

Pilot of a Low Calorie Diet in a liquid form as a treatment option within a specialist, multi-disciplinary weight management programme

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Introduction

Glasgow and Clyde Weight Management Service (GCWMS) is a specialist multidisciplinary weight loss programme for patients with obesity BMI $\geq 35\text{kg/m}^2$ or BMI $\geq 30\text{kg/m}^2$ with associated co-morbidities.^{1,2} Patients are offered a structured education programme for weight loss with a 600 calorie deficit plan, and an option of pharmacotherapy or a structured low calorie diet of 1200-1500 calories.

Low calorie diets in a liquid form for a limited period of time have been shown to be effective in achieving greater initial weight loss with long-term sustainable results. Research has found that participants report the use of meal replacements as being easy to follow, allowing a break from food, unhelpful eating habits and the decision making process around food choices.^{3,4}

Aims

To achieve a 10kg minimum weight loss over a 12 week period using a low calorie diet in a liquid form (LCLD).

To improve adherence to a recommended calorie prescription by replacing food with liquid meal replacements, that are calorie controlled.

Methods

Patients were recruited from GCWMS having all completed a 16 week lifestyle intervention (Phase 1). Patients attended an information session to enable them to make an informed decision before proceeding with the LCLD. Patients with a BMI $<30\text{kg/m}^2$ and those with diabetes on oral or injectable medications other than Metformin, were excluded.

Patient's energy requirements were calculated and they were advised to follow a personally prescribed calorie deficit liquid diet of either 1000, 1200 or 1500 calories per day for 12 weeks and then a 16 week food reintroduction programme.

Meal replacement plans were devised using over the counter products which included Optislim, Slimfast, Build Up (Nestle), Ultraslim (Tesco) and Measure Up (Asda) and a home made version using semi skimmed milk with added skimmed milk powder. Participants were given the choice of products and asked to self purchase these meal replacements.

Monthly educational group sessions and fortnightly weight appointments were provided over the 28 week period.

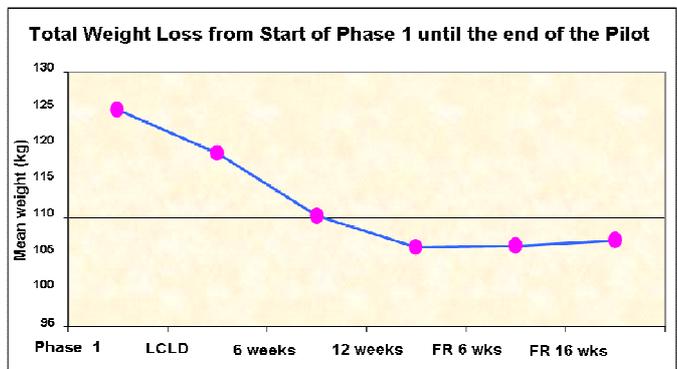
Results

35 patients attended the information session and 24 were recruited to commence the LCLD (79% female). Baseline characteristics of patients (mean): weight 124.8kg, BMI 45kg/m², age 46 years. 33% had comorbidities (heart disease, hypertension) and none of the patients had diabetes. Mean weight loss prior to commencing LCLD was 3.24kg (SD \pm 5.4).

50% of patients completed the 12 week LCLD phase and 66.6% of completers met ≥ 10 kg target, with mean weight loss of 12kg (SD \pm 6.4).

Mean total weight loss including 16 week lifestyle intervention and 12 week LCLD was 17.1kg (SD \pm 9.9).

10 patients continued into a 16 week food reintroduction programme. Following the 12 week liquid phase and 16 week food reintroduction phase, 60% of patients had maintained ≥ 10 kg of weight loss. All patients opted to attend a one year maintenance programme of monthly sessions as part of the standard GCWMS pathway.



Conclusion

Using a Low Calorie Diet in a liquid form as part of a specialist NHS weight management programme in a self selected group, can induce weight loss ≥ 10 kg which is recognised to improve health outcomes.¹ One year follow up results and progress of weight maintenance is ongoing.

References

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