Weight Management

A VA Clinician's Guide to Weight Management (2019)

VA

U.S. Department of Veterans Affairs

Veterans Health Administration

PBM Academic Detailing Service

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Your Partner in Enhancing Veteran Health Outcomes

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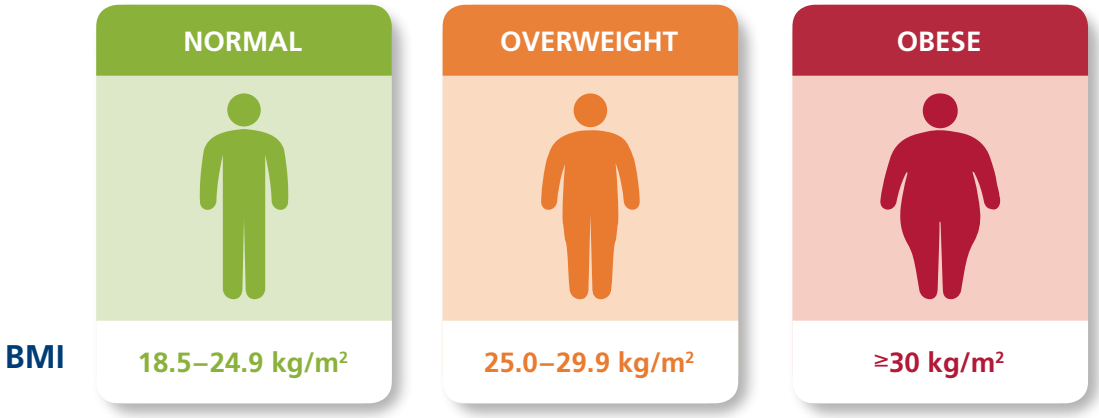
Background

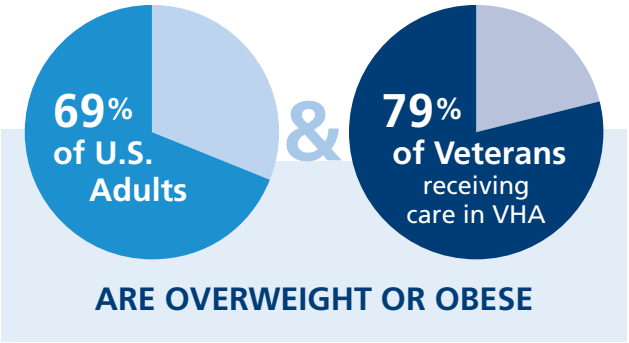
Obesity is a chronic, complex disease requiring lifelong commitment to treatment and long-term maintenance.[1] It is characterized by excessive fat accumulation that alters anatomy and physiology and results in unfavorable health consequences.[2]

Figure 1. Body Mass Index (BMI) categories[3,4]



BMI is the best diagnostic tool available but does not distinguish between fat and lean body mass.[2]

U.S. trend data from 1999-2000 to 2015-2016 indicates **rates of obesity have steadily increased** in youth and adults aged ≥20 years old.[3,5]



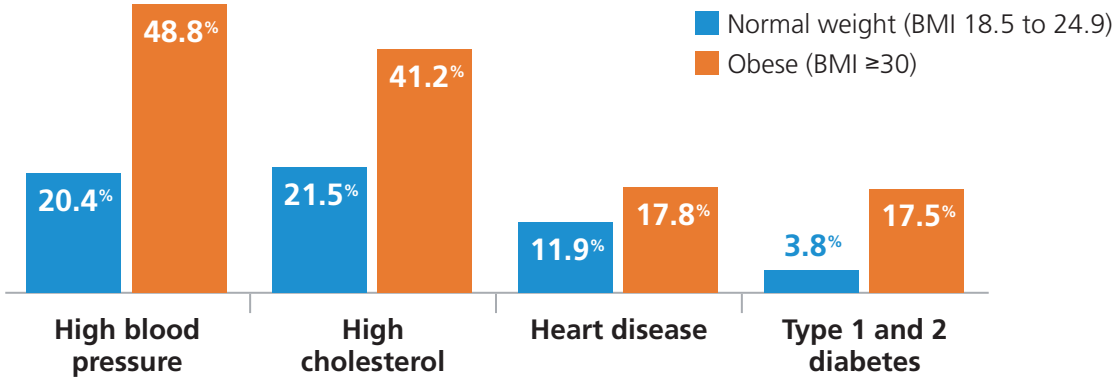
Risks associated with obesity

People who have obesity, compared to those with a normal or healthy weight, are at increased risk for many serious diseases and chronic health conditions such as **diabetes, hypertension, cardiovascular disease, anxiety, depression, osteoarthritis, pain, and sleep apnea.**[4,6]

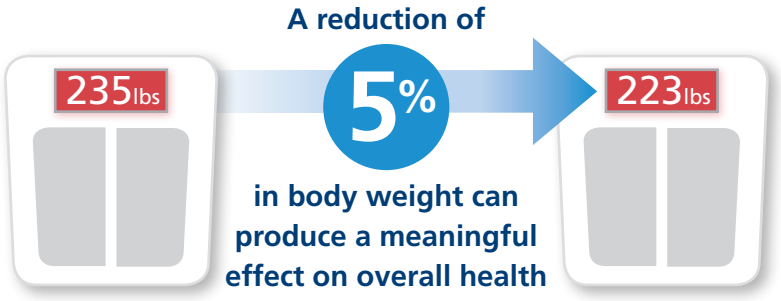
- This is particularly true for those with central obesity, in whom increased abdominal fat is associated with elevated fasting glucose, hypertension, and dyslipidemia.
- The relationship of BMI to health outcomes is weaker in older adults because of changes in body mass due to muscle and bone mass changes; therefore, the optimal BMI for those over 65 may be slightly higher than for younger people.[4,7,8]

Figure 2. Chronic medical conditions are more prevalent in patients who are obese[9]

Prevalence of selected chronic conditions by weight class, 2010-2015



According to data from the Agency for Healthcare Research and Quality (AHRQ), adult obesity is associated with higher prevalence of chronic conditions. The data presented here illustrates the prevalence of selected chronic conditions by weight class (2010-2015).



There is strong evidence that achieving ~5-10% weight loss is associated with improvements in various adiposity-related conditions.[4,10,11]

- Decreased risk of developing type 2 diabetes
- Decreased A1c in patients with type 2 diabetes*
- Decreased LDL, triglycerides; increased HDL in patients with dyslipidemia
- Decreased systolic and diastolic blood pressure in patient with hypertension*
- Decreased hepatic steatosis and liver function tests in patients with nonalcoholic fatty liver disease
- Decreased apnea-hypopnea index in patients with obstructive sleep apnea
- Improved joint function and symptoms in patients with osteoarthritis involving weight-bearing joint

*5-15% weight loss or more may be needed.[11]

A1c: hemoglobin A1c; **LDL:** low-density lipoprotein; **HDL:** high-density lipoprotein

Acknowledging the unspoken

Health care staff attitudes about obesity, including weight stigma and pessimism about weight loss success, **have been shown to negatively impact patient care** by influencing clinical decisions, patient-centered communication, and willingness or ability to provide treatment.[1,12-15]

These negative effects and attitudes can result in:

- Discord, patient mistrust, reduced patient disclosure
- Patient not following-through
- Reduced patient willingness to seek the care they need
- Reduced patient weight loss

Figure 3. The challenges we face[14-17]

Obesity is often viewed as a behavioral problem or choice and associated with negative stereotypes and personal attributes.

