Obesity: A Move From Traditional To More Patient-Oriented Management

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Background: **Family physicians have been encouraged to be aggressive in their treatment of obesity in their overweight patients. This article examines our traditional management of obesity and presents a management approach that is relatively safe, healthy, and patient-oriented.**

Methods: **A review of the literature on obesity and its treatment was performed by searching MEDLINE, PsychINFO, ERIC, and SOCA data bases from 1980 to 1993. Additional references were accessed by cross-referencing the bibliographies of the articles obtained through this search.**

Results and Conclusions: **Both physicians and society in general tend to be biased against obese individuals, and this bias has negative consequences in that it reinforces patients' negative stereotypes about their fatness and could contribute to their avoidance of physicians. To circumvent this tendency, physicians should make a conscious effort to treat their obese patients with understanding and respect and to offer treatment that optimizes their risk-benefit profile. Regardless of weight, all patients should be asked about their diet and exercise history, and a brief mental status evaluation should be performed to screen for eating disorders and other psychosocial disorders. In addition, all patients should be encouraged to follow a healthy lifestyle, which includes regular, moderate exercise and a balanced, low-fat diet. Repeated dieting should be avoided, because it can produce more harm than benefit by contributing to binge eating, loss of self-esteem, and increased risk of sudden death and cardiovascular disease. Thus, only obese patients who have never attempted comprehensive weight reduction programs should be encouraged to try such a program. Patients who have severe obesity that interferes with their lives or who have moderate obesity and a comorbid condition can be offered a gastroplasty or gastric bypass procedure, coupled with an explanation and discussion of the success and failure rates involved. Regardless of whether patients are able to lose weight, the family physician can still provide long-term support and care and encourage a healthy lifestyle in these patients. (J Am Board Fam Pract 1995; 8:99-108.)**

It is no secret that thinness and fitness are in fashion. During the past few decades Americans have plunged into the headlong pursuit of a new goal: losing weight to fit the so-called ideal body image.[1] This pursuit has been embraced by all sectors of society — women, men, and children alike. Brownell[2] cites data from the National Health Interview Survey indicating that 46 percent of women and 24 percent of men were dieting at the time of the survey in 1985. Thelen and colleagues[3] sampled three grades at a Midwestern elementary school and found that 28 percent of the second-grade girls, 33 percent of the fourth-grade girls, and 35 percent of the sixth-grade girls had already dieted at some point during their lives.

On the other hand, there is some evidence that antifat attitudes might be moderating. On 12 November 1993 the *Wall Street Journal* reported that the US Equal Employment Opportunity Commission "declared obesity a protected category under the federal disabilities law, indicating a broadening legal push by overweight people for workplace equality."[4] Along the same vein, Mayor Ben Nichols of Ithaca, New York, declared September 1993 to be Size Acceptance Month to "condemn prejudice and discrimination based on size."[5] On the medical front, the 1992 National Institutes of Health Technology Assessment Conference concluded that ". . . for most people, achieving body weights and shapes presented in the media is not a reasonable, appropriate, or achievable goal, and thus the failure to do so does not represent a weakness of will power or character . . . ."[6]

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Where do these changing and diverse perspectives on weight leave family physicians and their patients? The purpose of this article is to review these newer perspectives on obesity and present an updated approach to management of the fat patient.

Methods

A review of the literature on obesity was performed by searching MEDLINE, PsychINFO, ERIC and SOCA data bases from 1980 to 1993. Searches were done using the following key words: "obesity," "morbid obesity," "obesity surgery," "obesity therapy," "obesity prevention," "obesity control," "diet therapy," "obesity drug therapy," "dieting effectiveness," "dieting side effects or dangers," "obesity and family practice," "weight loss and family practice," "stigma of obesity," "obesity stereotypes or prejudices," "fat," "fat phobia," and "attitudes toward obesity." Additional references were accessed by cross-referencing the bibliographies of the articles obtained through this search.

