

KICKSTART

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KAER Toolkit

The Gerontological
Society of America
KAER Toolkit for the
Management of Obesity
in Older Adults

A toolkit that provides a framework
for primary care providers to help
older people with obesity recognize
and care for their condition.



www.geron.org/obesity

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Overview

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About The Gerontological Society of America



The mission of [The Gerontological Society of America \(GSA\)](#) is to cultivate excellence in interdisciplinary aging research and education to advance innovations in practice and policy. Our strategic goals are to: (1) expand opportunities for engagement and professional enhancement with GSA; (2) elevate the public understanding of, and regard for, aging with meaning; (3) strengthen GSA's commitment to social equity, diversity, and inclusion; and (4) strengthen the standing of GSA as an authoritative and respected voice in aging.

Vision

Meaningful lives as we age.

Join GSA and Access Members-Only Resources and Communities



Founded in 1945, GSA is the driving force behind advancing innovation in aging. GSA membership allows you to connect with 5,500 GSA members from more than 50 countries and collaborate in a respected interdisciplinary community to strengthen your career and advance innovation in aging. GSA offers [many benefits](#) to its members including [multiple opportunities](#) for professional development, networking, leadership, and volunteering throughout the year.

The KAER Toolkit – We Need Your Input!



With input from an expert advisory panel, GSA routinely enhances the KAER Toolkit. Please send us tools or resources that you recommend for inclusion in the kit. We also welcome input on how to enhance the KAER Toolkit from teams who have adapted the KAER process and used toolkit resources in their practice. Please send your feedback or suggestions to Jen Pettis at jpettis@geron.org.

Find GSA on:



Introduction

A chronic and often untreated disease, obesity has emerged over the past half century as a major source of morbidity and mortality in the United States and many other countries worldwide. Metabolic changes follow the deposition of excessive or maldistributed amounts of fat in the body. Studies have linked such changes with increased rates of diabetes, hypertension, and other diseases. These are threatening to reverse the increased life expectancy produced by innovations such as antibiotics, vaccines, and medical advances in cardiology and oncology. These effects are just as important in those aged 65 years or older as in younger people.

In 2015, The Gerontological Society of America (GSA) developed a model for care of older adults that provides a useful framework for primary care providers in helping older people with obesity recognize their condition and take action to maintain a healthy weight. This toolkit provides primary care providers with details, ideas, and resources for bringing this new way of managing obesity into their daily practices. Care teams may find it useful to reflect on their current practices around care of individuals with obesity using the [Start, Stop, Continue, Improve Action Plan](#).



This opening section presents the initial steps primary care providers can follow to incorporate contemporary ideas about weight management into their practices.



Primary care providers should understand the GSA KAER Model.



In 2015, GSA released a [report](#) on the detection of cognitive impairment and diagnosis of dementia (GSA, 2015). The report, developed by the GSA Workgroup on Cognitive Impairment Detection and Earlier Diagnosis, underscored the value of detecting cognitive impairment and providing timely diagnostic evaluations for older adults. The GSA Workgroup created a model and [toolkit](#) (GSA, 2017 and 2020) that identifies four steps to achieve greater awareness of cognition and brain health in older adults, increase detection of cognitive impairment, initiate earlier diagnostic evaluation, and make referrals for educational and supportive community services for people with dementia.

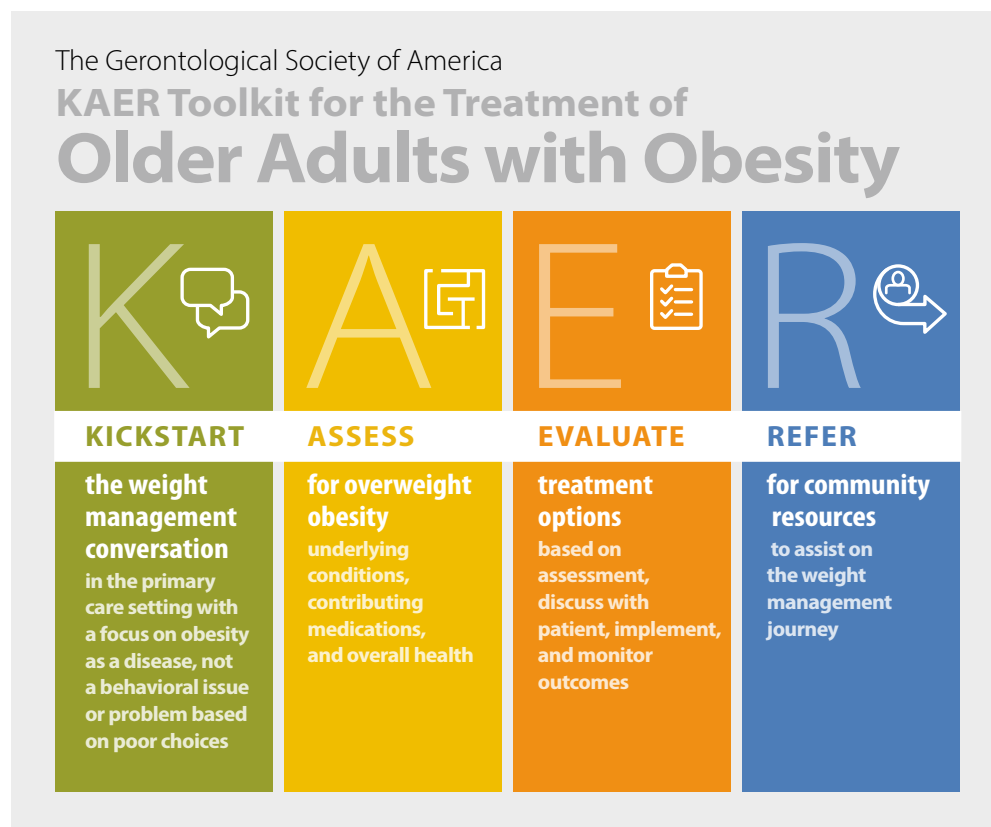
These four steps—Kickstart, Assess, Evaluate, and Refer (KAER)—are formulated to improve health-related outcomes and well-being for people living with dementia and their families. The logic behind the GSA KAER framework also applies to care of patients with overweight and obesity.

Primary care providers can use the GSA KAER Model in kickstarting the discussion of weight with older adults and their families; assessing the presence of altered body fat amount, distribution, and/or function; evaluating the individualized care plans developed for older adults with overweight and obesity; and referring patients to community resources (Figure 1). ***This toolkit presents the information and details primary care providers may use in implementing the GSA KAER Model in patients with overweight and obesity.***



During a [GSA Momentum Discussion](#) webinar, the expert peer review panelists for the Toolkit discuss the unique needs of older adults with overweight and obesity, review the need to address obesity and associated medical conditions intently, and provide valuable insights into using the GSA Toolkit for the Management of Obesity in Older Adults in clinical practice.

Figure 1. Steps in the GSA KAER Toolkit Framework



2

Primary care providers should assess themselves and their staff for any potential biases that may interfere or sabotage patient morale and willingness to recognize and address challenges in body size.

Weight bias occurs commonly. People affected by overweight or obesity feel stigmatized and are often reluctant to talk about their weight—much less agree to enter therapy for it. These individuals can be affected by depression, anxiety, and low self-esteem (Obesity Action Coalition [OAC], 2016).

When health care providers and those who assist them have negative attitudes about overweight and obesity, patients with weight challenges notice the bias and, as a result, are reluctant to seek medical care or they change providers. When in the office or clinic, people affected by overweight and obesity are more likely to decline having their weight measured or participating in conversations about body size (OAC, 2016).



Health care providers and staff members can assess their own biases by asking themselves these questions (OAC, 2016):

- How do I feel when I work with patients of different body sizes?
- Do I make assumptions regarding a person's character, intelligence, abilities, health status, or behaviors based only on their weight?
- What stereotypes do I have about persons with obesity?
- Do my patients affected by obesity feel confident and empowered, or otherwise?

Addressing and eliminating biases is a complex but necessary process. Before obesity care can be enhanced in a practice, patients must feel accepted with whatever body size they have. Resources for staff in assessing their own biases and learning about contemporary views of body size and overweight or obesity are available on the website of the [Obesity Action Coalition](#) and one of its micro-sites, [Stop Weight Bias](#). Articles on the National Council on Aging website discuss the [effects of weight bias and stigma on people with obesity](#) and [policy options for improving obesity care in older adults](#) (©2022 National Council on Aging).



3

Users of this toolkit should seek education on the medications with approved indications for overweight and obesity and other marketed products and services promoted to manage weight disorders.

Primary care teams have varying degrees of familiarity with weight management and may operate in different types of structures, organizations, and geographic regions. As such, care team members who consider using the GSA KAER Model in their clinical workflows may find specific steps to be more relevant than others and are encouraged to adopt processes that make sense within their clinical context.

New approaches and tools are continually being researched and tested in the field. Users of the toolkit are encouraged to consider new research studies and clinical guidelines as they become available, especially those that can better address obesity in older adults, particularly with the comorbidities that challenge people's ability to exercise and enjoy a healthy, affordable diet. Neighborhood characteristics limit exercise and transportation options for many older adults, as do socioeconomic factors; gender, racial, ethnic, cultural, and language-related diversity; low literacy; sensory and physical impairments; and intellectual disabilities.

By studying the clinical guidelines cited in this toolkit, health care providers can be updated on current concepts of obesity and its pathophysiology and treatment. Off-label uses of medications are not discussed in this toolkit; that is an area in which practitioners may need to seek additional information from other sources.



A podcast episode from [The Curbsiders](#) provides useful education on overweight and obesity. For patients, obesity treatments are summarized on the [Obesity Action Coalition website](#).

4

Users of this toolkit should understand that it summarizes a large and rapidly growing body of literature and resources addressing overweight and obesity.

This toolkit is intended as a supportive document of practical approaches, educational resources, and validated clinical tools to help primary care teams implement the GSA KAER Model in their initiatives related to weight management and timely identification of obesity and related conditions. The toolkit's content and interventions were developed with primary care teams as the principal audience. Medical educators and students may also find its contents helpful. This toolkit is divided into four sections to reflect each step of the model. The scope of information is directed to busy primary care teams in the following ways:

- Illustrations of the need for recognition of obesity-related disorders across the life span. GSA recognizes that obesity and overweight earlier in life present major challenges in older adulthood and that those of advanced age may have unrecognized problems as a result of protein loss and development of sarcopenic obesity.

- The essential information primary care teams need to manage overweight and obesity is presented succinctly. GSA recognizes that these conditions are often overlooked and multifactorial, which creates a need for discussions with patients and teamwork involving health professionals in multiple disciplines.

5

Primary care providers should be aware of prior GSA programs on obesity, nutrition, and oral health.

In addition to the prior report on use of the GSA KAER Model in people at risk for cognitive decline, GSA has published several reports on care of the older adult that are relevant to primary care providers implementing the GSA KAER Model for people with overweight and obesity. These include the following:



- [Obesity in Older Adults: Succeeding in a Complex Clinical Situation](#)
(publication)
- [Obesity: Its Effect on Increasing the Risk for COVID-19 and Other Health Conditions](#)
(Momentum Discussion)
- [Communicating With Older Adults](#)
(special publications, video vignette)
- [Interrelationships Between Nutrition and Oral Health in Older Adults](#)
(publication)
- [Oral Health: An Essential Element of Healthy Aging](#)
(publication)
- [Recruiting Older Adults for Clinical Trials: Communication Tips for Clinical Investigators](#)
(video vignette)

Of these, Communicating With Older Adults is particularly important. In having a reasoned and respectful conversation with older adults about weight management, primary care providers need to respond to the individual in front of them by avoiding stereotypes about older adults, using direct language when speaking, adjusting volume and content of speech when needed but only when needed, using visual aids whenever possible, speaking to the patient even when partners or caregivers are in the room, and avoiding nonverbal cues that can be misinterpreted. These and other tips for communicating with older adults are listed in Table 1.

