Risk Factors Associated with Canine Overweight and Obesity

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ABOUT THE STUDY

Overweight and obesity are major health concerns for both humans and companion dogs. Weight problems are associated with a myriad of poor health and shortened lifespan. In the largest study to date, veterinarian-reported prevalence of overweight and obesity in US dogs was 34% and 5%, respectively. Globally, dog obesity ranges from 6-31% in European countries, 44% in China, 40% in Japan and 26% in Australia. The clinical assessment of overweight and obesity relies on a physical condition score (BCS) based on visual inspection and palpation. Many studies have identified risk factors associated with increased BCS, such as aging, neutering, and decreased physical activity. Several studies have also found the effects of different eating habits. Home-made diets, table foods, semi-moist foods, and canned foods have all been associated with overweightness and obesity. Treats and snack consumption have also been identified as risk factors.

Since body weight is a complex property that can be affected by multiple variables, we performed a multivariate analysis to understand how different variables were combined to relate to BCS. These analyzes were performed separately for the overweight/obesity group and the obesity group. The results of a two-stepwise logistic regression model comparing an ideal weight dog (N=2725) with an overweight/obese dog (N=1384) and an obese dog (N=327) [1]. 337 dogs were excluded from the entire dataset from this logistic regression due to the lack of data for the selected variables.

Variables significantly related to overweight/obesity are age, exercise per week, level of food motivation, general mood, pet appetite, shared food, sprays, therapeutic doses, probiotic supplements, home environment. , Diet, and frequency of dental visits (p<0.05, stepwise logistic regression, N=4.109). Variables that are significantly related only to obesity are age, exercise per week, level of food motivation, other dogs in the home, general mood, pet appetite, neutering, tail chasing frequency, treatment, and pros. Biotics supplements, drug type, diet, and frequency of dental treatment (p<0.05, stepwise logistic regression, N=3052). Common parts of the variables of the two models are age, exercise per week, level of food motivation, general mood, pet appetite, therapeutic doses, probiotic supplements, diet, and dental care [2,3].

Many of the identified risk factors summarize solid evidence from previous studies. Exercise was previously identified as a protection against obesity. Neutering was also found to be a risk factor for overweight but not obese. We found that there was a more important relationship with the overweight/obesity combination model than with the obesity-only model. This result may be due to reduced intensity, but it is important for dog owners to be aware of this potential difference in severity when considering the potential consequences of neutering surgery [4-6]. This relationship is confirmed by studies showing that contraceptive neutered dogs lead to lower daily energy requirements combined with higher feed consumption. Gender has been previously identified as a risk factor both alone and in interaction with neutering, although no significant effects have been identified in other studies.

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