

Treating obesity and excess weight using a holistic, Pharmacy based approach to weight management.

Abstract

The aim of our Waistaway¹ Pharmacy service is to help anyone lose excess weight and to help those who have lost weight to maintain their weight loss long term. Using either calorie control or a Very Low Calorie Diet (VLCD) as the basis for weight loss the patients lost on average well above the internationally recognised value of 5% weight loss for medical benefit. This figure didn't alter significantly whether the patient lost weight once or multiple times. The effect on diabetes alone was impressive. Patients effectively went into remission in the first week of dieting and remained so once the weight loss was maintained.

Introduction

Weight loss is in theory very simple; you eat less and exercise more. The obesity crisis is showing no signs of abating and the rising levels of type 2 diabetes, hypertension, cancer, etc as a consequence is alarming. The NHS is at an all time breaking point with funds stretched. Current weight loss help for the majority of patients through the NHS is often restricted to a 12 week education programme, for example the NHS choices 12 week weight loss plan², under tier one and tier 2 of the NICE guidelines³. This is labour intensive to deliver and the often used 12 week period is not a suitable length of time to expect to help someone in the higher BMI brackets achieve the weight loss required. It also misses the long term issues these individuals face.

Weight loss is akin to any addictive behaviour. It cannot be cured, only be forced into remission, and just as an alcoholic faces a lifelong battle to conquer their addiction, a patient successfully losing weight will show the same potential to relapse.

Realistically patients require a structured support system of help in line with the NICE guidelines 4 tier system rather than fragmented help. This is where Waistaway has helped plug the gap since 2004 by offering weight management help across the first 3 tiers of the guidelines. Since the addition of a close working relationship with a GP practice in 2015 the weight losses and medical outcomes for diabetics and hypertensives in particular has enhanced the work already achieved over the years. The hope is that this Pharmacy based approach to weight loss will be acknowledged as a valid method of weight management without a cost to the NHS.

Method

Patients were recruited via a variety of means including a detailed website, social media, word of mouth and direct referral from healthcare practitioners. They were then initially assessed for the necessity of weight loss using the BMI calculations. Weight loss need was deemed appropriate so long as the patient was neither underweight on day one of dieting nor liable to go underweight (BMI<20) with the intervention we would advise. It was necessary to keep an open mind in terms of what a desirable weight meant to the patient (i.e. our aim wasn't thinness simply to improve the patient's health risk due to their weight) and for those patients presenting with a desire to make sure their weight wasn't increasing towards them being overweight or obese (i.e. prevention of obesity was also part of our aim). A discussion on their weight loss aims, past dieting history, medical conditions (if any) and any concerns they had led to our agreeing on an appropriate action for them. Patients of 18 years upwards was the general accepted age range eligible for using our programmes, and above 75 years their options were generally restricted to the Flex plan due to increased risk of comorbidities. The whole Waistaway service was managed by the Pharmacist with very little input necessary by GPs and since it was patient funded it had no cost implications to the NHS.

The weight loss methods were divided up into two options;

- Waistaway Flex plan (Tier 1 and 2 of the NICE guidelines)³
- Waistaway Sure plan (Tier 3 of the NICE guidelines)³

Waistaway Flex

This option involved the use of a flexible approach to weight loss in line with tier 1 and tier 2 of the NICE guidelines. Everyone was encouraged to attend a weekly weight check and advice appointment long term so they were aware of the need and availability of long term weight maintenance help. They could then flexibly use the following weight loss aids as a means to lose weight or to help maintain their weight post weight loss;

- Food diary assessment - the patients were all encouraged to bring in a food and drink diary. The level of detail was left open to the individual, with guidance, so that this would be achieved long term. Since the service is run under the supervision of a Pharmacist, and not a dietician or nutritionist, the assessment was a general one and involved looking at patterns of intake and obvious errors of Calorie intake. Any highlighting of nutritional intake issues were referred or replacement with nutrient complete formulas used.
- Portion control - the patients were introduced to the “Healthy Portion Plate”⁴ or “The Diet Plate™”⁵ as a possible one-off purchase to help control the intake of Calories and to allow correct portioning of the food groups, in line with the Eat-Well plate guidance⁶ by the NHS
- Partial Food Replacement (PFR) - using nutritionally complete formula foods from the Lipotrim⁷ Maintenance range and/or Ultralife⁸ SlimShake range the patients were directed on how to supplement or replace conventional foods hence reducing Calorie intake without compromising their nutritional intake or satiety.

This approach was ideally suited to those with less than one to two stone to lose, due to the rate of weight loss being in the region of 1 to 2lbs per week. Above a 2 stone weight loss requirement the length of time to target weight would be unrealistic and unachievable for most patients. Waistaway Flex was also used if one of our Waistaway Sure (Lipotrim Pharmacy programme⁷) patients was non-compliant or the patient found the Sure programme wasn't for them. Advice from the Pharmacist on how to manage their medical conditions whilst dieting was given where appropriate.

