Weight Management Options for the Holidays and Beyond

By Anna Marie Tran, OMS III and Kaitlyn Simpson, PGY 1
Touro College of Osteopathic Medicine, Middletown
Orange Regional Medical Center, Middletown, NY

As the holiday season rolls into full force, many are reminded of the need to be vigilant about excessive weight gain. The temptation of pies, cookies, cakes and other delicious foods are everywhere from office parties to family gatherings. As predicted, one of the hot button topics around the holidays is weight loss. Some are looking to lose a few pounds in the short-term while others need more long-term solutions. The concerning news is that obesity is prevalent in almost one-third of the U.S. adult population aged twenty and over - one of the highest rates in the world[1]. Those who are obese are at risk of conditions such as type 2 diabetes, coronary heart disease, stroke, sleep apnea, cancer, and even premature death.[2] The good news is that there are many options for weight loss and there is almost something out there for everyone. Even better is that health benefits can be appreciated with reduction of only 5% of a person's total body weight.[3] Thus, a solid knowledge of weight loss strategies can be instrumental in improving a patient's health and extending their life. This guide is a general overview of current weight management options available to the public.

One of the first questions that many health care providers hear is, "Do I need to lose weight?". While the answer can often be found subjectively with the patient's goals, providers have been using body mass index (BMI) to provide a more objective measure. Body mass index is an anthropometric calculation of weight (kg) divided by height (m^2).[4] Obesity is defined by a BMI of 30 kg/m^2 or higher. Overweight is defined by a BMI between 25 and 29.9 kg/m^2. A normal BMI is 18.5 to 24.9 kg/m^2. BMI has been used as a screening method for determining who is obese or overweight by health care providers.[5] In addition to calculating BMI, it is important to do a physical exam in order to assess for signs of comorbid conditions such as high blood pressure, which could indicate hypertension, or acanthosis nigricans, which could indicate insulin resistance. Waist circumference is another physical exam measure that can be used to determine cardiovascular risk. For females, a waist circumference of 35 inches or higher, or for men, 40 inches or higher, indicates elevated cardiometabolic risk.[6] A full inventory of current medications also needs to be taken into account because many medications can lead to weight

gain (i.e. glucocorticoids, beta-blockers, etc.). Lab values for fasting blood glucose, lipid panel, as well as liver function are helpful in determining if there are comorbidities contributing to weight gain.[7,8] After a full assessment, the conversation can be directed onto the next steps and goals.

Once it is determined that a patient needs to lose weight, they can begin their journey. The first-line recommendation given for weight management is lifestyle modification. This requires changes in diet, physical activity, and behavior. As easy as these recommendations may seem, it is important to keep in mind that making major changes to one's lifestyle can be difficult for many. There are many different dietary options including low-carbohydrate, low-fat/low-calorie, low calorie, Mediterranean, meal replacement, etc. Regardless of the specific diet, evidence supports restricting calorie intake for weight loss. Thus, restricting calories to less than 1200 kcal per day for females and less than 1500 kcal per day for males is useful for weight loss. Any dietary change needs to be tailored to the patient and their physical activity level.[9] The recommendation for physical activity is that both aerobic and strength training are necessary. Aerobic activity should consist of moderate to vigorous activity for greater than 150 minutes per week.[10] Strength training involving all muscle groups should occur 2 to 3 times per week.[10] The United States Preventive Task Force has recommended that health care providers offer intensive, multicomponent behavior-based weight loss interventions to adults with a BMI of 30 kg/m^2 or higher.[11] Behavioral interventions can include individual and group therapy, as well as self-directed interventions. Well-known commercially available weight loss plans such as Weight Watchers offer both meal planning and behavior modification.

Pharmacotherapy is available to those who have not met their weight loss goal of 5% of total body weight at three to six months with lifestyle modifications. There are four FDA-approved weight-loss prescription medications on the market: phentermine/topiramate ER (Qsymia), lorcaserin (Belviq), naltrexone/bupropion ER (Contrave), and liraglutide (Saxenda). Orlistat (Xenical, Alli) is the only FDA-approved over-the-counter weight-loss medication.[12] Pharmacotherapy is recommended for patients with a BMI higher than 30 kg/m^2, or a BMI of 27 kg/m^2 or greater with obesity-related comorbidities.[13] Medications have various effects from suppressing appetite to decreasing fat absorption in the intestines, and should be coupled with lifestyle modifications. When it comes to choosing which medication use, it is important to take into account the patient's goals as well as risks versus benefits of each type of medication. If a patient continues to lose 5% or more of their body weight at 3 months, and can tolerate the medication's side effects, pharmacotherapy can be continued.[13] If not, alternative interventions can be considered such as surgery.

Bariatric surgery is a good option for those who meet specific BMI criteria and who have not met their weight loss goals through lifestyle modifications or medical management. This includes adults with a BMI of 40 kg/m^2 or higher without comorbidities or those with a BMI of 35 to 39.9 kg/m^2 with one obesity-related comorbidity such as type 2 diabetes or sleep apnea.[4] Bariatric surgery describes a group of surgical procedures for weight loss including the sleeve gastrectomy, Roux-en-Y gastric bypass, and the adjustable gastric band. The sleeve gastrectomy has risen in popularity over the last several years, while the adjustable gastric band and Roux-en-

Y has fallen due to increased surgical and nutritional complications.[14,15] Overall, bariatric surgery has dramatic results with weight loss ranging from 45-80% one year post-operatively. Gastric bypass surgery results in the largest potential weight loss at 85%.[16] In addition, research has shown that those with type 2 diabetes who have undergone bariatric surgery have superior improvements in glycemic control as well as improved cardiovascular outcomes.[16] Aside from surgical therapies, non-surgical therapies done endoscopically are also an option. Endoscopic procedures include space-occupying balloons, sleeve gastroplasty and aspiration therapy. These are approved for use in patients with a BMI of 30 to 40 kg/m^2, however long-term efficacy and safety are still to be determined.[4]

At the end of the day, weight loss management is a highly individualized process. What is most important is that the patient understands the risks and benefits of all of the options and that he or she is supported in whichever decisions are made. Weight loss is a marathon not a sprint. Incorporating weight management into ongoing health education and preventative health visits is the key to success. Patients need to be concerned with their health beyond the holiday season.