Table 1. Tips for Improving Communications With Older Adults

General Tips for Improving Interactions With Older Adults
• Recognize the tendency to stereotype older adults; then conduct your own assessment. • Avoid speech that might be seen as patronizing to an older person (“elderspeak”).
General Tips for Improving Face-to-Face Communication With Older Adults
• Monitor and control your nonverbal behavior. • Minimize background noise. • Face toward older adults when you speak with them, with your lips at the same level as theirs. • Pay close attention to sentence structure when conveying critical information. • Use visual aids such as pictures and diagrams to help clarify and reinforce comprehension of key points. • Ask open-ended questions and genuinely listen to the responses.
Tips for Optimizing Interactions Between Health Care Professionals and Older Patients
• Express understanding and compassion to help older patients manage fear and uncertainty related to the aging process and chronic diseases. • Ask questions about an older adult’s living situation and social contacts. • Include older adults in the conversation even if their companion is in the room. • Customize care by seeking information about older adults’ cultural beliefs and values pertaining to illness and death. • Engage in shared decision making. • Strike an appropriate balance between respecting patients’ autonomy and stimulating their active participation in health care. • Avoid ageist assumptions when providing information and recommendations about preventive care. • Understand that how you give information is as important as the information itself — do so in a manner patients will be receptive. • Verify listener comprehension during a conversation. • Set specific goals for listener comprehension. • Incorporate both technical knowledge and emotional appeal when discussing treatment regimens with older patients. • To provide quality health care, focus on enhancing patient satisfaction. • Use humor and a direct communication style with caution with people of different cultures or age cohorts (such as older people and those from non-Western cultures). • Help internet-savvy older adults with chronic diseases find reputable sources of online support. • If computers or mobile devices are used during face-to-face visits with older adults, consider switching to those with screens that facilitate collaborative use.



6

To identify reimbursement possibilities for delivering GSA KAER–based quality patient care, seek current information on billing and policies of large insurers in the area served by your practice.

As discussed ahead in Step 2 (Assess) of this toolkit, reimbursement for obesity as a standalone diagnosis can be challenging. However, few individuals have obesity without other related conditions, and care addressing most of those conditions is reimbursable. When addressed as one of the contributing factors to hypertension, diabetes, kidney and liver disease, lipid disorders, and other chronic conditions discussed in Step 1 (Kickstart) of this toolkit, primary care providers can provide needed services while managing the many long-term challenges these patients have.

Within the Medicare population, reimbursements are available for intensive behavioral therapy and nutritional counseling provided by primary care physicians and for bariatric surgery. As discussed later in Step 3 (Evaluate), many other effective interventions are available for managing overweight and obesity between these extremes of a stepped-care approach. A bill in Congress, the [Treat and Reduce Obesity Act of 2021 \(S. 596\)](#), would expand Medicare coverage of intensive behavioral therapy for obesity.



OVERVIEW

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1 Kickstart

the Obesity Conversation

Section Takeaways

After reviewing this section, primary care teams will know how to:

- Identify patients with whom a conversation is needed about body size and weight management, based on weight, waist circumference, and other information commonly gathered during primary care clinical visits.
- List the six steps used in discussing body size with patients with overweight and obesity (the 6 As model).
- Identify at least three ways of engaging with patients before arrival for primary care visits and making them feel comfortable in the waiting room and during intake.
- Discuss with patients the health impacts of overweight and obesity using patient-centered, destigmatized, empathic language.
- Describe the process of taking a thorough weight history useful for identifying optimal steps in weight reduction and maintenance.

Overview

When a 65-year-old patient walks into a primary care provider's examination room for the "Welcome to Medicare" preventive visit, chances are the discussion needs to include weight and weight management. Nearly half of Americans have obesity, and this clinical condition often remains as they enter older adulthood. Another quarter of Americans have overweight. Combine those statistics with the incidence of chronic conditions that are associated with or worsened by excess adiposity—hypertension, heart disease, stroke, sleep apnea, and metabolic syndrome, to name a few—and it's evident that overweight and obesity present challenges that cut across health in general and quality of life for nearly all older adults.

Yet the stigma of overweight and obesity can make many practitioners reluctant to broach the subject and uncomfortable when they do. Practitioners may also hold unrecognized internal biases about overweight and obesity, feel they do not have time to address such a vexing problem, or believe they cannot get reimbursed for such care.

Practitioners may not be aware of current science about the real causes of overweight and obesity or why people regain lost weight so easily. No longer viewed as a disease of choice, obesity is a highly complex condition that results from treatable aberrations in gut hormone secretion and weight-control centers deep in the human brain and experience. Despite this reality, the stigma associated with overweight and obesity prevents many patients and their providers from discussing the benefits of treating underlying causes of weight gain and retention together with incorporating healthier diet and exercise routine into daily life.

Kickstarting the obesity conversation with older adults requires an understanding of the pathophysiology of overweight and obesity in conjunction with an appreciation for communication concerns that affect conversations with older adults. This section of the GSA KAER Toolkit focuses on the information and conversations needed to get people started on a successful weight-management path and how to be healthier at whatever body size they find most comfortable.

Approaches to Implement

1

Through staff education and training, address bias, incorrect assumptions, and stigma concerning weight and body size, and when needed, seek education on currently available modalities (diet, exercise, behavioral therapy, medications, surgery).

Addressing unrecognized internal biases about weight and correcting outdated assumptions about obesity among providers and office or clinic staff are critical for care of people with overweight and obesity to be successful. Obesity is now recognized as a chronic disease with pathophysiologic mechanisms involving the brain, the stomach, and hormones secreted by the gastrointestinal tract and pancreas. People with overweight and obesity are not lazy or failing to control their food intake; they are responding to complicated signals in the body that lead them to unhealthy behaviors.

Providers and staff must be sure they have contemporary, unbiased information and views on weight and body size. The primary care team must ensure they are bringing patients with overweight and obesity into an environment where they feel welcome and can address this chronic disease without feeling guilt or stigma.

In a [GSA Momentum Discussion Podcast](#) episode, Combating Bias to Promote Comprehensive Obesity Care for Older Adults, Dr. Fatima Cody Stanford discusses powerful examples of shares examples of how weight bias exists in healthcare and steps that providers and others can take to address it.

When needed, in-service education provided by experts in the field can help prepare the health professionals and others working in the office or clinic for provision of care to people with chronic overweight and obesity. This education should include current guidelines on treatment modalities, including new options in the therapeutic armamentarium.



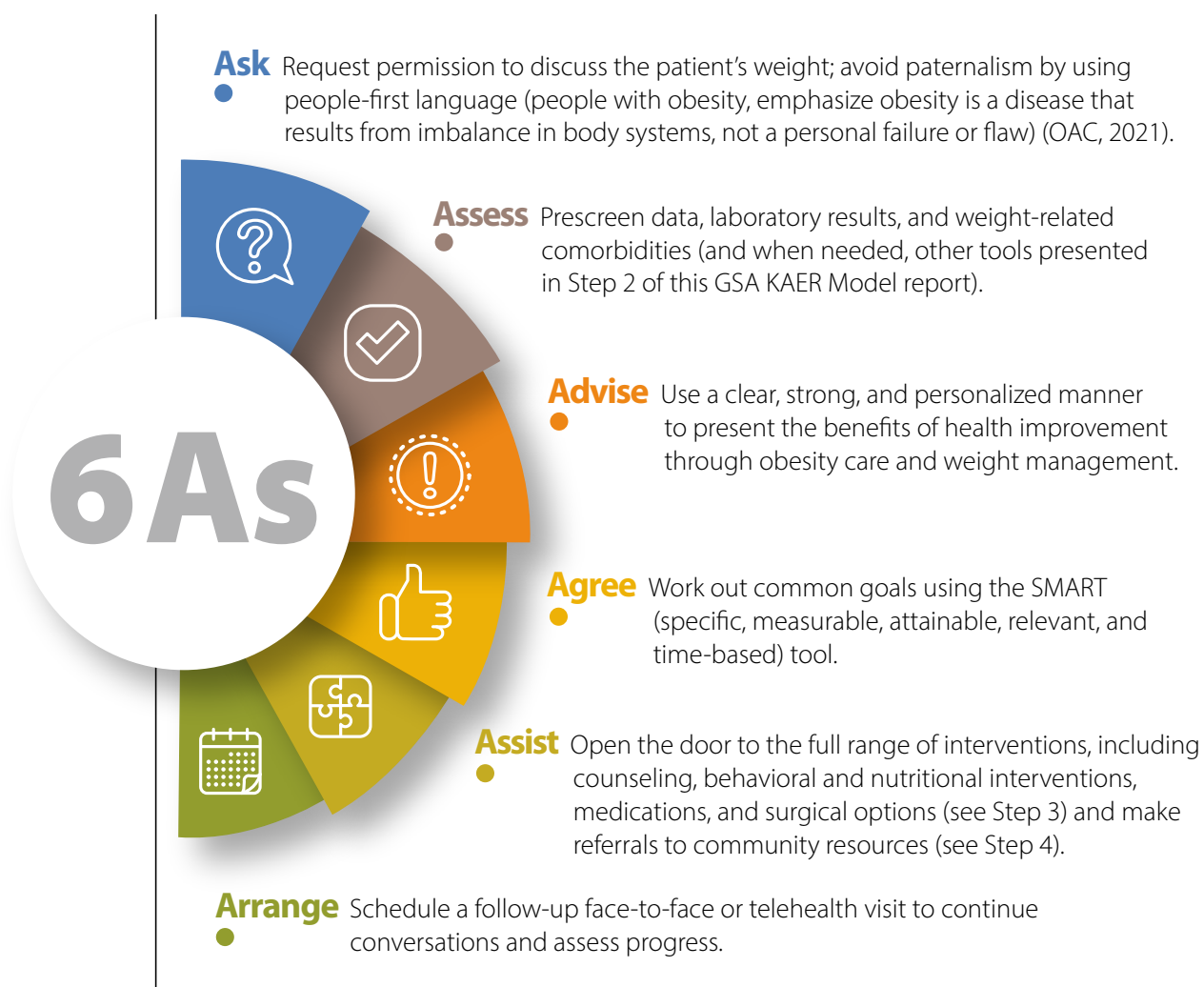
The [University of Connecticut Center for Food Policy & Health](#) is a useful resource for health professionals. In addition to free online educational resources for health professionals, the Center has online summaries on [weight bias and stigma](#), [needed changes in the office or clinic for patients with high body weight](#) and [examples of scripts for motivational interviewing](#).

2

Prepare for a shared decision-making conversation with the older adult about the chronic disease of overweight and obesity accompanied by the need for lifelong solutions that can optimize body size and maintain that size.



The goal of the kickstart conversation is simply that—to begin a two-way discussion of body size. Techniques of motivational interviewing are appropriate for the kickstart conversation, adapting the [5 As intervention that has been popularized for tobacco cessation](#) as 6 As advocated for discussing obesity and overweight (George Washington University and STOP Obesity Alliance, 2020):



Primary care providers and other office staff can develop approaches for responding to common concerns that make patients and their families reluctant to address weight management issues. As shown in Table K-1, health professionals should have ready effective responses that can help remove these roadblocks to better health.

Table K-1. Positive Responses to Common Roadblocks to Addressing Overweight and Obesity

When the patient says...	The provider responds...
I don't think obesity is a disease.	We can all be healthier at every size.
I don't want to talk about my weight.	That's okay. Just know that we're always here for you.
I don't have enough time for exercising.	Instead of doing one long workout session, build in three 10-minute bursts of activity during your day, such as a brisk walk. Even standing up instead of sitting at your desk has benefits.
I just don't like exercise.	Good news! You don't have to run a marathon or go to the gym all the time to benefit from being active. To make physical activity more fun, try something you enjoy doing, such as dancing to the radio or taking a yoga class with friends. Many people find they start to like exercise better the more they do it.
I'm worried about my health or getting hurt.	If you have a hard time being active because of your health, talk with a health care professional first. A certified fitness professional can also guide you on how to be active safely.
I feel self-conscious working out in front of others.	Start being active at home until you feel more confident. Be active with friends who will support and encourage you.

3

Engage patients in this conversation before arriving in the provider's office.

Contemporary online health portals can be used to provide previsit information and obtain responses as part of the preparation for preventive care and other appointments. Laboratory results obtained in the past and/or before the visit can point to problematic trends associated with overweight and obesity. Using this information, primary care providers can be ready to customize care based on patients' willingness to address concerns about body size.

4

Make patients feel welcome when they arrive at the office or clinic, ranging from the words used by staff to the type of furniture available in the waiting room.

