**Factors affecting weight loss in client-owned dogs: an international weight loss study**

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**Introduction**

Obesity is now a global concern in dogs and prevalence is increasing. Therefore, effective weight loss solutions are required that work in different geographical regions. Our main aim was to conduct an international, multi-centre, weight loss study to determine the efficacy of a dietary weight loss intervention in obese pet dogs. A key objective was to examine factors affecting efficacy of weight loss in different regions of the world.

**Materials and Methods**

A 3-month (median 12-weeks, range 10-14 weeks) weight loss programme was conducted at 340 veterinary practices in 27 countries, and enrolled a total of 926 dogs. All were fed commercially available dry or wet weight loss diets, with the energy allocation fed varying between 60 and 80 kcal/kg body weight0.75/day based on sex and neuter status. The Royal Canin Ethics Committee approved the study, and owners gave informed consent. The effect of time on bodyweight was analysed with a linear mixed model. A general linear model was used to determine factors (e.g. dog size, initial body condition score (BCS], geographical location, and interactions) affecting outcome in a subpopulation of 437 dogs that had complied best with the study visit schedule.

**Results**

At baseline, mean age was 6.5±2.3 years and median BCS was 8 (range 7-9). Ninety-seven percent of dogs lost weight during the programme, losing 11.4±5.8% at a rate of 0.89±0.46%/week. Dog size and continent significantly (p<0.05) and independently affected outcome, with small dogs (12.1±6.0%) losing more weight than large dogs (10.4±4.6%, *P*=0.026), and dogs in Europe (12.2±5.3%) losing more weight than dogs in America (10.4±5.2, *P*<0.001).

**Discussion and Conclusions**

This is the largest international multi-centre weight loss study ever conducted in obese dogs. Most dogs lost weight, but there were notable differences between dogs of different size and in different geographical locations.