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Medical Nutrition Therapy Interventions Provided by Dietitians for Adult Overweight and Obesity Management: An Academy of Nutrition and Dietetics Evidence-Based Practice Guideline

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Abstract

Overweight and obesity affect most adults living in the United States and are causally linked to several adverse health outcomes. Registered dietitian nutritionists or international equivalents (dietitians) collaborate with each client and other health care professionals to meet client-centered goals, informed by the best available evidence, and translated through a lens of clinical expertise and client circumstances and preferences. Since the last iteration of the Academy of Nutrition and Dietetics guideline on adult weight management in 2014, considerable research has been conducted and circumstances confronting dietitians have evolved. Thus, updated guidance is needed. The objective of this evidence-based practice guideline is to provide recommendations for dietitians who deliver medical nutrition therapy behavioral interventions for adults (18 years and older) with overweight and obesity to improve cardiometabolic outcomes, quality of life, and weight outcomes, when appropriate for and desired by the client. Recommendations in this guideline highlight the importance of considering complex contributors to overweight and obesity and individualizing interventions to client-centered goals based on specific needs and preferences and shared decision making. The described recommendations have the potential to increase access to care and decrease costs through utilization of telehealth and group counseling as effective delivery methods, and to address other barriers to overweight and obesity management interventions. It is essential for dietitians to collaborate with clients and interprofessional health care teams to provide high-quality

medical nutrition therapy interventions using the nutrition care process to promote attainment of client-centered outcomes for adults with overweight or obesity.

OVERWEIGHT AND OBESITY affect most adults living in the United States.¹ Excess adiposity, typically assessed with body mass index (BMI; calculated as kg/m²),² is causally linked to the development of many adverse health outcomes, including but not limited to risk of mortality, cardiovascular disease (CVD), prediabetes, and type 2 diabetes mellitus (T2DM).^{3–7} There are considerable health care and societal costs due to the high prevalence of overweight and obesity.⁸ Weight management interventions are prospectively associated with beneficial health outcomes in adults with obesity, including improved quality of life (QoL) and all-cause mortality.^{9,10} The contributors to widespread prevalence of overweight and obesity are complex, and are affected by many factors outside of individual control, including but not limited to genetics, social determinants of health and health inequities, food and physical activity environment, food access, and weight bias and stigma.^{7,11,12} Thus, addressing high rates of overweight and obesity requires creating compassionate solutions that can be tailored to a wide variety of adults who each face unique motivations for, and barriers to, reaching health goals.

In 2014, the Academy of Nutrition and Dietetics (Academy) authored an evidence-based practice guideline (EBPG) for adult weight management (AWM) on the Evidence Analysis Library (EAL) website.¹³ The 2014 AWM EBPG was based on systematic reviews conducted from 2008 to 2013.¹³ Since that time, considerable research has been conducted in the field of adult overweight and obesity management. In addition, circumstances and issues confronting dietitians have evolved, including, but not limited to, increased recognition of the role of weight bias in health care, the need for individualization of interventions to deliver effective care, and improved technology to deliver care via telehealth. Thus, updated guidance for medical nutrition therapy (MNT) interventions provided by dietitians for adults with overweight and obesity is needed. Comparisons of the topics addressed in 2014 and current EBPGs are described in [Figure 1](#) (available at www.jandonline.org ). Terms used throughout this EBPG are described with sources^{2,14–24} in [Figure 2](#), and an executive summary of recommendations is described in [Figure 3](#). This article is an abbreviated version of the full guideline, which can be found on the EAL website.²⁵

Figure 2.

Definitions of Terms

Access: Refers to giving equitable access to everyone regardless of human ability and experience.¹⁴

Body mass index (BMI): “A person’s weight in kilograms divided by the square of height in meters. A high BMI can indicate high body fatness. BMI screens for weight categories that may lead to health problems, but it does not diagnose the body fatness or health of an individual.”¹⁵

Client-centered: Please see definition for “patient-centered.”

Disability: A physical, mental, cognitive, sensory, or developmental condition that impairs, interferes with, or limits a person's ability to engage in certain tasks or actions or participate in typical daily activities and interactions.¹⁴

Health equity: Equity is the absence of avoidable, unfair, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or by other means of stratification. "Health equity" or "equity in health" implies that ideally everyone should have a fair opportunity to attain their full health potential and that no one should be disadvantaged from achieving this potential.¹⁴

International equivalents of registered dietitian nutritionists: Refers to nutrition and dietetics professionals who meet qualifications equivalent to registered dietitian nutritionists but live outside of the United States.

Medical nutrition therapy (MNT): An evidence-based application of the Nutrition Care Process. The provision of MNT (to a patient/client) may include 1 or more of the following: nutrition assessment/reassessment, nutrition diagnosis, nutrition intervention and nutrition monitoring and evaluation that typically results in the prevention, delay, or management of diseases and/or conditions.¹⁶⁻¹⁸

Nutrition Care Process (NCP): A systematic problem-solving method that credentialed nutrition and dietetics practitioners use to critically think and make decisions when providing medical nutrition therapy or to address nutrition-related problems and provide safe and effective quality nutrition care. The NCP consists of 4 distinct, interrelated steps: Nutrition Assessment and Reassessment, Nutrition Diagnosis, Nutrition Intervention, and Nutrition Monitoring and Evaluation.¹⁶⁻¹⁸

Obesity: Abnormal or excessive fat accumulation that presents a risk to health. Typically represented by BMI of ≥ 30 .^{2,19}

Overweight: Weight that is considered greater than is healthy for a given height. May be associated with abnormal or excessive fat accumulation that presents a risk to health. Represented by BMI of ≥ 25 to < 30 .^{2,19}

Patient-centered: “Providing care that is respectful of and responsive to individual patient preferences, needs, and values and ensuring that patient values guide all clinical decisions.”²⁰

Shared decision making: “A model of patient-centered care that enables and encourages people to play a role in the medical decisions that affect their health.”²¹

Social determinants of health (SDOH): “Conditions in the places where people live, learn, work, and play that affect a wide range of health and quality-of-life-risks and outcomes.”²²

Weight bias: Refers to the negative weight-related attitudes, beliefs, assumptions, and judgments toward individuals with overweight or obesity.^{23,24}

Weight stigma: “Refers to the discriminatory acts and ideologies targeted towards individuals because of their weight and size. Weight stigma is a result of weight bias.”²³

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Definitions of terms used throughout the evidence-based practice guideline for medical nutrition therapy interventions provided by dietitians for adult overweight and obesity management.

Figure 3.

Recommendation statement	Rating ^a
1.0. MNT^b Approach for Adult Overweight and Obesity Management	
1.1. It is reasonable for RDNs or international equivalents to use the NCP ^c to provide effective, client-centered interventions based on shared decision-making and clinical judgement and individualized to each client's needs, circumstances, and goals.	Consensus
1.2. MNT provided by RDNs or international equivalents is recommended for adults with overweight or obesity to improve cardiometabolic outcomes, QoL, ^d and weight outcomes, as appropriate for and desired by each client.	1B
1.3. RDNs or international equivalents should collaborate with an interprofessional health care team to provide comprehensive, multicomponent care for adults with overweight or obesity, as appropriate for and desired by each client.	1C
1.4. It is reasonable for RDNs or international equivalents to monitor and evaluate client outcomes and adapt goals and interventions, including those for weight maintenance, and provide resources as needed for each client.	Consensus
1.5. It is reasonable for RDNs or international equivalents to minimize the effects of weight bias and weight stigma and its consequences by targeting client-centered goals, individualizing interventions according to complex contributors of overweight and obesity, communicating using client-preferred terms, and providing an inclusive physical environment.	Consensus
2.0. Delivering MNT Interventions	
2.1. RDNs or international equivalents may provide at least 5 interactive sessions, when feasible and desired by each adult client with overweight or obesity, to achieve the greatest potential improvement in outcomes. Frequency of contacts should be tailored to each client's preferences and needs.	2C
2.2. RDNs or international equivalents should provide overweight and obesity management interventions for a duration of at least 1 year to improve and optimize cardiometabolic and weight outcomes, as appropriate for and desired by each client.	1C
2.3. After completion of overweight and obesity management interventions, RDNs or international equivalents should provide follow-up contacts at least every 3 months, for as long as desired by each client, to facilitate maintenance of weight loss and improved cardiometabolic outcomes.	1C
2.4. RDNs or international equivalents may use telehealth, in-person contacts, or a blend of these delivery methods when providing MNT interventions to adults with overweight or obesity. Outcomes may be optimized by including in-person contacts.	2C
2.5. RDNs or international equivalents may use both individual and group delivery methods when providing MNT interventions to adults with overweight or obesity, as feasible and appropriate for each client.	2C
2.6. RDNs or international equivalents providing MNT interventions for adults with overweight and obesity should coordinate care in a variety of settings, including primary care/ outpatient, community, and workplace settings, to access and support each client with resources in the environment that best suits individualized needs.	1B
2.7. It is reasonable and necessary for RDNs or international equivalents to be aware of and use existing channels of payment for services for adults with overweight or obesity to improve client access to care.	Consensus
3.0. Dietary and Lifestyle Intervention Approaches	
3.1. RDNs or international equivalents should advise adult clients with overweight or obesity that many different dietary patterns can be individualized to support client-centered goals. Prescribed dietary approaches should achieve and maintain nutrient adequacy and be realistic for client adherence. Prescribed calorie levels should be tailored based on estimated or measured needs and should be adjusted to improve weight outcomes, as appropriate for and desired by each client.	1C
3.2. RDNs or international equivalents should advise the following components as part of a comprehensive adult overweight and obesity management intervention to improve cardiometabolic outcomes, QoL, and weight outcomes, as appropriate for and desired by each client.	1C