In the waiting room, provide chairs appropriate for people with larger body sizes. To avoid the trap of sending verbal or nonverbal clues of "you don't belong here," educate staff of language to use when talking with patients about weight-related topics, consider educational videos and presentations to run on monitors in the waiting area, and be sensitive about the images and content of magazines and other printed materials available in this area.

5

During the clinical visit, ask the patient for permission to measure weight and engage in a conversation about body size.

At the office, medical assistants and other staff generally measure patient weight as part of the intake process. This is a stressful part of a medical visit for many patients with weight challenges, and staff should be trained to ask for permission to obtain a weight. Weights should be taken in a private area—the hallway or a common area where other patients may be present adds to patients' anxiety. Accommodations should be made for patients who want to face away from the display and for those unable to rise or stand on their own for weighing.

Similarly, when the provider or other staff members talk with the patient, permission to discuss weight should again be obtained. Questions can be asked about the terms the patient prefers when discussing excess weight; some are comfortable with *overweight* or *obesity*, while others may want to discuss *body size*. In a [GSA Momentum Discussion Podcast](#) episode, Kickstarting Body Size Conversations in Older Adults with Obesity, teams can learn practical approaches to engaging in successful, motivating conversations about body size in primary care settings.



The provider should also take care to use person-centered language during this conversation. “People with obesity” is preferred over expressions that label people or make the condition the center of the lives, such as “obese patients.” The kickstart conversation should be a respectful and encouraging exchange of information; this is the place for a “nice cop” approach with patients, saving any “tough cop” routines for later points in the care process when the patient needs that manner to increase motivation.



Primary care providers should be aware of the [HAES movement](#), an acronym for Health at Every Size. Promoted by the Association for Size Diversity and Health, the HAES principles advocate balanced eating, life-enhancing physical activity, and respect for the diversity of body shapes and sizes while rejecting “society’s ‘war on obesity’” (Association for Size Diversity and Health, 2021). When patients express these or similar beliefs, the clinician should respect their views on body size and preferences.





Recognize the importance of cultural differences as well as differences in risk based on age, race, or ethnicity.

Cultural preferences and views about larger body sizes should also be respected. Some cultures view larger body sizes positively; this is important to recognize and factor into conversations about weight and obesity.

A [GSA Momentum Discussion Podcast](#) episode, *Culturally Congruent Care for Hispanic Older Adults with Obesity*, highlights unique cultural beliefs and practices that are prevalent among individuals from the Hispanic community, addresses how providers must recognize and factor them into conversations about weight and obesity, and provides valuable insights into how providers may provide culturally congruent care while using the GSA KAER Framework.

To help remove the stigma of overweight and obesity, clinicians should convey contemporary views of excess adiposity as a disease, one with documented causes in the complex systems of the body that control eating, exercise, and weight retention. This disease can be treated through changes in

7

lifestyle as well as with medications.

Discuss the importance of healthy living at every body size and age.

The connections of overweight and obesity to other chronic conditions are key to making these and in some cases, such counseling is reimbursable. When patients express that they are comfortable with the body size they have, clinicians can focus on other chronic conditions and talk about the importance of loss of a few pounds in controlling hypertension, dyslipidemias, sleep apnea, and erectile dysfunction, and in preventing serious liver diseases. Losing just 5% or 10% of body weight can help people feel better while also making a big difference in their health.



A clinical history of the patient's experience with weight gain and loss is also useful to obtain during the kickstart conversation or at follow-up visits that focus on weight and its management. In [online videos](#) posted at RethinkObesity.com, Robert F. Kushner, MD, of Northwestern University School of Medicine shows how to use the OPQRST mnemonic in taking a weight history in a clinically appropriate manner during the initial patient conversation:

- **O** for onset.
- **P** for precipitating events.
- **Q** for quality of life.
- **R** for remedy.
- **S** for setting.
- **T** for temporal pattern.

This conversation uses several strategies to enhance the chances of long-term success: build rapport with the patient, increase patient understanding and perspective, encourage the patient to verbalize and reflect on personal experience, recognize and reward the patient's strengths and past success, leverage the patient's motivation, add to the patient's confidence, and reduce the patient's feelings of guilt and shame.

Because of the impact of genetics, diet, and exercise in obesity management, clinicians may need to bring other family members into these conversations; with the support of those close to patient, interventions are more likely to be successful. For older adults, family members and caregivers are often already present in the care setting. When they are, the clinician should talk directly to the patient about personal health, but during the kickstart and continuing conversations, others can be appropriately involved in the discussion of life in the home as part of the weight history and general perceptions about body size and diet.

Medications can be an important source of weight gain, particularly antidepressants, mood stabilizers, and antipsychotic agents. As appropriate, a careful medication history should be taken during the kickstart or follow-up conversations to identify precipitating factors in weight gain, loss, or regain.

Resources for Kickstarting the Conversation

Obesity Action Coalition

- [Weight Bias in Healthcare](#)
- [Weight Bias: People-First Language](#)
- [Understanding Obesity Stigma](#)

Obesity Care Advocacy Network

The Obesity Care Advocacy Network (OCAN) works to increase access to evidence-based obesity treatments by uniting key stakeholders and the broader obesity community around significant education, policy, and legislative efforts. Its website is an excellent resource for news and current information on efforts to improve coverage of obesity as a chronic, complex disease.

Obesity Care Week

Obesity Care Week was established with a vision to create a society that understands, respects, and accepts the complexities of obesity and values science and clinically based care.

- [Resources](#) for health care providers, patients and those who care for them, policymakers, and employers

National Academies—Roundtable on Obesity Solutions

A 7.5-year project to address systems-wide changes to reduce the prevalence of obesity, the Roundtable on Obesity Solutions addresses structural racism/social justice, biased mental models/stigma, and effective health communications according to a [roadmap for action](#) developed during strategic planning in 2020.

- [Proceedings of the April 2021 workshop](#)
- [Causal systems map of obesity drivers and solutions](#)
- Publications on “Advancing Effective Obesity Communications”

Stop Obesity Alliance (George Washington University Milken Institute School of Public Health)

- [Weight Can't Wait](#)

Why Weight? Communicate

- Education initiative encourages adults to take control of their health by engaging in meaningful conversations with their doctors—Curax Pharmaceuticals

Rethink Obesity

- Advice from experts in obesity care—Novo Nordisk

Association for Size Diversity and Health

- [Health at Every Size \(HAES\) principles](#)



Additional resources shown in the references section.

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OVERVIEW



2 Assess

For Weight Management Challenges

Section Takeaways

After reviewing this section, primary care teams will know how to:

- Use a personalized approach in conducting a complete assessment of patients for clinical concerns related to body size and the patients' concerns about activities of daily living and "what matters to them."
- Detect sarcopenic obesity in older adults with overweight and obesity.
- Assess patients for red-flag conditions related to body size and motivate patients through education about the benefits of avoiding prediabetes or diabetes and improving cardiometabolic health.
- Involve dietitians or nutritionists in working with patients on diet-related concerns and physical therapists for developing exercise plans appropriate for each person's capabilities and concomitant conditions.
- Work with other providers and billing staff to identify and use billing codes appropriate for the patient population and major insurers in the area.

Overview

After people are on board with addressing body size challenges with a health care team that is applying contemporary concepts in weight management, the primary care provider should conduct a full assessment, including weight history, periods of past weight loss and gain, current diet and exercise patterns, and medications. This assessment must account for important differences in older adults and those in the latter years of middle age. The assessment tools used can also differ based on body sizes, comorbidities, and the likelihood of sarcopenic obesity.

This section of the GSA KAER Toolkit describes an approach for primary care providers to use in the assessment of body size and weight management challenges. It is based on the realization that new models of care need to be identified, refined, and implemented in primary care to address the increasing prevalence of obesity in older adulthood and the longer lives people can expect after age 65.

Approaches to Implement

1

Go beyond BMI with a complete assessment and personalized care.

A personalized approach is needed in the assessment—one that is tailored to the special needs of each older adult. It should include tests that can identify people with overweight who have other risks. Age- or diet-related loss of muscle mass and function should be assessed as part of screening for sarcopenic obesity. A complete family and social history relevant to the weight management journey can help identify successful approaches in the past, and the person's willingness to start now on focusing on issues of body size can be determined (Stanford et al., 2019).

With many patients having a body mass index (BMI; calculated as weight in kilograms divided by the square of height in meters) of 30 kg/m² or more, obesity can often be diagnosed with just a height and weight. Even though BMI is poor measure for this purpose and its validity across a diverse population is questionable, this measure is used in current diagnostic criteria and is needed for billing for overweight and obesity. It is not, however, a good guide to a healthy weight for a specific person. Lower BMI cut points for Asian individuals are listed in Table A-1:

Table A-1. Clinical Characteristics and Interventions in Patients With Obesity

Diagnosis	BMI*		Comorbidity Risk		Chronic Disease Phase	Interventions		
	Non-Asian	Asian	Normal WC†	Increased WC†				
Underweight	<18.5	<18.5†	Low but other concerns	—	Primary	Not addressed in this toolkit		
Normal weight	18.5–24.9	18.5†–22.9	Average	—	Primary	Reinforce healthy habits		
						Lifestyle: Diet, physical activity, behavioral therapy	Medications	Surgery
Overweight	25.0–26.9	23.0–24.9	Increased	High	Secondary	+ (with comorbidity)		
	27.0–29.9	25.0–27.9	Increased	High	Secondary	+	+ (with comorbidity)	
Obesity class I—mild	30–34.9	>28.0	Moderate	Very high	Tertiary	+	+	
Obesity class II—moderate	35.0–39.9		High	Very high	Tertiary	+	+	+ (with comorbidity)
Obesity class III—severe	≥40.0		Very high	Very high	Tertiary	+	+	+

* BMI is calculated as mass (weight) in kilograms divided by the square of height in meters (kg/m²).

† Some experts recommend using 17.5 as the cut point between underweight and normal weight for Asian people. Guidelines in Asian nations differ on the exact BMIs considered underweight, normal weight, and overweight. The cut point of 23.5 for normal weight and overweight recognizes that Asian individuals in general should be monitored for diabetes at lower BMIs than other groups. However, this is a heterogeneous group, and findings have varied among subgroups of the Asian population (see Jih et al., 2014).

‡ In the United States and Canada, waist circumference is considered normal when it is 102 cm (40 inches) or less in males and 88 cm (35 inches) or less in females. Those are most appropriate for people of European descent (Europids, or Whites) and several populations with insufficient data to determine more appropriate cutpoints (ethnic South and Central Americans, sub-Saharan Africans, eastern Mediterranean and Middle East [Arab] populations). For people of Asian descent, lower cutoff points are appropriate (94 cm [37 inches] and 80 cm [31.5 inches] for males and females, respectively). Waist circumference cutoff points of 94 cm (37 inches) for men and 90–92 cm (35–36 inches) for women have been identified for Latinx individuals.

Abbreviations: BMI, body mass index; WC, waist circumference.

Sources: Garvey et al., 2016; Harvard, undated; Aschner et al., 2011.



Waist circumference should be measured during this assessment (and routinely in annual wellness visits). It is a key indicator of central obesity, which is associated with many of the adverse sequelae of excess body weight. Waist circumference provides additional information in patients with obesity, particularly those with BMIs in lowest obesity range (30.0–34.9) and those with BMIs in the overweight range (25.0–29.9). In those groups, high waist circumferences are associated with greater risks for cardiovascular disease, type 2 diabetes, all-cause mortality, and other conditions; a more aggressive effort to reduce body size is indicated (Obesity Society, 2015).

The current waist circumference cutpoints are 102 cm (40 inches) for males and 88 cm (35 inches) for females. As noted in the Table A-1 footnotes, lower cutpoints are used people of Asian descent.

A personalized approach is needed, and for that, baseline data are essential.

People often want to know what weight they need to reach and maintain, and that is understandable. A better focus, though, is on measures of function and health. As people seek to lose weight, they need to avoid inadvertent depletion of proteins, calcium, vitamins, and other essential nutrients because of dieting and insufficient intake. In addition, for long-term weight maintenance, people need to incorporate exercise into their daily routine. During the initial weight loss period, many people can lose weight through dieting and perhaps medications, but exercise helps in this process by stimulating the catabolic processes that can mobilize and burn the excess fat stores of the body. In addition, without exercise as an integral part of the day, people are not likely to maintain their body size once it is achieved.