Pervasiveness of Antifat Attitudes

The existence of prejudice against fat people in the general population has been amply documented and competently summarized.[7-16] Recent publications have continued to document negative attitudes toward fat adults and children[17,18] and the socialization of antifat attitudes from parents to children.[19] These attitudes weave their way into every facet of life, even affecting one's employment opportunities.[20-22]

Not surprisingly, researchers have documented these same negative attitudes toward fat people among health professionals. Antifat bias has been found among family physicians,[23] medical students,[24-27] nurses and nursing students,[28,29] and nutritionists.[30] A group of 438 Michigan family physicians ranked obesity as the fifth most negative patient characteristic; the younger the physician, the more likely obesity was seen as negative.[23] Price, et al.[27] surveyed 324 members of the American Academy of Family Physicians and found that two-thirds of the respondents believed their obese patients lacked self-control, and 39 percent thought they were lazy; 34 percent characterized their obese patients as sad.

There is evidence also that antifat attitudes could be related to raters' beliefs that fat persons overeat.[8] Maddox and Liederman[26] found that obese persons were often considered to be responsible for their obesity and that this responsibility affected whether they were liked or disliked. In one study, DeJong[31] showed that when high-school girls were told a subject was fat as a result of a thyroid problem, she was liked almost as much as an average weight subject and was liked significantly more than the fat subject who was not considered to have a thyroid problem. Thus, if physicians recognize that fatness might not be as self-inflicted or as much under the sphere of self-control as we have previously thought, some of their antifat bias might improve.

It is also likely that some of physicians' antifat attitudes stem from the emphasis placed on weight loss in medical training. For example, Heath, et al.[32] strongly recommend that "Since weight loss is considered a first-line therapeutic treatment for obesity and its concomitant illnesses, it is vital that physician educators emphasize weight-loss treatments to medical students, residents, and their own patients." Levy and Williamson[33] stress that "Family physicians need to emphasize the benefits of weight loss to their overweight patients to ensure their patients understand that they are above ideal body weight and that they need to lose weight."

Concerns have been raised about the potential negative impact of physicians' antifat attitudes on obese patients. On the basis of our clinical experience with fat patients, we believe that physicians' negative attitudes toward obesity not only reinforce patients' negative stereotypes about fatness, but also contribute to their avoidance of seeing their physicians for routine preventative health care. Reasons given by patients for avoiding physicians include physician disapproval of the patients' size, frequent prescriptions to diet, assumptions that they overeat, insensitive comments about weight, linking most of their illnesses to weight, and, in general, being made to feel that weight is their most important characteristic. This reluctance to seek appropriate medical care might contribute to the health problems that fat persons already have.

Traditional Treatments for Weight Control

Because any classification of weight is somewhat arbitrary, there has been considerable diversity in classification schemes for underweight, average

weight, and overweight categories. For the purposes of our discussion, our definition of weight is based on that proposed by Rowland,[34] who reviewed and synthesized the cutoffs from four major studies. This definition distinguishes five categories for body mass index (BMI) (BMI=weight in kg divided by height in meters squared) for women and men: underweight, average, overweight, moderate obesity, and clinically severe obesity.*

Dieting, defined here as some form of caloric or dietary restriction, is one of the most commonly used weight-loss treatments. Because of dieting's prevalence, scientific investigation into its effects and effectiveness is now considered important by both professionals and the public. In the following sections we review some of the scientific data questioning the effectiveness and safety of dieting.

Do Fat People Eat Too Much?

Physicians frequently recommend dieting to their fat patients because of their assumption that the major cause of obesity is overeating. In spite of this widespread assumption, however, a review of the medical literature does not support the notion that obese individuals consume more calories than their lean counterparts. In their review of more than 20 investigations, Wooley, et al.[35] concluded that on the whole those who are obese eat no more than those who are lean. The authors note that although methodological criticisms can be made about each individual study, the combined data of the 20 studies collected by a variety of different techniques are undeniably compelling. These various methodologies included observing individuals in public restaurants, monitoring eating in laboratory settings where the true nature of the experiment was disguised, and relying on self-report, often in the form of diaries about the person's food consumption. Additional study methods that have been used to support the idea that obese persons do not eat more than others included random observations of food stored in kitchens of private homes,[36] the use of food diaries combined with careful measurement of food intake for individuals who have been instructed not to lose weight,[37] and observations of food choices in a hospital cafeteria.[38] These studies, together with the findings of two additional reviews,[36,39] corroborated the conclusion of Wooley, et al. that, in general, obese persons probably do not consume more calories than those who are not overweight.