Obesity was not classified as a disease by the American Medical Association until 2013.

Providers view obesity treatment as less effective than treatment of most other chronic conditions.

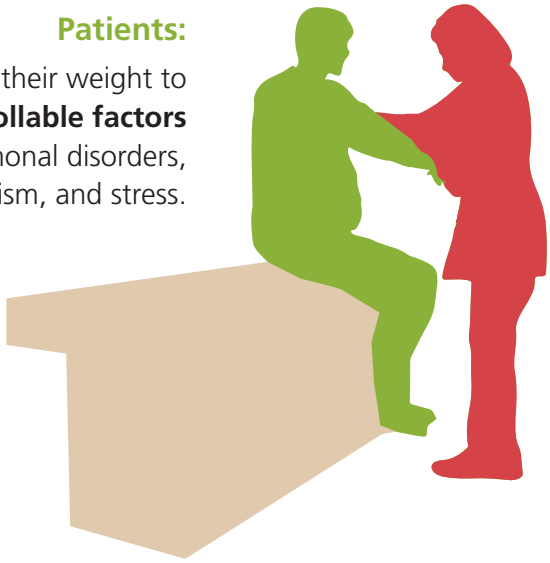
Less than 25% of physicians reported they would recommend evaluation for bariatric surgery in patients who met criteria.

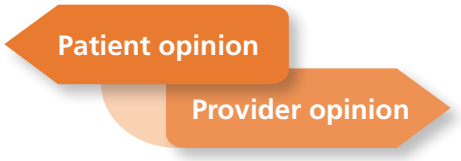
Addressing one obstacle at a time

DISCONNECT BETWEEN PATIENT AND PROVIDER[1]

Patients:

Often attribute their weight to **uncontrollable factors** such as hormonal disorders, slow metabolism, and stress.





Providers:

Often attribute obesity to **controllable factors** (such as over-eating) that can be solved through behavioral changes.

What can you do?

Consider and identify contributing factors for obesity.

Obesity is a complex disease that results from the interaction of biological, psychological, and environmental factors including:[8]

- Endocrine, gut microbiome, metabolic, neuroendocrine effects
- Biologic adaptations to weight loss
- Genetics
- Lifestyle
- Co-morbidities
- Medications (both prescribed and over-the-counter)
- Socioeconomic status (affecting access to affordable, healthy food and safe places to walk or exercise)

Prevention

PREVENT

Screen, document, and regularly assess for overweight and obesity.[3]

Routine screening should include measurement of height and weight to calculate body mass index (BMI) in all patients. Regular assessment increases the opportunity to identify unhealthy weight gain early and identify conditions and medications that promote weight gain and mitigate their effects. It also allows for discussions about the benefits of maintaining and striving for a healthy weight.[4]

- If a psychiatric condition is present, encourage patient engagement or follow-through with mental health treatment to optimize its management.[4,18-19]

Encourage physical activity

Physically active individuals sleep better, feel better, and function better.

Regular physical activity is recommended to reduce the risk of many chronic conditions, disability, and mortality.[20]

New research indicates that bouts of any length of **moderate-to-vigorous** physical activity contribute to health benefits associated with the accumulated volume of physical activity.[21]

MODERATE INTENSITY EXERCISE:

Walking briskly at a pace that makes you sweat, but at which you can still have a conversation (or at least 3 miles per hour)[21]

Figure 4. 2018 Physical Activity Guidelines for Americans–Prevention[21]

Recommendations for adults

- 150-300 minutes a week of moderate-intensity aerobic physical activity or 75-150 minutes a week of vigorous-intensity aerobic physical activity
  - Additional health benefits are gained by engaging in >300 minutes of moderate-intensity physical activity a week
- Muscle-strengthening activities of moderate or greater intensity that involve all major muscle groups ≥2 days per week

SPECIAL POPULATIONS:

OLDER ADULTS

- Same key guidelines as adults for aerobic and muscle strengthening activities *(directly above)* **plus** balance training
- Understand if/how their conditions may affect their ability to do regular physical activity safely
- If unable to do 150 minutes a week, they should be as physically active as abilities and conditions allow

WOMEN DURING PREGNANCY/ POSTPARTUM

- At least 150 minutes of moderate-intensity aerobic activity per week during pregnancy and postpartum period
- Adjustments in physical activity level may be needed during pregnancy and postpartum

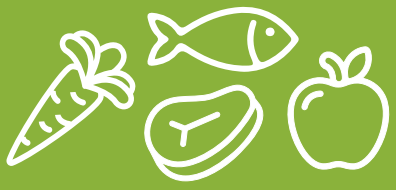
ADULTS WITH DISABILITIES

- If able, adult aerobic activity recommendations apply *(see above)*
- If able, adult muscle-strengthening activity recommendations apply *(see above)*
- If not able to meet recommendations, regular physical activity according to abilities is recommended and inactivity should be avoided

Encourage a healthy diet

This can be as simple as discussing food portion control, monitoring, and label reading. Some key recommendations from the Dietary Guidelines for Americans include:[22]

Follow a healthy eating pattern over time to help support a healthy body weight and reduce the risk of chronic disease.

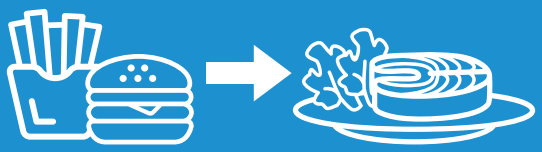


Choose a variety of nutrient-dense foods from each food group in recommended amounts.

Consume an eating pattern low in added sugars, saturated fats, and sodium.

Replace typical food and beverages choices with more nutrient-dense options.

Be sure to consider personal preferences to maintain shifts over time.

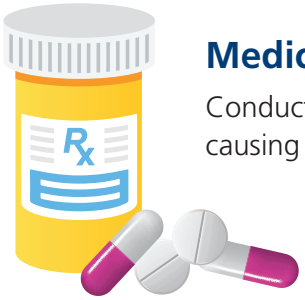


1 teaspoon 	¼ cup 	3 ounces of meat 
1 tablespoon 	½ cup 	1 medium baked potato 
1 ounce 	1 cup 	1 medium piece of fruit 

Identifying the correct serving size is important for portion control.

See the MOVE! Program website for more detailed information: **www.move.va.gov**

Review medications



Medication side effects can complicate issues with weight.

Conduct a medication review to determine if medications are contributing to or causing weight gain and consider non-obesogenic alternatives when feasible.

