

# Increased attendance at LighterLife management groups is associated with improved weight maintenance success 1 year after completing a VLCD weight loss programme



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## Introduction

Maintaining weight loss is highly challenging, particularly in today's obesogenic environment. Success is likely to be due to an individual's ability to make and maintain long-term lifestyle changes. LighterLife Total, a commercial weight-loss programme for obese individuals, utilises a tripartite approach consisting of a very-low-calorie diet (VLCD) in conjunction with behavioural-change therapy underpinned by group support. Post-weight loss, the LighterLife Management programme helps individuals sustain healthy lifestyle changes and maintain their weight loss.

## Aim

To retrospectively assess the relationship between maintained weight loss and group attendance in individuals after one year on the LighterLife Management weight-maintenance programme.

## Method

Weight records for 4897 individuals who had initially lost weight on LighterLife Total and who had been enrolled in Management for at least one year post-weight loss were analysed to evaluate the relationship between the number of attendances at weekly Management groups and the amount of weight regain at one year. During the VLCD, individuals were in receipt of a mean daily intake of 50g protein, 50g carbohydrate, 550 kcal and  $\geq 100\%$  RDA (recommended daily intake) for vitamins and minerals. They were also weighed weekly and participated in the LighterLife TCBT<sup>®</sup> behaviour-change programme facilitated by a LighterLife weight-management counsellor in small, single-sex groups. Differences in mean weight regain were analysed using one-way ANCOVA and the relationship between the number of group attendances and weight regain was assessed using partial correlation (SPSS 21.0 Chicago, IL, USA).

## Results

Quartile	Height (m)	Age (yrs)	Start weight (kg)	*Exit weight (kg)	Weight loss (kg)
1 (n=1225)	1.65 $\pm$ 0.08	45.34 $\pm$ 10.45	97.64 $\pm$ 15.98	74.52 $\pm$ 12.18	23.12 $\pm$ 10.52 <sup>b</sup>
2 (n=1224)	1.64 $\pm$ 0.07	47.16 $\pm$ 10.14	96.55 $\pm$ 15.69	71.12 $\pm$ 9.64 <sup>a</sup>	25.42 $\pm$ 11.13 <sup>a,b</sup>
3 (n=1224)	1.63 $\pm$ 0.08	47.44 $\pm$ 10.09	96.22 $\pm$ 15.24	70.40 $\pm$ 10.07 <sup>a</sup>	25.82 $\pm$ 11.35 <sup>a,b</sup>
4 (n=1224)	1.64 $\pm$ 0.07	48.08 $\pm$ 10.21	99.12 $\pm$ 16.20	71.29 $\pm$ 10.29 <sup>a</sup>	27.84 $\pm$ 11.73 <sup>a</sup>

**Table 1:** Baseline and weight loss data per quartile (mean $\pm$ stdev). Quartiles 1 and 4 represent those with the lowest and highest group attendances respectively

\*Exit weight is the same as baseline weight at management.

<sup>a</sup>P<0.001 between the Q1 and other quartiles, <sup>b</sup>P<0.001 between Q4 and other quartiles.

## Results contd.



**Figure 1:** Average weight loss maintenance and group attendance data per quartile after one year on LighterLife Management. Quartiles 1 and 4 represent those with the lowest and highest group attendances respectively.

Using pair-wise comparisons between quartiles and adjusting for both the amount of weight lost after the VLCD and the baseline weight at management (covariates), we observed a smaller increase in the mean weight regained in those quartiles with greater group attendance when compared with all lower attendance quartiles ( $p<0.01$ ) (figure 1) ( $4.6\pm 7.3$ kg ( $n=1224$ ),  $5.4\pm 7.7$ kg ( $n=1224$ ),  $6.1\pm 7.2$  ( $n=1224$ ),  $7.1\pm 7.7$ kg ( $n=1225$ ) for quartiles 4 to 1 respectively). In addition, there was a highly statistically significant difference ( $p<0.0001$ ) in weight regain between quartile 4 and quartile 1). Furthermore, a small negative correlation between the number of weekly group attendances and weight regain was also observed ( $r=-0.18$ ,  $p<0.0005$ ).

## Conclusions

An inverse relationship between the number of groups attended and the amount of weight regained one year post-weight loss following a VLCD was observed. These results indicate that individuals who regularly attended weight-management groups were more likely to sustain their weight loss.

The behavioural-modification work facilitated throughout LighterLife's weight-management programme may be an important factor in weight-maintenance success and further studies to investigate this are required.