Thus, if fat persons do not necessarily eat any more than thinner persons, the prescription of a diet might not be warranted or reasonable. Certainly, there are fat persons who are overweight partially because they eat too much, and for them modifying their food intake through dieting might be a useful strategy. Whether that same advice is reasonable for fat persons who are eating normally is questionable. The benefit of dieting in such circumstances needs to be assessed further and might depend, in part, on what the patient's previous experiences with dieting have been.

Is Dieting an Effective Treatment for Obesity?

There have been numerous studies documenting the difficulty of maintaining or sustaining substantive weight loss.[6,40-43] Current studies have lengthened the follow-up period, and the best studies observe dieters for at least 1 and up to 5 years after their initial weight losses.[44] Although the frequently quoted study by Stunkard and McLaren-Hume[45] documenting the long-term failure of dieting (i.e., that 95 percent of dieters regain their lost weight) was conducted more than 30 years ago, more recent follow-up evaluations of dieting programs remain discouraging.[44] For example, the results from one of the longest and most extensive follow-up evaluations of very low calorie diets and behavior therapy indicate that by the 5-year evaluation, the mean weight of dieting patients had returned to base line: "Of the total sample, 18 percent maintained a loss of 0.1–5 kg, and 18 percent maintained a loss greater than 5 kg, 5 percent of the sample maintained their entire weight loss."[44] The National Institutes of Health Technology Assessment Conference Statement[6] concluded, "For most weight loss methods, there are few scientific studies

*The first category, labeled *underweight*, cites a BMI of less than 19.1 for women or 20.7 for men. The BMI associated with lowest mortality, we will call *average*, a term we prefer to *acceptable*, is between 19.1–27.3 for women and 20.7–27.8 for men. The next BMI category, 27.3–32.3 for women and 27.8–31.1 for men, is labeled *overweight*; the fourth, 32.3–44.8 for women and 31.1–45.4 for men we will call *moderate obesity*, a term we prefer to *severe overweight*; and the fifth, more than 44.8 for women or 45.4 for men will be termed *clinically severe obesity*, a term we prefer to *morbid obesity*. These definitions of obesity represent a substantial proportion of the US population; it is estimated that one-quarter to one-third of Americans are overweight.[6]

evaluating their effectiveness and safety. The available studies indicate that persons lose weight while participating in such programs but, after completing the program, tend to regain the weight over time."

The medical literature has suggested many theories about why dieting programs fail. First, studies in both animals and humans suggest that resting metabolic rate declines in response to dietary restriction and weight loss.[46-48] Nisbett's widely accepted set point theory has been used to explain this drop in basal metabolic rate.[36] This theory proposes that each person has a natural set point which operates like a home thermostat, where metabolism changes to maintain a set weight regardless of the amount of food consumed. Another theory proposed for the failure of dieting is that marked amounts of fat-free body weight can be lost along with body fat when reduced food intake is imposed.[39]

Second, research has also shown that biological variables, particularly genetic characteristics, are influential in the regulation of body weight and shape. Brownell[2] reviewed several studies of adopted children that showed the weights of adoptees and adoptive parents are unrelated, while those of adoptees and their biological parents are strongly associated. His review of twin studies likewise supported the view that weight and body fat distribution are genetically determined.[2] Recognizing that genetics likely has an important influence on one's body size and could well mediate an individual's set point, it seems reasonable to conclude that there are limits to the amount of weight loss that most individuals can effect in the long term.