Waistaway Sure

Waistaway Sure was our Very Low Calorie Diet (VLCD) option using the Lipotrim Pharmacy Programme. The VLCD option meant the patients were required to stop their intake of all conventional food and replace with nutritionally complete Lipotrim formula foods. They were allowed to consume 3 formula foods a day for women and 2 larger formula foods for men, water, black tea and black coffee only. This was ideally maintained for the duration of the weight loss phase with no breaks. Invariably some patients relapsed to normal food intake as you would expect with treating any habit or addiction and appropriate advice and motivation given by the trained staff or preferably Pharmacist.

The patients were required to watch an educational DVD and read some comprehensive literature on this dieting method so they knew what this type of diet involved, how to resume conventional food intake correctly and weight maintenance. This detailed information was also covered in their initial consultation.

A tick-box medical was used to determine the appropriateness of a VLCD for this patient and assessed by a trained member of staff or referred to the Pharmacist in line with the SOP. Patients not able to use this option, and thus referred to the Waistaway Flex option, were those using Insulin, taking warfarin (unless a patient of the surgery we were working closely with), lithium and those females who were either pregnant (excluded from our programmes entirely) or breastfeeding.

Advice from the Pharmacist on how to manage their medical conditions whilst dieting was given where appropriate. Type 2 diabetic patients were referred to their GP with a referral form requesting the cessation of their diabetic medication on day one of the diet and throughout a compliant dieting phase. Patients on antihypertensive medications were monitored weekly using a blood pressure monitor and referred if the pharmacist deemed a medication dose adjustment likely.

Patients were required to have a 1 stone or more weight loss need to be allowed to participate on the VLCD option.

The patients followed either the Flex Plan or Sure plan until they either reached target, felt unable to continue or, in the case of the Sure plan, were non compliant over a number of weeks (length of time determined by the Pharmacist). Once the weight loss phase had finished the patient then followed a structured 1 week menu of a combination of formula foods and conventional foods called "refeeding". This phase was to prevent weight gain from refeeding edema and to allow the patient to consume conventional foods without any ill effects after being abstinent for a significant amount of time. The patient was given an audio CD to listen to which detailed this re-feeding phase, the rationale behind it and also the principles of lifelong weight maintenance. The patients were encouraged to attend at least periodic weight checks to monitor

their weight maintenance and preferably weekly checks combined with the Waistaway Flex option long term.

Results

Waistaway Sure (Lipotrim Pharmacy programme)

Table 1 - included only those people who lost at least 5% of their initial weight on the Sure Plan using Lipotrim

| Venue | No Patients seen | Average start BMI | Average weight loss KG | Average weight loss % |
|----------------------|------------------|-------------------|------------------------|-----------------------|
| Huntingdon & Hampton | 1064 | 33.1 | 10.5 | 11.1 |
| Wellingborough | 16 | 37.3 | 11.1 | 11.6 |
| Bletchley | 5 | 34.1 | 6.5 | 6.6 |
| Wansford | 17 | 33.9 | 9.1 | 9.3 |

Table 2 - Breakdown in numbers in each BMI category and the dieting results

| BMI Category | No. patients | Average weight loss (kg) | Average weight loss % |
|--------------|--------------|--------------------------|-----------------------|
| <20 | 0 | 0 | 0 |
| 20-25 | 28 | 5.7 | 8.2 |
| 25-30 | 334 | 7.0 | 9.2 |
| 30-35 | 362 | 9.7 | 10.7 |
| 35-40 | 235 | 12.8 | 12.5 |
| 40-45 | 105 | 16.0 | 13.7 |
| 45-50 | 32 | 17.0 | 13.0 |
| 50-55 | 3 | 45.1 | 31.7 |
| 55-60 | 2 | 10.3 | 6.5 |
| 60-75 | 1 | 124 | 58.0 |
| | | | |
| total | 1102 | 10.5 | 11.0 |

Table 3 - Male female comparison

| | No. patients | Average first BMI | Average BMI point loss | Average weight loss % |
|--------|--------------|-------------------|------------------------|-----------------------|
| female | 953 | 33.0 | 3.7 | 11.0 |
| male | 149 | 34.4 | 3.9 | 11.0 |
| total | 1102 | 33.2 | 3.8 | 11.0 |

Table 4 - Results per diet attempt number.

