Research Article
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Self-monitoring of the caloric content of the food eaten is essential in weight loss and in maintenance

Abstract

Objective: We tried to evaluate the importance of self-monitoring of caloric content of the diet in weight loss. It has been suggested that self-monitoring is an essential part of weight loss attempts and it has been suggested to be essential also in maintenance.

Methods: As a study group we had 77 persons who were or had been as hospital outpatients for the treatment of obesity. The history of all their weight loss efforts was analysed and the amount of weight lost in all their weight loss efforts was counted. The amount of the weight lost was divided in two parts: the amount lost by the means including self- monitoring of caloric content of the food eaten and amount lost by methods not including self-monitoring. The methods that did not include self-monitoring were attempts to change the life style (a general intention to eat less and better and exercise more to lose weight).

Results: The amount of weight lost by methods including self-monitoring were 5 fold bigger compared to methods not including self -monitoring (2064,4kg/397,5kg). As self-monitoring was discontinued the weight came back. This difference was considered to be statistically extremely statistically significant ($p<0.0001$ in Fisher's exact test).

Conclusion: Self-monitoring of the caloric content of the food consumed should be a permanent habit in the weight loss management even in the maintenance phase.

Keywords: self-monitoring in weight loss, weight loss management

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Abbreviations: SM, self monitoring; NSM, not self-monitoring; VLCD, very low calorie diet; BMI, body mass index

Introduction

We tried to study the importance of self-monitoring of the caloric content of the food eaten into weight loss results. Self-monitoring of the caloric content of food may be inbuilt in the diet. In that case the diet is planned preliminary and the content of the food is known. In this case the monitoring has been done already in the structure of the diet. If the amount of calories eaten has not been planned preliminary, in our study self-monitoring consisted of reporting the amount of calories eaten along the course of the day. Points or other units may have been available as help, but in the end the amount of calories was reported. The usual ways nowadays are computer programs or pen and paper. Already 1993 the importance of self- monitoring to weight loss results was established.[1]

Materials and methods

The study group consisted of 77 consecutive randomly chosen persons (female/male 47/30) who had searched for help for obesity during the years 2005-2012 in the University Hospital of Turku or in the Central Hospital of Satakunta, Pori. The median age was 54, ranging 30-68years. In our study the data was collected personally from the patients during their visits as outpatients in the hospital or from the patient data of the hospital. The purpose was to collect data about his or her previous successful weight loss efforts. It was studied in which way the patient had been able to lose weight in his /her lifetime. There could have been several successful methods. No failed attempts were asked or analysed in this study. The methods of successful weight loss were divided according to the existence of self-monitoring of the caloric content of the food eaten during dieting. The diets were divided into two main types: First types were those with clear self- monitoring or monitoring done beforehand so that the diet had a strict structure that was followed. The other type was changing the life-style-methods, that payed attention to healthy eating habits without specific monitoring or pre-planned structure. The amount of weight lost in both types was counted.

The diets of the first type with self-monitoring were weight watchers-type diets with calories, points or units counted, commercially available very low calorie diets and diets planned by health care professionals. In all these diet types the caloric content of the food was controlled with monitoring, either previously, before eating or along with the food consuming. We also tried to find out the person´s weight at the time of the study.

The study protocol has been accepted by the Ethical Committee of Turku University Hospital (K24/11, 18.5.2010, 147). This study had no financial support from any part presenting any method of weight loss. The only financial support came from a private person's (Hilda Kauhanen) memorial fund.

Results and discussion

Out of the 77 persons 67 had been successful with VLCD, 37 with weight watcher- type programmes and 14 had themselves made a life-style change in eating habits. In this group of 77 persons the amount of weight lost by the methods including self-monitoring was 2064, 4kg. The amount of weight lost in the same study group with methods not including self-monitoring of the caloric content of the food eaten was

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397kg. The difference is 5 fold. This difference was considered to be statistically extremely statistically significant ($p<0.0001$ in Fisher's exact test).

