

Take Obesity Seriously: Weight Management in Primary Care

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Citation:

van den Berg-Wolf M, Kyrillos JV. Take obesity seriously: weight management in primary care [published online October 25, 2018]. Consultant360.

Excess weight gain during adulthood is associated with a significantly increased risk of the acquisition of major chronic diseases and decreased odds of healthy aging.¹ Yet primary care providers (PCPs) have not been effective in addressing either prevention or treatment of obesity. Since the 1980s, progressive weight gain in the United States has led to a prevalence of obesity (body mass index [BMI] of 30-40 kg/m²) of 39.6% and severe obesity (BMI >40 kg/m²) of 7.7% in the US population.^{2,3}

Modalities to help prevent and manage obesity include lifestyle interventions, antiobesity drug therapy, and bariatric surgery when appropriate.⁴ However, research has shown that few PCPs approach the subject with patients during visits; thus, obesity remains underdiagnosed and undertreated.⁵ In addition, fewer people report dieting now in the United States than ever before.⁶

The goal of this article is to provide a framework for the PCP in order to help prevent and treat obesity and to help prevent weight gain once weight has been lost.

Risk of Excess Weight

Obesity causes dysfunction from fat accumulation in and around various organs in the body, and associated fat accumulation in the pharynx and larynx lead to the development of obstructive sleep apnea and hypoventilation syndromes. Increased body weight increases the load on joints and leads to hepatic fat storage diseases. However, obesity also is associated

lead on joints and leads to hepatic fat storage diseases. However, obesity also is associated with a systemic inflammatory state and chronic overactivity of the sympathetic nervous system, leading to the development of hypertension.^{7,8} Obesity also is implicated in the development of cancers and therefore can be thought of as an inflammatory disorder.⁹ Obesity is well established as a metabolic disease that is associated with worsening diabetic control, insulin resistance, dyslipidemia, hepatosteatosis, hyperuricemia and gout, cholelithiasis, acanthosis nigricans, nephrolithiasis, glomerulopathy, prothrombotic predisposition, neuropsychiatric diseases, and asthma.¹⁰

Benefits of Weight Loss

Systematic reviews conducted by the US Preventive Services Task Force of behavioral interventions consisting of weight loss counseling found that significant numbers of patients could achieve and maintain greater than 5% of body weight over time.¹¹ Losing just 5% of body weight can lead to clinically meaningful metabolic effects, and this can help treat obesity-related disorders.¹² Losing 5% of body weight has been shown to decrease the risk of developing type 2 diabetes mellitus over time by more than 50%.¹³ Research has shown that modest weight reductions can be effective for many patients to help combat and treat comorbidities such as hypertension and diabetes.¹⁴⁻¹⁶ Weight reduction also helps reduce the harmful fat accumulation and its effects on organs.⁷

Barriers to Care

Clinicians report barriers that prevent effective counseling of overweight and obese patients.⁵ Time constraints, lack of training to treat obesity, lack of training in nutrition and obesity, lack of comparison data on various dietary approaches, and lack of long-term data on newer antiobesity medications are commonly listed as barriers. Preconceived problems—real or imagined—exist with getting insurance coverage for antiobesity medications. PCPs may perceive that the problem of obesity may not warrant attention and do not refer patients to obesity specialists when they are available.¹⁷ Another barrier to treatment is providers' own bias relating to obesity. When patients feel judgment and shame, they are more likely to resort to maladaptive behaviors and are less likely to seek care.^{18,19}

Understanding Metabolic and Body Changes in Obesity

When excess weight is gained, biologic adaptations promote the maintenance of the extra body weight. These biologic adaptations occur regardless of the starting weight of the patient.^{20,21} The adaptations make losing weight and keeping lost weight off very difficult. Understanding how these adaptations affect patients is crucial to be able to counsel patients effectively.