Table 1. Select medications associated with weight gain[23-27]

Drug class	Specific medications
Anticonvulsants	• Carbamazepine • Valproic acid • Pregabalin • Gabapentin
Antidepressants	• Amitriptyline • Mirtazapine • Paroxetine
Antipsychotics	• Clozapine • Olanzapine • Quetiapine • Risperidone • Thioridazine
Antidiabetic agents	• Insulin • **Meglitinides:** nateglinide, repaglinide • **Sulfonylureas:** chlorpropamide, glimepiride, glipizide • **Thiazolidinediones:** pioglitazone, rosiglitazone
Beta-blockers	• Atenolol • Metoprolol • Propranolol
Glucocorticoids	• Prednisone
Contraceptives	• Medroxyprogesterone acetate depot injection
Mood stabilizers	• Lithium

Indentification

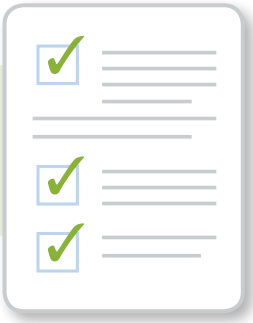
IDENTIFY

Identify and diagnose obesity when it is present and include other members of the healthcare team to manage when needed.[4]

Assess for the presence of obesity-associated conditions among patients who are obese or overweight:

- Perform a targeted assessment on patients who are overweight and obese.
- In addition to the basic medical history and physical examination, assess for factors contributing to obesity.
- Consult with or refer to members of the healthcare team regarding weight management opportunities.
  - **Examples:** clinical pharmacists, MOVE! Weight Management Program for Veterans (MOVE!), registered dietitians, obesity medicine providers, bariatric surgery providers

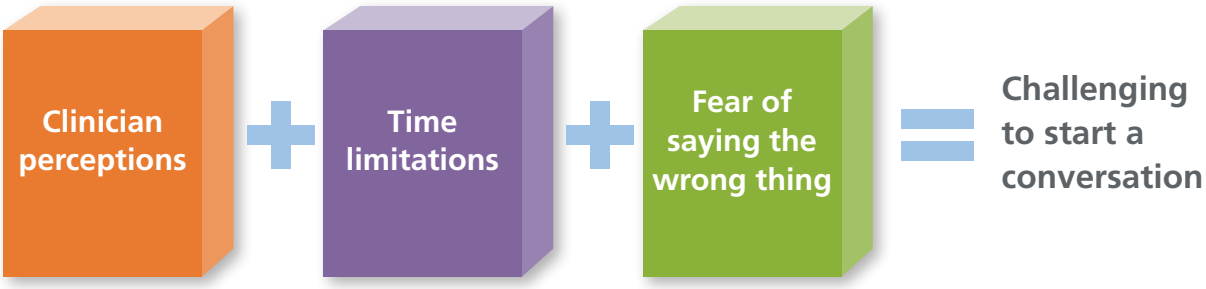
ANNUAL SCREENING *should include a review of medications as well as medical and mental health conditions that may be contributing to weight gain.*



Challenges starting the conversation[1,28]

Discussing obesity can be challenging not only due to provider time limitations and demands for co-morbidity management, but also due to concerns or unease about approaching the topic in a way that will be impactful and acceptable to the patient.

Other challenges may include clinician misperceptions regarding the potential impact of discussions about weight management on patient behavior (including participation in weight management interventions) or misperceptions of the impact of effective weight management (e.g., MOVE!, medications, bariatric surgery) on health, well-being, and other outcomes.



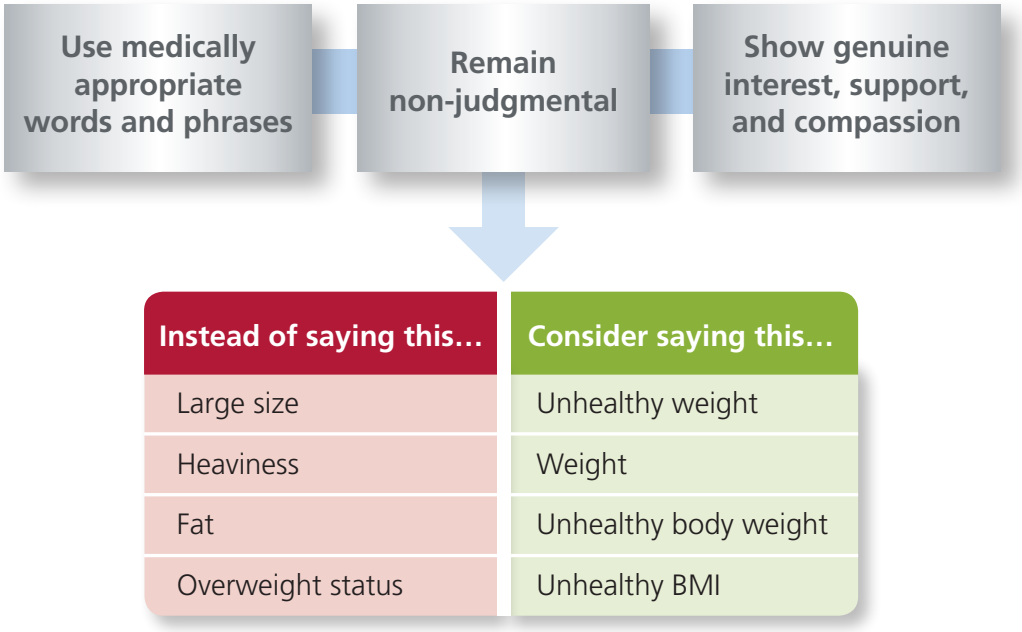
Engagement

ENGAGE

Engage Veterans in shared decision-making regarding weight loss and treatment options.

Consider how you're approaching the conversation with patients who are overweight or obese. Non-verbal cues, your tone, and the language you use will influence the patient's perception of the conversation.

Figure 5. Tips for discussing weight with Veterans[1]



Instead of saying this…	Consider saying this…
Large size	Unhealthy weight
Heaviness	Weight
Fat	Unhealthy body weight
Overweight status	Unhealthy BMI

Veterans who are obese, as well as those who are overweight with an obesity-associated condition, **can benefit from weight loss** and should be engaged in a process of shared decision-making. The recommended process for achieving shared understanding is based on evidence-based principles of health education, health behavior counseling, shared decision-making, and motivational interviewing.[4]

- ✔ **Discuss risks of unhealthy weight** as well as the potential benefits of participating in an effective weight management intervention.
- ✔ **Discuss relative potential obstacles** to participation in a weight management program, considering an individual's coexisting medical conditions.
- ✔ **Emphasize, if needed, the value of viewing unhealthy weight as a chronic disease** that requires lifelong management.

