mild signs of diabetes can also be present because of other conditions.

Although obesity is not always a factor, after diabetes is diagnosed and disease management has been instituted, weight control should be discussed with owners. Of animals diagnosed with diabetes, clinical recognition of NIDDM is most frequent in cats and rare in dogs; less than 5% of dogs are diagnosed with NIDDM, but up to 30% of cats reportedly may have the condition. For cats, diet and/or oral hypoglycemic agents may be beneficial; however, it is very common for cats to require insulin during the course of the disease.

Osteoarthritis

In animals as in humans, extra weight increases pressure on joints, which can worsen an existing arthritic condition. Some researchers believe that this condition is the most serious consequence of obesity in animals. Although obesity and osteoarthritis are often associated, a cause and effect between the two has not been proven. In some animals, excess weight damages joints; whereas in others, obesity might result from the decreased activity that occurs in patients with joint disease. Regardless of the relationship, both problems can become worse without some type of intervention. Loss of weight can relieve pressure on the joints, especially knee and hip joints.

Cardiovascular Problems

In humans, obesity is often associated with high blood pressure, which in turn can lead to elevated risk factors for heart disease and stroke and resultant complications (increased hypertension and elevated blood lipids that can lead to blocked arteries). To date there is no clinical evidence to suggest that obesity in animals results in hypertension. One study showed an increased risk for circulatory problems only in grossly obese dogs. Animals also rarely develop atherosclerosis; therefore, blocked arteries from high blood lipid levels is not a concern.

Cancer

In humans, several types of cancers have been associated with obesity. Obese women run a high risk for developing such cancers as uterine, cervical, and breast cancers; and obese men are at higher risk for colon, rectum, and prostate cancers. In animals, many of these cancers are not associated with obesity with the exception of

mammary cancer. One study has correlated the beginning stages of mammary cancer in dogs with early obesity.

Skin Problems

One study showed that obese cats are at more than two times the risk of developing non-allergic skin conditions compared with cats in optimal body condition. Dry, flaky skin and feline acne accounted for more than 50% of skin disorders; the remaining dermatologic problems included skin alopecia of unknown origin, seborrhea, eosinophilic ulcers, and cysts. These conditions in obese cats may reflect difficulties with grooming.

Surgical Risk

Obesity has been associated with increased surgical risk. Technical difficulties may include slow wound healing, increased risk of fat necrosis after surgery, and larger mass or depth of mass that needs to be penetrated before gaining access to the abdominal cavity. Because of the risk factors involved with obese animals during surgery, it is important for veterinary clinics to establish weight management programs before an emergency situation arises.

Prevention

The best way to prevent animals from developing weight problems is to educate clients on proper feeding techniques and how to evaluate their pet's body condition before weight becomes a problem. Although this is important at any life stage, the best time to do this is during the first clinical visit; hopefully, the animal is still young at this time because proper intervention during the early years can ensure a lifetime of optimum weight.

Clients can be given "take-home kits" that contain food samples, literature on proper feeding, and a body condition scoring sheet. This information enables owners to monitor their pet's condition and adjust food levels accordingly. It is important to teach pet owners how to assess the rib cage, abdominal tuck, and waist parameters so pet food intake can be adjusted as the animal's lifestyle changes. For example, when an animal is spayed or neutered, energy needs decrease by about 25%; the quantity of food should be decreased or a lower-caloric diet should be offered. Many owners believe that their animals will automatically become overweight after they have been spayed or neutered; however, assessing each pet's body condition on a periodic basis and adjusting food intake as necessary should alleviate weight-gaining problems.

If you have any questions concerning your pet's weight, contact Flanary Veterinary Clinic at (270) 898-9738.
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