Introduction
Maintaining weight loss is highly challenging, particularly in today’s obesogenic environment. Success is likely to be due to the individual’s ability to make and maintain long-term lifestyle changes.

LighterLife Lite is a commercial weight-management programme for patients with BMI 25-29.9 which utilises a low-calorie diet (LCD), providing a daily intake of 800-1200 kcal to achieve weight loss, alongside a unique group based behaviour-change programme, informed by transactional analysis, cognitive behavioural therapy and addiction/change theory (TCBT®). Following completion of LCD, an ongoing weight-maintenance programme further develops this behaviour-change work in weekly group meetings, along with practical support including regular weight checks and advice on healthy eating, portion control and physical activity.

This intervention is designed to sustain lifestyle change by supporting a healthier, more reflective mindset, thereby increasing the likelihood of long-term weight management and reducing associated co-morbidities.

Aim
To determine the degree of maintained weight loss in the LighterLife Management weight maintenance programme after 1 year, following a significant initial mean weight loss of 9.7kg (1st 7lb) on the LighterLife Lite LCD, which equated to a 12.9% reduction from baseline.

Method

- **Initial assessment:** Information programme and preliminary screening
- **Medical screening:** More in-depth screening for suitability and medication adjustment, if appropriate
- **Weight-Loss Phase:** LCD and TCBT®, 4-12 patients, single-sex facilitated group
- **Food-transition phase:** Single-sex groups, gradual reintroduction to food over 4-12 weeks
- **Management:** Ongoing weight-maintenance programme to assist with long-term behaviour change, including regular weight checks
- **Data collection and auditing**

Patients initially lost weight on the LighterLife Lite LCD. This comprised three fortified-food replacements – providing ≥75% of recommended daily allowances (RDA) for key vitamins and minerals, plus 33.7g protein, 23.5g carbohydrate, 27.5g fibre, and a mean 11.9g fat – alongside a daily calorie/carbohydrate-restricted meal which supplied the balance of required nutrients.

This audit reports on 1118 patients who continued to attend the weight-maintenance programme meetings and have their weight recorded with their weight-management counsellor. 1 year after significant mean weight loss of 9.7kg (1st 7lb) in 8 weeks on the LighterLife Lite LCD.

Results

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>8wks</th>
<th>1yr</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean weight (kg)</td>
<td>75.1</td>
<td>65.4</td>
<td>66.8</td>
<td>p&lt;0.01*</td>
</tr>
<tr>
<td>Mean BMI</td>
<td>27.6</td>
<td>24.1</td>
<td>25.3</td>
<td>p&lt;0.01*</td>
</tr>
<tr>
<td>Mean weight loss</td>
<td>9.7kg</td>
<td>6.3kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Mean weight (kg) start 8wks 1yr
- Mean BMI start 8wks 1yr
- Mean weight loss

* 2-tail t-test performed on start weight/BMI vs weight/BMI at 8 weeks, start weight/BMI vs weight/BMI at 1 year, and weight/BMI at 8 weeks vs weight/BMI at 1 year, all resulting in p<0.001

Conclusion
- The size of the group (n=1118) demonstrates that meaningful weight maintenance over 1 year is achievable for large numbers of patients, given the opportunity to participate in a highly effective programme such as LighterLife Lite, which supports patients’ ability to make lifestyle changes through TCBT®, and an ongoing weight-maintenance programme which supports the sustainability of such changes.
- In this group, almost 70% of patients kept off 5% of their start weight at 1 year, and over 40% kept off 10%.
- Maintaining a healthier weight over 1yr is likely to be due to an individual’s ability to make lifestyle changes.
- Historic data as discussed by Wing et al, 2005, demonstrate that weight gain is common, regardless of weight-loss method and particularly with increasing time.
1, 2 and 3-year weight maintenance outcomes in 5965 patients after a mean weight loss of 25.7kg (4st 1lb) using a VLCD and behaviour change programme

Introduction

Maintaining weight loss is highly challenging, particularly in today’s obesogenic environment. Success is likely to be due to the individual’s ability to make and maintain long-term lifestyle changes.