each client: • nutritionally adequate diet with adjusted calories to improve weight outcomes or a nutritionally adequate, energy-balanced diet for weight maintenance; • behavioral strategies, including self-monitoring (diet, physical activity, weight) • appropriate physical activity to meet client goals (within the RDN's scope of practice or referral to an exercise practitioner).	
4.0. Special Populations	
4.1. RDNs or international equivalents should collaborate with clients and healthcare teams to manage co-morbidities such as T2DM, ^e CVD, ^f dyslipidemia, and other potential complications associated with overweight or obesity by tailoring MNT to each client's specific health care needs, including medications, while supporting weight loss.	1B
4.2. Adults with obesity who receive pharmacotherapy or metabolic and bariatric surgery should collaborate with RDNs or international equivalents, as part of an interprofessional health care team, to improve and maintain a healthy diet that meets nutritional needs and advances weight loss efforts to improve cardiometabolic outcomes.	1B
4.3. For adults who are members of groups disproportionately affected by overweight or obesity, or under-resourced communities (eg, adults with low socioeconomic status, adults from racial or ethnic minority groups, older adults, adults with disabilities), RDNs or international equivalents should provide culturally appropriate interventions that are tailored to each client's values, beliefs, and barriers regarding excess weight, and food and physical activity behaviors.	1C
^a Recommendations are rated according to the Cochrane Collaboration's Grading of Recommendations Assessment, Development and Evaluation (GRADE) methods. ²⁶ Recommendations are rated as Strong (1), Weak (2) or Consensus. Letters indicate certainty of supporting evidence and ranges from High (A) to Very Low (D). ^b MNT = medical nutrition therapy. ^c NCP = nutrition care process. ^d QoL = quality of life. ^e T2DM = type 2 diabetes mellitus. ^f CVD = cardiovascular disease.	

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Executive summary of recommendations for registered dietitian nutritionists (RDNs) or international equivalents providing overweight and obesity interventions for adults with overweight and obesity.

Executive summary of recommendations for registered dietitian nutritionists (RDNs) or international equivalents providing overweight and obesity interventions for adults with overweight and obesity.

GUIDELINE OBJECTIVE, SCOPE, AND TARGET USERS

The objective of this EBPg is to provide evidence-based recommendations for dietitians who deliver behavior change based nutrition interventions for adults (18 years and older) with overweight and obesity to improve cardiometabolic outcomes (blood pressure [BP], fasting blood glucose, and waist circumference [WC]), QoL, and weight outcomes, when appropriate for and desired by the client. In this context, the phrase “appropriate for” indicates that the client has overweight or obesity and does not have a condition for which weight loss is contraindicated, such as an eating disorder or cancer. The information in this EBPg, which was based on evidence of dietitian-provided interventions, may also inform nutrition-related practice for other health care practitioners, such as Nutrition and Dietetics Technicians, Registered, within their professional scopes of practice.

Although dietitians may help to address barriers based on social determinants of health, such as by providing resources for food assistance to address food insecurity, this EBPG specifically focuses on behavioral lifestyle interventions. This EBPG does not describe nutrition screening or assessment methods or monitoring and evaluation in depth, and more detailed recommendations for these stages of the nutrition care process (NCP) can be found in the Academy's 2014 AWM EBPG.¹³ This EBPG does not address post-metabolic and bariatric surgery nutrition care in detail, but this topic has been examined in a prior Academy systematic review.²⁷

Recommendations are not meant to represent the exclusive course of action in the management of overweight, obesity, or cardiometabolic disease. Practitioners using these recommendations are responsible for evaluating the appropriateness of each recommendation for each of their clients. All recommendations should be interpreted through the lens of clinical judgment and client values and all recommendations should be individualized to each client's needs and preferences.²⁸

SUPPORTING SYSTEMATIC REVIEW

To inform the current EBPG, a systematic review examining the effect of behavior-based MNT interventions provided by dietitians was conducted.^{25,29} The systematic review followed methods from the Academy³⁰ and the Cochrane Collaboration's Grading of Recommendations Assessment, Development and Evaluation (GRADE) methods²⁶ and adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) checklist.³¹ Sixty-seven randomized controlled trials (RCTs) and 3 non-RCTs (represented in 83 articles) were included and analyzed to inform the current EBPG.³²⁻¹¹⁴ Effect sizes, conclusion statements, and grades for certainty (quality) of evidence from the systematic review can be found in the [Table](#) (available at www.jandonline.org [\[7\]](#)). For topics not addressed by the supporting systematic review, such as weight bias, external recent systematic reviews and expert opinions were used to inform practice recommendations.

GUIDELINE DEVELOPMENT PROCESS

A full account of the guideline development process can be found on the EAL website.²⁵ Briefly, this EBPG was conducted using Academy methods¹¹⁵ and GRADE's Evidence-to-Decision framework.^{116,117} The Evidence-to-Decision framework guided expert panel members to consider the following factors when drafting potential recommendations: supporting evidence, including the balance of benefits and harms, evidence certainty, and importance of affected outcomes; resource use; equity; client values; acceptability and feasibility to stakeholders and clinical expertise.

Recommendation statements were graded with a number (1 or 2) to describe the strength of the recommendation and a letter (A to D) to describe the strength of supporting evidence ([Figure 4](#)).²⁶ When multiple outcomes with different evidence ratings were considered for a recommendation statement, or when recommendations were supported by sub-analyses that were not specifically graded on a summary of findings [table](#), the team prioritized included outcomes and used definitions of evidence grades to guide grading of the recommendation statement.²⁶ In cases in which evidence was unavailable or unclear, recommendations were graded as "Consensus" and were based on relevant literature, scope of practice, and clinical expertise. [Figure 5](#)

(available at www.jandonline.org) describes the relationships between the recommendation statements and supporting evidence. [11,12,16,17,25,26,27,29,32–59,61–76,79,83–86,88,89,91–107,118–127](#)

Figure 4.

Strength of guideline recommendation	Implications for clinicians	Certainty of evidence from systematic review	Definition of grades for certainty of evidence
1: Strong	Most individuals should receive the recommended course of action. Adherence to this recommendation according to the guideline could be used as a quality criterion or performance indicator. Formal decision aids are not likely to be needed to help individuals make decisions consistent with their values and preferences.	A-HIGH	We are very confident that the true effect lies close to that of the estimate of the effect.
		B-MODERATE	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different
2: Weak	Recognize that different choices will be appropriate for different patients, and that you must help each patient arrive at a management decision consistent with her or his values and preferences. Decision aids may well be useful helping individuals making decisions consistent with their values and preferences. Clinicians should expect to spend more time with patients when working towards a decision.	C-LOW	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.
		D-VERY LOW	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect
Consensus	Recommendation is based on clinical expertise and experience with client values. Thus, different choices will be appropriate for different patients, and you must help each patient arrive at a management decision consistent with her or his values or preferences.	Unclear or unavailable	Evidence from the systematic review was unavailable or unclear.

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Ratings for recommendation strength and grades for certainty of evidence.²⁶ Typically, strong recommendations are created from evidence with HIGH or MODERATE certainty of evidence and weak recommendations are created from LOW or VERY LOW certainty evidence. However, in some cases evidence was limited, but expert panel members came to consensus that a recommendation should be rated as strong due to clinical experience.

Stakeholder Involvement and External Review

This EBPB and its supporting systematic review were written by a team of dietitians. Six expert panel members with practice and/or research expertise in providing nutrition interventions for adults with overweight or obesity were selected by the Academy’s Council on Research’s Work Group Selection Sub-committee. One dietitian was a licensed clinical psychologist, one was an American College of Sports Medicine Certified Exercise Physiologist, and one has an acquired disability. Three additional dietitians served as systematic review and EBPB methodologists. Expert panel members used expertise and evidence to guide content of recommendations and unanimously approved recommendation statements and ratings.

This EBPB underwent peer review by 13 external reviewers, primarily using the AGREE II (Appraisal of Guidelines for Research Evaluation II) tool.¹²⁸ This EBPB also underwent a “public comment” period in which stakeholders, including adults affected by overweight or obesity, were invited to review key recommendation statements and answer questions about key recommendations that were posted on a public website. Public stakeholder comments were reviewed, major themes were identified, and the EBPB was updated to address concerns, including greater emphasis on individualization; inclusion, diversity, equity, and access (IDEA); weight bias and stigma; clarifying specific groups to which specific recommendations may or may not apply; and challenges of dietary adherence and weight loss maintenance. See the EAL website for more information on how stakeholder input was incorporated into this guideline and on the process for updating this EBPB.²⁵

RECOMMENDATION STATEMENTS AND SUPPORTING EVIDENCE FOR ADULT OVERWEIGHT OR OBESITY MANAGEMENT

Additional evidence supporting these recommendations can be found in the [Table](#) and [Figure 5](#) and in the supporting systematic review.^{25,29}