Dangers of Dieting

In addition to questioning the effectiveness of dieting as such, researchers are also questioning the effects of repeated or persistent dieting on eating behavior, health, and psychological functioning. Numerous investigators have raised the concern that dieters or restrained eaters could be setting themselves up for eating binges.[49-52] Both clinical reports and epidemiologic surveys indicate that bulimia, a disorder characterized by episodes of binge eating, feelings of lack of control over eating during the binges, regular purging (either self-induced vomiting, use of laxatives or diuretics, strict dieting or fasting, or vigorous exercise to prevent weight gain), and a persistent overconcern with body shape and weight,[53] usually begins during a period of severe dietary restriction. Wadden and Stunkard[52] summarized two separate investigations that found more than 80 percent of subjects dieting at the time of their initial binge-purge episode, even though most were not overweight. They also concluded that severe dietary restriction appears to have similar negative behavioral consequences for the obese.

In addition to the effects of chronic dieting on eating and binging behavior, recent studies have raised serious questions about the dangerous effects of weight fluctuations. Lee and Paffenbarger[54] tracked 11,703 male Harvard University alumni between the years of 1962 and 1977 and found that those who lost or gained more than 11 pounds were at higher risk of death than those who stayed within 2 pounds of the same weight. Similar results were found by Lissner, et al.[55] in their 32-year analysis of weight fluctuations in 3130 men and women in the Framingham Heart Study. These researchers found that individuals whose body weight fluctuated often or greatly were significantly more likely to be victims of heart disease and premature death than those whose weight remained stable. Further, it has been argued that dieting could leave patients with discouraging failure experiences; expose them to professionals who hold them in low regard; cause them to see themselves as deviant, flawed, and inadequate; confuse their perceptions of hunger and satiety; and divert their attention away from solving other problems or accomplishing other achievements.[56]

The National Institutes of Health Technology Assessment Conference Statement[6] has cautioned that, because of the general ineffectiveness of weight loss programs and because of the medical harm they might cause, "before individuals adopt any weight loss program, the scientific data on effectiveness and safety (should) be examined." If no such data exist, the panel recommends that the program not be used. Because few weight loss programs have such scientific data, this recommendation, if followed, would eliminate the use of many, if not most, of the current weight loss programs and methods.

Surgical Treatments

Surgical methods of managing obesity can be considered for individuals who have (1) clinically

severe obesity, or (2) moderate obesity with high-risk comorbid conditions, such as life-threatening cardiopulmonary problems (e.g., severe sleep apnea, pickwickian syndrome, and obesity-related cardiomyopathy), severe diabetes mellitus, or lifestyle problems related to obesity (e.g., joint disorders or problems with employment, family function, or ambulation).[57] Because of the risks of surgery in such patients, it is important that patients understand surgery is only one of their options. Also, they must maintain a sense of control in their decision for or against surgery, and the patient's choice must be respected. The National Institute of Health Consensus Panel therefore has recommended that patients who are potential candidates for surgical procedures be judged by experienced clinicians to have a low probability of success with nonsurgical measures (they have made serious attempts to lose weight with nonsurgical methods), have an acceptable operative risk profile, and be well informed and motivated.[57]

Two major types of surgical procedures currently being used for the treatment of obesity are the vertical banded gastroplasty and Roux-en-Y gastric bypass.[57] Vertical banded gastroplasty, performed by constructing a small pouch with a restricted outlet along the lesser curvature of the stomach, functions by diminishing gastric volume. With the Roux-en-Y anastomosis procedure, a restrictive proximal gastric pouch is created that is connected by a small stoma to a limb of small intestine, bypassing the stomach and a portion of the small intestine. Thus, this procedure helps promote weight loss both by restricting gastric volume and creating a malabsorptive state. Several investigators have noted greater weight losses with the bypass procedure[57-59]; however, some believe that this advantage is offset by its higher risk for surgical complications and nutritional deficiencies.[59]

