

Why I Treat Obesity

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ABSTRACT

In this narrative, I describe a patient who has lost 25% of her starting body weight and the behaviors that she practices to maintain this weight loss. Patients who have lost weight have reductions in metabolism that are out of proportion to their amount of weight loss. They also have increases in appetite. I propose that physicians must improve in their treatment of obesity as a chronic disease. To achieve this, they must understand the physiologic and behavioral barriers to long-term weight loss, and they must be open to the use of medications for treating obesity.

MY PATIENT DELLA

I look forward to seeing Della (name changed). She comes to see me every 3 months like clockwork. Della is 58 years old. When I first met her, she weighed 241 pounds, down from her highest recorded weight of 273 pounds. My colleagues referred her because she needed to lose more weight. I prescribed an extended-release form of phentermine-topiramate and asked her to replace 2 of her 3 daily meals with a high-protein shake supplemented with vitamins and minerals. She lost an additional 22 pounds during the next 6 months, and 10 months later, she achieved her lowest weight of 196 pounds. At her last visit, a few weeks ago, she weighed 204 pounds. Despite regaining 8 pounds from her lowest weight, and although her body mass index of 33 kg/m² means she still has class 1 obesity, she has maintained a weight loss of 69 pounds for more than 2 years. This amount of weight loss equals 25% of her highest body weight and is the amount typically seen after bariatric surgery. In fact, her coworkers have asked her whether she had weight loss surgery.

She now follows a strict eating plan limited to 1500 calories a day, which includes religiously counting every calorie, measuring portion sizes, and weighing the food she is about to eat. She exercises multiple

times a week. All of these behaviors are supported as evidence-based practices by studies on behavioral treatment of obesity.¹ Her hemoglobin A_{1c} level has been in the prediabetes range since our practice started measuring, but her most recent value was in the normal range. This patient is one of the hardest-working and most successful patients in my practice of obesity medicine.

WHY IT IS HARDER FOR HER TO KEEP OFF THE WEIGHT

The science of obesity supports the idea that Della must work harder to maintain weight loss than other patients who weigh the same as she does but have not lost weight. The reason is that the extent of metabolic adaptation to weight loss is out of proportion with the amount of weight loss because of “adaptive thermogenesis.” Specifically, individuals who lose 10% of their body weight burn about 300 fewer calories per day when compared with people with similar but stable weight.² The reduction in metabolism that occurs with weight loss is persistent. For example, in a rigorously matched study of trios of subjects (each trio included a subject who was at stable weight, a subject who was maintaining weight reduction of 10% after recent weight loss, and a subject who had maintained a 10% weight loss for 1 year), a reduction in 24-hour energy expenditure was observed in both groups that had lost weight. This reduction in energy expenditure was out of proportion with the amount of weight lost, and the reduction persisted 1 year after the weight loss.³

The changes in energy balance include changes in appetite. For example, increases in ghrelin (the hunger-signaling hormone) persist for at least 1 year after weight loss.⁴ Increases in food intake were also demonstrated in an experiment using canagliflozin, which is an inhibitor of the SGLT-2 receptor and is US Food and Drug Administration approved for the treatment of diabetes. It works by inducing a glucose diuresis, which can lead to

weight loss. When study subjects took canagliflozin, there was an increase in food intake of 100 kcal per day for every kilogram of weight lost. Thus, the increase in energy intake in response to weight loss was 3 times larger than the reduction in metabolic rate.⁵ This information about appetite strongly supports the long-term use of medications to treat obesity, given that increases in appetite can be treated but reductions in metabolism cannot.

The changes in energy expenditure and food intake in response to weight loss described above suggest that body weight is preferentially maintained at its highest weight level.⁶ The mechanisms controlling the set point (where a biological organism establishes homeostasis) of body weight are likely multiple, and are incompletely understood. The underlying science and the experience of patients like Della support the idea that obesity is a chronic disease (Table 1), and this idea was endorsed by the American Medical Association in 2013.⁷ Obesity is a chronic metabolic condition that can be managed but not cured. In this respect, managing obesity is like managing chronic pain or a substance use disorder. All these conditions involve changes in normal physiologic function (brain chemistry or basal metabolism) that predispose patients to relapse.