1.0. Recommendations for MNT Approach for Adult Overweight or Obesity Management

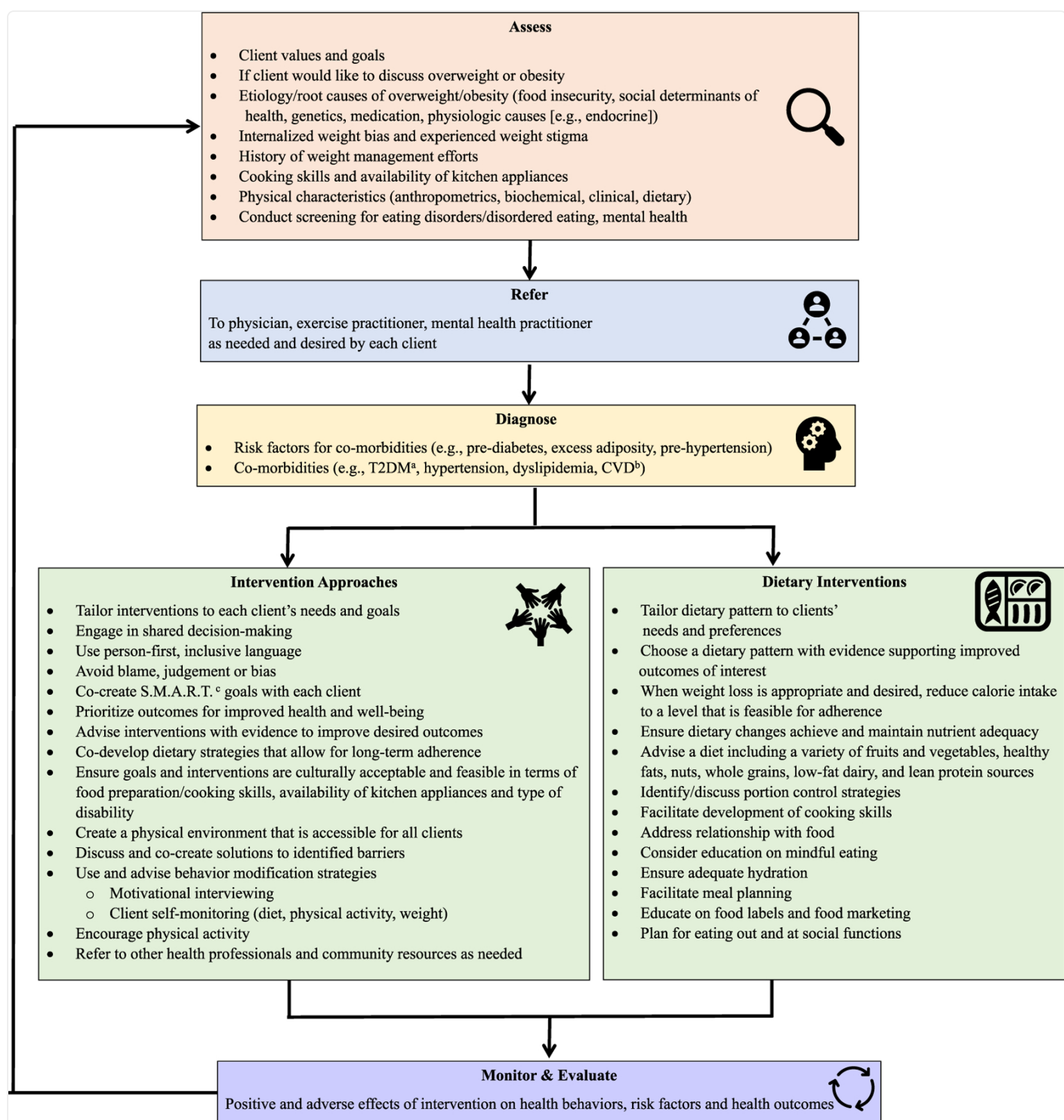
- 1.1. It is reasonable for RDNs or international equivalents to use the NCP to provide effective, client-centered interventions based on shared decision making and clinical judgment and individualized to each client’s needs, circumstances, and goals (Consensus).
- 1.2. MNT provided by RDNs or international equivalents is recommended for adults with overweight or obesity to improve cardiometabolic outcomes, QoL, and weight outcomes, as appropriate for and desired by each client (1B).
- 1.3. RDNs or international equivalents should collaborate with an interprofessional health care team to provide comprehensive, multicomponent care for adults with overweight or obesity, as appropriate for and desired by each client (1C).
- 1.4. It is reasonable for RDNs or international equivalents to monitor and evaluate client outcomes and adapt goals and interventions, including those for weight maintenance, and provide resources as needed for each client (Consensus).
- 1.5. It is reasonable for RDNs or international equivalents to minimize the effects of weight bias and weight stigma and its consequences by targeting client-centered goals, individualizing interventions

according to complex contributors of overweight and obesity, communicating using client-preferred terms, and providing an inclusive physical environment (Consensus).

Individualized Interventions Using the NCP

When conducting overweight and obesity management interventions, dietitians adhere to scope and standards of professional practice^{[12,16](#)} and use the NCP framework.^{[17](#)} A description of key elements to consider for each stage of the NCP when providing adult overweight and obesity management interventions is described in [Figure 6](#). During nutrition assessment, dietitians collect client information on factors that indicate whether an intervention may be contraindicated due to other client health conditions (eg, active eating disorders including overeating due to loss of control, women who are currently pregnant, and those undergoing chemotherapy), a client's motivation level, and other socio- and economic factors. A focus on weight loss is not always indicated and may not always result in overall health improvement. Rather, a focus on overall healthy eating habits coupled with increased physical activity and improved clinical outcomes, such as reduction in BP or cholesterol levels, may be the goal. After nutrition assessment, dietitians refer clients to complementary practitioners as needed, such as to a dietitian or mental health counselor specializing in eating disorders or an exercise specialist ([Figure 6](#)).

Figure 6.



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Key elements of the Nutrition Care Process for medical nutrition therapy provided by dietitians for adults with overweight or obesity. ^aT2DM = type 2 diabetes mellitus. ^bCVD = cardiovascular disease. ^cS.M.A.R.T. = specific, measurable, achievable, relevant, time-bound.

During the initial session, the dietitian collaborates with the client to identify the client's goals. Working together, the dietitian and client establish and prioritize goals that are specific, measurable, attainable, relevant, and time-based (S.M.A.R.T.). Factors such as genetics, social determinants of health, knowledge, skills, abilities, and availability of cooking appliances may affect nutrition recommendations and client adherence. In all cases, MNT interventions are individualized to each client's values, health status, environment, nutrition literacy, medications and other factors.¹² In overweight and obesity management interventions, clients value specific, tailored, and usable diet and exercise plans.¹²⁹ The novelty or tailored aspect of a nutrition program or setting can motivate clients to participate, as can meaningful relationships with health care providers and other clients (in group settings).¹³⁰ It is important for the dietitian to incorporate proven counseling methods, such as motivational interviewing, to help clients facilitate desired behavior change.¹² Dietitians work with clients to make small, acceptable changes towards their goals to sustain intervention adherence. Monitoring and evaluation of anthropometric and other outcomes can occur at scheduled sessions to track progress, when possible. After the intervention, dietitians monitor and evaluate client outcomes to adapt to changing client needs over time.¹⁷ More detailed information on nutrition assessment, monitoring, and evaluation can be found in the 2014 Academy AWM guideline.¹³

Interprofessional Health Care Team

Referrals to other health care professionals are standard practice,¹² and can increase client engagement and success.¹²⁹ To determine whether an aspect of an intervention is within one's scope of practice, dietitians can consult the Academy's Scope of Practice Decision Algorithm tool.¹³¹ Dietitians should maintain regular communication with other members of the health care team regarding client progress. Development of a joint care plan may be appropriate to ensure consistent strategies and messages are delivered by each member of the health care team working with the client. Dietitians can be key advocates for adults with overweight or obesity by providing education to other health care practitioners regarding the complex contributors to weight status. This collaboration may facilitate improved physician perspective regarding client circumstances and motivation and improve empathy with the client.¹³² Potential members of the interprofessional health care team serving adults with overweight and obesity are described in [Figure 7](#).

Figure 7.

- Adult client with overweight or obesity
- Registered Dietitian Nutritionist or international equivalent
- Primary care provider
- Psychologists and other mental health professionals
- Social workers
- Exercise physiologists, physical therapists, or other qualified physical activity practitioners
- Nutrition and Dietetics Technicians, Registered

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Practitioners that may be included in the interprofessional team supporting adults with overweight or obesity.

Inclusive, Nonbiased Care

Adults with overweight and obesity may experience internalized weight bias and weight stigma ([Figure 2](#)),²³ which is associated with increased diabetes risk, depression, anxiety, lowered self-esteem, and increased C-reactive protein levels, among other outcomes.^{11,119} Clients' engagement with health services can be negatively impacted when they perceive weight bias from health care professionals.¹²² However, providing compassionate, client-centered care and providing evidence-based overweight and obesity management interventions are not mutually exclusive.¹³³ Dietitians and other health care providers have a responsibility to recognize weight stigma and weight bias as some of the many complex contributors to negative health outcomes related to overweight and obesity and consider how these factors may affect or be addressed in nutrition interventions.

There are many factors that contribute to overweight and obesity beyond lifestyle behaviors.^{7,12} Thus, dietitians should not assume that a client's weight status implies a lack of motivation, willpower, or unhealthy lifestyle behaviors. Dietitians should ask clients with overweight or obesity whether and how they would like to talk about their weight, using the terms clients prefer to use when describing weight status or body size.¹³⁴ Dietitians can ensure they are targeting outcomes important to clients by conducting a thorough nutrition assessment, including motivational interviewing. Additional guidance to address internalized weight bias and weight stigma in the health care setting includes ensuring furniture, equipment, and facilities can accommodate diverse body sizes.¹²³ These techniques are also important when working with adults with disabilities. When conducting overweight and obesity management sessions, dietitians should strive to use inclusive, nonstigmatizing language

and a people-first approach.^{123,132} Dietitians are encouraged to assess their own weight bias or other biases.¹³⁵ All dietitians should provide compassionate, evidence-based, and client-centered care to actively address weight stigma and end diet culture by prioritizing health over weight.¹³³ Dietitians working with clients who are members of groups with high rates of overweight or obesity or who are under-represented may consider using resources and materials tailored to that group, such as those with low socioeconomic status (SES),¹³⁶ who are members of racial or ethnic minority groups,^{137,138} who are transgender or gender diverse,¹³⁹ and individuals with disabilities.¹⁴⁰ See [recommendation 4.3](#) for more information.

Costs.