Patients who are considering operative procedures for weight loss should be informed of potential complications, which can occur in the early postoperative period or later. Early postoperative complications are seen in 10.3 percent of patients and include respiratory complications (4.47 percent), wound infections (1.6 percent), gastrointestinal leak (0.57 percent), cardiac complications (0.41 percent), deep venous thrombosis (0.35 percent), renal complications (0.16 percent), wound dehiscence (0.13 percent), subphrenic abscess (0.09 percent), hepatic complications (0.06 percent), evisceration (0.03 percent), pulmonary embolus (0.03 percent), and other (2.39 percent). The perioperative mortality rate is low, at 0.1 percent.[60] On the other hand, perioperative morbidity and mortality rates for revision procedures are approximately twice that of primary operations.[61] In one study of 920 individuals who underwent Roux-en-Y gastric bypass procedures, early technical complications and inadequate weight loss necessitated reoperation in 42 (4.6 percent) of patients.[62] Although most of the negative outcomes of surgery for obesity are reported in terms of major perioperative complications, evidence indicates that many patients suffer less severe chronic problems, such as those of micronutrient deficiencies — particularly of vitamin B_{12}, folate, and iron — and the so-called dumping syndrome, characterized by gastrointestinal distress and other symptoms.[57] Yale[59] estimated that perhaps two-thirds of patients who underwent a Roux-en-Y procedure had symptoms of dumping that were severe enough to help decrease their consumption of caloried liquids.

The success of a procedure is determined not only by perioperative outcomes, but also by the degree of weight loss and the maintenance of weight loss over time. Success, as defined in these terms, might be seen in 50 to 66 percent of patients. Conversely, treatment failures occur in approximately one-third to one-half of surgical cases in which failure is defined as failure to lose 50 percent of excess weight (20 to 31 percent of cases), death (0 to 2 percent), lost to follow-up (5 to 7 percent), or revision or reversal of the operation (6 to 14 percent).[58] Investigators of a new study evaluating 5-year outcomes for 174 patients treated with vertical banded gastroplasty concluded that gastric banding was simple, safe, and effective for 5 years in only about 50 percent of patients.[63]

For patients who have successful outcomes, there is often improvement in several comorbid conditions, such as sleep apnea, obesity-associated hypoventilation, cardiac abnormalities, glucose intolerance and frank diabetes mellitus, hypertension, serum lipid abnormalities, venous stasis ulcers, stress overflow urinary incontinence, gastroesophageal reflux, menstrual irregularity, infertility, hirsutism, and psychosocial disorders.[57,64,65] Other important postoperative out-

comes include improvements in self-esteem, positive emotions, marital satisfaction, and eating behavior.[66]

Other Treatments

Other nonsurgical, nondieting methods of weight loss include anorectic drugs and exercise.[6] Because current licensing regulations allow prescription of anorectic drugs for limited periods of time (12 to 16 weeks) and because of their potential for abuse, their role in the treatment of obesity is limited at this time.

The weight loss and nutrition literature is replete with new diets and treatments that initially appear promising. Most recently, attention has been given to the low-fat diet; though advocated for its cardiovascular benefit, it can also contribute to modest weight losses. There is not yet a great deal of information on the long-term effects of a low-fat diet on weight, but several studies evaluating the outcomes of low-fat diets, in which fat content is reduced from about 39 percent to 20 to 22 percent of caloric intake, have found these diets to result in modest weight losses of approximately 3 kg that can generally be maintained for at least 1 to 4 years.[67-71] Such weight losses appear to be more strongly related to changes in the proportion of energy derived from fat than from change in the total energy intake.[69] Additional studies are needed to evaluate longer term effects of a low-fat diet on weight.

Regular exercise can also help produce and maintain long-term weight losses, as shown by Safer's review[72] of studies evaluating three modes of therapy: very low calorie diets, behavior modification, and exercise. This review concluded that individuals who continued to exercise regularly achieved the best weight loss results 1 to 6 years later. Other investigators agree that exercise is one of the best predictors of long-term weight maintenance in obese persons.[73] Further, exercise, like the low-fat diet, often produces other health benefits.