Older adults should be assessed using guidelines appropriate for people in this age group. Diagnoses may have little importance to people as they age, but one thing certainly does: maintaining their independence and ability to manage the activities of daily living. A good model for an appropriate focus in the older adult is the 4 Ms framework: What matters (to the older adult), *medication*, *mentation*, and *mobility* (Institute for Healthcare Improvement, 2020).

As detailed below, the assessment of body size and weight management in older adults should include the following:

- Weight, height, and waist circumference.
- Presence of concomitant diseases (including those that limit people's ability to vary their diet and/or get enough aerobic or resistance exercise to affect body size).
- Medications, including those that can cause people to gain weight.
- Activities of daily living, including mobility (walking from room to room, climbing stairs, walking outside the home) using the 6-minute walk test, stair climb test, chair stand tests, and/or hand-grip strength.
- Presence of sarcopenic obesity using validated instruments such as the SARC-F questionnaire (Ishida et al., 2020; Linge et al., 2020).
- Quantification of muscle mass and body fat (e.g., dual-energy x-ray absorptiometry [DXA] scan).

Because of the risk of osteoporosis in older adults, national and international guidelines call for DXA scans in many patients during middle and older adulthood. In addition to bone density, DXA scans can provide valuable information on total body protein, fat, and water stores. Primary care providers should request this information for patients who have or at risk for overweight and obesity. Baseline DXA scans are needed for women older than 50 years and men older than 70 years, both for tracking bone health and for monitoring during treatments for overweight and obesity (Viswanathan et al., 2018).

If the DXA scan is impractical for cost or other reasons, low-cost and reasonably accurate substitutes are available. These are sufficiently accurate for purposes of assessing muscle mass. Scales and other equipment that use bioimpedance analysis can be used for assessing muscle, fat, and bone mass and the water proportion of body weight.

An innovative method, visual body composition (VBC), uses smartphone cameras to estimate percentage body fat. A study posted as a preprint (not yet peer reviewed) compared DXA, VBC and methods of measuring air displacement, VBC had the best agreement with DXA without bias (Majmudar et al., 2021).

2

Screen all older adults with overweight or obesity for sarcopenic obesity.

Sarcopenia is the loss of muscle mass, often as a normal consequence of aging in sedentary individuals, leading to decreased strength and compromise of activities of daily living. It is often associated or equated with frailty, and that suggests the image of thin older adults with mobility and balance challenges. However, sarcopenia is diagnosed based only on functional abilities—not weight or body size. When sarcopenia occurs in people with overweight or obesity, they have sarcopenic obesity, with decreased muscle mass that is masked by increased fat stores. This results in compromise of activities of daily living (Batsis & Villareal, 2018).

A good instrument for screening for sarcopenia is SARC-F, a questionnaire used to determine a person's abilities with regard to *strength*, *assistance* in walking, *rising* from a chair, *climbing* stairs, and history of *falls*; its components are presented in Table A-2. The reliability of SARC-F is good, and it has been validated for use in patients who are hospitalized (Ishida et al., 2020). In the community, the instrument is very good at correctly classifying a person who does not have sarcopenic obesity (sensitivity, or lack of false negatives), but it has low-to-moderate sensitivity in that it has a higher number of false positives, or instances in which a person is incorrectly classified as having sarcopenic obesity (Voelker et al., 2021). Nevertheless, it is an easy-to-administer and ideal option for screening for sarcopenic obesity. People who test positive can then be assessed further with tests of mobility and strength.

Nurses or medical assistants can handle those assessments: the chair–stand assessment (time to complete 5 chair stands of ≥ 15 seconds indicates low muscle strength); hand-grip strength using dynamometers (readings of < 27 kg for men or < 16 kg for women indicate low grip strength); and asking about the person's ability to climb 10 stairs (Ibrahim et al., 2018).

Table A-2. Sarcopenia Screening Assessment Using the SARC-F Instrument

Functional Component	Question	Scoring*
Strength	How much difficulty do you have in lifting and carrying 10 pounds?	None = 0 Some = 1 A lot or unable = 2
Assistance in walking	How much difficulty do you have walking across a room?	None = 0 Some = 1 A lot, use aids, or unable = 2
Rise from a chair	How much difficulty do you have transferring from a chair or bed?	None = 0 Some = 1 A lot or unable without help = 2
Climb stairs	How much difficulty do you have climbing a flight of 10 stairs?	None = 0 Some = 1 A lot or unable = 2
Falls	How many times have you fallen in the past year?	None = 0 1–3 falls = 1 ≥ 4 falls = 2

Source: Malmstrom and Morley, 2013.

* Scores on each of the 5 questions are summed. Sums of 4 or more are considered indicative of sarcopenia.

3

Implement more aggressive assessments of red-flag conditions common in older adults, including prediabetes, diabetes, dyslipidemia, hypertension, and liver disease.

Providing reinforcements for improvements in body size is an important motivator for people with overweight and obesity. In addition to pointing out to patients the percentage of total body weight they have lost, improvements in several other clinically important parameters are likely to occur, including the following (Pi-Sunyer et al., 2015):

- **Prediabetes and diabetes:** In a study of liraglutide 3 mg, the percentage of people progressing to diabetes and percentage of people on active therapy with prediabetes was reduced significantly (compared with placebo) at the study's end (56 weeks). Other benefits included decreases in the percentage of people with high glucose levels; reduction in glycated hemoglobin, fasting glucose, fasting insulin levels; and higher insulin and C-peptide levels.
- **Cardiometabolic health:** With liraglutide treatment and associated weight loss, patients had decreases in systolic and diastolic blood pressures and improvement in fasting lipid levels, high-sensitivity C-reactive protein, plasminogen activator inhibitor-1, and adiponectin.

Kidney and liver health, asthma, and obstructive sleep apnea are also likely to improve when people lose weight, but the evidence is not as strong.

To monitor improvements in other chronic conditions during weight loss, several clinical indicators should be measured routinely, including those listed in Table A-3. Showing test results to the patient will reinforce the benefits of weight loss and these laboratory tests can be used to bill under codes for more than one chronic condition.



Table A-3. Laboratory Tests to Monitor in Patients Working to Lose Weight

Tests	Key Results
Complete blood count	Albumin level (indicator of protein status), hemoglobin and hematocrit (adequate nutrition, including iron)
Metabolic panel	Fasting blood glucose (prediabetes and diabetes), serum creatinine (kidney health)
Liver function tests	ALT and AST (liver health), albumin (protein status)
Kidney function	Albumin-to-creatinine ratio, estimated glomerular filtration rate, serum creatinine
Periodic glucose tolerance tests	Used in diagnosis of prediabetes and diabetes
Other cardiovascular tests	Apolipoproteins, C-reactive protein, cystatin C, homocysteine, leptin, leptin-to-adiponectin ratio, lipoprotein(a)
Lipid panel	Total cholesterol, LDL-C, HDL-C, triglycerides

Abbreviations: ALT, alanine aminotransferase; AST, aspartate aminotransferase; HDL-C, high-density lipoprotein cholesterol; LDL-C, low-density lipoprotein cholesterol.

4

Acclimate the older adult to members of the health care team with expertise in managing weight and body size issues among people in this age group, including dietitians or nutritionists and physical therapists.

Discuss with the patient that weight management is a team effort. If a diagnosis of overweight or obesity is made and the patient is ready to address it, explain that referrals are often made to nutritionists or dietitians for assisting with diet and to physical therapists to create a safe exercise regimen with both aerobic and resistance activities that fit into the patient's daily life on a long-term (preferably lifetime) basis. Behavioral change is also needed; referral should be made to mental health professionals with expertise in obesity or to evidence-based programs that provide comprehensive lifestyle intervention leading to the needed results.

For people whose BMIs are in the tertiary ranges listed in Table A-1, referral to an obesity specialist is sometimes appropriate as treatment at the primary care level begins. Since many obesity specialists are overwhelmed with referrals, patients can encounter waits of several months to a year, and primary care will be needed during the interim. A website of the Obesity Action Coalition, obesitycareproviders.com, is useful for identifying nearby obesity specialists and bariatric surgeons as well as dietitians, psychologists, and psychiatrists with expertise in obesity.



5

Identify and use billing codes for needed interventions that the person's insurance will cover.

In the primary care setting, reimbursement for obesity as a standalone diagnosis can be challenging. Diagnosis and treatment of obesity require specialized knowledge and systems that are not generally available in primary care offices and clinics. Nonphysicians are needed in these processes, including dietitians who can assess diets and prescribe interventions, physical therapists and exercise coaches with specialized knowledge of the older adult, endocrinologists for patients with underlying metabolic or hormonal disorders, and surgeons when bariatric surgery is needed (Batsis, 2019; Porter Starr et al., 2019).

Specific billing codes and the documentation needed to support those are discussed in the Optum policy 64. It was approved in April 2021 and covers Current Procedural Terminology codes 99401 and 99402 and Healthcare Common Procedure Coding System codes G0446, G0447, and G0473.

Another approach to billing is to discuss obesity when addressing related conditions, which most of these patients have. When discussed as one of the contributing factors to hypertension, diabetes, kidney and liver disease, lipid disorders, and other chronic conditions discussed in Step 1 of this report, primary care providers can provide needed services while managing and billing for the many long-term challenges facing these patients.

Within the Medicare population, reimbursements are available for intensive behavioral therapy and nutritional counseling provided by primary care physicians and for bariatric surgery. As discussed next in Step 3 (Evaluate), many other effective interventions are available for managing overweight and obesity between these extremes of a stepped-care approach. A bill in Congress, [the Treat and Reduce Obesity Act of 2021 \(S. 596\)](#), would expand Medicare coverage of intensive behavioral therapy for obesity.

In addition to billing for conditions related to obesity and overweight, providers can seek guidance on documentation and billing codes on [RethinkObesity.com](#). The [Obesity Medicine Association](#) has educational programs on billing and coding available for a small fee.



[Additional resources shown in the references section.](#)

REFER **R**

EVALUATE **E**

ASSESS **A**

KICKSTART **K**

OVERVIEW



3 Evaluate

Treatment Options

Section Takeaways

After reviewing this section, primary care teams will know how to:

- Have conversations with patients about body size and SMART (specific, measurable, attainable, relevant, and time-based) goals the person is willing to pursue.
- Express goals in terms of percentage of body weight reduction, such as 5% or 10%.
- Apply accepted national guidelines in the evaluation and treatment of patients with overweight and obesity.
- Coordinate team activities in helping patients with exercise and nutrition plans.
- Include medications in treatment plans as appropriate to patients' needs and clinical conditions.
- Advise patients on the need for bariatric surgery and the process and long-term considerations with this modality of care.

Overview

Management of excessive or maldistributed fat mass begins with recognition of obesity as a chronic medical condition that must be addressed over the life course through multimodal interventions. As with many conditions presenting when people reach older adulthood, decisions should be tempered by consideration of which interventions are most likely to be successful given the presence of other conditions and which are worthwhile given the fewer number of expected life years remaining.

For many people with overweight and obesity, a three-pronged lifestyle therapy approach can be successful through use of dietary modification, physical activity, and behavioral therapy. However, the weight can be difficult to lose and often returns after the intervention period if exercise does not continue or diet is not maintained at a reasonable level (Garvey et al., 2016). In addition, interventions in older adults can require adjustments to diet, exercise, and medications based on concomitant disorders and functional limitations.

Because of those realities, medications are increasingly recognized as necessary in managing chronic obesity. Older agents have limitations; new and innovative agents address the pathophysiologic mechanisms through which obesity occurs. Just as hypertension and dyslipidemia are chronic diseases requiring long-term pharmacotherapy, lifelong obesity medications and behavioral changes are necessary.

Bariatric surgery can produce remarkable results—including remission of diabetes within days of the procedure (even before weight loss occurs). After the surgery, people must control their diets and use dietary supplements to replenish some vitamins; for patients willing to live with those and other postsurgical realities, bariatric surgery is a good choice.

Approaches to Implement

1

Begin with an empathic, compassionate conversation with the person about the full range of interventions that are likely to be effective based on the goals of therapy feasibility given physical or financial limitations, along with a commitment to maintain interventions over the life span.

