

# OBESITY IN DOGS

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The rising obesity epidemic has been described as a significant health problem affecting both people and their pets. (Kushner RF et al 2006) Obesity is most often the result of excessive dietary intake, and/or inadequate energy utilization. (German AJ 2006) Over 60% of American adults are overweight or obese, and up to 40% of their pets join them in this condition. (Kushner RF et al 2006, German AJ 2006) Obesity is the most common nutritional disorder seen in dogs today. (Robertson ID 2002, Mlanick E et al 2006) A review of the literature on canine obesity draws parallels between risk factors, the negative impact on health, and treatment of obesity in humans and their companion pets.

## **Risk factors for canine obesity include:**

- 1) Overeating: may be due to the availability and palatability of pet foods, competition for food from other animals present at the time of feeding, begging at the table and receiving high-fat treats all contribute to obesity in dogs.
- 2) Lack of exercise (as parallels trends in humans)
- 3) Hormonal Factors: Spay and neutering, endocrine disorders (such as hypothyroidism and hyperadrenocorticism)
- 4) Drugs such as corticosteroids and Phenobarbital that increase appetite.

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- 5) Aging: associated with a decrease in lean body mass and metabolic rate, possible medical conditions and overall reduced activity.
- 6) Genetic: Certain breeds are at greater risk for obesity, including Labrador Retriever, Dachshund, Sheltie, Cocker Spaniel, Beagle, Basset Hound, Cavalier King Charles spaniel, and Cairn terrier dogs.

(Sanderson SL 2007, Colliard L et al 2006)

When considering all of the above factors we must remember that humans are the ultimate risk factor in canine obesity. Canine obesity is a human created phenomenon, since dogs don't put food in their bowls- we do! Feeding is a major part of the human-animal bond. For many dog and cat owners, feeding equals love.

Studies show that pet owners are poor predictors of canine obesity when compared with professional assessment. (Colliard L et al 2006) Veterinarians are often reluctant to bring up the subject of overweight and obesity, especially when the owner, is overweight or obese for fear of offending their clients. (Kushner RF et al 2006) This stigma may be a factor in the challenge of combating obesity and the conditions caused or complicated by obesity in both people and their pets.

### **Conditions Caused or Complicated by Obesity:**

- 1) Decreased life expectancy (obese dogs live 2-years less compared with non-obese paired littermates)
- 2) Increased incidence of hip dysplasia and degenerative joint disease
- 3) Pulmonary and cardiovascular disease
- 4) Reduced immunity
- 5) Exercise and heat intolerance
- 6) Hyperlipidemia and dyslipidemia
- 7) Increased incidence of pancreatitis
- 8) Dystocia and possibly decreased fertility
- 9) Hypertension
- 10) Increased incidence of mammary tumours and transitional cell carcinoma of the urinary bladder
- 11) Diabetes mellitus
- 12) Skin fold dermatitis
- 13) Difficulty with performing surgical procedures
- 14) Increased morbidity and mortality during and after anaesthesia (many anaesthetics are fat-soluble and so obese animal may take longer to recover from anaesthesia and complications associated with ventilation may occur.)

(Sanderson SL 2007, Mlacnick et al 2006)

## **Treatment of Obesity in Dogs:**

### *Dietary Management:*

Calorie restricted diets can be specifically calculated using derived mathematical equations, although, simple and practical dietary recommendations provide a greater the chance of adherence to the dietary regime. For example: suggestions on reduction/change to lower calorie treats. (Sanderson SL 2007)

### *Lifestyle Management:*

Increase in physical activity promotes fat loss and may assist in lean tissue preservation. Exercise may also prevent the regain in weight that can occur after successful weight loss. (German AJ 2006)

### *Monitoring of Weight Loss:*

Correct monitoring of a weight loss program is one of the most important components of a weight loss program. (German AJ 2006) Treatment of obese dogs may be comparable to the treatment of obese children because a change in the behaviour of the parent/owner is required. The family environment may shape attitudes, leading to overeating and a sedentary lifestyle. (Yaissle JE et al 2004)

### *Physiotherapy:*

Mlacnik et al 2006 showed a greater weight reduction and reduction in lameness in overweight dogs with gait abnormalities due to osteoarthritis was attained by dogs treated with caloric

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restriction and intensive physiotherapy, vs. dogs placed on a calorie restricted diet, and a home exercise/ owner massage program. Results suggested that regular evaluation of home exercises, hands on physiotherapy, and application of TENS, were superior to a home/owner administered program.

*PPET Study: People and Pets Exercising Together:*

Kushner et al 2006 ran the first study to demonstrate the effectiveness of a combined people and pets exercise program. It used the well documented beneficial impact of companion animals on the physical, psychological, and social health of people as the basis for developing a weight loss program for people and pets together. Dog owners spend more time in mild and moderate physical activities and walked an average of 56% more per week than nondog owners.

Companion dogs filled the role of social support, which is known to be a strong influence on physical activity. Both the people and their dogs showed a mean weight loss, the dogs being 15%.

**Conclusion**

Obesity is a significant public health problem affecting people and their pets. The same factors that underlie human obesity also underlie the growing prevalence among companion pets.

Understanding risk factors, the negative impact on health, identification of overweight and

obesity, and subsequent treatments can help us to accept our role in development of the epidemic. In order to combat the problem, health professionals must overcome their fear of offending clients and endorse proactive approaches which include education, and support for adoption of healthy changes in diet and physical activity.

### **References:**

Colliard L, Ancel J, Benet JJ, Paragon BM and Blanchard G (2006): Risk Factors for Obesity in Dogs in France. *American Society for Nutrition. Journal of Nutrition* 136:1951S-1954S.

German AJ (2006): The Growing Problem of Obesity in Dogs and Cats. *American Society for Nutrition. Journal of Nutrition* 136:1940S-1946S.

Kushner RF, Blatner DJ, Jewll DE and Rudloff K (2006): The PPET Study: People and Pets Exercising Together. *Obesity* 14(10): 1762-1770.

Mlacnik E, Bockstahler BA, Muller M, Tetrick MA, Nap RC and Zentek J (2006) Effects of a Caloric Restriction and a Moderate or Intense Physiotherapy Program for Treatment of Lameness in Overweight Dogs with Osteoarthritis. *JAVMA* 229(11): 1756-1760.

Robertson ID (2003): The Association of Exercise, Diet and Other Factors with Owner-perceived Obesity in Privately Owned Dogs from Metropolitan Perth, WA. *Preventative Veterinary Medicine* 58:75-83

Sanderson SL (2007): Obesity management in dogs. *NAVCA Clinician's Brief* April: pp. 27 –33.

Yaissle JE, Hollway C and Buffington CA (2004): Evaluation of owner education as a component of obesity treatment programs for dogs. *JAVMA* 224 (12): 1932-1935

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