LighterLife Total is a commercial weight-management programme for patients with BMI ≥30, which utilises a nutritionally complete (energy deficient) very-low-calorie diet (VLCD) to achieve weight loss, alongside a unique group based behaviour-change programme, informed by transactional analysis, cognitive behavioural therapy and addiction/change theory (TCBT®). Following completion of VLCD, an ongoing weight maintenance programme further develops this behaviour-change work in weekly group meetings, along with practical support including regular weight checks and advice on healthy eating, portion control and physical activity.

This intervention is designed to sustain lifestyle change by supporting a healthier, more balanced eating, portion control and physical activity.

Aim

To determine the degree of maintained weight loss in the LighterLife Management weight maintenance programme after 1, 2 and 3 years, following a significant initial mean weight loss of 25.7kg (4st 1lb) on the LighterLife Total VLCD, which equated to a 26% reduction from baseline.

Method

Initial assessment: Information on programme and preliminary screening

Medical screening: More in-depth screening for suitability and medication adjustment, if appropriate

Weight-Loss Phase: VLCD and TCBT®, 4-12 patients, single-sex facilitated group, ongoing clinical monitoring, Weekly weight checks

Food-transition phase: VLCD: single-sex groups, gradual reintroduction to food over 8-24 weeks

Management: Ongoing weight maintenance programme, to assist with long-term behaviour change, Weekly weight checks

Data collection and auditing

Results

<table>
<thead>
<tr>
<th></th>
<th>Start</th>
<th>Exit</th>
<th>1yr</th>
<th>2yr</th>
<th>3yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean weight (kg)</td>
<td>90.1 (15st 1lb)</td>
<td>73.4 (11st 8lb)</td>
<td>80.6 (12st 10lb)</td>
<td>83.3 (13st 2lb)</td>
<td>84.4 (13st 4lb)</td>
</tr>
<tr>
<td>Mean BMI</td>
<td>30.3</td>
<td>26.9</td>
<td>29.5</td>
<td>30.6</td>
<td>31.0</td>
</tr>
</tbody>
</table>

n=patients available at each time point

% keeping off 5% of start weight

% keeping off 10% of start weight

% keeping off 20% of start weight

Maintenance outcomes in ≥100% RDA (recommended daily intake) for vitamins and minerals.

Success is likely to be due to the individual’s ability to make and maintain long-term lifestyle changes.

Maintaining weight loss is highly challenging, particularly in today’s obesogenic environment. Over 60% kept off 10% of their start weight, and nearly 80% kept off a clinically significant 5% of their start weight.

Conclusion

- The size of the group (n=5965) demonstrates that meaningful weight maintenance over 1 to 3 years is achievable, given the opportunity to participate in a highly effective programme such as LighterLife Total, which supports patients’ ability to make lifestyle changes through TCBT®, and an ongoing weight maintenance programme which supports the sustainability of such changes.

- Almost 25% of patients remaining engaged with their LighterLife weight-management counsellor for 3 years kept off 20% of their start weight. Over 60% kept off 10% of their start weight, and nearly 80% kept off a clinically significant 5% of their start weight.

- Maintaining a healthier weight over a 3-year period is likely to be due to an individual’s ability to make lifestyle changes and this is enhanced by LighterLife’s weight maintenance programme.

- Historic data as discussed by Wing et al, 2005, demonstrate that weight gain is common, regardless of weight-loss method and particularly with increasing time.

Patients initially lost weight on the LighterLife Total VLCD, comprising fortified-food replacements providing a mean daily intake of 50g protein, 50g carbohydrates, 550 kcal and ≥100% RDA (recommended daily intake) for vitamins and minerals.

This audit reports on 5965 patients who continued to attend the weight-maintenance programme meetings and have their weight recorded with their weight-management counsellor for up to 3 years after achieving significant mean weight loss of 25.7kg (4st 1lb) on the LighterLife Total VLCD.
Introduction
LighterLife Total is a commercial weight-management and behaviour-change programme that has been offered to patients with BMIs≥30 since 1996 and has published weight-loss data at ECO demonstrating its efficacy since 1997. It affords the opportunity to lose weight using a nutritionally-complete (energy deficient) VLCD and, significantly, to identify personal psychological motivation for over-consumption, thereby enabling patients to develop robust strategies for more successful weight management in the future.

