

Canine Obesity and How Physiotherapy Can Help

Well, it's that time of year when many of us are facing the harsh reality that, while the festive season has come and gone, our Xmas kilos look like they're here to stay! And while I have the good excuse this year of "I just had a baby last month", the last time my dog Skarlett had puppies was 5 years ago, while two of my other dogs are boys!

But how do we know if our pets are just "fluffy" or if we have a real problem on our hands? (If I had a dollar for every time I've heard "she's not fat, she's fluffy!") I find the best way to define whether a dog is overweight or not is to use a body condition scoring system. For example, Purina has developed a 9-point scale which rates an ideally weighted dog as a score of 5: "Ribs palpable without excess fat covering. Waist observed behind ribs when viewed from above. Abdomen tucked up when viewed from side." Sadly, if we are really honest, not too many of our dogs fit this description, do they? All those little treats we give them for being good, having those puppydog eyes, or because the-kids-didn't-finish-their-dinners-and-it-would-be-a-waste-to-throw-it-in-the-bin add up to a bit more padding on the ribs, no discernable waist and a somewhat droopy belly!

And we all know from the human field that the key to losing weight is to eat less and exercise more, but that's easier said than done, isn't it? Maybe this one more treat won't hurt and we'll start in earnest tomorrow instead?

Let's consider what the research says about how we're killing our dogs with kindness:

- **Reducing a dog's weight by 11-18% can significantly improve hind limb lameness caused by hip arthritis.** (Impellizeri et al 2000)
- **A diet-related improvement in hip joint subluxation can help delay or mitigate the signs of hip dysplasia in growing dogs.** (Kealy et al 1993)
- **Overfeeding of an all-meat diet can result in obesity, fatigue, hyperparathyroidism, decreased cardiac performance, respiratory embarrassment, skin lesions, prediabetes and increased glucocorticoid levels. A balanced diet fed in limited amounts, and exercise, can result in a marked loss of weight and an improvement in the dog's health.** (Stogdale and Moore 1980)
- **Obesity can make anaesthesia more dangerous.** (Clutton 1988)
- **An increase in weight of about 1kg per week can lead dogs to develop high blood pressure, higher heart rates and increased pressure in the heart in just 4 weeks, and an inability to maintain their typical exercise levels in just 3 weeks.** (Mizelle et al 1994)

And if that's not enough to scare us onto the straight and narrow, let's consider a landmark experiment in which 8-week-old Labrador puppies were matched into pairs with all factors the same except for how much food they ate each day for the rest of their lives: one dog in each pair was fed a "normal" amount of food each day, while the other was fed $\frac{3}{4}$ of the normal amount. Now, before we go any further, I'd like to point out that I've seen the photos and it wasn't that the "normal" dogs were obese, nor were the " $\frac{3}{4}$ " dogs emaciated – the " $\frac{3}{4}$ " dogs were a bit more along the lines of the ideal body condition score of 5 out of 9, though.

But back to the story:

- **By the time these Labradors were 2, the " $\frac{3}{4}$ " group had significantly fewer signs of hip dysplasia than the "normally fed" group.** (Kealy et al 1992)

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- **By 5 years of age, the “¾” group had much less development of hip arthritis than the other dogs.** (Kealy et al 1997)
- **By the time the dogs were 8, those fed “¾” of the “normal” dogs had 3 times less hip arthritis, almost ½ as much shoulder arthritis and much milder arthritic symptoms in both the shoulders and the elbows.** (Kealy et al 2000)
- **At the age of 12, the “¾” dogs had lower body fat content and lower levels of triglycerides, insulin, and glucose in their blood. Their life span was significantly longer and the onset of clinical signs of chronic disease were generally delayed.** (Kealy et al 2002)
- **The “¾” dogs also had better glucose tolerance than the “normally fed” dogs, which the researchers associated with increased quality and length of life and reduction in disease.** (Larson et al 2003)

Horrifying, isn't it, that such a significant difference in health and longevity could come about from such a small difference in feeding patterns throughout life!

With that in mind, how much should we be feeding our dogs? Well, it does very much depend on your dog's general health, degree of obesity, the type of food fed and its metabolizable energy per gram. It is best to seek specific advice tailored to your dog's individual circumstances and qualified animal physiotherapists have been taught about canine nutrition and how to use formulae to scientifically determine exactly how much food a dog should be fed each day to reach and maintain an optimum healthy weight.

But decreasing food intake (“energy in”) is only half the story: “energy out” must also be increased via increased exercise. But would you want to embark on an exercise program if it hurts to move? A lot of overweight dogs have joint problems like arthritis or cruciate ligament injuries, and their excess weight can limit their flexibility, making exercise even more uncomfortable. And while animal physiotherapists can help determine appropriate amounts of energy in, we have even more ways of helping improve the energy out side of the equation.

For example, I had an overweight cattle dog cross attend for physiotherapy. Her owner joked that “it runs in the family – I'm fat and so is my dog!” I assessed the dog and found that her shoulder arthritis was severely limiting her ability to walk any distance without pain, so I treated her with a machine that electrically improves pain and muscle tone around the joint and taught her owner a program of exercises to do at home to build on the improvements made at physiotherapy appointments. I had to modify the program, though, to make it more comfortable for the owner's physical limitations – one of the advantages of training first as a human physiotherapist before graduating to animal physiotherapy is that we are able to design programs that are comfortable for both owner and dog alike! The owner, vet and I all worked as a team to ensure the best possible results of the dog's weight loss program with the happy outcome of the dog losing weight and improving comfort in her shoulder.

In another example, an overweight dog had had recent cruciate ligament surgery, but the muscles surrounding the stifle were not strong enough to endure prolonged exercise sessions to help lose weight. We therefore devised an exercise program including aquatic physiotherapy to help support some of the dog's bodyweight while working against the increased drag of the water (please refer to last month's column for more information) and land-based exercises to help improve joint position

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control, strength and flexibility of the whole body, as physiotherapists understand that each body segment is related to the next and thus the body should be treated as a whole.

There are lots of other examples I will share with you in future columns, but I hope the above has given you some food for thought (pardon the pun!) about how to better manage canine obesity. If you would like more information about any of the references mentioned in this column, please feel welcome to contact me at info@k9physio.com so I can email you the full details. Likewise, if you have a question about how physiotherapy may be able to help your dog, or would like to suggest a topic for an upcoming column, please feel welcome to contact me on (02) 4739 4557 or info@k9physio.com.

Wishing your dogs the best of health, Helen Nicholson BPhy, MAnimSt(Animal Physiotherapy).