HOW PRIMARY CARE PHYSICIANS CAN HELP

Despite the studies outlined above, many physicians still see obesity as a lifestyle choice. Better education might help these physicians understand the issues better. Recent studies show that many

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Table 1: A weight-loss and 24-hour energy expenditure comparison between patient A and patient B

Patient	A	B
Height	5 ft, 6 in	5 ft, 6 in
Weight	200 lbs	200 lbs
Sex	Woman	Woman
Weight loss	Weight stable since early adulthood	Lost 10% of body weight in the past year (22 lbs)
Estimated 24-h energy expenditure	2191	1891
Hunger level	Stable	Increased

Ft = foot; in = inch; lb = pound.

physicians lack knowledge about the metabolic adaptations to weight loss, and also that they lack basic knowledge about how to treat obesity.^{8,9} For example, only 19% of internists and 16% of family physicians know the US Food and Drug Administration criteria for starting a medication to treat obesity, and only 39% of internists and 36% of family physicians know the criteria for using weight-loss medications on a long-term basis.⁹ One reason for this lack of knowledge may be the relative absence of questions about obesity in medical-licensing examinations.¹⁰

For the practicing internist or family physician, treatment for obesity is best understood as multimodality and long term. Lifestyle changes (reduced calorie intake, increased physical activity) are necessary, and high-intensity behavioral treatment to help meet these targets is recommended for all patients.¹¹ The addition of medically supervised diets, pharmacotherapy, or weight loss surgery can help some patients meet and sustain those behavioral targets. Several randomized trials have found that the combination of high-intensity behavioral treatment and medications nearly double the weight loss achieved, compared with either therapy alone. Thus, combination therapy is additive. Finally, monthly or more frequent contact with a trained interventionist (eg, registered dietitian, behavioral psychologist) is recommended to ensure longer-term success with maintenance of weight loss.¹¹ Increased exercise is critical for the long-term maintenance of weight loss, in part because of its ability to improve resting metabolic rate. Data from the National Weight Control Registry (a database of individuals who have successfully maintained a weight loss of at least 30 pounds) provide insight into the behaviors required for long-term success.¹² On the

particular question of long-term use of medications to treat obesity (a question I receive frequently from colleagues), randomized trial data strongly suggest that medications are only effective for as long as the patient continues to take them.¹³ Clinical guidelines on pharmacotherapy for obesity indicate that medications are most appropriately used as a chronic therapy.¹⁴

There are not enough physicians who are willing to treat obesity. As I write this, I also am emailing 2 obesity medicine colleagues in other practices who are trying to help friends in distant locations find a physician who will prescribe a medication to help manage their weight. In addition, nearly every week I work with physicians in my health care system who are hesitant to prescribe any medication for weight control. I look forward to a time when I do not need to be informally consulted to find physicians to prescribe a weight-loss medication. For Kaiser Permanente clinicians interested in prescribing, a brief continuing medical education video can be found at: https://clm.kp.org/wps/portal/cl/CO/search_iframe?query=obesity&cx=0&cy=0. All clinicians (Kaiser Permanente and non-Kaiser Permanente) can learn more about pharmacotherapy by reviewing the clinical guideline on medications to treat obesity.¹⁴

I treat obesity because of patients like Della, who restricts her calories, monitors her diet, and exercises regularly to maintain her weight loss. Certainly, the number of physicians who treat obesity is increasing. For example, more physicians are now taking the board examination for obesity medicine than are becoming certified for some traditional internal medicine subspecialties, such as endocrinology and infectious diseases.¹⁵ I also look forward

to the day when all physicians understand and treat obesity as a chronic disease, like they do for diabetes and hypertension. ❖

Disclosure Statement

The author(s) have no conflicts of interest to disclose.

How to Cite this Article

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Food Preparation

Obesity rates are inversely correlated with the amount of time in food preparation. The more time a nation devotes to food preparation at home, the lower its rate of obesity.

— Michael Pollan, b 1955, American journalist, author, and activist