The last three steps—*agree*, *assist*, and *arrange*—of the 6 As described in Step 1 (Kickstart) should be used in Step 3 (Evaluate) of the GSA KAER Model. The provider and the patient need to jointly agree on a goal of therapy and interventions that can reach that goal. The SMART process can be applied in setting goals by making them *specific*, *measurable*, *attainable*, *relevant*, and *time*-based. The health care team will assist the person to address needed behavioral and lifestyle changes, eat a healthy diet designed to lose or maintain weight, use medications properly and safely, and understand what surgical interventions involve and when they should be considered. The team also will arrange follow-up visits and referrals to other health professionals and to helpful community resources.





As discussed earlier, empathy and use of person-centered language are critical in eliminating the stigma attached to large body sizes and motivating the older adult to commit to lifelong interventions that can reduce weight and maintain it at a target level. Take care to avoid language that implies a negative value judgment. People have obesity; they are not obese people. They have a chronic disease and did not “fail” to control themselves. If interventions do not work for an individual, the person did not “fail therapy”; instead, say, “That intervention did not work. We will try a different approach.”

For overweight and obesity, patients want and need a conversation, not a paternalistic lecture. This sometimes requires short discussions at multiple office visits before the person is ready and motivated to address body size issues. The provider should continue using the person’s preferred language identified in Step 1 (Kickstart) and Step 2 (Assess) of this toolkit to describe and discuss body size.

Avoid focusing on a specific weight as the target; instead, talk about percentage reductions in body size, and explain how each percentage point lost can help control diabetes, blood pressure, lipids, liver disease, and kidney disease. Progression from prediabetes to diabetes is also slowed or stopped by loss of as little as 5% or 10% of body weight.

2

With the patient, set a goal for therapy based on percentage loss of total body weight.

In older adults with overweight and obesity, interventions with dietary modifications and exercise should have clear clinical goals, such as prevention of type 2 diabetes, reductions in blood pressure, and/or improvements in mobility and conditions that limit physical function (e.g., osteoarthritis). The relationship between BMI and mortality is curvilinear with increased mortality as BMI increases. However, the shape of this curve is flatter in older individuals (Veronese et al., 2015). Thus, the relative risk of obesity is less in older adults than in younger individuals.

Additionally, since sarcopenia is a common problem in older adults and weight loss through caloric restriction alone can lead to a loss of lean mass, the benefits of dieting are less and the risks greater in older adults as compared with younger individuals, making a focus on discrete clinical goals more important drivers of the decision for weight loss in these patients (Garvey et al., 2016).

An initial goal for weight loss in older adults is 5% or 10% of the initial body size. In people with severe obesity (obesity class III, BMI ≥ 40) or moderate obesity (obesity class II, BMI of 35–39.9) with one or more comorbidities, bariatric surgery is a possible adjunct when behavioral interventions, exercise programs, and pharmacotherapy have not reduced body size to lower BMIs. When setting goals of therapy for these individuals, acknowledge upfront whether the chosen goal will get the person to a body size for which bariatric surgery is not needed.

When interventions lower body sizes to the chosen target, the provider and older adult can discuss whether to choose a new, lower target or maintain the new weight. This discussion should be based on changes in clinical parameters achieved through the initial weight loss.

3

Use the current, joint American Heart Association/American College of Cardiology/The Obesity Society guidelines in developing treatment plans.

Primary care providers should follow the general sequence of tests, cutpoints, interventions, and considerations recommended for people with overweight and obesity by the American Heart Association, American College of Cardiology, and The Obesity Society, as shown in Figure E-1 (Jensen et al., 2014). These must be applied to the care of older adults with considerations for concomitant disorders, functional deficits, exercise capabilities, dietary needs, and other factors unique to this part of the life span. Keep in mind that BMIs should be combined with clinical assessment and body shape and sizes to reach a diagnosis of overweight or obesity in older adults (Jensen et al., 2014; Batsis and Zagaria, 2018).



Prior experiences and marketing hype may have led people to believe that losing weight means some sort of reduced caloric diet. Dispel this by using graphics to show the large number of treatment modalities that can be used in treating overweight and obesity, including [the “POWER” chart on the American Gastroenterological Association website](#). The consumer part of the [American Association of Clinical Endocrinology obesity website](#) is a good source of information.

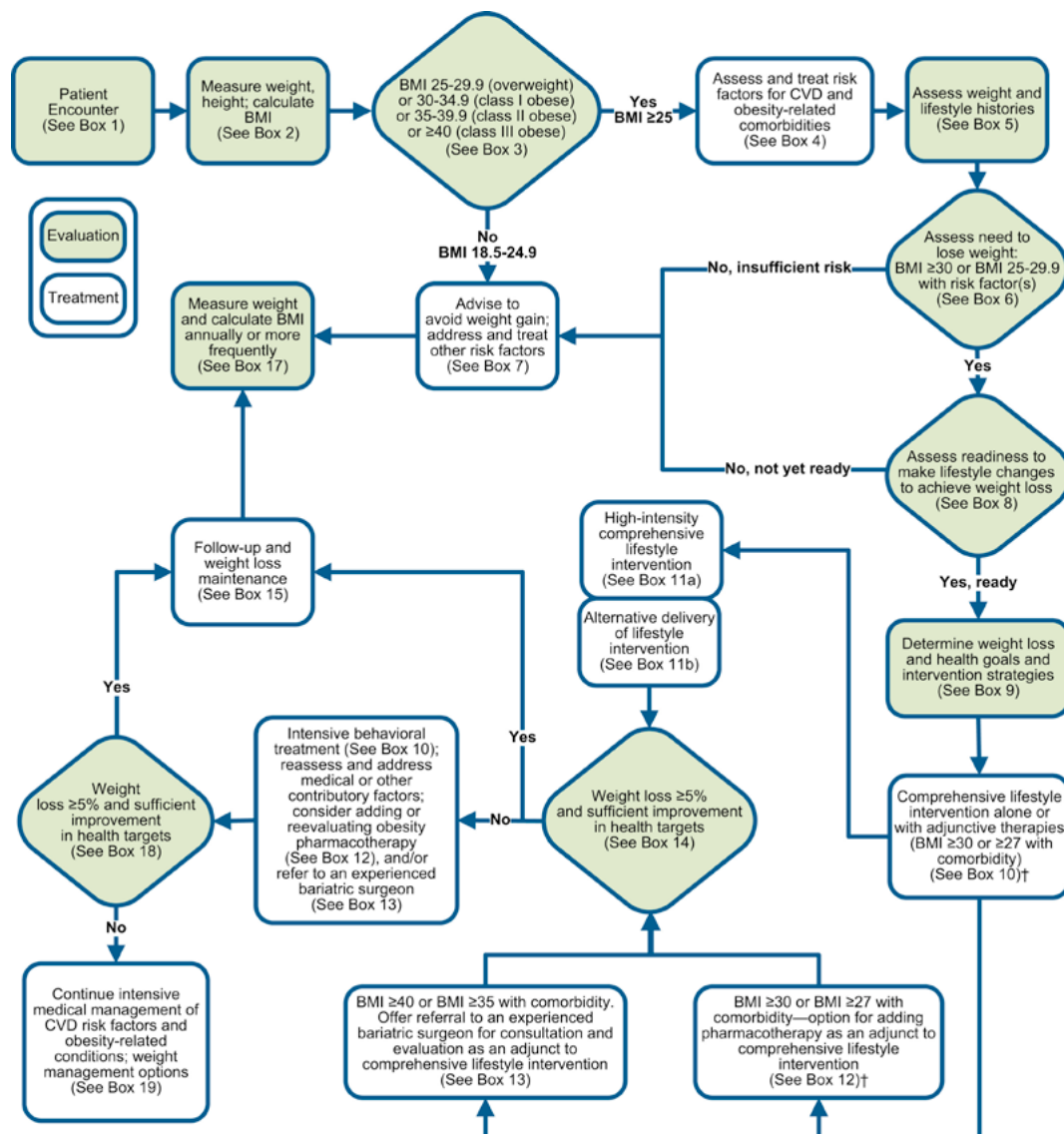
An important step in developing treatment plans is a thorough medication history, including both prescription and nonprescription drugs, dietary supplements (including vitamins and minerals), and recreational or street drugs. Antipsychotic medications, including those used as mood stabilizers in people with affective disorders, are common causes of weight gain; these agents include risperidone, quetiapine, aripiprazole, olanzapine, lithium, and valproic acid. Other weight-promoting medications include sleep agents (zolpidem, eszopiclone, trazodone, zaleplon), neuropathic agents (gabapentin, pregabalin), beta-blockers, corticosteroids, and insulin and other glucose-lowering drugs used in the treatment of diabetes.

The provider should address any inaccurate perceptions the older adult has about dieting while discussing treatment options. Common myths and possible responses are shown in Table E-1.

Another approach useful for many patients is an infographic produced by The Obesity Society in 2015 (Figure E-2). By illustrating the large number of potential contributors to energy storage by the body, primary care providers can point out those mechanisms that can be affected by lifestyle factors, nutrition, exercise, medications, and surgery.

This toolkit provides information about the most commonly used treatment modalities for people affected by overweight and obesity. Providers should keep in mind the many other factors that affect weight homeostasis, including some that can be addressed in primary care practice. Sleep deficits and circadian rhythm disorders, mental health (social anxiety and mood disorders), infections, smoking cessation, thyroid function, and chronic inflammation are among the treatable modifiers shown in Figure E-2.

Figure E-1. AHA/ACC/TOS Treatment Algorithm—Chronic Disease Management Model for Primary Care of Patients With Overweight and Obesity*



The boxes referred to in the algorithm are available in [the full article available online](#).

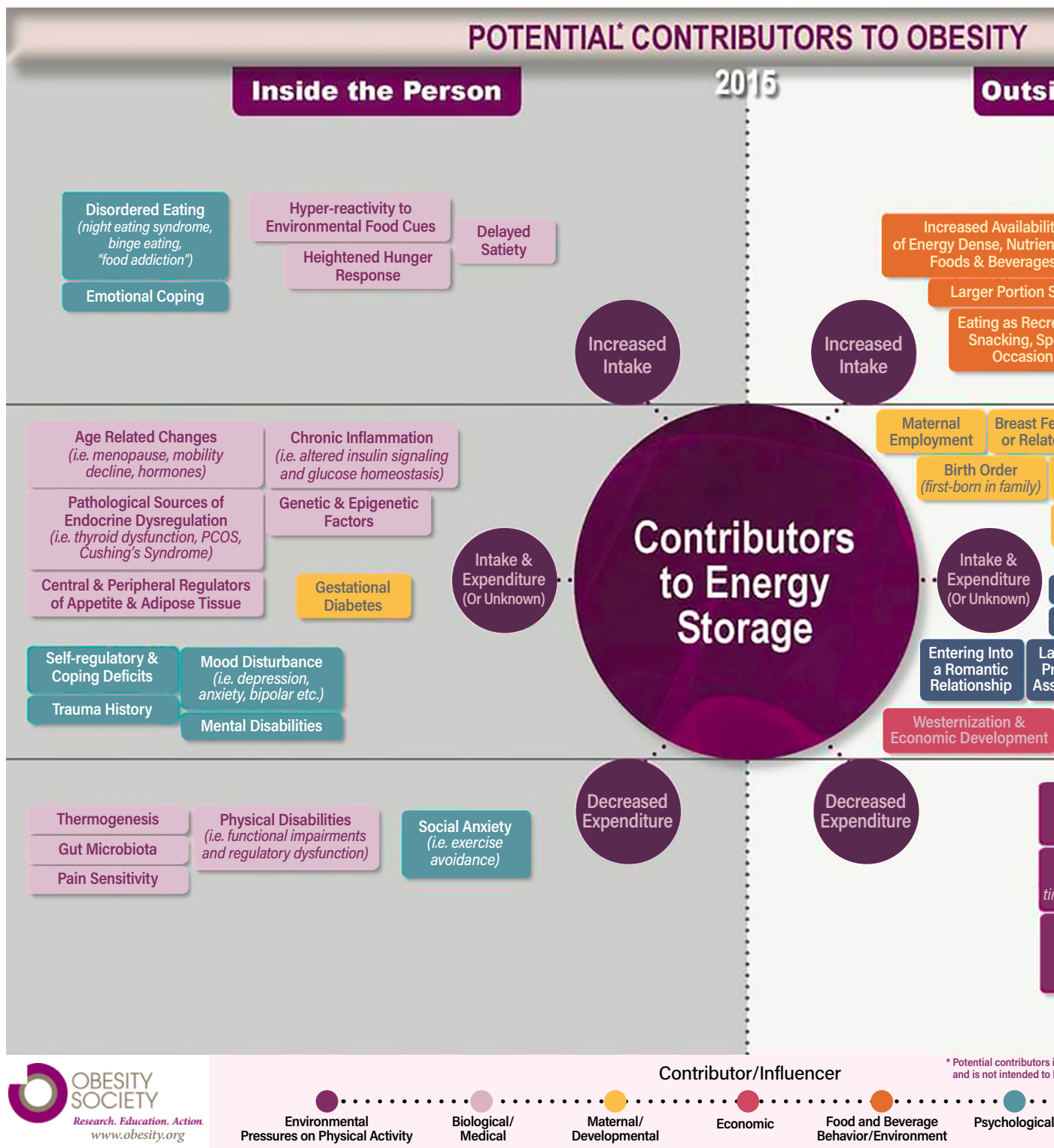
*This algorithm applies to the assessment of overweight and obesity and subsequent decisions based on that assessment. See text for more information and details about how this algorithm should be used in practice. This includes an evaluation for sarcopenic obesity during initial work-up; early inclusion of waist circumference as a key indicator in evaluation and monitoring of therapeutic intervention; and inclusion of newer medications in the treatment phase if less expensive agents do not produce the desired weight loss.