Simple caloric restriction causes metabolic adaptations that are designed to prevent weight reduction.²⁰ As persons gain weight, normal signaling fails to occur between fat cells, the gut

microbiome, stomach, pancreas, and brain via hormonal release and other mechanisms that are not completely understood. Instead of signals occurring to decrease food intake (eat less) and to increase skeletal muscle output (move more), signals occur to increase more food intake and to move less.^{20,22,23} These adaptive processes lead to diet failures in the form of increased appetites (eating more) and in slowing of metabolic rate.

Furthermore, ingestions of different types of food in general do not have equivalent metabolic effects: Proteins, fats, carbohydrates, and alcohol all have effects that vary widely with respect to signaling satiety, to promoting food consumption, and to promoting pathways that decrease appetite and promote energy expenditure as opposed to pathways that promote energy conservation and fat storage.²⁴ These metabolic adaptive processes continue after weight is lost and make it harder for people to maintain weight loss over time.²⁵ Much as a thermostat adjusts to maintain a set temperature, metabolic processes shift to maintain a set weight.²⁶ Yet recent review articles endorse the thinking that restrictions only at the calorie level are important and advise clinicians to encourage ingestion of fewer calories—“eat less and move more.”²⁷ The message to patients that obesity is only a result of their excess consumption of calories has placed the perception of blame onto patients.²⁸

Dietary Counseling

All successful approaches to treating patients with obesity combine behavioral counseling as a basis therapy with addition of antiobesity medications and surgery when appropriate.²⁶

Traditional nutritional approaches to weight loss promotion have been advocating low-fat diets in the attempt to cut calories. Dietary advice over the past 40 years has largely remained the same, with recommendation of plant-based foods (grains, cereals, fruits, vegetables) over animal products (eggs, dairy, meat), and vegetable oils over natural animal fats such as butter. In addition, clinicians have endorsed the idea of low-fat diets to improve heart health. However, research comparing the Mediterranean diet with a control (low-fat) diet refutes this idea. Participants with high cardiovascular risk who followed a Mediterranean diet either supplemented with extra-virgin olive oil or nuts were found to have fewer major cardiovascular events compared with those following a low-fat control diet over 5 years.²⁹ There was no impact on overall mortality or weight loss; participants were not counseled to reduce caloric intake or to exercise.

Recent analysis of commercial weight-loss programs revealed that weight loss occurred with any low-carbohydrate or low-fat diet as long as the patient was able to continue the program.³⁰ A recent trial involving 609 overweight adults showed that weight loss at 12 months was similar in groups randomly assigned to either a healthy low-fat diet or a healthy low-carbohydrate diet; there was no interaction between weight loss and genotype pattern of the participants with respect to gene-diet interactions or baseline insulin secretion levels.³¹ Furthermore, evidence

exists that nutrition research can be subject to bias, since nutritional research is largely funded by the industries that benefit from the diets they support.^{32,33}

There is increasing interest in carbohydrate-restricted diets that promote burning fat instead of carbohydrates; some promising emerging research shows that these low-carbohydrate/high-fat or ketogenic diets can deliver what anecdotal reports have indicated—that eating mostly fat and protein leads to a greater feeling of satiety and promotes positive changes in appetite-regulating hormones.³⁴ Research on the ketogenic diet has indicated that people who restrict carbohydrates and eat higher-fat diets tend to lose more weight and keep more of it off than people on traditional low-fat diets.³⁵ In addition, patients following carbohydrate-restricted diets show improvements in cardiovascular risk factors, metabolic markers, and diabetes control.^{36,37}

Avoiding Medications Associated With Weight Gain

A variety of prescription medications commonly used in primary care have been found to be associated with weight gain. Medication-induced weight gain should be seen as preventable, and the use of medications associated with weight gain should be carefully monitored to offset the likelihood of weight gain with the desired clinical effect. Patients should be informed of the risks and benefits of any medications associated with weight gain and participate in shared decision-making around their use. PCPs are referred to other resources for a more complete discussion on obesogenic medications.^{26,38}