Costs of MNT interventions are primarily due to dietitian time.⁸⁶ LOW certainty evidence demonstrated that overweight and obesity management interventions provided by dietitians may be cost-effective.^{25,29} Given the health benefits demonstrated, the cost-to-benefit ratio of MNT provided by a dietitian is unlikely to be very high, and if MNT is successful, benefits may outweigh financial costs. Costs may ultimately be higher for an interprofessional approach, but cost-efficacy, in relation to improved outcomes, is not known. Public and private payers may not be willing to cover overweight and obesity management interventions, particularly those provided by an interprofessional health care team. However, interventions provided by a dietitian may be less expensive and more cost-effective than visits to a medical doctor or more intensive therapies, such as prescription drugs or surgery to treat comorbidities.¹⁴¹

2.0. Recommendations for Delivering MNT Interventions

2.1. RDNs or international equivalents may provide at least 5 interactive sessions, when feasible and desired by each adult client with overweight or obesity, to achieve the greatest potential improvement in outcomes. Frequency of contacts should be tailored to each client's preferences and needs (2C).

2.2. RDNs or international equivalents should provide overweight and obesity management interventions for a duration of at least 1 year to improve and optimize cardiometabolic and weight outcomes, as appropriate for and desired by each client (1C).

2.3. After completion of overweight and obesity management interventions, RDNs or international equivalents should provide follow-up contacts at least every 3 months, for as long as desired by each client, to facilitate maintenance of weight loss and improved cardiometabolic outcomes (1C).

In the systematic review supporting this EBP, ^{25,29} the most beneficial outcomes resulted from interventions with 5 or more contacts with a dietitian and were at least 12 months in duration.^{25,29} There were no clear dose-response patterns between frequency of contact with the dietitian and outcomes, except for fasting blood glucose, for which greater frequency aligned with a greater effect size.^{25,29} Adult clients value flexible overweight and obesity management support.¹³⁰ Thus, the benefit-to-risk ratio of delivering at least 5 contacts or 12 months of an intervention with a dietitian is ascertained for each individual adult client. For interested adult clients hoping to achieve weight loss goals, increased contacts likely provide some benefits. The dietitian and adult client determine an appointment schedule that best suits each client's values and needs and aligns with the timing of when to evaluate and reset progress goals. Scheduling more frequent sessions (weekly or biweekly) early in the intervention may be beneficial to support and reinforce new behavior changes. A client's public/private payer coverage of MNT visits may also need to be a consideration when scheduling contacts.

Developing rapport and offering flexibility when and how interventions are delivered may improve dietitian-client relationships during overweight and obesity management interventions and follow-up.¹³⁰

Recent systematic reviews described that weight lost during interventions is typically regained without extended care after the completion of interventions.^{118,142} Behavior-based weight maintenance interventions result in less weight regain compared with control conditions.¹⁴³ Thus, extended care provided by a dietitian after the intervention is an important part of adult overweight and obesity management to maintain improvements in outcomes. During follow-up contacts, dietitians can address client tensions around changing habits, addressing needs and conflicts with beliefs.¹⁴⁴ Adult clients may find value in discussing insights from their overweight and obesity management journeys, working to establish self-regulation, developing strategies to address internal and external influences of dietary intake, and identifying new sources of motivation.¹⁴⁴ Adult clients may also benefit from developing new patterns of thinking, meeting needs previously addressed by obesogenic behaviors with more healthy behaviors, and by changing beliefs and self-concepts.¹⁴⁴ Please see [recommendation 3.0](#) for more information on weight maintenance. If a dietitian is working with an adult client who is resistant to continuing in-person follow-up, the dietitian may still want to offer checking in with this client at least every 3 months via telephone, e-mail, or chat to ensure they are on track and not in need of further nutrition counseling or resources.

Costs.

There is potential harm related to financial costs and diminishing returns when requiring a specific number of contacts with a dietitian. Although some adults may require and benefit from more contact with a dietitian, others may consider more contacts or lengthy interventions to be a barrier to participating in overweight and obesity management. Those without health insurance or who are unable to pay out of pocket are disadvantaged by a recommendation requiring a greater number of contacts than those described. Lack of transportation and/or increased transportation or childcare costs for more contacts could be a possible disadvantage to those with low SES. In some cases, mean effects from interventions provided by dietitians were small and heterogeneous and, in comparison with the resources used for the intervention, this level of reduction may not be as beneficial for some adults with overweight or obesity as others.

2.4. RDNs or international equivalents may use telehealth, in-person contacts, or a blend of these delivery methods when providing MNT interventions to adults with overweight or obesity. Outcomes may be optimized by including in-person contacts (2C).

2.5. RDNs or international equivalents may use both individual and group delivery methods when providing MNT interventions to adults with overweight or obesity, as feasible and appropriate for each client (2C).

Telehealth

Telehealth interventions address major barriers to participation in overweight and obesity management, including time, cost, and travel for appointments,¹³⁰ and exposure to others who may be ill. Telehealth technology has improved and become more accessible to clients. Offering telehealth as an option for MNT

delivery may address health inequities by facilitating access to and feasibility of nutrition care. In the supporting systematic review, the influence of interventions on outcomes was similar for those with in-person delivery methods and those using a blend of delivery methods (ie, a blend of in-person and telehealth contacts) for most outcomes examined.^{25,29} However, in-person contacts may offer additional benefits. Ensuring that MNT occurs at regularly prescribed intervals may need to take priority over the delivery method to continue providing adequate client support. Dietitians should work with clients to determine coverage of telehealth services by public and private payers.

A significant challenge of telehealth interventions is reduced ability to collect standardized anthropometric measurements. Adult clients can be trained to track weight or WC using standardized methods, to document measures with digital images, and/or clients can be provided with a scale that can automatically sync electronically (ie, Bluetooth capacity) with a database used by the dietitian. However, periodic in-person contacts (ie, every 3 months) are desirable to confirm weight status. Dietitians can use telehealth to improve insight into the clients' home eating environment and can interact with clients while in their kitchens.

An adult client's ability to meet in person, their internet and/or phone access, and their preferences for in-person vs telehealth MNT delivery methods should be taken into consideration when determining types of contacts. Lack of internet access may be a potential barrier to using telehealth for clients with low SES¹⁴⁵ or living rurally. To reduce the barrier associated with internet access, traditional phone calls instead of, or in addition to, video conferencing may be effective for overweight and obesity management interventions. The Academy provides tools and resources for providing nutrition care with telehealth.¹⁴⁶

Group Contacts

Although the individual delivery method can focus attention on each adult client's specific circumstances, developing relationships in groups with other adults who face similar circumstances and/or have similar physiques is also valued by adult clients.¹³⁰ Adult clients may value social inter-activity of in-person, individual, and group counseling to improve sense of support.¹³⁰ In the systematic review supporting this EBP, interventions that used both individual and group delivery methods demonstrated the most optimal outcomes. The recommendation of a blended format that includes both individual and group delivery methods will benefit practitioners and clients alike, to allow for cost savings of using a group delivery method when appropriate.

Dietitians currently using solely individual or solely group delivery methods can transition to a blended format. When creating the client group, it may be ideal to group adult clients with similar experiences or backgrounds (eg, parents, adults with T2DM) in the same group. It is important for the dietitian to be flexible and to accommodate adult clients' needs and their potentially changing levels of comfort with the group delivery method. For some adult clients, the expectation to share about their weight loss in a group with other adults may be a barrier to participation, and delivery method should be tailored to client preferences. Individual and/or group delivery methods can occur in person, virtually, or with a blend of these delivery methods. Telehealth group delivery could happen via video conferencing platforms or in a discussion forum that allows clients the ability to post on their own schedule.

Health Insurance Portability and Accountability Act

For dietitians providing MNT via telehealth, a variety of technologies and platforms are available. However, it is important that any medium for delivering MNT adheres to Health Insurance Portability and Accountability Act (HIPAA) standards to protect client privacy. Telehealth can take place via phone calls or video conferencing platforms that are HIPAA-compliant.¹⁴⁷ When conducting sessions one-on-one via telehealth, dietitians should ensure they are in a private location, use a headset to limit noise interference to ensure others cannot hear the client, and keep all records within a HIPAA-compliant electronic health record. Client privacy can be more difficult when conducting group sessions, and dietitians should consider using an informed consent with clients to outline confidentiality and behavior expectations within the group setting and potential risks.

2.6. RDNs or international equivalents providing MNT interventions for adults with overweight and obesity should coordinate care in a variety of settings, including primary care/outpatient, community, and workplace settings, to access and support each client with resources in the environment that best suits individualized needs (1B).

Improving public health through addressing the high prevalence of adult overweight and obesity will require approaches in multiple settings. In the systematic review supporting this EBP, successful interventions were delivered in a range of settings, including primary care/outpatient, community and workplace settings.²⁵

Primary Care Interventions

Including dietitians in primary or outpatient care likely improves coordination of care and compliance with attending multiple sessions with the dietitian. In addition, billing for services is already a part of standard medical practice. Dietitians in private practice should seek to establish a relationship with primary care or outpatient providers in their local area who can provide MNT referrals for adult clients with overweight or obesity.¹⁴⁸ The Intensive Behavioral Therapy for Obesity toolkit provides a detailed description of how to establish healthy partnerships with primary care or outpatient providers to treat obesity.¹⁴⁸

Community and Workplace Interventions

Interventions provided in community and workplace settings allow a broader population to receive nutrition interventions to improve weight outcomes, and thus could potentially reduce the impact on health inequities in disadvantaged groups. Overweight and obesity management interventions provided by dietitians in a variety of community and public settings (eg, places of worship, neighborhood centers, community centers, beauty shops, barber shops, schools, and public libraries) and in the workplace may be more accessible and viewed as less threatening and more convenient than medical settings. In addition, these interventions possibly help provide “ready-made” support groups to facilitate weight management during and after interventions.