†BMI cutpoint determined by the FDA and listed in the product labeling of medications approved by FDA for people with overweight or obesity.

Abbreviations: ACC, American College of Cardiology; AHA, American Heart Association; BMI, body mass index; CVD, cardiovascular disease; FDA, U.S. Food and Drug Administration; TOS, The Obesity Society.

Source: Jensen et al., 2013 AHA/ACC/TOS Guideline for the management of overweight and obesity in adults: A report of the American College of Cardiology/American Heart Association Task Force on Practice Guidelines and The Obesity Society, *Journal of the American College of Cardiology*. 2014; 63(25):2985–3023. Treatment algorithm reprinted with permission from Elsevier.

Figure E-2. Contributors and Influences for Obesity



Abbreviation: PCOS, polycystic ovary syndrome; SES, socioeconomic status.

Source: The Obesity Society, 2015.

Identify the Person

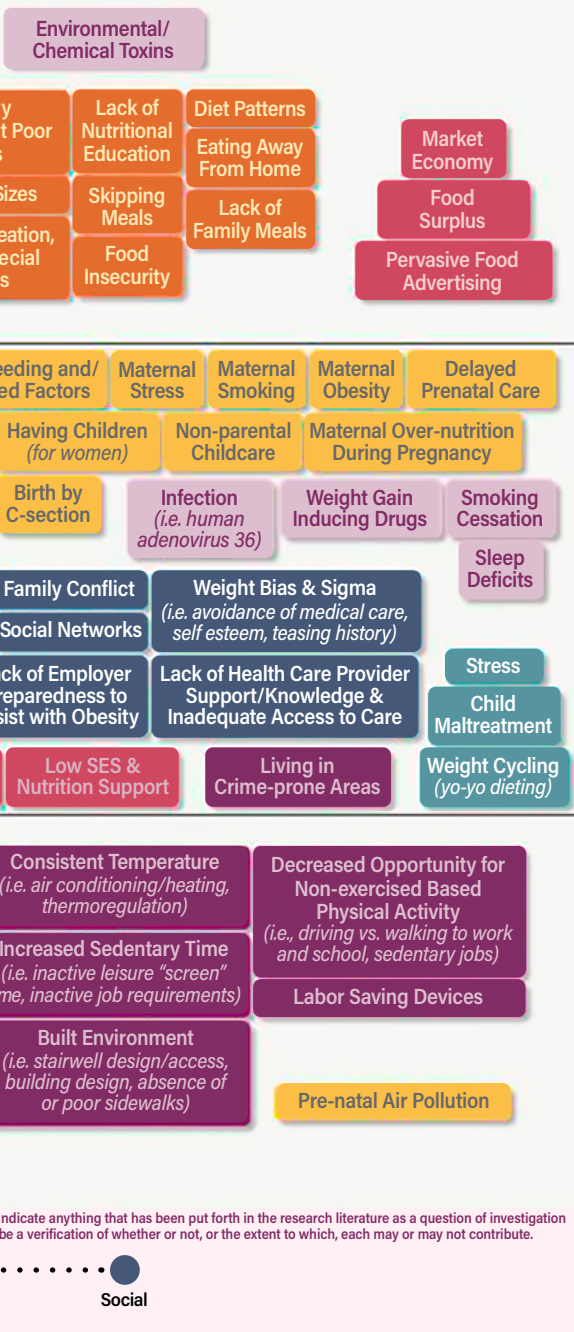


Table E-1. Top 10 Myths About Weight Loss and Sample Responses

Myth/Misinformation	Sample Response
1 It's just calories in/calories out—anyone can lose weight by eating less or exercising more.	While weight loss does require a calorie deficit and counting calories is one way of achieving that, it is just as important to focus on the quality of foods eaten and use other interventions that can alter the complex web of hormonal and physiological systems that control the impulse to eat and how much energy the body dissipates through usual activities of life.
2 "Elimination" diets work best for losing weight.	People need to use methods in losing weight that they are willing to commit to for the rest of their lives. Fad diets may (or may not) be effective for weight management, but if the person doesn't want to live with them forever, fad diets are not recommended.
3 Cutting out carbohydrates or fat makes you lose weight.	The Dietary Guidelines for Americans 2020–2025 recommends a healthy eating plan that emphasizes fruits, vegetables, whole grains, and fat-free or low-fat milk and milk products, includes protein sources, is low in saturated and trans fats and added sugars, and stays within the person's daily caloric needs. Eliminating any major component of a healthy diet is not healthy.
4 Never snack!	When healthy foods such as fruits are chosen, snacks can actually help get people on diets from meal to meal without hunger or symptoms of hypoglycemia. Like eliminating treats, it is also not an intervention most people can maintain over the long term.
5 You have to go hungry.	To establish a long-term, healthy eating pattern, people actually should not go hungry. A good rule to follow is to never skip a meal and use healthy snacks if hunger occurs between meals.
6 Cut out breakfast.	This is one of the worst things a person can do while trying to lose weight. As opposed to helping, studies have shown skipping breakfast is associated with overweight and obesity—and the association is greater than with alcohol or levels of inactivity.
7 Eating certain foods—such as pineapple, ginger, garlic, chili peppers, onions, asparagus, or avocados—will speed up the body's metabolism and help burn fats.	No foods have been found to burn fats. People need to eat a healthy diet; if it includes these foods, that is fine, but it won't increase weight loss.
8 Artificial sweeteners help people lose weight.	People who drink lots of sugar-laden teas or carbonated products can avoid those calories by using artificial sweeteners, but most evidence shows that use of those products is actually associated with higher BMIs and greater cardiometabolic risks.
9 It is possible to focus weight loss on one part of the body.	Exercises can be used to tone particular areas of the body where people want to lose weight, but caloric restrictions are determined by a person's body, not the exercises.
10 Eliminating gluten helps with weight loss.	This is not true, and gluten-free diets are frequently low in fiber. That causes people to feel less full after meals and thereby eat more.

BMI, body mass index.

Sources: Cleveland Clinic, 2016; Newman, 2021; Petre, 2019; U.S. Department of Agriculture and U.S. Department of Health and Human Services, 2020.



4

In developing exercise plans, talk with patients about their daily routines and when they can fit in daily exercise activities, financial realities that limit some options (e.g., health clubs, personal trainers), and how physical therapists can help with starting the process and addressing limitations on aerobic and resistance exercises that can be customized for each older adult.

Exercise is very important in the long-term management of weight disorders. While body size can often be reduced by 5% or 10% by dieting with or without pharmacotherapy, maintaining the target weight is very likely to require at least 150 minutes of weekly aerobic or resistance exercise for most older adults. Programs of exercise providing 200 or more minutes of high-intensity exercise each week are associated with maintenance of weight loss over time (Jensen et al., 2014).

When possible, people with overweight and obesity should participate in an on-site, high-intensity, comprehensive lifestyle program that lasts 6 months or more. These programs focus on adhering to a lower-calorie diet and increasing physical activity through behavioral strategies (Jensen et al., 2014).

The exercise regimen people use during weight loss needs to be maintained for the rest of their lives. Physical therapists are important in formulating a workable plan, especially given physical limitations secondary to concomitant conditions that many older adults have. Exercise can be broken up into shorter periods of activity several times per day, and this approach is useful in patients with time limitations and/or physical limitations.

5

Refer patients to registered dietitians, nutritionists, and other health professionals who can address special nutritional needs.

Older adults are complicated in many ways, and that makes prescribing a weight-loss diet difficult. As they age, most people have multiple medical conditions, but perhaps it is the diversity of older adults that makes the biggest difference. Dichotomies in activity, health, finances, transportation, access to health care, attitudes about medicine, personal and cultural views about weight and body size—all these mean that prescribing a single diet for all patients as they age will not work.

Primary care providers often find that the best approach to dietary advice is to refer patients to registered dietitians, nutritionists, or other qualified practitioners who also have experience in geriatrics. They can assess older people for sarcopenia and sarcopenic obesity as well as identify conditions such as osteopenia or osteoporosis that require attention to specific components of the diet.

A [GSA Momentum Discussion Podcast](#) episode, *Nutritional Needs of Older Adults with Obesity*, explores complex issues around dietary needs of older adults, including the importance of assessing for and addressing sarcopenia, and highlights how comprehensive nutritional care can support function, independence, and quality of life while enabling the older adult to reach and maintain their desired body weight.

Care, including dietary advice and comprehensive lifestyle interventions, delivered by telephone or using video-based communication options has become very common during the pandemic. Delivered by trained health professional, interventions are effective whether delivered in person or through electronic or telephonic communications (Jensen et al., 2014).



When primary care providers want or need to provide dietary advice to older adults, maintenance of protein intake and getting adequate calcium and vitamin D are essential. Protein should be high quality (e.g., lean meats, especially beef) and adequate for the person's body size (commonly 0.8 g per kg of body weight for adults). Protein supplements can be prescribed for older adults unable to consume adequate dietary protein. Calcium and vitamin D requirements have been debated in recent years. The current federal recommendations for adults older than 50 years of age are as follows:

- **Calcium:** 1200 mg daily for women; 1000 mg daily for men.
- **Vitamin D:** 600 IU per day (this increases to 800 IU for adults older than 70 years of age).

6

Use medications initially in certain at-risk patients and after 3 months if nondrug interventions have not produced the target reduction in body size.

Pharmacologic options are useful adjuncts to dietary and lifestyle interventions aimed at reducing body size. The main point to emphasize with patients is these are adjuncts; weight loss requires a net energy loss. Medications are useful in helping people adhere to lower-calorie diets, but alone, they will not produce weight loss. After target weight loss is achieved, medications are useful in helping people stay at that weight and avoid the “yo-yo” rebound in body size that patients often experience.

The number of effective medications approved by the U.S. Food and Drug Administration (FDA) has increased greatly in recent years, and more agents are in late stages of clinical development. In contrast with previously used products, the new medications target the pathophysiologic mechanisms producing excess fat storage and increased body size.

In older adults, the presence of multiple health conditions requiring drug treatment creates the potential for detrimental drug interactions, adverse effects, and polypharmacy. Medications should be chosen with the complete drug regimen in mind.

Five products are currently approved by FDA for long-term weight management. As shown in Table E-2, the agents fall into different pharmacologic categories, creating the need to tailor therapy to the specific clinical situation of each patient.

In selecting an agent, the percentage reduction in weight loss is an important factor to consider. Figure E-3 shows the mean weight loss in clinical trials with most of the currently marketed agents. Older agents—orlistat and phentermine—tend to produce lower amounts of weight loss than the newer products shown in the figure. If the target weight loss is 5% or 10%, using one of the newer agents is more logical.

A recent article published in *Obesity* described a phenotypic approach to medication selection. This approach was used in one health system with a largely homogenous racial group; however, the approach is important to share with users of this kit. Medications were assigned to an intervention group based on these phenotypes as determined based on obesity, body composition, resting energy expenditure, satiety, satiation, eating behavior, affect, and physical activity (Acosta et al., 2021):

- Abnormal satiation (“hungry brain”)—treated with phentermine/topiramate ER.
- Abnormal hedonic eating (“emotional hunger”)—treated with naltrexone ER/bupropion ER.
- Abnormal satiety (“hungry stomach”)—treated with subcutaneous liraglutide 3 mg.
- Low predicted energy expenditure (“slow burn”)—treated with phentermine plus increased resistance training.