Role of Antiobesity Medications

Guidelines from the Endocrine Society in 2015 included added emphasis on the utilization of anti-obesity medications in obesity management.³⁹ Antiobesity medications are recognized to help patients who have been unable to successfully lose and maintain weight, and these drugs may help with adherence to behavior change and improve physical functioning. If a patient's response to weight-loss medication is considered effective (ie, weight loss of 5% or more body weight at 3 months) and the treatment is safe, then the medications should be continued long-term.³⁹

Antiobesity medications are indicated for patients whose BMI exceeds 30 kg/m² or with a BMI greater than 27 kg/m² with obesity-related comorbidities such as hypertension, obstructive sleep apnea, dyslipidemia, type 2 diabetes mellitus, or knee or hip osteoarthritis.^{40,41} In total, 6 medications have been approved by the Food and Drug Administration for the treatment of obesity, most of which work centrally to suppress appetite. All are in pregnancy category X and require close follow-up of patients to monitor for adverse effects and to monitor the effects on mood, blood pressure, and heart rate and the potential for misuse, abuse, and overdose. Orlistat, lorcaserin, liraglutide, phentermine-topiramate, and naltrexone-bupropion have been approved for long-term use.^{7,42,43} Phentermine alone, the most prescribed drug for weight loss

in the United States, has only been approved for 3-month use; however, recent guidelines advocate its long-term off-label use, and the drug can be obtained outside of insurance reimbursement with coupons.^{39,44} Better combinations of existing drugs and the development of new drugs likely will lead to more-effective strategies for patients.⁴²

Drug therapy for obesity is largely underutilized in the United States; a recent study showed that patients filled 15 times as many prescriptions for antidiabetic medications (excluding insulin) than for antiobesity medications.⁴⁵ Not enough obesity specialists practice in the United States to meet current needs. A 2014 survey of 1992 physicians in the entire database of the American Society of Bariatric Physicians (now the Obesity Medicine Association) showed that 59% of obesity physicians practiced in fee-for-service private-practice centers that do not accept insurance.⁴⁴

Bariatric Surgery and Procedures

Bariatric surgery is recommended for patients with a BMI greater than 40 kg/m² or a BMI greater than 35 kg/m² with obesity-related comorbidities. Patients who undergo bariatric surgery, particularly Roux-en-Y gastric bypass surgery, can sustain larger weight losses of 16% to 32% of baseline weight and can experience remission of obesity-related conditions including type 2 diabetes mellitus.⁴⁰ In addition to gastric bypass and gastric sleeve surgeries, other procedures and devices are on the horizon that promise to be less-invasive than traditional approaches. Antiobesity drugs often are used after bariatric surgery to help prevent weight regain.

Role of Exercise

Although exercise has numerous physical, cardiovascular, and psychological benefits, there have been mixed data regarding the use of physical activity for weight reduction.⁴⁶ Due to compensatory mechanisms in metabolism, hunger, and satiety, it is very difficult to create an energy deficit simply by increasing exercise.⁴⁶ While increased physical activity may assist with weight loss and weight maintenance and may improve metabolic health, telling patients that they will not be able to lose weight without exercising may discourage them from attempting to focus on food quality if they are not exercising. It is important to assess patients' current level of activity and readiness and ability to change and to use this information to set realistic goals to increase physical activity, both as exercise and nonexercise activity.²⁶

Conclusion

The obesity problem in the United States is increasing as the population ages. There are not enough practicing US obesity specialists to reach all patients in need. Effective treatment involves counseling patients about the benefits of weight loss and increasing physical activity

while avoiding negative messages. PCPs must be willing to refer patients to obesity experts and behavioral groups when available, and the prescription of antiobesity medications should be considered.⁴² Numerous resources and treatment guidelines are available to PCPs to help in the effective treatment of patients with obesity.^{4,26,39} If appropriate, patients should be referred to a bariatric surgeon.

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