Motivational interviewing

Motivational interviewing has been shown to significantly improve weight loss in patients who are overweight or obese, resulting in a 3.3 pound (1.5 kg) higher weight loss than control treatments in weight loss studies.[29]

To increase patient engagement and action, use motivational interviewing to examine and address ambivalence to change:[30]

1. *Why would you want to lose weight and exercise?*
2. *What success have you had with weight management in the past?*
3. *What are your reasons for working on your weight?*
4. *How important is it for you to make this change, and why?*
5. **Summarize the patient's responses and then ask:**
   So, what would you like to do?
   - Collaborate on an action plan—What would be a realistic next step?[31]
   - Address barriers to adherence[32,33]
   - Peer/social support—particularly in low health literacy patients[34,35]
   - Health care team checks in regularly and applauds progress[32-35]

Personalized Action Planning[32,36,37]

✔ **Include the use of daily weighing** and integrate into daily routines. Daily weighing has been associated with significantly greater weight loss and less weight regain.

For example, by placing the scale near the toothbrush, daily weighing is encouraged.

✔ **Emphasize the value of peer, provider, or social support,** and addressing barriers for adhering to an action plan.

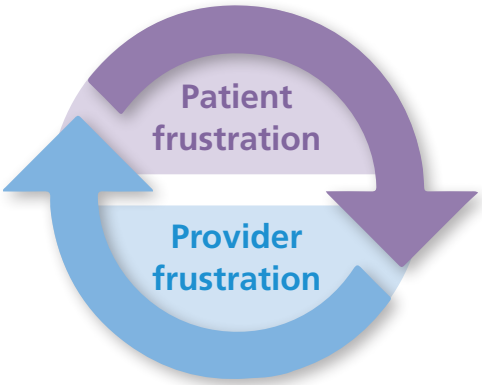
Figure 6. Shared decision-making approach to discussing overweight and obesity and the MOVE! Program

Responding to Veterans' perceived barriers to weight loss

Table 2. Objections and responses

Example objections voiced by Veteran	Example provider responses
"I don't have time to work out (or make a healthy meal)."	"Many Veterans have challenges with time. The MOVE! program and our VA dietitians can help you identify ways to address time concerns."
"I tried the MOVE! program and it didn't work for me."	"It's great you tried MOVE!. What parts of MOVE! were helpful?" **OR** "It's great you tried MOVE!. For some Veterans, participating in MOVE! doesn't lead to significant weight loss. It's challenging to lose weight, so we may want to consider how to boost your chance of success." *(Consider offering to review the patient's medications to identify those that may contribute to obesity.)*
"My knees have arthritis so I can't exercise."	"If you are interested, we can discuss how you can increase your activity in ways that don't affect your knees. What is your understanding of how losing some weight might help your arthritis?"
"Eating healthy is too expensive."	"It's good that you are thinking about how you might eat healthier. The MOVE! program and our VA dietitians can help you identify ways to eat healthier without spending more."
"I've tried several medications before and they didn't work for me."	"If you are interested, we can look at the medications you've tried in the past to see if there is a reason they may not have worked for you, or if there are others you haven't tried yet."

Frustrations with management of obesity[1]



PATIENTS:

Many patients who are overweight or obese initially lose weight through dieting; however, maintenance of weight loss is challenging for many reasons, including the long-term reduction in resting metabolic rate that accompanies weight loss.

PROVIDERS:

Perceive that responsibility for weight loss lies with the patient or that the availability of evidence-based treatments for obesity are limited.

What can you do?

- **Work with the patient to set reasonable weight loss goals.** Consider an initial goal of 5% weight loss over 6 months. This is a reasonable goal and in line with what the MOVE! program is focused on—achieving clinically meaningful (~5%) weight loss.
- **Gain a better understanding of evidence-based prevention** and management of overweight and obesity.[15]
- **Support weight management opportunities** available for Veterans within VHA and the community.
- Integrate **weight management** into Veteran care.
- Consider treatment strategies such as **pharmacotherapy** and **bariatric surgery** when applicable.

Weight loss is not a milestone, it's part of a dynamic process.[38]

Management

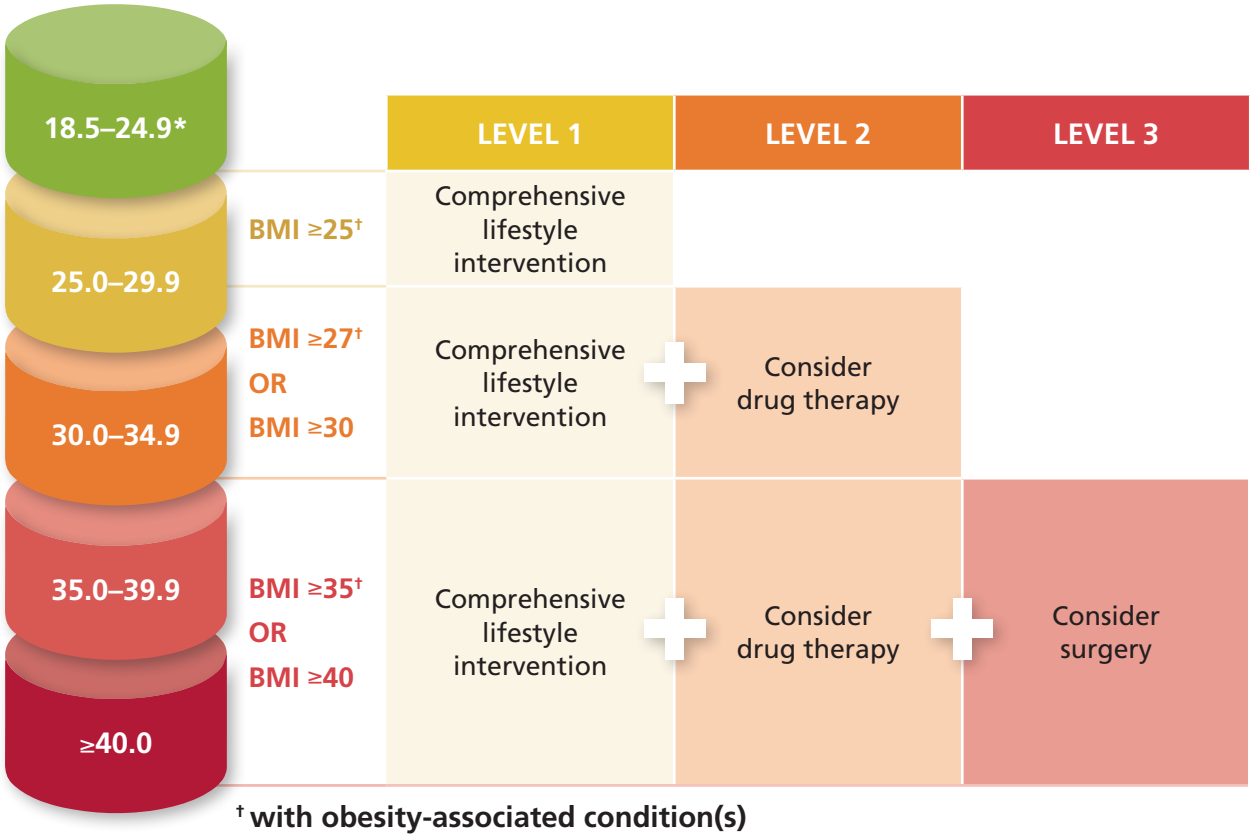
MANAGE **Offer or refer the patient to evidence-based weight loss interventions based on their obesity-associated conditions and BMI.**

Obesity is a chronic disease that generally requires long-term management. When considering management options, it is important to take a complications-centric approach with the primary therapeutic endpoint being improvement in adiposity-related complications.[11]

Treatment selection should be aligned with the severity of overweight, associated chronic conditions, functional limitations, and patient values and preferences. Three evidence-based treatment options include:[10]

- **LEVEL 1** **Comprehensive lifestyle intervention** (in VHA, the MOVE! Weight Management Program for Veterans)
- **LEVEL 2** **Pharmacotherapy**
- **LEVEL 3** **Bariatric surgery**

Figure 7. Treatment recommendations using BMI (kg/m²) as a guide



† with obesity-associated condition(s)

***Note:** Patients at a healthy weight may be offered information and counseling about a healthy lifestyle and maintaining a healthy weight.