Depending on the workplace culture, employees may not feel comfortable engaging in discussions about their personal eating habits with coworkers and/or supervisors. There may be distrust regarding how information

obtained from a workplace wellness program could be used negatively against them for health insurance costs. Adult clients encountered in community and public settings may be more likely to have food insecurity, which may be associated with overweight and obesity.^{[149](#)} Understanding the prevalence of food insecurity, availability of cooking equipment, and the existing food assistance programs available (eg, Supplemental Nutrition Assistance Program and food pantries) can improve rapport with clients and facilitate their ability to access and prepare healthy food.^{[150](#)} The 2-item Hunger Vital Sign tool has been validated for accuracy in identifying food insecurity,^{[151](#)} and is available on the Food Research & Action Center website.^{[152](#)}

Stakeholder Input.

When developing adult overweight and obesity management interventions for community and public settings, dietitians should reach out to various community stakeholders (either individuals or organizations) to better understand the needs of the community and both challenges and opportunities in delivering such interventions.^{[150](#)} Also, dietitians should stay updated about availability of related programs and resources within the community that can support overweight and obesity management interventions (eg, community gardens and exercise classes). When enrolling participants in interventions in community and public settings, dietitians should network with community leaders and peer influencers to help with recruitment and encourage participation. Dietitians should be aware of the baseline status of all participants in the intervention, and aspects concerning IDEA, to tailor messages and goals appropriately. Dietitians working in community and public settings should consider standards of practice that can contribute to intervention efficacy.^{[150](#)}

Before beginning interventions in the workplace setting, the dietitian should observe the workplace environment to better understand dynamics between employees. This knowledge can be used to design a custom intervention that factors in the unique barriers and/or facilitators to effective programs for that specific workplace. Conducting a baseline survey of employees may also yield insights regarding past attempts at weight loss, as well as what employees are looking for in such a program. Dietitians can collaborate with workplace supervisors and human resource representatives in the workplace to devise a program whereby participant attendance or completion can contribute decreased health care premiums.

More information on implementation considerations and potential costs of interventions in specific settings is available on the EAL website.^{[25](#)}

2.7. It is reasonable and necessary for RDNs or international equivalents to be aware of and use existing channels of payment for services for adults with overweight or obesity to improve client access to care (Consensus).

Payment of nutrition care services remains a major barrier to care for clients with overweight or obesity and the dietitians serving them. Accessing payment options, when possible, can improve access to care. Dietitians may wish to create a bundle of services related to the overweight and obesity management intervention using a group delivery method for adult clients to purchase to increase usability and participation.

Dietitians should be aware of appropriate billing practices and codes to receive payment for adult overweight and obesity interventions when possible.¹² Dietitians working in private practice or contracting with a primary care provider enroll as providers through the public and private payers common to clients in their area. To facilitate payment for services, dietitians obtain a National Provider Identifier.¹⁵³ Dietitians can take advantage of resources available through the Academy to inform billing practices.¹⁵⁴ The Intensive Behavioral Therapy for Obesity toolkit gives detailed guidance on billing for obesity services.¹⁴⁸ Management for obesity may be more likely to be covered by public and private payers than management for overweight.¹⁵⁵ For up-to-date best practices regarding public and private payer reimbursement for overweight and obesity management services, dietitians can contact their Academy affiliate or their local association's Nutrition Services Payment Specialist. More information on implementation considerations and potential costs is available on the EAL website.²⁵

Dietitians leverage demonstrated clinical and cost benefits to advocate for payment of services for adults with overweight or obesity under public and private payers' fee-for-service and alternative payment models.¹⁴⁸ Dietitians have an important role in advocating for the efficacy of the profession and importance of payment for overweight and obesity management services and can use the Academy's Action Alerts to take action on current legislation for better food, nutrition, and health policies.¹⁵⁶

3.0. Recommendations for Dietary and Lifestyle Intervention Approaches

3.1. RDNs or international equivalents should advise adult clients with overweight or obesity that many different dietary patterns can be individualized to support client-centered goals. Prescribed dietary approaches should achieve and maintain nutrient adequacy and be realistic for client adherence. Prescribed calorie levels should be tailored based on estimated or measured needs and should be adjusted to improve weight outcomes, as appropriate for and desired by each client (1C).

3.2. RDNs or international equivalents should advise the following components as part of a comprehensive adult overweight and obesity management intervention to improve cardiometabolic outcomes, QoL, and weight outcomes, as appropriate for and desired by each client:

- nutritionally adequate diet with adjusted calories to improve weight outcomes or a nutritionally adequate, energy-balanced diet for weight maintenance;
- behavioral strategies, including self-monitoring (diet, physical activity, weight); and
- appropriate physical activity to meet client goals (within the RDN's scope of practice or referral to an exercise practitioner) (1C).

Contributors to overweight and obesity are complex and health care providers should recognize and address the multifactorial etiologies of overweight and obesity when possible. This section is focused specifically on the lifestyle behaviors of dietary intake and physical activity. Those adults valuing and seeking overweight and obesity management interventions will benefit from an integrated approach that includes nutrition, physical activity, and behavior change.^{129,130,132} Current research describing overweight and obesity management interventions typically includes caloric reduction as a means to weight loss.^{25,29} This approach is based on extensive literature describing that excess weight, typically assessed with BMI, is prospectively associated with mortality, CVD risk, prediabetes, and T2DM, and weight loss is prospectively associated with beneficial health outcomes, including QoL, even in adults who are metabolically healthy.^{3-6,9,10} However, weight outcomes are only one measure of health, and dietitians work with clients to improve other health and well-being outcomes by advising an individualized diet that is nutritious, culturally acceptable, and feasible for long-term adherence.^{25,29}

Behavior tracking and modification strategies and physical activity are also common components of overweight and obesity management interventions.^{25,29} These components have been tested extensively, with little uncertainty in beneficial influence on outcomes.

Counseling Approach

Dietitians are skilled in the use of advanced behavior-change techniques to assist clients in meeting their goals. When working with health care providers, adults with overweight or obesity value positive, friendly, and nonjudgmental encouragement.¹³⁰ It is important for dietitians to meet their adult clients where they are at, assess their readiness to change, and encourage changes that are small and acceptable to clients. Effective listening skills and motivational interviewing techniques should be employed during MNT sessions to help ensure that the adult client's experiences and preferences are properly considered when developing goals and strategies.¹² During the initial session, the dietitian and client identify the adult client's goals as they relate to weight loss, BP, and other outcomes, and establish and prioritize goals that are S.M.A.R.T.

In adults with overweight or obesity, dietitians include behavior-modifying strategies in interventions, such as collaborative goal setting, accountability, meal planning, stimulus control (eg, altering environment), and problem solving or troubleshooting. Evidence indicates that successful overweight and obesity management interventions include behavior-modifying therapies.²⁵ Self-monitoring of diet and physical activity are supportive of weight loss in adults with overweight or obesity, particularly if participants receive tailored advice.¹⁵⁷ Dietitians use advanced behavior-change techniques to facilitate client self-management.¹²

Dietary Intake

Modifying dietary intake is a key component of overweight and obesity management, and a healthy dietary pattern can improve metabolic health and risk of inflammation and non-communicable disease risk.¹⁵⁸ Adult clients value flexibility and variety in dietary intake when undergoing overweight and obesity management.¹³⁰ A flexible approach to eating may help stabilize dietary intake for individuals with past negative experiences with or relationships to dieting.¹³⁰ However, some adult clients may value more prescriptive or structured eating plans.¹³⁰ During an initial appointment with an adult client, dietitians discuss any specific dietary preferences, including cultural or religious food traditions, cooking skills, and access to cooking equipment, to provide more customized recommendations. In addition, dietitians assess adult client's food access to facilitate realistic and implementable dietary recommendations. More resources on overweight and obesity management, including client education materials and sample menus, are available in the *Nutrition Care Manual*.¹⁵⁹

The dietitian may consider providing education on MyPlate at one of the first sessions with an adult client. The MyPlate method is an appropriate way for clients to reduce calorie intake, as it allows for appropriate proportions of intake from each food group.^{160,161} However, MyPlate should be adapted to individuals who primarily use bowls or eat from shared dishes or eat different types of foods. An overview of dietary approaches that may be effective for improving outcomes, including weight loss if accompanied by caloric reduction, can be found in [Figure 8](#).^{161–165} All diets described have potential pros and cons, and dietary approaches are tailored to the needs and preferences of each client. Generally, dietitians suggest that clients focus on consumption of foods

that are nutrient-dense but not energy-dense (eg, fruits and vegetables and other high fiber foods), while limiting foods that are energy-dense but not nutrient-dense (eg, foods with high amounts of added sugar). It is important to remain up to date on current literature regarding efficacy of dietary approaches to manage overweight and obesity.

Figure 8.