LighterLife’s unique group based behaviour-change programme is informed by transactional analysis, cognitive behavioural therapy and addiction/ change theory (TCBT®). Following completion of VLCD, an ongoing weight-maintenance programme further develops this behaviour-change work in weekly group meetings, along with practical support including regular weight checks and advice on healthy eating, portion control and physical activity.

This intervention is designed to sustain lifestyle change by supporting a healthier, more reflective mindset, thereby increasing the likelihood of long-term weight management and reducing associated co-morbidities.

Aim
To demonstrate the year-on-year reproducibility of weight loss achieved using the LighterLife Total VLCD and behaviour-change programme in male and female patients over a 12-week period.

To determine whether the weight loss achieved by male and female patients using the LighterLife Total VLCD and behaviour-change programme over a 12-week period produces consistent amounts of weight loss when examined on a year-on-year basis from 2008 to 2010.

Method

A random sample (n=3000) of male and female patients completing 12 weeks of the LighterLife Total VLCD in 2008-2011 was selected from the LighterLife client database. Mean start weight and BMI were recorded at baseline and mean weight loss and BMI reduction were calculated after 12 weeks’ participation.

During the VLCD, patients were in receipt of a mean daily intake of 50g protein, 50g carbohydrate, 550 kcal and ≥100% RDA (recommended daily intake) for vitamins and minerals. They were also weighed weekly and participated in the LighterLife TCBT® behaviour-change programme facilitated by a LighterLife weight-management counsellor in small, single-sex groups.

This offered the opportunity to identify ways in which patients had been using food (and drink) to suppress difficult emotions, and to become aware of how old messages might be influencing current behaviour, including food and lifestyle choices. Developing this self-awareness can lead to the development of new coping strategies which enable successful weight management in the future.

Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Mean start weight</th>
<th>Mean start BMI</th>
<th>Mean weight after 12 weeks</th>
<th>Mean BMI after 12 weeks</th>
<th>Mean weight loss</th>
<th>Mean BMI reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>102.4kg (16st 2lb)</td>
<td>37.6</td>
<td>30.4</td>
<td>19.6kg (3st 1lb)</td>
<td>7.2</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>103.5kg (16st 4lb)</td>
<td>37.8</td>
<td>30.7</td>
<td>19.6kg (3st 1lb)</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>103.9kg (16st 5lb)</td>
<td>38.0</td>
<td>30.9</td>
<td>19.4kg (3st 1lb)</td>
<td>7.1</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>105.3kg (16st 8lb)</td>
<td>38.2</td>
<td>31.2</td>
<td>19.5kg (3st 1lb)</td>
<td>7.0</td>
<td></td>
</tr>
</tbody>
</table>

**Year-on-year, both start BMI and the amount of weight loss were found to be consistent.**

Conclusion

- Reproducible and highly consistent weight-loss results are demonstrably achievable with the LighterLife Total VLCD and behaviour-change programme, irrespective of participants.
- The TCBT® behavioural-modification work facilitated in small groups alongside the LighterLife Total VLCD may be a factor in compliance and therefore in the reproducibility of results.
Comparison of weight loss in patients with type 2 diabetes using a very-low-calorie diet (VLCD) approach

Hallam CL1, Lula SI1, Broom J1, Mullins G1, Cook D1, Haslam D1, Cox JSA1, Hewlett B1.

Introduction
Type 2 diabetes is an obesity-driven chronic progressive condition, exacerbated by insulin/sulphonylurea treatment causing weight gain. While bariatric surgery and a recent very-low-calorie diet (VLCD) study (Lim et al. 2011) demonstrate reversibility of this pathology, significant weight loss by standard dietary measures in type 2 diabetes is difficult; studies demonstrate only 50% of the weight loss achieved by non-diabetic patients (Avery et al. 2004).

