Introduction: The State of Obesity in 2017

Robert F. Kushner and Scott Kahan

Obesity continues to be a major national and global health challenge and a risk factor for an expanding set of chronic diseases. In 2015, high body mass index contributed to 4.0 million deaths globally, which represented 7.1% of the deaths from any cause. Obesity is now regarded as a disease, and multiple health care societies have begun to tackle obesity as a discrete target for assessment and treatment that is supported by several position statements and guidelines. Nonetheless, a perception and treatment gap continues to exist between health care providers and patients regarding the provision of obesity care.

Obesity as a Disease

Jagriti Upadhyay, Olivia Farr, Nikolaos Perakakis, Wael Ghaly, and Christos Mantzoros

Obesity is a complex disease with many causal factors, associated with multiple comorbidities that contribute to significant morbidity and mortality. It is a highly prevalent disease that poses an enormous health and economic burden to society. This article reviews the mechanisms of obesity and its related comorbidities.

Treatment of Obesity in Primary Care

Adam G. Tsai, Jocelyn E. Remmert, Meghan L. Butryn, and Thomas A. Wadden

This article outlines some of the behavioral, pharmacologic, and surgical interventions available to primary care physicians (PCPs) to help their patients with weight management. Studies on lifestyle modification, commercial weight loss programs, and medical and surgical options are reviewed. Several clinical suggestions on obesity management that PCPs can take back and use immediately in office practice are offered.

Guideline Recommendations for Obesity Management

Donna H. Ryan and Scott Kahan

It is an obligation for all health care providers to participate in obesity management. This article discusses obesity guidelines from The Obesity Society, the Endocrine Society, and the American Association of Clinical
Endocrinologists. It reviews and compares findings and recommendations across these guidelines, identifies areas of controversy and concordance, and suggests how primary care practices may make use of the most appropriate recommendations for their circumstances.

**Addressing Obesity in Aging Patients** 65

John A. Batsis and Alexandra B. Zagaria

Obesity in older adults affects not only morbidity and mortality but also quality of life and the risk of institutionalization. Weight loss interventions can effectively lead to improved physical function. Diet-alone interventions can detrimentally affect muscle and bone physiology and, without interventions to affect these elements, can lead to adverse outcomes. Understanding social and nutritional issues facing older adults is of utmost importance to primary care providers. This article also discusses the insufficient evidence related to pharmacotherapy as well as providing an overview of using physiologic rather than chronologic age for identifying suitable candidates for bariatric surgery.

**Obesity in Pregnancy: Optimizing Outcomes for Mom and Baby** 87

Heidi Dutton, Sarah Jean Borengasser, Laura Marie Gaudet, Linda A. Barbour, and Erin Joanne Keely

Obesity is common in women of childbearing age, and management of this population around the time of pregnancy involves specific challenges. Weight and medical comorbidities should be optimized both before and during pregnancy. During pregnancy, gestational weight gain should be limited, comorbidities should be appropriately screened for and managed, and fetal health should be monitored. Consideration should be given to the optimal timing of delivery and to reducing surgical and anesthetic complications. In the postpartum period, breastfeeding and weight loss should be promoted. Maternal obesity is associated with adverse metabolic effects in offspring, promoting an intergenerational cycle of obesity.

**Dietary Management of Obesity: Cornerstones of Healthy Eating Patterns** 107

Alissa D. Smethers and Barbara J. Rolls

Several dietary patterns, both macronutrient and food based, can lead to weight loss. A key strategy for weight management that can be applied across dietary patterns is to reduce energy density. Clinical trials show that reducing energy density is effective for weight loss and weight loss maintenance. A variety of practical strategies and tools can help facilitate successful weight management by reducing energy density, providing portion control, and improving diet quality. The flexibility of energy density gives patients options to tailor and personalize their dietary pattern to reduce energy intake for sustainable weight loss.

**The Role of Behavioral Medicine in the Treatment of Obesity in Primary Care** 125

Scott Kahan, Dawn K. Wilson, and Allison M. Sweeney

Behavioral medicine provides a framework for supporting patients to achieve changes in target health behaviors, such as dietary and
Behavioral medicine fits alongside traditional medical treatments, can minimize the need for more intensive medical treatments, improves outcomes of these treatments, and improves adherence to medication prescriptions or postsurgical recommendations. This article provides an overview of behavioral medicine counseling for obesity in primary care, rooted in the “5 As” approach to health behavior change, and the basic outline of behavioral skills interventions in which health care providers use self-regulatory and behavioral strategies to improve health-related behaviors among patients with obesity.

**Obesity Pharmacotherapy**

Katherine H. Saunders, Devika Umashanker, Leon I. Igel, Rekha B. Kumar, and Louis J. Aronne

Although diet, physical activity, and behavioral modifications are the cornerstones of weight management, weight loss achieved by lifestyle modifications alone is often limited and difficult to maintain. Pharmacotherapy for obesity can be considered if patients have a body mass index (BMI) of 30 kg/m² or greater or BMI of 27 kg/m² or greater with weight-related comorbidities. The 6 most commonly used antiobesity medications are phentermine, orlistat, phentermine/topiramate extended release, lorcaserin, naltrexone sustained release (SR)/bupropion SR, and liraglutide, 3.0 mg. Successful pharmacotherapy for obesity depends on tailoring treatment to patients’ behaviors and comorbidities and monitoring of efficacy, safety, and tolerability.

**Medical Devices for Obesity Treatment: Endoscopic Bariatric Therapies**

Eric J. Vargas, Monika Rizk, Fateh Bazerbachi, and Barham K. Abu Dayyeh

Endoscopic bariatric therapies (EBTs) are effective tools for the management of obesity. By mimicking restrictive and bypass surgery physiology, they provide a safe and effective treatment option with the added capabilities of reaching a broader population. Multiple efficacious medical devices, such as intragastric balloons, endoscopic suturing or plication devices, and bypass liners, at various stages of development are available in the United States. EBTs represent the newest addition to a multidisciplinary approach in obesity management. This article reviews several devices' safety and efficacy for primary care providers in the era of evolving obesity treatment.

**Bariatric Surgery for Obesity**

Carel W. le Roux and Helen M. Heneghan

In this review, the authors discuss the indications for and the published outcomes of commonly performed bariatric procedures, including weight loss, perioperative morbidity and mortality, late complications, as well as the impact of bariatric surgery on comorbidities, cardiovascular risk, and mortality. They also briefly discuss the mechanisms by which bariatric and metabolic surgery causes such significant weight loss and health gain.
Weight loss can be achieved through a variety of modalities, but long-term maintenance of lost weight is much more challenging. Obesity interventions typically result in early weight loss followed by a weight plateau and progressive regain. This article describes current understanding of the biological, behavioral, and environmental factors driving this near-ubiquitous body weight trajectory and the implications for long-term weight management. Treatment of obesity requires ongoing clinical attention and weight maintenance–specific counseling to support sustainable healthful behaviors and positive weight regulation.