Diet	Description
Calorie reduction for weight loss, when appropriate and desired	
Dietary Approaches to Stop Hypertension (DASH) diet ¹⁶²	Rich in fruits and vegetables, legumes and nuts, whole grains, and low-fat dairy. Limit foods high in saturated fat, sweets, and sugar-sweetened beverages. Number of servings per food group to consume is usually provided to assist with calorie reduction.
Higher-protein diet ¹⁶³	25% of total calories from protein, 30% of total calories from fat, and 45% of total calories from carbohydrate
Higher-protein zone—type diet ^{162–164}	5 meals/d, each with 40% of total calories from carbohydrate, 30% of total calories from protein, and 30% of total calories from fat
Lacto-ovo-vegetarian—style diet ¹⁶³	Fruits and vegetables, eggs, plant-based proteins, and dairy products; no meat
Low-carbohydrate diet ^{162,164}	Initially <20 g/d carbohydrate, increasing to <130 g/d
Low-fat vegan—style diet ¹⁶³	10% to 25% of total calories from fat
Low-fat diet ^{162,163}	20% of total calories from fat
Lower-fat, high-dairy/calcium with added fiber and low-glycemic index foods ¹⁶³	≤30% fat 4 servings/d dairy With or without increased fiber and/or low-glycemic-index (low glycemic load) foods
Macronutrient-targeted diets ^{162,163}	15% or 25% of total calories from protein; 20% or 40% of total calories from fat; 35%, 45%, 55%, or 65% of total calories from carbohydrate
Meal replacement ¹⁶³	Liquid or bar meal replacements
Mediterranean-style diet ^{162–164}	No agreed upon guidance, but generally higher in fruits and vegetables, low in red meats, higher use of plant-based proteins and seafood and use of olive oil as a fat source. Number of servings per food group to consume is usually provided to assist with calorie reduction.
Moderate-protein diet ¹⁶³	12% of total calories from protein, 58% of total calories from carbohydrate, and 30% of total calories from fat
MyPlate ¹⁶¹	Guidance from the US Department of Agriculture to promote inclusion of all food groups and intake of a variety of nutrients. Suggests filling half of one's plate with fruits and vegetables, making half of grains whole grains, varying proteins, and moving to lower-fat dairy products.
Ornish diet ^{162,164}	<10% calories from fat
The American Heart Association—style Step 1 diet ¹⁶³	Prescribed energy restriction of 1,500 to 1,800 kcal/d, <30% of total calories from fat, <10% of total calories from saturated fat

[Open in a new tab](#)

Dietary approaches to consider for adults with overweight or obesity. All dietary patterns suggested require guidance to facilitate caloric reduction to promote weight loss when appropriate for and

desired by the client.

The dietitian individualizes the meal pattern to distribute calories at meals and snacks throughout the day.¹³ Research reports inconsistent results regarding the association between eating frequency and body weight, which may be due to portion size, energy density, or compensation of energy intake at subsequent eating occasions.¹⁶⁶ The role of advising breakfast in overweight and obesity management is unclear and should be individualized to each client.¹⁶⁷

For weight-loss goals and energy prescription, dietitians individualize care based on clients' preferences and needs. Weight loss as little as 3% to 5% may result in cardiometabolic health benefits, and a weight loss goal of 10% may be appropriate for adults with obesity or comorbidities.^{163,168} Prescribed energy intake ranges should be realistic for adherence during the intervention. The dietitian may want to precede an intervention by having an adult client track their food intake and monitor portion sizes, which can increase client awareness of dietary intake. Use of energy estimating equations, such as Mifflin St. Jeor,¹⁶⁹ can be used to understand energy needs for the adult client's current body weight and activity level. The dietitian can then use usual dietary intake information and results of equations or indirect calorimetry to determine an appropriate calorie range that will result in weight loss through a reduction in intake relative to needs. Although caloric reduction is recommended for weight loss, methods of communicating this principle will be dependent on the clinician and client. For example, dietitians may recommend a meal plan that describes portion sizes of specific foods, but not calorie content. Dietitians working with adult clients who have a history of disordered eating or history of an eating disorder may suggest clients are assessed by a mental health professional before initiating a weight loss program. Also, dietitians want to weigh the clients in such a way so they do not see the actual weight number.^{170,171} Care should also be taken not to emphasize the amount of weight lost relative to other improvements related to overweight and obesity management, such as cardiometabolic outcomes, body composition, and QoL.

For all clients, and older adults in particular, body composition should be monitored to ensure that the adult client is not experiencing a significant loss of muscle mass with weight loss. Physical activity and/or resistance training may help reduce muscle loss, as can consuming protein regularly throughout the day (instead of primarily at 1 meal).¹⁷² In addition, education is provided to the adult client about body composition and the physiology of weight loss to help them create an appropriate goal related to weekly or overall weight loss.

Non-Diet Approaches

Most research examining interventions for adults with overweight or obesity has focused on calorie reduction with a goal of weight loss.¹⁷³ However, non-diet approaches that do not focus on caloric restriction have been proposed as methods to improve health and well-being without specifically targeting weight loss. Practitioners following these approaches describe that standards of care for management of overweight and obesity may be harmful and lead to adverse health outcomes.¹⁷⁴ However, obesity is a serious medical condition, and those seeking management deserve compassionate, evidence-based care.

In the systematic review supporting this EBPB, the EBPB team attempted to identify non-diet interventions provided by dietitians for adults with overweight or obesity: 4 RCTs were identified.²⁵ In line with the intended framework, study authors reported no effect of interventions on BMI, percent weight loss, or WC, but evidence certainty was LOW or VERY LOW.^{25,108–110,112–114} In addition, there was no effect of the interventions on BP or QoL (LOW or VERY LOW certainty of evidence).^{25,109–112,114} Results of recent systematic reviews agreed that interventions that did not include dietary restriction did not result in improved CVD risk factors or results were inconsistent,^{175,176} but these approaches may be associated with body satisfaction, as well as psychological and physical activity outcomes.^{175,176}

The question of how to approach weight loss most effectively and compassionately is challenging, and dietetics practice will depend on client needs and values and practitioner perspective. Many other behavioral changes can improve health beyond weight loss, such as increased physical activity; increased consumption of whole grains, low-fat dairy, and fruits and vegetables; and improvements in sleep and stress management.¹³³ Strategies such as promoting mindful eating may be used to help the client in lieu of prescribing caloric restriction; however, little evidence is available that supports the premise that mindful eating reduces energy intake or enhances dietary quality.¹⁷⁷ The dietitian should be transparent with the adult client regarding the strength of the evidence for non-diet approaches as a treatment for overweight and obesity compared with the evidence for traditional MNT for adult overweight and obesity management.

Weight Maintenance

A major challenge for clients who participate in overweight and obesity management interventions is maintaining weight loss after behavioral interventions.¹¹⁸ Maintaining lifestyle changes after an intervention can be difficult, as adult clients navigate the co-existence of new behaviors with old habits. Without extended care interventions, weight lost during behavioral interventions is often gained back in the follow-up period.^{25,118} Behavior-based weight-maintenance interventions result in less weight regain than control conditions.¹⁴³ Several studies support the long-term effect of behavioral interventions, including weight loss, on long-term health outcomes.^{178–182} Recent systematic reviews described self-monitoring of dietary intake and weight were strong determinants of weight-loss maintenance and self-monitoring of physical activity was a moderate determinant.^{124,183} Other strong behavioral determinants of weight maintenance included eating behaviors, such as portion control; limiting intake of energy-dense foods, including sugar-sweetened beverages; and increasing fruit and vegetables intake.^{124,183,184} Self-efficacy for exercise, weight management, and dietary intake, and having high physical self-worth were strong and moderate predictors of weight-loss maintenance.¹²⁴

As described in [recommendation 2.0](#), dietitians regularly follow-up with and monitor and evaluate clients after a behavioral intervention to help them reprioritize goals and identify barriers and facilitators to achieving goals. Results of monitoring and evaluation may be to adjust the intervention intensity (eg, frequency and types of contacts with the dietitian), focus of the dietary intervention, physical activity-related goals, and which behavioral strategies to implement, as needed based on client needs and preferences. See [recommendation 2.0](#) for more information on weight maintenance.

Physical Activity

Dietitians consider their professional scope of practice when providing education and recommendations related to physical activity.^{12,16} Dietitians can use general physical activity recommendations from guidelines, such as the Physical Activity Guidelines for Americans, when appropriate.^{12,185} Individualized recommendations should only be made if the dietitian is also a credentialed fitness professional. Dietitians should develop a network of fitness professionals in their vicinity to whom they can refer clients. To determine whether an aspect of an intervention is within one's scope of practice, dietitians can consult the Academy's Scope of Practice Decision Algorithm.¹³¹ Academy members can also access a free case study, "Recommendations by RDN for Physical Activity" at www.eatrightstore.org.¹⁸⁶ Dietitians can find tips, tools, and resources in "Physical Activity Toolkit for RDs: Exercise is Medicine," which was recently updated by several dietetic practice groups (Weight Management, Cardiovascular Health and Well-Being, Sports and Human Performance Nutrition) in partnership with the American College of Sports Medicine's Exercise is Medicine program.¹⁸⁷

Potential Risks and Harms of Implementing Dietary Recommendations

Few adverse events were reported as a result of overweight and obesity management interventions in the supporting systematic review.^{25,29} When weight loss occurs, up to 25% of the weight lost may come from lean body tissue (ie, muscle) rather than fat tissue.¹⁸⁸ This is of greatest concern among older adults who are already at increased risk of sarcopenia due to age-accelerated muscle wasting, and weight loss may be contraindicated for this population.

Some individuals may object to focusing on weight loss and caloric restriction to improve overall health. Current evidence does not suggest that supervised weight management interventions result in eating disorders.^{189,190} Although research is not clear, for clients with current eating disorders, overweight, or obesity management interventions may not be appropriate. Similarly, there is some controversy regarding the negative effects of overweight and obesity management interventions on psychological outcomes.¹⁹¹ However, a recent systematic review examining psychological effects of weight-loss interventions found improvements in depression, mental health-related QoL, and self-efficacy after 12 months of weight loss interventions. There was no effect on anxiety, binge eating, body image, emotional eating, life satisfaction, self-esteem, or stress at the intervention's end.¹⁹² Another recent systematic review found that interventions resulted in improved QoL with or without weight loss, but that improvements in body image and health-related QoL were closely related to weight loss.¹⁹³ There is discussion that self-directed dieting may increase disordered eating behaviors, but supervised, evidence-based treatment can result in sustainable improvements in health outcomes and self-worth.¹³³

4.0. Recommendations for Special Populations

4.1. RDNs or international equivalents should collaborate with clients and health care teams to manage comorbidities, such as T2DM, CVD, dyslipidemia, and other potential complications associated with overweight or obesity by tailoring MNT to each client's specific health care needs, including medications, while supporting weight loss (1B).

