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The management of the obese patient

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Obesity is said to be the most common nutritional disturbance in this country. This statement is certainly true from the point of view of the dietitian, as obesity is one of the largest problems with which she is faced.

From the practical point of view the problem is clearly divided into the relatively simple one of the obese patient in hospital and the much larger and more difficult one of the obese patients who have to be treated in their own home surroundings.

In an attempt to assess this latter problem, the patients initially referred for weight reduction to the Dietetic Department of the Royal Infirmary of Edinburgh in the first 6 months of 1958 were studied. The total number of new patients of all types given dietetic instruction was 831; 407 were non-diabetic obese persons requiring advice on weight reduction. Of these 407 patients 31 (8%) were referred directly to the department by their own practitioners, 99 (24%) were seen on discharge from the wards of the hospital and 287 (68%) were sent as outpatients from other departments of the hospital.

The distribution of patients according to age and sex is shown in Fig. 1. The ages ranged from 7 to 82 years, the largest group being in the middle range, 45–60. The number of females was slightly more than twice the number of males—287 females to 120 males. The distribution of the sexes was similar throughout the age groups with the exception of the group under 15 in which there were more males than females. This variation may be due to the fact that the acquisition of 'puppy fat' in young girls does not usually result in their being referred for medical advice.

Ninety-nine (about 25%) of the patients were referred for the treatment of uncomplicated obesity: the remaining 318 (about 75%) suffered from some disability consequent upon their obesity or had to have their weight reduced in preparation for a surgical operation or because of orthopaedic, cardiac, circulatory or respiratory complications.

The percentage of excess weight was calculated from the tables of standard weight for height and age issued by the Metropolitan Life Insurance Company. The patients were weighed in indoor clothes with shoes. Thirty-five (12%) of the patients

Fig. 1. Distribution of obese patients according to age and sex.

were more than 50% overweight, 91 (23%) were between 30 and 50% overweight, 177 (44%) were between 10 and 30% overweight and the remaining 85 were 10% or less overweight. Clinical examination of these last 85 patients clearly demonstrated excessive subcutaneous adipose tissue and they undoubtedly required to have their weight reduced.

Table 1. *Relationship between age and degree of obesity*

Percentage excess weight*	Percentage of patients in age (years) group: Under 40	40–60	60 and over
10	8	60	32
10–20	13	67	20
20–30	20	64	16
30–40	25	65	10
40–50	28	57	15
50+	45	50	5

*Calculated from the tables of standard weight for height and age issued by the Metropolitan Life Insurance Company.

Table 1 shows that the younger patients were more overweight on reporting for treatment, the elderly tending to be referred for treatment for lesser degrees of overweight.

More than 50% of the patients (243) were engaged in domestic work of one sort or another; the rest were either occupied outside the home or were schoolchildren, of whom there were 13.

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The patients on coming to the Dietetic Department were all seen individually by a dietitian. A brief diet history was obtained which gave a picture of the individual meal pattern, home circumstances, the facilities and requirements for dieting presented by their occupation, an approximate estimate of their financial resources and any other difficulties with which they might have had to contend. When the patient did not cook for himself the person who did so was seen if at all possible.

The calorie content of the diets prescribed varied from 1000 to 1800 kcal daily according to the age, occupation, activity and requirements of the patients. This restriction of calories was achieved by reduction of carbohydrate intake to 100–180 g/day, maintenance of protein intake in accordance with the daily allowances recommended by the (U.S.) National Research Council: Food and Nutrition Board (1948) and drastic reduction of fat intake to 45–70 g/day. No restriction was placed on fluid or salt intake except when specially indicated.

The diet was calculated and written out by the dietitian in the presence of the patient. The patients were consulted on the distribution of meals and food and opportunity was given for them to ask questions. The patients were taught the simple principles of nutrition, and the reasons for omission or inclusion of various foods were explained. They were not asked to weigh their food but were given advice about the size of portions and were shown models of the quantities permitted. They were instructed in the use of exchanges for the various groups of foods and encouraged to make their diets as varied and as interesting as possible. They were also told which foods they could take freely so as to satisfy their appetites without unduly prejudicing their calorie intake. This method of giving patients diet sheets 'tailor-made' to fit their individual requirements is the standard practice of the Department as it is felt that by so doing maximum co-operation from the patients should be obtained and the dietitians have full scope to use their skill.

The use of drugs to depress appetite was not encouraged and, unless prescribed by the patients' own medical practitioners, such drugs were not given to any of this group.

In order to assess the response of the patients and to help and encourage them, they were all asked to report at about monthly intervals. To facilitate their attendance they were offered the choice of morning, afternoon or evening sessions.