Management Protocol

In view of the negative attitudes in US society toward obesity and the resistance of obesity to most commonly used treatments, obesity emerges as one of the more sensitive and difficult-to-manage problems seen in primary care today. Because overweight patients often experience discrimination in other sectors of life, it is important that they are treated with understanding and respect in the physician's office. Practical measures that help put these individuals at ease and serve them better include providing furniture that accommodates individuals of all sizes, large blood pressure cuffs and longer needles, lavatories with a split seat in the front, additional weights for scales, and locating the scale in a private area.

A brief dietary and exercise history should be obtained and a mental status evaluation done on all patients, regardless of their weight (Figure 1). For patients who are obese or underweight, a detailed history of weight loss or gain attempts should be reviewed, including what was done to lose or gain weight, how long the weight loss or gain was maintained, and whether the patient weighed more or less 3 to 5 years after each attempt. Health care providers should be aware that many fat patients have lost and gained hundreds of pounds while trying many of the best, as well as some of the most dangerous, diets, and that they are likely to blame themselves for these dieting failures. Treatments that have failed in the past should not be prescribed again unless any factors causing previous failure can be singled out and corrected; factors that do not place blame on the personal inadequacies of the dieter are preferable.

Furthermore, it should not be assumed that obese patients are eating either poorly or excessively, even should the patient so insist. Rather, to determine the nature of a patient's eating pattern, the patient should be asked to keep a food diary for 4 to 8 weeks; during this assessment period, it is important that the patient not begin a new diet but eat normally. Because many fat patients believe that they do eat abnormally and excessively, there is no substitute for the precise data collected in food diaries. It is important that all patients understand the principles of a healthy lifestyle, including nutritional eating and regular exercise; for the majority of patients, including mildly obese patients, weight management would end here.

Patients with a diagnosed eating disorder, whether they be overweight, underweight, or average weight, should receive treatment for the disorder. In addition, underweight patients without an eating disorder should be examined medically for endocrine, malignant, or other disorders.

Moderately to severely obese patients who do not have eating disorders should be offered a