Level 1:

Comprehensive lifestyle intervention (CLI)

Comprehensive lifestyle intervention (CLI) should be offered to all obese patients and overweight patients with one or more obesity-associated chronic health conditions.[4] In VHA, the **MOVE!** Weight Management Program for Veterans is the CLI of choice.

The foundation of treatment for overweight and obesity should include at least 12 contacts over a year of an intervention that combines the following components:

- Dietary
- Behavioral
- Physical activity

Diet and physical activity together must create an energy deficit of 500-1,000 kcal/day for effective initial weight loss (adherence to any calorie-deficit diet is more important than choice of a specific diet).

Moderate or vigorous physical activity, through short bursts of activity or a single longer episode, typically must accumulate to at least 150 minutes per week.

People who want to lose a substantial amount of weight (more than 5% of body weight) and people who are trying to keep off a significant amount of weight once it has been lost may need to do more than 300 minutes of moderate-intensity activity or 150 minutes of vigorous activity a week to meet weight-control goals.[21]

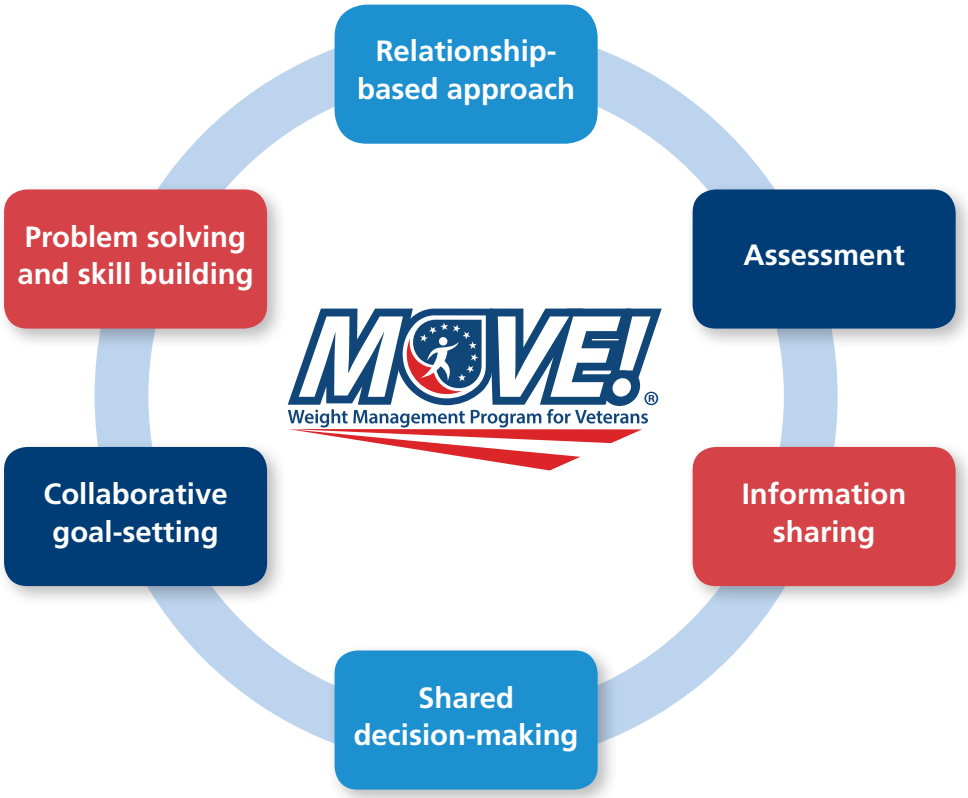
MOVE! WEIGHT MANAGEMENT PROGRAM FOR VETERANS

MOVE! is an evidence-based, population-focused weight management program that has helped thousands of Veterans to lose weight and improve their health. Comprehensive lifestyle intervention is the foundation of MOVE!

MOVE!® Weight Management Program for Veterans

- Goal is to assist Veterans in achieving clinically significant weight loss (~5%)
- Guided by national policy, aligned with VA/Department of Defense Obesity Clinical Practice Guidelines
- Led by facility MOVE! coordinators and provider champions, VISN MOVE! Coordinators

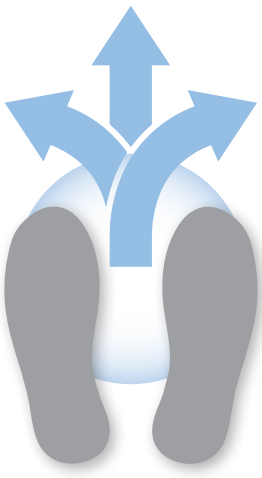
Figure 8. MOVE! Program characteristics



Flexible MOVE! Program participation options

Comprehensive lifestyle intervention offered via various modalities for Veterans:

- Group sessions
- Individual sessions
- Telephone lifestyle coaching
- Clinical Video Telehealth (CVT)
- **TeleMOVE!**—home telehealth
- **MOVE! Coach** mobile app
- **MOVE! Coach with Care**—mobile app + clinical contacts
- **Be Active and MOVE!**—physical activity adjunct
- **Annie** text messaging app



GREATER CHOICE

Level 2:

Drug therapy[10]

- Although lifestyle changes alone can result in weight loss for some, **many patients who are overweight and obese need additional interventions** for weight reduction.
- **Pharmacotherapy should always be used in combination with CLI.**
  - The addition of pharmacotherapy produces greater weight loss and weight-loss maintenance compared with lifestyle interventions alone.[11]
- **Weight loss medications can be used long-term** in individuals who are obese or overweight with at least one weight-associated co-morbidity (e.g., type 2 diabetes, hypertension, dyslipidemia, metabolic syndrome, obstructive sleep apnea, or degenerative joint disease [osteoarthritis]).[39]

Medication-assisted weight loss can improve blood pressure, dyslipidemia, glycemia, markers of inflammation, and insulin resistance.[11]