The present weight was known at 50 patients and the median weight was 135,6kg. In addition the BMI was known from 5 persons. Their median BMI was 52 (range 45-60). Although body mass index could not be counted from those whose weight only was known it can be rested certain that the maintenance has failed. Only two persons weighed below 100kg, the maximum weight being 234kg. Also the fact that all these persons in the study continued to search for help for their obesity, supports the concept of failure in maintenance.

This study has several limitations. It is a small study, with a small study population. Parts of the data were collected retrospectively and were not complete in every aspect. Therefore the results could be considered inspirational for further study.

According to our study self-monitoring of the caloric content of the food eaten is an essential part of a success in weight loss management and it should be a permanent habit in persons having problem with obesity even when the weight management process turns into a maintenance phase. The idea of self-monitoring as a part of maintenance phase of weight loss is gradually appearing in articles of self-monitoring.[2] In our study when self-monitoring of the caloric content of the food eaten was used the weight management was successful, and when it was stopped the weight was gained back. When it comes to treating obesity lifestyle changes without self-monitoring are ineffective on the long run. The weight comes back as the monitoring period stops. Life changes can be effective otherwise, but when it comes to obesity, they are not effective.[3] The Finnish Diabetes Prevention study is a prime example. All the weight lost came back with the exception of one kilogram per person (Figure 1).[4]

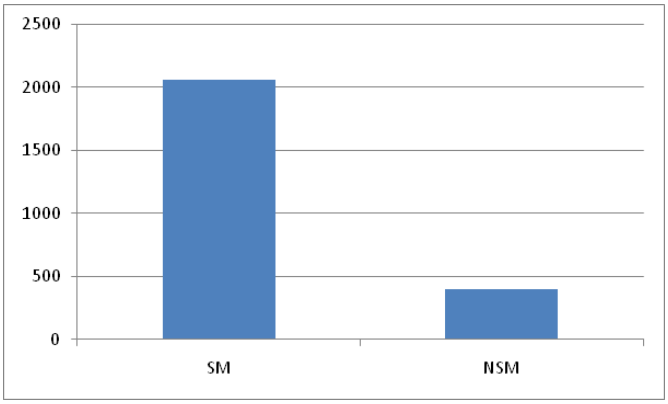

Figure 1 The amount of weight lost in kg in a 76 person study group with weight loss methods including self-monitoring (SM) and methods not including self-monitoring (NSM).

There should not be any hesitation from the therapist´s side to suggest self-monitoring. Even in the very best article, where self-monitoring is recommended to be used as a part of maintenance, self -monitoring has been called a burden.[2] This was very true as at the time the article was published pen and paper were the methods most to be used, but nowadays there are several very easy-to -use programs online. Previously the time demanded for a meal to be put in an internet program of self-monitoring was considered to be 10minutes[2] as now it takes only seconds. The scientific world should concentrate in making self-monitoring simple and study the amount needed. The efficacy is already proven. The same logic should be implemented to the treatment of obesity that is implemented to the treatment of diabetes mellitus type 1. The monitoring should continue forever.

Obesity is not treated properly without self- monitoring. As the adherence to the diet regimen, whatever it is, is crucial, it would be important to find to everyone the most convenient and sufficient way to monitor. That should be promptly studied by the scientific world of obesity. This study presents a part of the inspiration to continue with this task (Table 1 & 2).

Table 1 Characteristics of the study participants

Number of persons studied	77
Average age	54years
Age range	28-77years
Number of persons having lost weight	77
Male/female	30/47

Table 2 Results of the study

Number of persons having lost weight with SM	74/77
Number of persons having lost weight without SM	18/77
Maximum weight lost with methods with SM	79kg
Maximum weight lost with methods without SM	36kg
Total weight lost with SM	2064,4kg
Total weight lost without SM	397kg
Median personal weight at the time of study (n=50)	135,6kg

Conclusion

Self-monitoring of the caloric content of the food consumed should be a permanent habit in the weight loss management even in the maintenance phase.

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Conflict of interest

The author declares no conflict of interest.

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