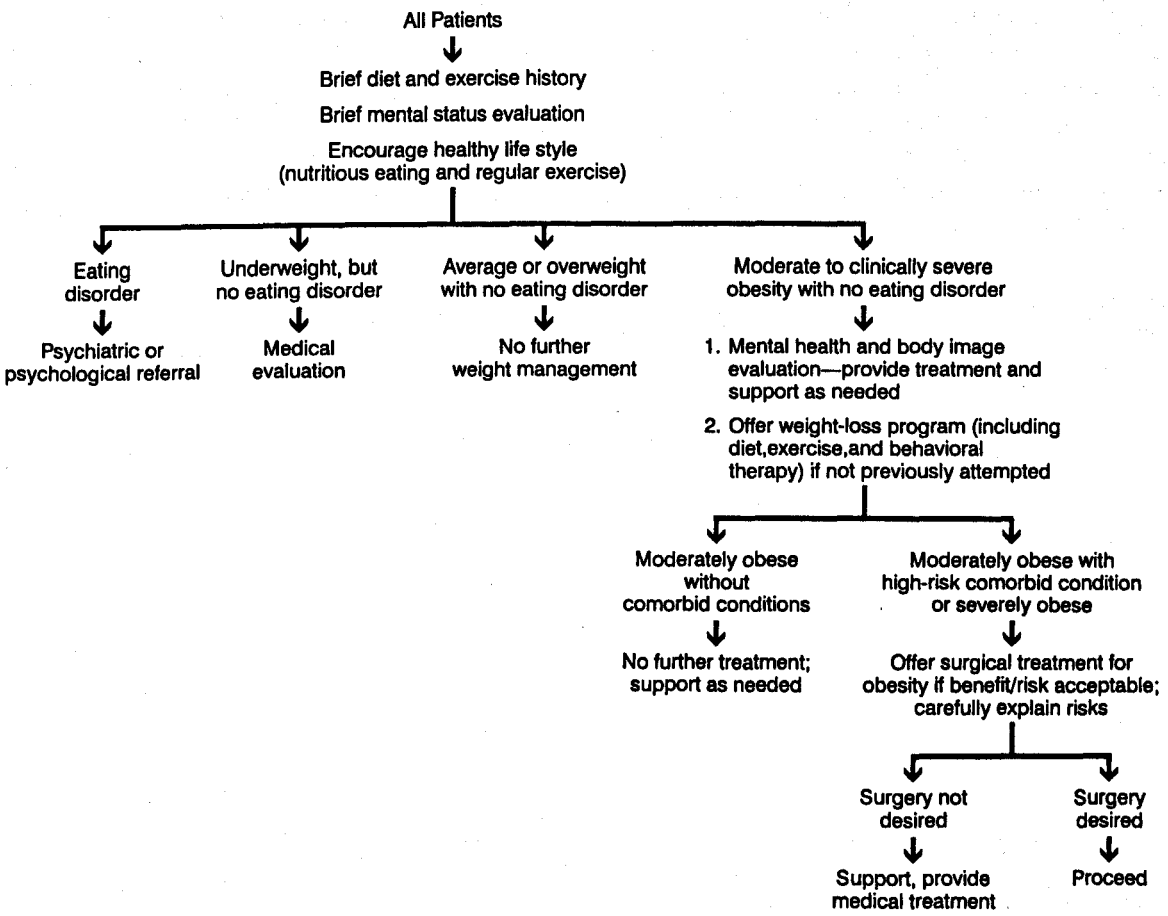

Figure 1. Protocol for Weight Management.

comprehensive weight-loss program consisting of nutritional education, exercise, and behavioral therapy, but only if such a program has not been previously attempted or if the factors leading to its previous failure can be uncovered and corrected. The physician should be honest about the difficulties of weight loss and weight loss maintenance and should help the patient set goals that are thought to be obtainable. It is important to talk about how weight control exacts a cost, and this cost in terms of time, attention, and sacrifice can be quite high. Each patient has the right to decide whether they want to devote their limited energy and resources to this particular task. Parham[74] has addressed this issue persuasively and eloquently:

> Sure, everyone says there is no easy answer (to weight loss) but the general tone of optimism belies the extent of the difficulty. This leaves the dieter unprepared for what lies ahead. When they encounter the almost inevitable weight regains, the tendency is to feel shame. This leads to reduced self esteem, again reducing the chances of any sustained achievement.[p 197]

Many overweight patients are not able to control their weight, but they can exercise control over their lifestyles. They should be encouraged to improve or maintain healthy life habits, which include nutritional eating and regular, moderate exercise, measures that might not be accompanied by weight loss. It is possible to be "fat and fit,"[75] to incorporate incremental exercise changes into one's daily routine, and to begin living life "as if one is thin."

Patients with clinically severe obesity, whose obesity seriously impairs the quality of their lives, or with moderate obesity combined with a high-risk comorbid condition who are unresponsive to nonsurgical weight loss programs can be told about surgical treatment for their obesity. This group consists of only a small minority of overweight individuals in whom the benefits of surgery are thought to outweigh the risks. Again, patients themselves should have a clear understanding of not only the risks but also the potentially high failure rates of 33 to 50 percent before a decision for

surgical treatment is made. Patients who decide against a surgical procedure should continue to receive medical treatment and support as needed.

It is unfortunate that we do not yet have a good treatment for this widespread problem, that is, a treatment that is both safe and effective for most persons. Certainly, the management of obesity is evolving, and additional research is needed to investigate more optimal ways of treating obesity. We recognize that some clinicians will feel frustrated and impotent as they encounter patients whose comorbid conditions are made worse by obesity and for whom there appears to be no satisfactory treatments. Until such treatments are discovered, however, it is important that health care providers adhere to the principle of "do no harm" or, for the minority of patients who qualify for and choose a surgical procedure, "weigh the potential harm against the benefit." In the words of Wadden and Stunkard,[52] "Health-care professionals have a unique potential to either alleviate or exacerbate the emotional pain borne by many obese persons." We believe that by stressing a healthy lifestyle, rather than weight loss as such, we will be minimizing psychological pain and maximizing health.

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