Compared with patients in a control group treated without phenotypic testing, participants in the phenotype-guided group lost 1.75-fold more weight over 12 months, a significant difference based on average weight loss of 9.0% and 15.9%, respectively (Acosta et al., 2021).

Guidelines suggest weight loss medications could be considered in patients with a BMI greater than 27 with a weight-related comorbidity or a BMI greater than 30 without associated comorbidities. Once the decision is made to start therapy with an antiobesity medication, the patient should monitor for effectiveness and side effects and contact the prescriber as needed during the first 3 months of use. If the patient has not lost 5% or more of baseline weight by 3 months, a reassessment is in order. Adherence should be addressed if this is a factor, along with intolerance and other reasons that the patient may not be taking the medication as directed. If these factors are not present or patients continue to not lose weight, the medication should be stopped due to a lack of efficacy and another medication considered.

Table E-2. FDA-Approved Medications for Long-Term Management of Obesity

Agents	Mechanisms of Action	FDA-Approved Indications	Considerations When Used in Older Adults	Key Feature
Phentermine/topiramate ER	Anorexiant/ anticonvulsant/ sympathomimetic	Chronic weight management as adjunct to reduced-calorie diet and increased physical activity in adults with BMI* ≥ 30 or ≥ 27 in presence of other risk factors (e.g., hypertension, type 2 diabetes, dyslipidemia)	• Is a Schedule IV controlled substance • Has numerous drug interactions and requires close monitoring • Contraindicated in glaucoma, hyperthyroidism, and during or within 14 days of MAOI therapy • REMS program restricts availability to certified pharmacies; warns of increases in suicidal ideation and other ADRs	Produced the greatest weight loss in clinical trials

Agents	Mechanisms of Action	FDA-Approved Indications	Considerations When Used in Older Adults	Key Feature
Naltrexone ER/ bupropion ER	Opioid antagonist/ antidepressant	Chronic weight management as adjunct to reduced-calorie diet and increased physical activity in adults with initial BMI ≥ 30 or ≥ 27 in presence of other risk factors (e.g., hypertension, type 2 diabetes, dyslipidemia)	• Has boxed warning about increases in suicidal ideation • Has contraindications, including use in uncontrolled hypertension and current long-term use of opioids • May make patients susceptible to anxiety	May be useful in patients with depression, food cravings, or compulsive eating
Liraglutide 3 mg	GLP-1 receptor agonist	Chronic weight management as an adjunct to a reduced-calorie diet and increased physical activity in adults with initial BMI ≥ 30 or ≥ 27 in presence of other risk factors (e.g., hypertension, type 2 diabetes, dyslipidemia) and in adolescents aged 12 years or older with body weight >60 kg and initial BMI corresponding to 30 in adults	• Administered by subcutaneous injection once daily • Therapy initiated with doses of 0.6 mg and advanced weekly until 3 mg is reached • Should not be used with other products containing liraglutide or other GLP-1 receptor agonists • Patients should be monitored for depression or suicidal thoughts • Contraindicated in patients with personal or family history of MTC/MEN2	May be useful in those with prediabetes or diabetes

Agents	Mechanisms of Action	FDA-Approved Indications	Considerations When Used in Older Adults	Key Feature
Semaglutide 2.4 mg	GLP-1 receptor agonist	Chronic weight management as an adjunct to a reduced-calorie diet and increased physical activity in adults with initial BMI ≥ 30 or ≥ 27 in presence of at least 1 other risk factor (e.g., hypertension, type 2 diabetes, dyslipidemia)	• Should not be used in combination with other products containing semaglutide or other GLP-1 receptor agonists • Safety and efficacy not studied in combination with other weight-loss products • Not studied in patients with history of pancreatitis	• Is administered as weekly subcutaneous injection at rotating sites on the abdomen, thigh, or upper arm • Should be given once weekly on the same day each week at any time of the day • Good selection for first-line therapy for overweight and obesity in those who also have diabetes or cardiovascular disease
Orlistat	Lipase inhibitor	Weight loss and maintenance in conjunction with reduced-calorie diet in adolescents or adults aged 12 years or older with BMI ≥ 30 or ≥ 27 in presence of other risk factors (e.g., hypertension, diabetes, dyslipidemia)	• Available by prescription and over the counter • No dosage adjustments needed in renal or hepatic dysfunction/failure	Available without a prescription; while not tolerable for many patients, this is the safest of the available products

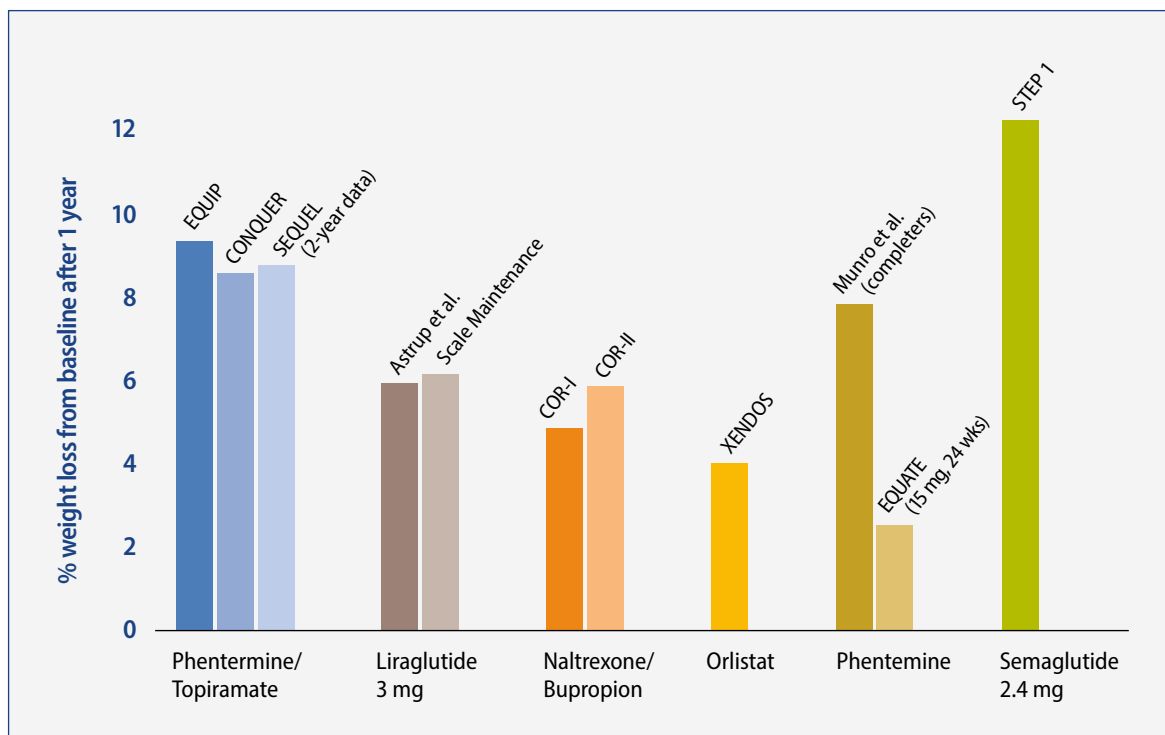
* BMI is calculated as mass (weight) in kilograms divided by the square of height in meters (kg/m^2).

Abbreviations: ADRs, adverse drug reactions; BMI, body mass index; ER, extended release; FDA, U.S. Food and Drug Administration; GLP-1, glucagon-like peptide 1; MAOI, monoamine oxidase inhibitor; MEN2, multiple endocrine neoplasia syndrome type 2; MTC, medullary thyroid carcinoma; REMS, Risk Evaluation and Mitigation Strategy.

Sources: Jensen et al., 2014; U.S. Food and Drug Administration (product labeling available online at Drugs@FDA).



Figure E-3. Comparative Efficacy of Antiobesity Medications



Abbreviation: STEP, Semaglutide Treatment Effect in People With Obesity program.

Source: Garvey, 2012; Wilding et al., 2021.

7

Bariatric surgery can be considered in patients with BMIs of 30–34.9 who have concomitant type 2 diabetes, BMIs of 35–39.9 with comorbidities, and BMIs of 40 or more.

Primary care providers should begin early talking about bariatric surgery with older adults with larger body sizes. For some people who are unlikely to be able to lose sufficient weight to achieve target weights and reduce risks of complications, bariatric surgery may be considered at the beginning of treatment. For others who begin with lifestyle interventions and pharmacotherapy, the process for bariatric surgery should be initiated early since several months or a year may be required before they are seen by accredited/certified providers. If sufficient weight loss is achieved in the interim, the referral can be withdrawn.

Bariatric surgery can produce much greater weight loss than usually occurs with lifestyle and medication interventions—as much 35% or more of initial body size. But this procedure is not for everyone; the decision for any patient to undergo any type of surgery is a major one. For older adults, the risk-to-benefit consideration is further complicated by short-term risks of surgery, the patient's ability to recover from surgery and to adhere to needed lifelong changes in diet and other aspects of daily life, and the number of years of expected life remaining for the person to enjoy the benefits of surgery. Those benefits can be huge and life-changing; in many patients with diabetes, the condition disappears within 3 days after surgery. Postsurgical improvements are seen in weight, cardiovascular function, liver health, and many other systems of the body; only bone health is adversely affected because of deficiencies of vitamin D and increases in parathyroid hormone of 40% or more (Jensen et al., 2014).



Courtesy of the Obesity Action Coalition

If the person proceeds with the referral for bariatric surgery, it will still take several months to complete a detailed presurgical assessment. These include psychological and nutritional assessments, development of a guided postsurgical weight loss and exercise plan, medical clearance, and preoperative imaging (Benalcazar and Cascella, 2021).

For the remainder of the person's life, a special diet and an exercise regimen are needed to maintain weight loss. While the details on these components are beyond the scope of this toolkit, the primary care provider should help the person set realistic expectations when making the initial decision to seek bariatric surgery. This is not by any analysis “an easy way out”; diet after surgery is much more tightly controlled and limited, and the exercise regimen will be at least as challenging and time-consuming as during previous interventions.



[Additional resources shown in the references section.](#)

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For Community Resources

Section Takeaways

After reviewing this section, primary care teams will know how to:

- Identify community, online, and national resources appropriate for patients' needs and situations related to addressing overweight or obesity.
- Get involved in community efforts to address the needs of older adults with overweight and obesity in addition to the challenges they face in addressing issues of body size.
- Identify technological tools useful for increasing patient awareness of issues with body size and motivation to action.
- Counsel patients about long-term challenges associated with overweight and obesity.

Overview

The journey to an optimal body size can be difficult at times, and lifelong perseverance is required during the maintenance phase. Thankfully, a plethora of community, online, and technologic tools are available to assist people in their efforts.

People look to their primary care providers as “champions” who can provide guidance on which programs work best and are within the person's budgetary limits. Older adults may not be aware of programs that focus specifically on that age group and are available locally. The advice proffered by primary care providers is likely to be followed by the trusting patients needing assistance on their weight management journey.