Table 3. Pharmacotherapy options

Weight management medication	REMS*	Controlled substance schedule	Boxed warning	Administration
Phentermine/ topiramate ER (Qsymia®)	Yes**	CIV	No	Oral, titration to dose given once daily
Naltrexone/ bupropion ER (Contrave®)	No	None	Yes (suicidal thoughts/ behaviors)	Oral, titration to twice daily
Lorcaserin (Belviq®) **Lorcaserin ER (Belviq XR®)**	No	CIV	No	Oral, twice daily **XR:** Oral, once daily
Orlistat (Xenical®, Alli®)	No	None	No	Oral, three times daily
Liraglutide (Saxenda®)	No	None	Yes (thyroid C-cell tumors)	Injection (SC), titration to dose given once daily

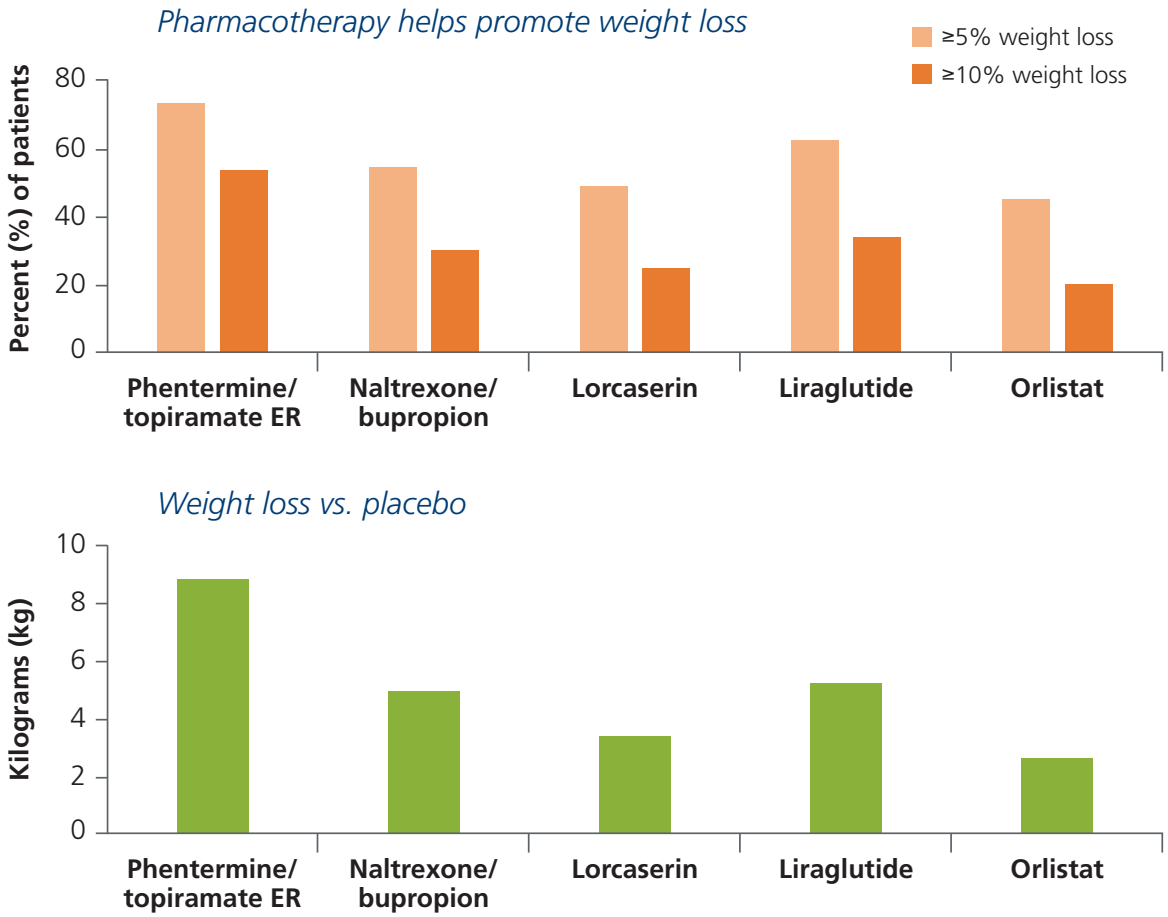
Please see Quick Reference Guide for more information. Criteria for use of the individual agents for chronic weight management are available in VA PBM Criteria for Use. VA Formulary information at: www.pbm.va.gov/apps/VANationalFormulary

***REMS:** Risk Evaluation and Mitigation Strategy

****REMS:** Phentermine/topiramate ER—to prevent unintended exposure during pregnancy, as topiramate is associated with oral clefts in newborns exposed during the first trimester; requirements for provider and pharmacy certification

ER: extended-release; **SC:** subcutaneous; **XR:** extended release

Figure 9. Pharmacotherapy weight loss outcomes[39]



According to a 2016 systematic review and network meta-analysis reviewing 28 randomized clinical trials with over 29,000 patients, pharmacotherapy agents—when added to a comprehensive lifestyle intervention—were associated with achieving significant excess weight loss versus placebo at one year.

MEDICATION PEARLS[11]

- Weight loss from clinical interventions will likely plateau around 6-9 months.
- Weight is usually regained after the medication is stopped.
- Longer durations of treatment do not typically lead to greater weight loss, but instead help to maintain weight.

Figure 10. General pharmacotherapy prescribing recommendations*

*See Guidance on Selecting Weight Management Medication for more information
**Clinically significant: at least 3% to 5% of baseline weight

CONSIDER

Consider pharmacotherapy as an adjunct to CLI for patients who are overweight or obese or if other interventions have not resulted in desired weight loss.

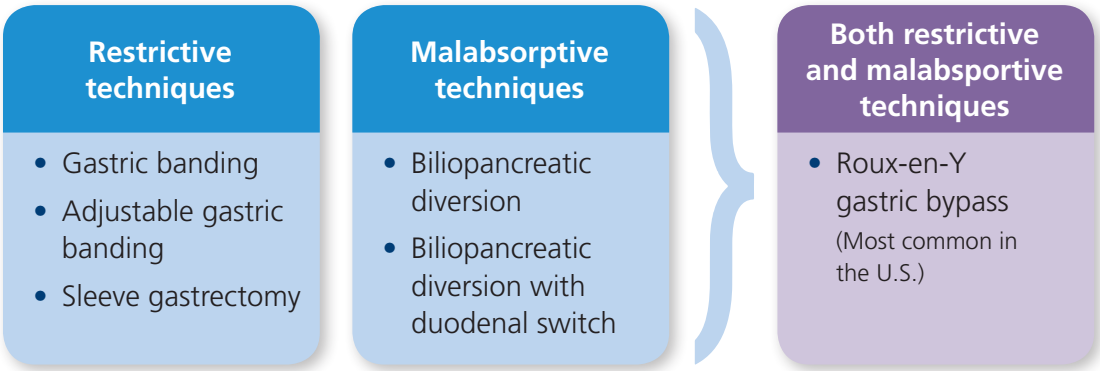
Level 3:
Surgical interventions

Surgical interventions for obesity have consistently demonstrated profound and sustained weight loss.[40] Surgical options for weight loss should be offered as an adjunct to comprehensive lifestyle interventions for the following patient populations:[4]