T2DM, CVD, dyslipidemia, and other comorbidities are common in adults with overweight and obesity, and management recommendations often overlap.^{194–197} Dietitians prioritize nutrition diagnoses and interventions based on the most significant problems at the time of meeting, safety, client needs, likelihood of the intervention

influencing the problem, and client values.^{[12](#)} Dietitians regularly communicate with other health care providers working with the client to ensure consistent messaging and care plans are being delivered. Coordination of outcome measurements between the dietitian and other members of the health care team need to occur to ensure that client progress is consistently documented. Realistic goals and expectations pertaining to the amount and rate of weight loss is discussed during an initial MNT appointment to ensure that the dietitian and client are aligned. The dietitian also emphasizes the benefits of following a healthy, balanced diet for gradual weight loss vs the risks of attempting a fad diet or using supplements to rapidly lose weight. When working with adult clients who have obesity or comorbidities, dietitians should use the Physical Activity Readiness Questionnaire,^{[198](#)} which aims to assess whether a client can safely engage in physical activity or requires medical clearance, before encouraging physical activity.

There is a need for a high limit or no limit to the amount of MNT appointments covered for adults with comorbidities and/or obesity. Although barriers to implementation exist, financial barriers are reduced in the T2DM population and for those with obesity, given the ability to reimburse for dietitian (or certified diabetes educator) visits for adults with these conditions. See the EAL website for more information about efficacy of weight management interventions for adults with T2DM, CVD, and dyslipidemia, and for potential risks and harms of implementing this recommendation.^{[25](#)}

T2DM.

This guideline does not include detailed guidance on comprehensive nutrition care for adults with T2DM. Practitioners should refer to EBPGs,^{[199,200](#)} scope and standards of professional practice,^{[201](#)} and standard of care^{[197](#)} focused on diabetes for specific nutrition care recommendations. When providing dietary recommendations to adult clients with overweight or obesity and T2DM, dietitians consider the carbohydrate contents for specific foods relative to the total calorie content for that eating occasion. Dietitians may find the carbohydrate-controlled dietary approach of the MyPlate method to be helpful.^{[202](#)} Dietitians treating adults with overweight or obesity and T2DM should be adequately trained to treat T2DM. Dietitians provide education on monitoring blood glucose and consuming consistent carbohydrates to ensure blood glucose values are maintained within goal levels. Adults with T2DM who experience weight loss because of the intervention should have their blood glucose and hemoglobin A1c levels reassessed, along with their insulin (or other medication) dosage.

CVD and Dyslipidemia.

In accordance with recent systematic reviews, dietitians may consider use of dietary approaches, such as the Dietary Approaches to Stop Hypertension or the Mediterranean diet to improve health outcomes related to CVD, such as BP and cholesterol levels, in addition to body weight.^{[203,204](#)} Guidelines for dietitians working with adult clients with heart failure or hypertension are available on the EAL website.^{[205,206](#)}

Obesity, Classes I to III.

Many adults with obesity may prefer intensive obesity management programs.¹³⁰ In these cases, adult clients will likely benefit from multidisciplinary interventions, including physical activity, mental health, and medical care in addition to nutrition interventions.¹² Dietitians practice within their scope and refer to colleagues in other disciplines and/or expand their own training to adequately address the complex needs of adults with obesity. The health care team may need to include a therapist or mental health professional, particularly if the client is dealing with binge eating or food addiction issues. The amount of calorie reduction needed to achieve weight loss should allow for inclusion of light to moderate physical activity to the extent the adult client can tolerate exercise. Dietitians should also be aware of issues that may limit physical activity for adult clients with obesity, such as chaffing or orthopedic issues. Dietitians may find it useful to collaborate with physical therapists, personal trainers, or other fitness professionals who specialize in activity for individuals with obesity.

4.2. Adults with obesity who receive pharmacotherapy or metabolic and bariatric surgery should collaborate with RDNs or international equivalents, as part of an interprofessional health care team, to improve and maintain a healthy diet that meets nutritional needs and advances weight loss efforts to improve cardiometabolic outcomes (1B).

Metabolic and bariatric surgery is common in adult clients with obesity, is fairly safe, and can lead to clinically significant weight loss.²⁰⁷ Individuals who are candidates for metabolic and bariatric surgery are often required to meet with a dietitian to evaluate past attempts at weight loss. Presurgery dietary counseling may also include modest weight loss efforts, dietary behavior change, and preparation for postoperative eating behaviors and food choices. However, there is an opportunity during these visits to develop a rapport with the individual to encourage them to continue working with the dietitian post surgery. In general, adult clients who undergo metabolic and bariatric surgery or are using pharmacotherapy for weight loss may be less interested in working with a dietitian while they “wait and see” whether the management is successful on its own. By using principles of motivational interviewing, the dietitian may increase the “buy-in” from these adult clients. Based on past research, dietitians may wish to focus on adult clients who have had bariatric surgery in the last 6 to 12 months to help them achieve appropriate weight loss using MNT.²⁰⁸ See the EAL website for evidence, potential risks and harms, and costs associated with this recommendation²⁵ and the Academy guideline on MNT for individuals who have had bariatric surgery for more information.²⁷

4.3. For adults who are members of groups disproportionately affected by overweight or obesity, or under-resourced communities (eg, adults with low SES, adults from racial or ethnic minority groups, older adults, and adults with disabilities), RDNs or international equivalents should provide culturally appropriate interventions that are tailored to each client’s values, beliefs, and barriers regarding excess weight and food and physical activity behaviors (1C).

Adults Who Are Members of Groups Disproportionately Affected by Overweight or Obesity, and Under-Resourced Communities

Overweight and obesity are more prevalent among adults who are members of specific racial or ethnic minority groups compared with White adults, among adults with low SES compared with adults with high SES, and among adults with disabilities compared with adults without disabilities.¹ Perceptions of ideal body weight may

vary between adults according to racial or ethnic member group and/or SES.^{[209,210](#)} There was not enough evidence to provide, with any certainty, expected weight loss from interventions provided by dietitians for adults in these populations.^{[25](#)} In addition, there is little evidence available on overweight and obesity management interventions delivered to adults who are members of gender minority groups.^{[211](#)} As with other groups, it is likely that there is uncertainty and variability with how much adults in these specific groups value weight loss, which may vary depending on baseline weight or BMI, as well as cultural and personal values.^{[129](#)} If overweight and obesity interventions were targeted towards adults with low SES, who are members of specific racial or ethnic minority groups, or who have disabilities, health inequities would likely be reduced. Increasing the number of dietitians who identify as members of under-represented groups is needed to implement successful overweight and obesity interventions for diverse populations of adults.

When conducting MNT sessions, dietitians should strive to use inclusive, nonstigmatizing language and a people-first approach,^{[123,132](#)} particularly when working with individuals who have low SES, are members of racial or ethnic minority groups, or who have a disability. The US Department of Health and Human Services Office on Minority Health and the Centers for Disease Control and Prevention both provide practitioners with tools for communicating in a way that promotes IDEA.^{[212–214](#)} Overweight and obesity management interventions that address the moderators of social and demographic factors are limited.^{[25](#)} Thus, thorough assessment of the myriad contributors to overweight and obesity should be discussed during nutrition assessment to ensure interventions are individualized to each client and are adjusted as needed over time. Dietitians work with adult clients to individualize dietary recommendations to meet client needs, including but not limited to dietary preferences, daily schedule, food access, food preparation skills, and availability of cooking equipment. For example, dietitians should always ask about a typical day for adult clients, including sleep, meals, work, and activity. This allows the dietitian to gain insights into a variety of factors that can play a role in client success.

Clients may benefit from resources tailored to their population group. The Academy has several member interest groups (MIGs) that have developed or identified various materials that are useful for overweight and obesity weight management for adults from under-represented groups. For example, the National Organization of Blacks in Dietetics and Nutrition MIG^{[137](#)} has a library of resources,^{[138](#)} including books, cookbooks, blogs, and websites by Black dietitians that are applicable to overweight and obesity weight management in adults. Also, a new MIG, the Disabilities in Nutrition and Dietetics (Disabilities) MIG—for nutrition and dietetics practitioners, students, and interns who have disabilities and/or who work with clients who have disabilities—will launch in 2023. There are also free resources available that are tailored to adults who are transgender or gender diverse.^{[139](#)}

For clients with low SES, routine screening for food insecurity^{[151](#)} and understanding the existing federal food assistance programs, along with localized food help initiatives (ie, food pantries and produce giveaways), can improve rapport with clients and facilitate their ability to access healthy food.^{[150](#)} The US Department of Agriculture provides resources for eating healthy on a budget.^{[136](#)} Beyond using traditional methods of payment (see [recommendation 2.7](#)), dietitians can collaborate with affected adults and stakeholders to brainstorm methods of improving access to care. For example, dietitians could consider using a sliding scale to make visits more accessible to clients with low SES. Another innovative solution includes establishing “pay it forward” scholarships that are funded by other clients or individuals who have financial resources and awarded to clients who may find eating healthier to be unaffordable or otherwise inaccessible.^{[215](#)} Dietetics programs, particularly those initiating a Future Education Model curriculum, may want to consider developing a reduced fee model for

providing MNT to the public, using a team of graduate students or dietetic interns with a dietitian supervisor.²¹⁶ It will be important to advocate for improved reimbursement and public and private payer coverage for dietitian interventions for adults from diverse and under-resourced groups.²¹⁷

RDNs are encouraged to incorporate IDEA principles in their practices and research. [Figure 9](#) defines each word in the IDEA acronym and provides specific examples regarding overweight and obesity management for adults. Increasing collective consideration for IDEA principles requires a conceptual framework for action, including assessing determinants of health, formulating and implementing solutions, and evaluating impacts from an individual to policy level.²¹⁸ The Academy's website for dietitians, eatrightPRO.org [↗](#), hosts an IDEA Hub²¹⁹ to provide networks among and resources for dietitians aiming to advance IDEA principles in their practices and professions. Dietitians can learn more about implicit bias in regards to race, gender, weight, and other factors,^{135,220} and from education opportunities about improving IDEA.²²¹

Figure 9.