References

[1] Fryar, C., Carroll, M. and Ogden, C. (2019). *Prevalence of Overweight, Obesity, and Severe Obesity Among Adults Aged 20 and Over: United States, 1960–1962 Through 2015–2016*. [online] Cdc.gov. Available at: https://www.cdc.gov/nchs/data/hestat/obesity_adult_15_16/obesity_adult_15_16.pdf [Accessed 28 Nov. 2019].

[2] Cdc.gov. (2019). *Adult Obesity Causes & Consequences | Overweight & Obesity | CDC*. [online] Available at: https://www.cdc.gov/obesity/adult/causes.html [Accessed 28 Nov. 2019].

[3] Magkos, F., Fraterrigo, G., Yoshino, J., Luecking, C., Kirbach, K., Kelly, S., de las Fuentes, L., He, S., Okunade, A., Patterson, B. and Klein, S. (2016). Effects of Moderate and Subsequent Progressive Weight Loss on Metabolic Function and Adipose Tissue Biology in Humans with Obesity. *Cell Metabolism*, 23(4), pp.591-601.

[4] Mechanick, J. et al. (2019). *Clinical practice guidelines for the perioperative nutrition, metabolic, and nonsurgical support of patients undergoing bariatric procedures – 2019 update*. [online] Journals.aace.com. Available at: https://journals.aace.com/doi/pdf/10.4158/GL-2019-0406 [Accessed 28 Nov. 2019].

[5] Cdc.gov. (2019). *Defining Adult Overweight and Obesity | Overweight & Obesity | CDC*. [online] Available at: https://www.cdc.gov/obesity/adult/defining.html [Accessed 28 Nov. 2019].

[6] Klein, S., Allison, D., Heymsfiled, S., Kelley, D., Leibel, R., Nonas, C. and Kahn, R. (2006). Waist Circumference and Cardiometabolic Risk. *Diabetes Care*, 30(6), pp.1647-1652.

[7] Jensen, M., Ryan, D., Apovian, C., Ard, J., Comuzzie, A., Donato, K., Hu, F., Hubbard, V., Jakicic, J., Kushner, R., Loria, C., Millen, B., Nonas, C., Pi-Sunyer, F., Stevens, J., Stevens, V.,

Wadden, T., Wolfe, B. and Yanovski, S. (2013). 2013 AHA/ACC/TOS Guideline for the Management of Overweight and Obesity in Adults. *Circulation*, 129(25 suppl 2), pp.S102-S138.

[8] Aace.com. (2019). *1.4 Clinical Evaluation | American Association of Clinical Endocrinologists*. [online] Available at: https://www.aace.com/disease-state-resources/nutrition-and-obesity/slide-library/14-clinical-evaluation [Accessed 29 Nov. 2019].

[9] Bray, G., Fruhbeck, G., Ryan, D. and Wilding, J. (2016). Management of Obesity. *The Lancet*, 387(10031), pp.1947-1956.

[10] HHS.gov. (2019). *Physical Activity Guidelines for Americans*. [online] Available at: https://www.hhs.gov/fitness/be-active/physical-activity-guidelines-for-americans/index.html [Accessed 29 Nov. 2019].

[11] Uspreventiveservicestaskforce.org. (2019). *Final Recommendation Statement: Weight Loss to Prevent Obesity-Related Morbidity and Mortality in Adults: Behavioral Interventions - US Preventive Services Task Force*. [online] Available at: https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/obesity-in-adults-interventions1 [Accessed 29 Nov. 2019].

[12] National Institute of Diabetes and Digestive and Kidney Diseases. (2019). *Prescription Medications to Treat Overweight and Obesity | NIDDK*. [online] Available at: https://www.niddk.nih.gov/health-information/weight-management/prescription-medications-treat-overweight-obesity [Accessed 29 Nov. 2019].

[13] Apovian, C., Aronne, L., Bessesen, D., McDonnell, M., Murad, M., Pagotto, U., Ryan, D. and Still, C. (2015). Pharmacological Management of Obesity: An Endocrine Society Clinical Practice Guideline. *The Journal of Clinical Endocrinology & Metabolism*, 100(2), pp.342-362.

[14] Ponce, J., DeMaria, E., Nguyen, N., Hutter, M., Sudan, R. and Morton, J. (2016). American Society for Metabolic and Bariatric Surgery estimation of bariatric surgery procedures in 2015 and surgeon workforce in the United States. *Surgery for Obesity and Related Diseases*, 12(9), pp.1637-1639.

[15] American Society for Metabolic and Bariatric Surgery. (2019). *Bariatric Surgery Procedures | ASMBS*. [online] Available at: https://asmbs.org/patients/bariatric-surgery-procedures [Accessed 30 Nov. 2019].

[16] 1. Telem D, Greenstein A, Wolfe B. Outcomes of Bariatric Surgery. www.uptodate.com. Published 2019. Accessed November 30, 2019.