- BMI 35.0-39.9 kg/m^2 with obesity-associated conditions
  or
- BMI ≥40 kg/m^2

There is insufficient evidence to suggest offering bariatric surgery as an adjunct to comprehensive lifestyle intervention for weight loss or to improve some obesity-associated conditions in patients over age 65 ***or*** *with a BMI <35 kg/m^2.*

Figure 11. Types of bariatric surgical procedures



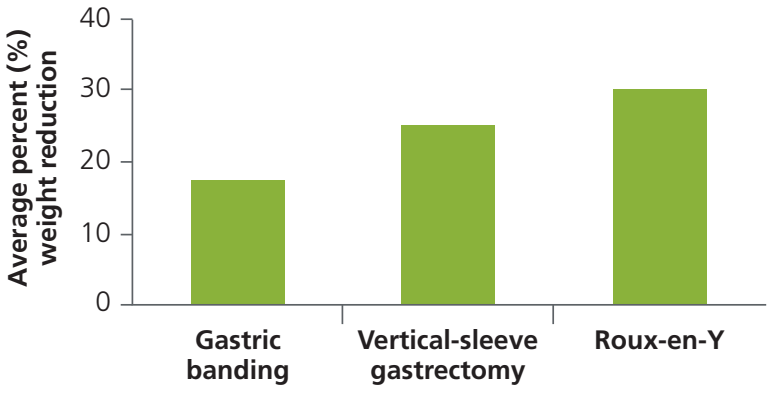
Weight loss expectations with bariatric surgery[10,41]

The amount of weight loss depends on several factors including exercise, diet, lifestyle, and overall commitment to changing old habits.

After one year, patients on average lose 15-30% of their body weight depending on the type of surgical procedure.[10]

It is important to note that patients are reported to regain ~5-10% from their lowest weight at 10 years of follow-up after a bariatric surgical procedure.[10]

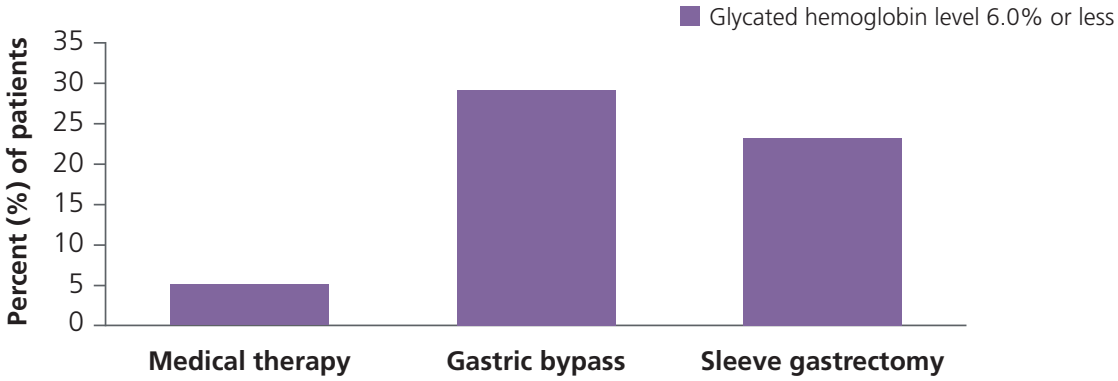
Figure 12. Surgical procedures achieve 15-30% weight reductions[10]



After bariatric surgery

After bariatric surgery, pronounced clinical improvements can be seen in most obesity-related health issues.[10,42]

Figure 13. Surgical procedures improve hemoglobin A1c[42]



A 2017 study in 134 patients compared 5-year outcomes from bariatric surgery versus intensive medical therapy in patients with diabetes. At baseline, the study participants had a mean glycated hemoglobin level of 9.2±1.5%, and a mean duration of diabetes of 8.4±5.2 years, with 44% of patients requiring insulin.

According to the results, 2 of 38 patients (5%) in the medical therapy group, 14 of 49 patients (29%) in the gastric-bypass group, and 11/47 patients (23%) in the sleeve-gastrectomy group achieved a glycated hemoglobin level of 6% or less (unadjusted p=0.01, adjusted p=0.03, p=0.08 in the intention-to-treat analysis).

There are approximately 20 VHA Bariatric Surgery Programs currently—contact them to learn their policy for bariatric surgery. An example of the requirements may be:

- Participation in MOVE! or other comprehensive lifestyle intervention
- Providing a physical and labs 30 days before bariatric surgery
- Addressing emergent conditions (complications) post-surgery

Use this link to locate VA bariatric surgery programs: http://vaww.dushom.va.gov/DUSHOM/surgery/NSOMaps.asp

REFER

Refer patients who meet criteria for weight loss surgery to MOVE! and ensure they receive an evaluation for surgical intervention.

Summary

1. **Screen, document, and regularly assess** for overweight and obesity.

2. **Identify and diagnose obesity** when it is present and include other members of the healthcare team to manage when needed.

3. **Engage Veterans** in shared decision-making regarding weight loss and treatment options.

4. Offer or refer the patient to **evidence-based weight loss interventions** based on their obesity-associated conditions and BMI.

5. **Consider pharmacotherapy** as an adjunct to CLI for patients who are overweight or obese or if other interventions have not resulted in desired weight loss.

6. **Refer patients** who meet criteria for weight loss surgery to MOVE! and ensure they receive an evaluation for surgical intervention.

Important resources

- **Office of Disease Prevention and Health Promotion:** https://health.gov
- **MOVE! Program:** www.move.va.gov
- **Pharmacy Benefits Management Services SharePoint site:** https://vaww.pbmnat.va.gov/sites/PBM/Pages/Home.aspx
- **Iowa City VA Bariatric Surgery Resources:** www.vapulse.net/groups/hpdp-program-planning/blog/2018/07/17/bariatric-resources-attachments