LighterLife Total is a commercial weight-management programme for patients with BMI≥30 which utilises a nutritionally-complete (energy deficient) VLCD to achieve weight loss, alongside a unique group-based behaviour-change programme, informed by transactional analysis, cognitive behavioural therapy and addiction/change theory (TCBT®). Following completion of VLCD, an ongoing weight-maintenance programme further develops this behaviour-change work in weekly group meetings, along with practical support including regular weight checks and advice on healthy eating, portion control and physical activity.

This intervention is designed to sustain lifestyle change by supporting a healthier, more reflective mindset, thereby increasing the likelihood of long-term weight management and reducing associated co-morbidities.

While diabetic patients on medication have already engaged with healthcare professionals and received advice on dietary adjustment and lifestyle changes to manage their condition, this type of intervention is clearly unsuccessful for weight management, given their mean weight on commencement of the LighterLife VLCD and TCBT® behaviour-change programme.

Aim
This audit compares data from patients taking oral hypoglycaemic or insulin medication for type 2 diabetes vs non-diabetics matched for BMI, age and gender, all of whom participated in the LighterLife Total VLCD for a period of 12 weeks.

Method
An audit of our database identified 484 type-2 diabetic patients taking oral hypoglycaemic or insulin medication (169 male, 325 female) who had completed 12 weeks of the LighterLife Total VLCD, in receipt of a mean daily intake of 50g protein, 50g carbohydrate, 550 kcal and ≥100% RDA for vitamins and minerals. They were matched for BMI, age and gender with non-diabetic patients from the database.

During VLCD participation, all patients identified were weighed weekly and participated in the LighterLife TCBT® behaviour-change programme facilitated by a LighterLife weight management counsellor in small, single-sex groups. This offered the opportunity to identify ways in which patients had been using food (and drink) to suppress difficult emotions and influence current behaviour, developing new coping strategies.

All patients also attended 4-weekly reviews with their physician who adjusted medication as appropriate on commencement of, and during their participation in, the LighterLife Total VLCD. Those in the type-2 diabetic group were typically advised to continue their medication as appropriate on commencement of, and during their participation in, the LighterLife Total VLCD.

Results

<table>
<thead>
<tr>
<th></th>
<th>Start weight</th>
<th>Start BMI</th>
<th>Exit weight</th>
<th>Exit BMI</th>
<th>Weight loss</th>
<th>BMI reduction</th>
<th>% excess weight lost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diabetic patients</td>
<td>113.6kg (17st 12lb)</td>
<td>40.4</td>
<td>93.4kg (14st 10lb)</td>
<td>33.2</td>
<td>20.2kg (3st 8lb)</td>
<td>8.5</td>
<td>17.5%</td>
</tr>
<tr>
<td>Non-diabetic patients</td>
<td>114.8kg (18st 1lb)</td>
<td>40.9</td>
<td>89.3kg (14st 1lb)</td>
<td>31.9</td>
<td>25.2kg (4st 4lb)</td>
<td>9.5</td>
<td>21.7%</td>
</tr>
</tbody>
</table>

2-tail t-test: p=NS p<0.001 p<0.001 p>0.05 p<0.001

Discussion
Both patient groups lost a significant amount of weight, and well in excess of the 10% weight reduction known to reduce the risk of weight-related comorbidities. While the non-diabetic group lost a greater percentage of excess weight, the diabetic group’s weight loss was well in excess of the 50% weight loss expected from previous studies.

The use of TCBT® and small-group support for these obese patients, both diabetic and non-diabetic, may be factors in maintaining compliance with the LighterLife Total VLCD.

Conclusion
- In a weight-loss-resistant cohort, diabetic and non-diabetic patients following the LighterLife Total VLCD and TCBT® behaviour-change programme achieved weight loss by non-surgical means, commensurate with the reversal of type 2 diabetes.
- While bariatric surgery is recommended as a treatment option for adults with BMI≥40, and for those with BMI 35-40 with type 2 diabetes, this audit suggests a VLCD such as LighterLife Total is beneficial and a cost-effective alternative, including for known difficult-to-treat type 2 diabetic patients.