| Diet attempt number | Number patients achieving 5% weight loss or more | Average % weight loss |
|---------------------|--|-----------------------|
| 1st attempt | 652 | 11.3 |
| 2 | 174 | 8.9 |
| 3 | 97 | 8.6 |
| 4 | 71 | 9.4 |
| 5 | 35 | 8.4 |
| 6 | 27 | 13.0 |
| 7 | 12 | 12.3 |
| 8 | 10 | 10.1 |
| 9 | 12 | 9.1 |
| 10 | 7 | 8.0 |
| 11 | 3 | 7.1 |
| 12 | 1 | 8.6 |
| 13 | 1 | 9.1 |
| | | |
| total | 1102 | 10.5 |

Table 5 - results per medical condition identified

| Medicated Condition | No. patients | Starting BMI | Average weight loss KG | Average weight loss % |
|---------------------|--------------|--------------|------------------------|-----------------------|
| Type 2 diabetes | 7 | 39.0 | 11.5 | 10.7 |
| Hypertension | 40 | 36.9 | 11.0 | 10.4 |

Diabetic case study - male 50y medicated Type 2 diabetic and hypertensive

Start Weight: **119.1 KG**

Current weight: **92.8 KG**

Net weight change to last recorded weight: **26.3 KG**

Dieted **9** weeks

Week 0 BP 147/83
Blood glucose 5.4mmol/l (weekly average)
stopped metformin
Still taking bendroflumethiazide 2.5mg od and ramipril 5mg od

Week 1 BP 147/83
Blood glucose 4.2 to 7.7

Week 7 BP 127/83
Blood glucose 5.2 (weekly average)

Week 8 BP 120/82

Week 9 BP 109/74 (referred to GP for BP medication dose adjustment)
Blood glucose 6.3 (weekly average)

Still compliant and comfortable to date (as of 24/06/16)

Waistaway maintenance using Waistaway Flex

Table 6 - weight maintenance results post weight loss for whole service

| Number patients | Average start BMI | Average BMI at last visit | Average weight lost (Kg) | Average Weight loss % | Average duration of maintenance (days) |
|-----------------|-------------------|---------------------------|--------------------------|-----------------------|--|
| 497 | 28.42 | 28.69 | -0.76 | -1 | 80.57 |

Discussion

The results Waistaway has produced over a 12 year period has been consistent and remarkable with weight losses averaging above 11% in all but newly established venues. With more patients enrolled and no deviation from the method in each of the venues the data will no doubt be replicated. The fact that these medically beneficial weight losses occur independent of gender, starting BMI and number of attempts demonstrates the value of this pharmacy programme to those needing weight loss treatment for existing obesity and prevention of obesity alike.

Patients with type 2 diabetes lost weight at the same rate as non-diabetics. This is contrary to the statement in the British National Formulary⁹ that “rates of weight loss may be slower in patients with type 2 diabetes”. Patients compliant on the Sure plan (Lipotrim) were effectively in diabetic remission on starting the weight loss phase through to and including the weight maintenance phase. This meant the diabetic medication could be safely stopped on starting the VLCD.

Medicated hypertensive patients were equally as successful losing weight on our programme, with a number of patients requiring dose reductions or even cessation of their antihypertensive medication as their blood pressure improved.

The data on weight maintenance is encouraging since we saw only a 1% increase in weight over an average of over 80 days. The spread of data for weight maintenance ranged from 0 days, where the patient decided to maintain alone, up to 945 days follow-up. Long term weight maintenance help was heavily promoted to ensure the patient wasn't attempting weight maintenance alone because it is the lack of weight maintenance ability that led to their weight gain initially.

We are currently only able to audit the weight loss data for those following the Waistaway Sure Lipotrim programme. The auditable computer programme used is currently being developed to add this function. Anecdotal evidence, after assessing individual records, show weight losses are being achieved by patients on the Flex plan in the region of 1lb a week average loss and the total losses are much less significant than those using the Lipotrim programme. However any losses that are maintained, as shown in Table 6, will be leading to the reduction of excess weight and obesity related health risks.

It is vital that this comprehensive approach to weight management is acknowledged as a viable option for treatment and prevention of obesity. Since there is no cost to the NHS and it is controlled by a health professional, an accessible Pharmacist, referrals are essential from Primary Care so their patients can have access to a programme that encompasses all of the first 3 tiers of the NICE guidelines.

References

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- 3) NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE PUBLIC HEALTH
DRAFT GUIDANCE Managing overweight and obesity in adults – lifestyle weight
management services
<https://www.nice.org.uk/guidance/ph53/documents/overweight-and-obese-adults-lifestyle-weight-management-draft-guidance2>
- 4) The Healthy Portion Plate <http://healthyportionplate.com/>
- 5) The Diet Plate™ <http://www.thedietplate.com/>
- 6) NHS eatwell guide <http://www.nhs.uk/Livewell/Goodfood/Pages/the-eatwell-guide.aspx>
- 7) Lipotrim <http://www.lipotrim.co.uk/>
- 8) Ultralife <http://www.ultralifestyle.co.uk/>
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