Of the total number of patients 36% (148) did not return. About 50% (70) of these were unable to do so because of physical disability, distance, home commitments or similar circumstances; the remainder must be considered as voluntary defaulters in that, as far as we know, they had no excuse. It would be of interest to follow up this group and discover the reasons for their failure to return. Of the 64% (259) patients who did return there was a wastage of approximately one-quarter to one-third over each month until, at the end of 6 months, only 13% (48) were still attending, and at this point the study was discontinued. Fifty-eight (15%) patients were discharged during this period having achieved the desired loss of weight. The standard weight was reached by 44. There was no correlation between attendance and age, sex or percentage of excess weight (Fig. 2).

It is difficult to devise an index of success comparable for all patients. It is misleading to express the weight loss as a percentage of the initial excess weight, as it is obviously easier for someone who is 14 lb overweight to lose 50% of his excess weight than for someone who is 50 lb overweight to do likewise.

Fig. 2 shows the effect of prescription of low-calorie diets to the 259 patients who returned. Those patients who gained weight had with one exception attended on only one or two occasions—the gain may of course have been the reason for their

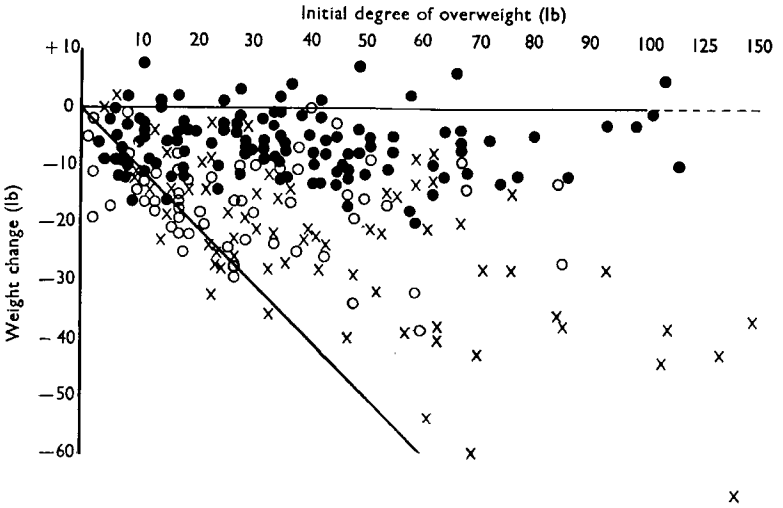

Fig. 2. Weight changes of 259 obese patients prescribed a low-calorie diet for 6 months and asked to report at monthly intervals. ●, patients who returned once or twice only; ○, patients who returned three or four times; X, patients who returned five or six times. The diagonal line represents the standard weight for the patients.

future defaulting. In general, those who attended only twice did not lose weight appreciably during this time although there were again a few exceptions. In contrast, more than half of those who attended for from 4 to 6 months lost weight appreciably during this longer period, but during the first 2 months their weight loss did not differ significantly from that of those who returned only twice. It may be that the latter continued to lose weight whilst not attending the clinic—a matter which is presently being investigated. It does seem that the more obese the patient is the more likely he is to lose weight.

There was no correlation between sex and age and weight loss, although those in the younger age groups were, if anything, more successful. The only occupational difference shown was that those patients such as policemen, who were accustomed to discipline, were more successful.

It is very difficult to assess the motivation which makes patients lose weight. The patients were all instructed in their dietetic regimen in the same manner and with similar emphasis. There appeared to be no significant difference between the results with patients suffering from some complication and with patients who desired weight reduction for aesthetic reasons. It was not possible from the records available to ascertain if the length of time that the patients had been overweight was of importance in their response to treatment.

It would appear that once some initial success has been achieved it is easier to gain the co-operation of the patient. This fact, however, is of no assistance with those who do not return. The use of threats of future ills impresses certain patients with the need for reducing weight but unfortunately seems to frighten away others.

One of the greatest difficulties is that in Britain a well-covered frame is still regarded as a desirable and healthy attribute, and people who attempt to reduce weight have frequently to contend with relatives, friends and neighbours who seem to delight in telling them that they do not look well or are starving themselves, or who put various temptations deliberately in their way. It is often difficult for patients to continue with dietary restrictions in the face of this discouraging attitude.

The results of the series described here demonstrate that success can be achieved in the treatment of a certain proportion of obese patients, there being apparently no common factor that ensures such success. These results, however, brook no complacency and the mystery of the attitude of the obese towards dieting requires further consideration.

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