

Weight management in client-owned cats fed a high protein – low carbohydrate maintenance diet

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According to several studies worldwide, around 1 out of 2 cats are overweight or obese.^{1,2} As overweight and obesity dramatically increase the risk of numerous diseases, many experimental weight loss trials have been successfully conducted by researchers.^{3,4} Nevertheless, decreasing a cat's bodyweight is not easy when done at home by its owner.⁵ Specific weight loss diets, formulated on a low energy - high fibre concept, are frequently poorly palatable and often perceived as too burdensome and too restrictive by pet-owners, who thus simply give up on these diets. There is therefore a need for non-restrictive palatable diets which could help cats lose weight in a "softer way".

I. Objectives of the study

The first objective of this study was to investigate the weight loss effect of a new high protein - low carb maintenance diet in overweight cats, which had previously failed with a weight loss diet. The secondary objective of this study was to assess the palatability of this new diet and the degree of satisfaction of the owners regarding it.

II. Material and Methods

20 adult neutered house cats, already used to dry diets, were recruited, on the basis that their owners perceived them as being overweight, and that all animals had already tried to lose weight, at least 3 months before the beginning of the study, but had not succeeded. According to their owners the main reasons for this failure were: refusal of the cats to consume the new specific weight loss diet (probably because of a lack of palatability), insufficient satiety effect of the new diet leading to a begging pet, programme too restrictive, or weight loss too slow. That is why the owners accepted to include their cats in that study in order to assess a new pet food. During the 8 week study, all cats were offered, by their owner, a high protein - low carb dry maintenance diet, composed of 44.5% proteins (mainly animal proteins: 92%), 13% fat, 7.5% crude cellulose and 24% nitrogen free extract (on a crude matter basis), instead of their usual diet. The measured metabolisable energy of this diet was 338 kcal/100g. The conditions of feeding (timing, frequency...) remained unchanged. Treats were not forbidden but their distribution had to be reported. At the beginning of the study and at the end of each week owners had to measure their cat's bodyweight and report it in a rationing table, which gave them the daily quantity of food to deliver to their pet for the next week. The daily quantity of kibbles indicated in the rationing table was calculated on the basis of a daily energy requirement estimated with the following formula: $0.8 \times 0.8 \times 60 \times \text{BW}$ (BW meaning body weight, in kilograms), to take into account neutering and sedentary lifestyle. Based on these recommendations, a "soft" weight loss (i.e. 0.5 to 1% per week) was expected. Pet-owners also filled in a questionnaire every week which mainly aimed to assess their general feeling about the tested diet and its appreciation by their cats, as compared with their usual diet and with their previous weight loss diet. Statistical analysis of weight loss between each week was performed using a General Linear Mixed Model (factors: fixed (time), random (cat)) with a 5% significant level.

III. Results

5 cats did not complete the study: their owners decided to stop after one to three weeks because of poor palatability and consumption. 15 out of 20 animals, aged from 2 to 10 years old (with a mean age of 6.7), completed the study. Description of the studied population: 53% were spayed female cats and 47 % neutered male cats. 40 % were indoor cats; others having outdoor access. The mean bodyweight was 5.8 kg (from 4.3 to 8 kg). According to their owners, 87% of cats were between 10 and 20% overweight whereas 13% of cats were between 20 and 30% overweight. 80% of owners did not really measure the quantity they gave to their pets and 64% recognised that they gave extra kibbles when their cat begged. Results of the study: 80% of cats really liked the tested diet, and 20% did not show a preference versus their usual diet. 10 cats (67%) effectively lost weight between the beginning and the end of the study. The mean weight loss of these cats is shown in figure 1. It was more pronounced during the first 3 weeks, with a significant difference between weeks 1 and 2 ($p<0.0005$) and between weeks 2 and 3 ($p<0.0124$). The mean weight loss was again significant between the 5th and 6th weeks ($p<0.0169$). Weight loss from one week to the next was, on average, 1.2%. Half of the pet-owners noted that this weight loss was reflected in a slimmer silhouette. At the end of the study, 73% of owners intended to buy the tested diet or would recommend it to a friend.

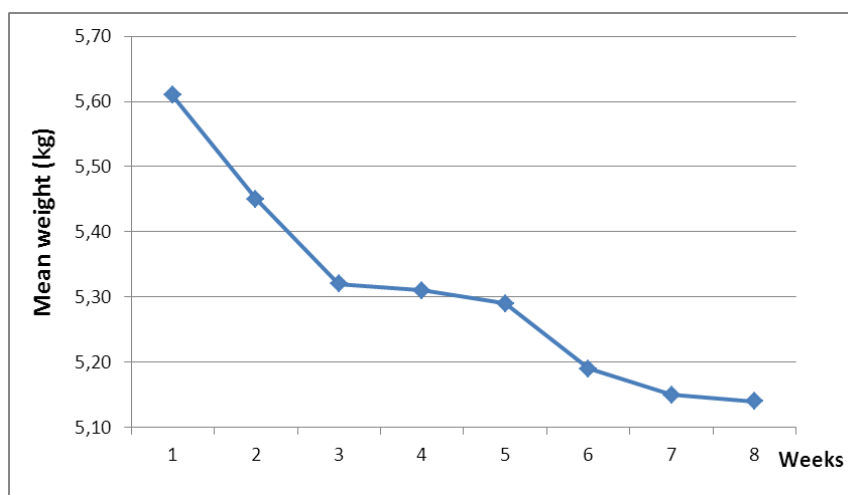


Figure 1: Evolution of the mean weight of the 10 cats which lost weight during the study

IV. Conclusions

This study showed that a high protein - low carb maintenance diet helped overweight cats which had previously failed to effectively lose weight with a weight loss diet. The palatability of this new diet seemed to be good, as 75% of the 20 owners felt that their cats appreciated it. This palatability may be due to its high animal protein content.^{6,7} Despite the absence of rationing and the distribution of treats by most of the owners, meaning that this can be considered as a non-restrictive weight loss program, more than 2 out of 3 cats effectively and regularly lost weight during the study. As a conclusion, this “soft” way to lose weight and the good palatability are probably the key points that can explain the good satisfaction rate among owners regarding the tested diet. A next study should assess the long term efficiency of the diet to maintain optimal body weight and avoid weight regain.

V. Bibliography

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