Approaches to Implement

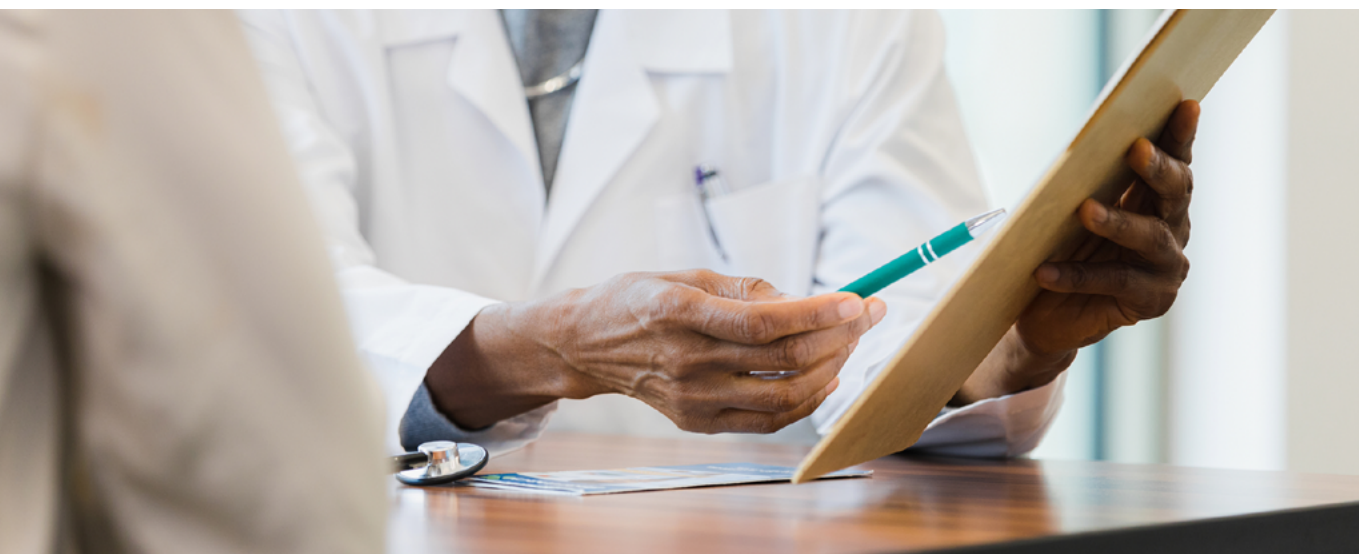
1

Provide people with a list of community, online, and national resources to help them in their journey to control overweight or obesity. Be sure to include programs available through health systems at the local level as well as national providers such as the Veterans Health Administration.

Using Table R-1 as a starting point, primary care providers should give people lists of resources that can enhance the likelihood of success. Keep in mind which programs health insurance and Medicare will cover, the out-of-pocket costs to the individual, and whether the person can afford those and has transportation needed to participate. Address the needs of older adults who are homebound or not able to exercise outdoors because of infrastructure (e.g., sidewalks, parks), safety of the neighborhood, or weather during certain times of the year (e.g., snow and ice during winters).

People who receive care through the Veterans Health Administration, Medicare Advantage programs, or national providers such as Kaiser Permanente may have additional options for accessing weight management, dietary, and exercise services. Those services should be reviewed with the patient during the process of developing and maintaining lifestyle changes needed for a healthy body size.

Area Agencies on Aging (AAA) coordinate and offer services that help older adults maintain their independence and remain in their homes as long as possible. Meals on Wheels America and home-maker assistance could be especially beneficial to people trying to eat a better diet. Caregiver assistance is also available through the AAA.



2

Work with local health systems to develop needed resources for older adults and their unique challenges with body size, including limitations on diet and exercise interventions because of other concomitant chronic diseases, limited or fixed incomes, need for education and involvement of caregivers, and desire for socialization and interactions with others.

As leaders in their communities, primary care providers can help local health systems develop services and programs for older adults in the weight management journey. When such programs already exist, review their offerings with the older adult in mind, and help the organization see where gaps exist for people with multiple comorbidities, limited funds and mobility, inconsistent internet connections, and deficits in vision, hearing, oral health, literacy, and activities of daily living.



Ochsner Health is a New Orleans–based health system that has developed a number of innovative and progressive services for its service area that now stretches across Louisiana and into Texas and Mississippi. Online descriptions of [“3 different paths to weight loss”](#) and Ochsner’s [Healthy Weight Program](#) provide good models to consider in discussions with local health systems.



The [University of Connecticut Center for Food Policy & Health](#) is another exemplary resource. In addition to free online educational resources for health professionals, the Center has online summaries on [needed changes in the office or clinic for patients with high body weight](#) and [examples of scripts for motivational interviewing](#).

3

Recommend technology that can create awareness and motivation in optimizing people’s body size and tracking their progress.

Online and app-based tools are useful in assisting people with body size, but older technologies such as DVDs remain useful for many older adults. As shown in Table R-1, people are enthusiastic about the Walk at Home DVDs by Leslie Sansone as well as the workouts for older adults collection from Collage Videos, which are available online and on DVDs. TOPS Club offers popular Take Off Pounds Sensibly guidance through both online and local chapter memberships.

Examples of app-based tools are listed in Table R-2. The notion that older adults are not familiar with smartphones and computers is increasingly inaccurate, as people who grew up and matured in the 1960s through the 2000s use these technologies every day.

Table R-1. Resources for Older Adults During the Body Size Journey

Organizations and Companies	Relevant Programs and Services
The Y	Programs for older adults, including Enhance Fitness and Moving for Better Balance Diabetes Prevention Program and Advocating for Chronic Disease Prevention Healthier Communities Initiative
TOPS Club Inc. (Take Off Pounds Sensibly)	Online/virtual memberships and in-person chapters in the United States and Canada with local advocates and coordinators; provides support for weight management and healthy living
Collage Videos for older adults	Videos on DVDs with workouts for endurance, balance, flexibility, and limited mobility
National Institute on Aging	Get Fit for Life: Exercise & Physical Activity for Healthy Aging
Leslie Sansone	Walk at Home low-impact walking exercise DVDs for in-home use
Centers for Disease Control and Prevention	Arthritis Help for Veterans Lifestyle Management Programs/Physical Activity Programs These programs are often available through local Area Agencies on Aging
U.S. Department of Veterans Affairs	MOVE! Weight Management Programs Gerofit—A Program Promoting Exercise and Health for Older Veterans
Vivo	Fitness training memberships include a one-on-one baseline assessment, two live online classes each week, and nutrition analysis
Bold	Program promoting exercise for better aging; provides a personalization quiz, assessments, and exercise program, including strength training, tai chi, and yoga
Walk with a Doc	Combines exercise with health education, social connection, and spending time outdoors
American Physical Therapy Association	Maintaining Health and Fitness: Tips and Exercises for Older Adults

Table R-2. Technology-Based Assistance for Older Adults During the Body Size Journey

Companies	Relevant Technology and Services
My Fitness Pal	Online and app-based tools for tracking meals through a food diary; searchable foods database; personal database; and free mobile apps for smartphones
BeachBody	Online and on-demand workout videos for general audiences (not specific to older adults) that can be streamed through smart phones and several apps on smart televisions; workouts can be modified for the needs of the individual; has recipes to support healthier diets and community resources
Lose It!	App-based tool for tracking foods and weight; provides nutrition and wellness tips; tracks water and macronutrient (protein and carbohydrates) intake
Peloton	Indoor exercise bikes, app for mobile devices, and online on-demand classes
Les Mills	Fitness and workout app with virtual classes and other services



Additional resources shown in the references section.



4

Reinforce the chronic nature of obesity and need for lifelong commitment to those interventions that work for each person for maintaining the body size desired. Schedule follow-up appointments and discuss the need for long-term monitoring and care.

As emphasized throughout this GSA KAER Toolkit, primary care providers can provide valuable, life-changing care to people with overweight and obesity. In tracking the percentage weight loss over time, patients' success should be compared against their own prior values—not against other people or averages from studies. Celebrate markers along the way by noting progress toward both body size and clinical goals, "You've lost 3% of your body weight, and your blood pressure, lipids, and liver enzymes have all improved. With greater percentage weight loss, you will be even healthier."

Obesity is a chronic disease, one that requires the same regular follow-up visits as the other conditions people address through lifelong care. Be sure that office staff and patients understand the necessity for regular appointments and continued exercise, diet, and medications for people with overweight and obesity even after they have reached target weight goals that are below the BMI cut points for those conditions. The disease does not go away, and weight will rebound easily without continued treatment.

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Resources

Related Resources From GSA

[Obesity in Older Adults: Succeeding in a Complex Clinical Situation](#)

[GSA KAER Toolkit for Brain Health, Cognitive Impairment, and Dementia](#)

[Malnutrition Resources and Infographics](#)

[Sleep Health](#)

[GSA Journals](#)—*The Journals of Gerontology Series A and Series B; The Gerontologist, Innovation in Aging, Public Policy & Aging Report*

Other Resources

American Academy of Physician Associates

- [Obesity Intake Form](#)
- [Obesity Management in Primary Care Certificate Program: Practice Management & Leadership Training for PAs and NPs](#)

American Association of Clinical Endocrinology

- [Nutrition and Obesity](#)

American Association of Nurse Practitioners

- [National Obesity Care Week: Increasing Access to Care](#)
- [Obesity Specialty Practice Group](#)

American College of Occupational and Environmental Medicine

- [Books and resources on obesity in the workplace; impact on employee costs and absenteeism](#)
- [Obesity in the Workplace: Impact, Outcomes, and Recommendations](#)

American College of Physicians

- [Obesity Management Learning Series](#)

American College of Sports Medicine

- [Exercise Is Medicine](#)

American Council on Exercise

- [Senior Fitness Certification Program](#)
- [Take 5 With Dr. Amy Bantham: Move to Live More](#)
- [Fully Vaccinated? Here Are Some Guidelines for Returning to Physical Activity](#)
- [Linking Physical Activity, Therapies and Mindfulness for Healing](#)

American Gastroenterological Association

- [Obesity Awareness Highlights—Pharmacotherapy and New Initiatives](#)
- [Obesity and How It Affects GI Patients](#)
- [White Paper AGA: POWER—Practice Guide on Obesity and Weight Management, Education, and Resources](#)

American Medical Group Association

- Obesity Care Model Collaborative: Resource Guide (open access)

American Psychological Association

- Obesity webpage
- Books such as *Dieting, Overweight, and Obesity*

American Society for Metabolic and Bariatric Surgery

- General information on older adults, including articles on “older adults” in the Society’s journal, *Surgery for Obesity and Related Diseases*

American Society for Nutrition

- Weight and long-term weight management

Black Women’s Health Imperative

- Diabetes and Prediabetes
- “Obesity—When Diet & Exercise Are Not Enough” (sponsored by Novo Nordisk)
- National Obesity Awareness Campaign

Centers for Disease Control and Prevention

- Adding Physical Activity as an Older Adult

ConscienHealth

- Affiliates and Advocates (networking and research)

Healthcare Leadership Council

- Military readiness/national security, “One Nation, Overweight”

Health.gov - website coordinated by the DHHS Office of Disease Prevention and Health Promotion

- Physical Activity Guidelines for Americans Midcourse Report: Implementation Strategies for Older Adults
- Move Your Way® Community Resources Materials for Older Adults

MedTech Coalition for Metabolic Health

- Supports view of obesity as a **multifactorial chronic disease** requiring a comprehensive approach to prevent and treat
- **Founding members** are seca, KORR Medical Technologies, and LEVL

National Alliance of Healthcare Purchaser Coalitions

- **Obesity Initiative**; actions for employers about obesity; benefit design consideration regarding bariatric surgery

National Institute of Diabetes and Digestive and Kidney Diseases

- [Stay Fit as You Mature and Health Tips for Adults](#)
- [Strategic Plan for NIH Obesity Research](#)
- [NIH/NIDDK-sponsored clinical trials on overweight and obesity](#)
- [Definition and Facts for Adult Overweight and Obesity](#)
- [Treatment for Overweight and Obesity](#)

National Institute on Aging

- [Maintaining a Healthy Weight](#)
- [The obesity-linked gene](#)
- [Overcoming Roadblocks to Healthy Eating](#)
- [Sample Menus: Healthy Eating for Older Adults](#)
- [Summaries of studies showing relationships between obesity and conditions such as dementia, sleep, loneliness/social isolation in older people](#)
- [Four types of exercises for improving health and physical ability](#) in older adults: endurance, strength, balance, flexibility

Obesity Action Coalition

- [Position Statements on a comprehensive medical approach to obesity prevention and treatment, coverage by health insurance as standard benefit, and discrimination and care issues](#)
- [#StopWeightBias Campaign](#)
- [Overview of Advocacy in Obesity](#)
- [Resources](#)

LSU Pennington Biomedical Research Center

- [DASH Diet | What You Need to Know](#)
- [Metabolic Kitchen Recipes](#)
- [The Truth About Fad Diets](#)

Scientific Exchange Obesity Resources

- [FORWARD: Focus on Obesity Education](#)

The Obesity Society

- [Position Statements](#)

Trust for America's Health

- [State of Obesity 2022: Better Policies for a Healthier America](#)

World Obesity Federation

- [Resources](#)

WW

- [Weight Watchers Reimagined](#)
- [Programs](#) on food, activity, sleep, mindset, personal assessment, and behavior change



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