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REFERENCES

1. McGowan, B.M., A Practical Guide to Engaging Individuals with Obesity. *Obes Facts,* 2016. 9(3): p. 182-92.
2. Pilitsi, E., et al., Pharmacotherapy of obesity: available medications and drugs under investigation. *Metabolism,* 2018.
3. Prevention, C.f.D.C.a. Defining Adult Overweight and Obesity. 2016 [cited 2018 July 2]; Available from: www.cdc.gov/obesity/adult/defining.html.
4. Obesity, T.M.o.O.a. and W. Group, VA/DoD Clinical Practice Guideline for Screening and Management of Overweight and Obesity. 2014. Version 2.0.
5. Hales, C., et al., Prevalence of Obesity Among Adults and Youth: United States, 2015-2016. NCHS Data Brief, 2017(No. 288).
6. Prevention, C.f.D.C.a. The Health Effects of Overweight and Obesity. Healthy Weight 2015 [cited 2018 July 3]; Available from: www.cdc.gov/healthyweight/effects/index.html.
7. Han, T.S., F.C. Wu, and M.E. Lean, Obesity and weight management in the elderly: a focus on men. *Best Pract Res Clin Endocrinol Metab*, 2013. 27(4): p. 509-25.
8. Winter, J.E., et al., BMI and all-cause mortality in older adults: a meta-analysis. *Am J Clin Nutr,* 2014. 99(4): p. 875-90.
9. Biener, A.I. and S.L. Decker, Medical Care Use and Expenditures Associated With Adult Obesity in the United States. *Jama,* 2018. 319(3): p. 218.
10. Heymsfield, S.B. and T.A. Wadden, Mechanisms, Pathophysiology, and Management of Obesity. *N Engl J Med,* 2017. 376(3): p. 254-266.
11. Garvey, T.G., et al. American Association of Clinical Endocrinologists and American College of Endocrinology Comprehensive Clinical Practice Guidelines for Medical Care of Patients with Obesity. *Endocr Pract,* 2016. 22(suppl 3).
12. Huizinga, M.M., et al., Disparity in physician perception of patients' adherence to medications by obesity status. *Obesity (Silver Spring),* 2010. 18(10): p. 1932-7.
13. Phelan, S.M., et al., Impact of weight bias and stigma on quality of care and outcomes for patients with obesity. *Obes Rev,* 2015. 16(4): p. 319-26.
14. Foster, G.D., et al., Primary care physicians' attitudes about obesity and its treatment. *Obes Res,* 2003. 11(10): p. 1168-77.
15. Bleich, S.N., et al., U.S. health professionals' views on obesity care, training, and self-efficacy. *Am J Prev Med,* 2015. 48(4): p. 411-8.
16. Krans, B. American Medical Association: Obesity Is a Disease. Health News 2013 [cited 2018 July 5]; Available from: www.healthline.com/health-news/policy-ama-says-obesity-is-not-a-disease-061813#1.
17. Pollack, A., A.M.A Recognizes Obesity as a Disease, in *The New York Times.* 2013.
18. Masheb, R.M., et al., High-frequency binge eating predicts weight gain among Veterans receiving behavioral weight loss treatments. *Obesity (Silver Spring),* 2015. 23(1): p. 54-61.

19. Palavras, M.A., et al., Comparing cognitive behavioural therapy for eating disorders integrated with behavioural weight loss therapy to cognitive behavioural therapy-enhanced alone in overweight or obese people with bulimia nervosa or binge eating disorder: study protocol for a randomised controlled trial. *Trials,* 2015. 16: p. 578.
20. Blackwell, D., State Variation in Meeting the 2008 Federal Guidelines for Both Aerobic and Muscle-strengthening Activities Through Leisure-time Physical Activity Among Adults Aged 18-64: United States, 2010-2015, in National Health Statistics Reports, U.S.D.o.H.a.H. Services, Editor. 2018, Centers for Disease Control and Prevention.
21. Services, U.S.D.o.H.a.H., Physical Activity Guidelines for Americans, U.S.D.o.H.a.H. Services, Editor. 2018: Washington, DC.
22. Promotion, O.o.D.P.a.H., Dietary Guidelines for Americans. 2015-2020.
23. Leslie, W.S., C.R. Hankey, and M.E. Lean, Weight gain as an adverse effect of some commonly prescribed drugs: a systematic review. *Qjm,* 2007. 100(7): p. 395-404.
24. Bray, G.A. and D.H. Ryan, Medical therapy for the patient with obesity. *Circulation,* 2012. 125(13): p. 1695-703.
25. Apovian C, A.L., Bessesen DH, et al., Pharmacological Management of Obesity: An Endocrine Society Clinical Practice Guideline. *J Clin Endocrinol Metab,* 2015. 100(2): p. 342-362.
26. Perreault L, P.-S.F., Kunins L, Obesity in adults: etiology and risk factors. 2018, UpToDate: UpToDate.com.
27. Serretti, A. and L. Mandelli, Antidepressants and body weight: a comprehensive review and meta-analysis. *J Clin Psychiatry,* 2010. 71(10): p. 1259-72.
28. Gudzune, K.A., et al., Physicians build less rapport with obese patients. *Obesity (Silver Spring),* 2013. 21(10): p. 2146-52.
29. Armstrong, M.J., et al., Motivational interviewing to improve weight loss in overweight and/or obese patients: a systematic review and meta-analysis of randomized controlled trials. *Obes Rev,* 2011. 12(9): p. 709-23.
30. Miller WR, R.S., Motivational interviewing: helping people change. 3rd ed. 2012: Guilford Press.
31. Leventhal, H., E.A. Leventhal, and J.Y. Breland, Cognitive science speaks to the "common-sense" of chronic illness management. *Ann Behav Med,* 2011. 41(2): p. 152-63.
32. Charania, M.R., et al., Identification of evidence-based interventions for promoting HIV medication adherence: findings from a systematic review of U.S.-based studies, 1996-2011. *AIDS Behav,* 2014. 18(4): p. 646-60.
33. Lester, R.T., et al., Effects of a mobile phone short message service on antiretroviral treatment adherence in Kenya (WelTel Kenya1): a randomised trial. *Lancet,* 2010. 376(9755): p. 1838-45.
34. Dutton, G.R., et al., Pilot study evaluating the feasibility and initial outcomes of a primary care weight loss intervention with peer coaches. *Diabetes Educ,* 2015. 41(3): p. 361-8.
35. Fisher, E.B., et al., Peer support in health care and prevention: cultural, organizational, and dissemination issues. *Annu Rev Public Health,* 2014. 35: p. 363-83.
36. Shieh, C., et al., Self-weighing in weight management interventions: A systematic review of literature. *Obes Res Clin Pract,* 2016. 10(5): p. 493-519.
37. Zheng, Y., et al., Self-weighing in weight management: a systematic literature review. *Obesity (Silver Spring),* 2015. 23(2): p. 256-65.
38. Poulimeneas, D., et al., Weight Loss Maintenance: Have We Missed the Brain? *Brain Sci,* 2018. 8(9).
39. Khera, R., et al., Association of Pharmacological Treatments for Obesity With Weight Loss and Adverse Events: A Systematic Review and Meta-analysis. *Jama,* 2016. 315(22): p. 2424-34.
40. Mechanick JI, e.a., Clinical Practice Guidelines for the Perioperative Nutritional, Metabolic, and Nonsurgical Support of the Bariatric Surgery Patient. *Obesity (Silver Spring),* 2014. 21(1): p. s1-27.
41. System, I.C.V.H.C., A Patient Guide to Bariatric Surgery. 2018, U.S. Department of Veteran Affairs: Iowa City VA Health Care System.
42. Schauer, P.R., et al., Bariatric Surgery versus Intensive Medical Therapy for Diabetes–5-Year Outcomes. *N Engl J Med,* 2017. 376(7): p. 641-651.

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PBM Academic Detailing Service

This reference guide was created to be used as a tool for VA providers and is available to use from the Academic Detailing SharePoint.

These are general recommendations only; specific clinical decisions should be made by the treating provider based on an individual patient's clinical condition.

VA PBM Academic Detailing Service Email Group:
PharmacyAcademicDetailingProgram@va.gov

VA PBM Academic Detailing Service SharePoint Site:
https://vaww.portal2.va.gov/sites/ad

VA PBM Academic Detailing Service Public Website:
http://www.pbm.va.gov/PBM/academicdetailingservicehome.asp

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