IDEA ^a	Definition	Examples concerning overweight/obesity management by RDNs for adults from under-represented groups
Inclusion	The intentional, ongoing effort to ensure that diverse people with different identities can fully participate in all aspects of the work of an organization, including leadership positions and decision-making processes.	Collaborate with BIPOC ^b RDNs in adult overweight/obesity management services and research projects. Include BIPOC students/interns in adult overweight/obesity management services and research projects.
Diversity	Diversity refers to the composition of a group of people from any number of demographic backgrounds, identities (innate and selected), and the collective strength of their experiences, beliefs, values, skills, and perspectives.	Join Academy MIGs ^c to network with BIPOC students, interns, and practitioners and learn about specific resources available to MIG members. Request a BIPOC RDN to mentor you about overweight/obesity management services for individuals from under-represented groups
Equity	Equity is the absence of avoidable, unfair, or remediable differences among groups of people, whether those groups are defined socially, economically, demographically, or geographically or be other means of stratification.	Provide services for adult overweight/obesity management in locations, such as schools, community centers and churches that are close and easily accessible by individuals in under-represented groups. Provide scholarships and “pay it forward” rates for adult overweight/obesity management services.
Access	Providing equitable opportunities to everyone regardless of human ability and experience.	Use resources (eg, e-mails, documents, images, presentations, social media, multimedia, website, virtual sessions) that are applicable to and usable by everyone regardless of whether they can manipulate a mouse, have limited vision, see fewer colors, have hearing difficulties, or process information differently. Visit Partnership on Employment & Accessible Technology (www.peatworks.org) to learn more.
^a IDEA = inclusion, diversity, equity, access. ^b BIPOC = Black, Indigenous, and people of color. ^c MIG = member interest group.		

[Open in a new tab](#)

Definitions for inclusion, diversity, equity, and access, and examples concerning overweight and obesity management by registered dietitian nutritionists (RDNs) for adults from under-represented groups.

Older Adults

In the United States, 42.8% of older adults (60 years and older) have obesity,¹ which may contribute to or exacerbate comorbidities such as sleep apnea, osteoarthritis, cancer, cognitive dysfunction, metabolic abnormalities, pulmonary abnormalities, urinary incontinence, physical dysfunction, and increased frailty.^{222,223} In the systematic review supporting this EBPG, overweight and obesity management interventions from a dietitian for older adults with overweight or obesity likely improve weight outcomes and WC (MODERATE certainty evidence) and may improve fasting blood glucose, BP, and QoL (LOW certainty evidence).²⁵ However,

the risk-to-benefit ratio of providing overweight and obesity management interventions in this population is less straightforward than for younger or middle-aged adults.

Weight loss may have unintended consequences, such as loss of muscle and bone mass, which is already a concern in older adults and may increase risk for sarcopenia. Dietitians should consider whether a restrictive diet is appropriate for adults 75 years and older, because weight loss may be accompanied by loss of lean muscle mass and sarcopenia.¹⁸⁸ Dietitians may consider not recommending weight loss in some cases (eg, for adults at risk for or experiencing malnutrition or chronic dehydration²²⁴). Level of overweight or obesity may help guide decision making about whether weight loss is appropriate for an older client. Older adults with overweight might be better off maintaining weight if there are no comorbidities, given risks of lean body mass loss from low-calorie diets. When weight loss is not indicated, dietitians can focus on wellness and healthy dietary intake instead of weight loss.^{221,225} For adults receiving overweight and obesity interventions, body composition is monitored regularly to ensure that the older adult client is not experiencing muscle loss. Assessment of body composition should include a nutrition-focused physical examination to assess skeletal muscle.

When working with older adults, dietitians consider protein needs to maintain lean body mass and encourage adequate high-quality protein intake throughout the day. In addition, older adults may have reduced absorption of some micronutrients, such as iron and vitamin B12. Nutrition guidance for older adults is available in the 2020–2025 Dietary Guidelines for Americans (DGA) and describes considerations for protein and vitamin B12 intake.²²⁵ The DGA highlights the importance of enjoying food, considering ability to chew and swallow, mobility and strength to procure and prepare food, practicing food safety, and referrals to food assistance services.²²⁵

For adults 75 years and older, dietitians should consider requesting primary care provider approval for physical activity due to risk of falls and injuries in older adults with frailty. Dietitians consider mobility and functional status when discussing physical activity with older adults. Dietitians should be aware of polypharmacy, drug-nutrient interactions, and medication adverse effects when providing MNT to older adults. When designing interventions for older adults, dietitians should consider potential challenges with transportation to and from appointments, walking distance from parking areas for older adults with limited mobility, and potential challenges using technology for telehealth appointments. More research is needed on overweight and obesity management interventions provided by a dietitian for adults 75 years and older.

See the EAL website for more information on potential costs of the intervention.²⁵

GUIDELINE STRENGTHS AND LIMITATIONS

The recommendations outlined in this EBPG are primarily based on a rigorous systematic review and guideline development process. The systematic review demonstrated a significant impact of overweight and obesity management on most of the outcomes examined, and MODERATE to HIGH certainty of evidence ratings supported many of the updated recommendations. The systematic review followed rigorous methods by the Academy and GRADE methods and adhered to GRADE methods and PRISMA standards.^{26,30,31} There is a paucity of intervention trials that specifically address each individual's complex contributors to weight status and

associated outcomes. Most current research with interventions provided by dietitians targets cardiometabolic and anthropometric outcomes.^{[173](#)} Although there is increasing focus on client-centered outcomes, such as QoL and mental health or psychological outcomes, there is still a lack of evidence examining these outcomes.^{[173](#)}

This updated EBPG aligns with current standards of practice^{[12,16](#)} and, as such, will be acceptable to most practitioners and feasible for most dietitians to implement. Recommendations supporting telehealth, group counseling, and a variety of contact settings may facilitate improved access to nutrition care for clients. This EBPG includes several suggestions regarding diets that can be adapted for weight management, but does not give specific dietary recommendations for any group of individuals (eg, those with T2DM or dyslipidemia) due to the multitude of factors that must be considered when designing individualized diet interventions. For additional discussion on strengths and limitations, see the EAL website.^{[25](#)}

FUTURE RESEARCH

There is a significant need for additional studies on cost effectiveness or return on investment for MNT to strengthen dietitian advocacy for reimbursement of services specifically for adults with overweight or obesity. Currently, very few clients have public or private payer coverage that would allow for the number of contacts suggested in this EBPG and, therefore, studies outlining the return on investment for these services are essential. Recommendations that include group and telehealth delivery methods may significantly improve the cost burden for payers as well, and deserves further study.

There is a great need for research examining how to address environmental factors, genetic factors, and weight stigma in health care. RCTs on adult overweight and obesity management are needed that are tailored to specific groups who may be at increased risk of overweight or obesity, such as adults with low SES, those who are members of racial or ethnic minority groups, adults with disabilities, and older adults. Future research concerning adult overweight and obesity managements requires a lens more focused on IDEA. More research is needed on the efficacy of non-diet intervention approaches provided by dietitians on health outcomes associated with overweight and obesity. Also, research is needed that examines outcomes from interventions, extended care, and follow-up for more than 2 years. More discussion on future research needs is available on the EAL website.^{[25](#)}

CONCLUSIONS

This updated EBPG describes evidence-based strategies for providing effective, individualized, inclusive MNT for adults with overweight and obesity. Recommendations in this EBPG highlight the importance of considering complex contributors to overweight and obesity and individualizing interventions to client-centered goals based on specific needs and preferences and shared decision making. Dietitians can use behavioral modification strategies to help clients set small, acceptable goals that encourage adherence and are flexible to meet the changing needs of each client. This guideline addresses overweight and obesity management as a continual, long-term process that requires extended care and follow-up with monitoring and evaluation to adjust interventions to client needs and circumstances as they change over time. Recommendations in this EBPG have the potential to increase access to care for many adults through utilization of telehealth and group counseling as

effective delivery methods to foster health improvements, decrease costs, and to address other barriers to overweight and obesity management interventions. It is essential for dietitians to collaborate with clients and interprofessional health care teams to provide high-quality MNT interventions using the NCP to promote improvement of client-centered outcomes for adult clients with overweight or obesity.

Supplementary Material

1

[NIHMS2114703-supplement-1.pdf](#) (92.2KB, pdf)

Supplementary materials: [Figure 1](#) and [5](#) and the [Table](#) are available at www.jandonline.org [↗](#)

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Footnotes

STATEMENT OF POTENTIAL CONFLICT OF INTEREST

Conflict of interest was assessed prior to joining the expert panel, during each expert panel meeting, and following the guideline. H. A. Raynor is the principal investigator on National Institutes of Health (NIH) grant on child weight management (5R01DK121360) and co-editor of the Academy's *Weight Management Handbook*. S. Domel Baxter is co-investigator on grant from Pediatric Nutrition DPG. T. Halliday received grant funding from NIH R21 through June 2021 and has an NIH KL2 award (KL2TR002539) through February 2023 and a BUILD Dairy grant through the Western Dairy Center through August 2023. N. Malik receives funding

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Associated Data

This section collects any data citations, data availability statements, or supplementary materials included in this article.

Supplementary Materials

[NIHMS2114703-supplement-1.pdf](#) (92.2KB, pdf)