



## Complete Summary

---

### **GUIDELINE TITLE**

Adult weight management evidence-based nutrition practice guideline.

### **BIBLIOGRAPHIC SOURCE(S)**

American Dietetic Association (ADA). Adult weight management evidence based nutrition practice guideline. Chicago (IL): American Dietetic Association (ADA); 2006 May. Various p. [151 references]

### **GUIDELINE STATUS**

This is the current release of the guideline.

The guideline will undergo a complete revision every three to five years.

## COMPLETE SUMMARY CONTENT

SCOPE  
METHODOLOGY - including Rating Scheme and Cost Analysis  
RECOMMENDATIONS  
EVIDENCE SUPPORTING THE RECOMMENDATIONS  
BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS  
CONTRAINDICATIONS  
QUALIFYING STATEMENTS  
IMPLEMENTATION OF THE GUIDELINE  
INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT  
CATEGORIES  
IDENTIFYING INFORMATION AND AVAILABILITY  
DISCLAIMER

## SCOPE

### **DISEASE/CONDITION(S)**

Adult overweight and obesity

### **GUIDELINE CATEGORY**

Counseling  
Evaluation  
Management  
Treatment

### **CLINICAL SPECIALTY**

Cardiology  
Endocrinology  
Family Practice  
Geriatrics  
Internal Medicine  
Nutrition  
Pharmacology  
Physical Medicine and Rehabilitation  
Preventive Medicine

## **INTENDED USERS**

Dietitians

## **GUIDELINE OBJECTIVE(S)**

### **Overall Objective**

- To help dietetic practitioners, patients and consumers make shared decisions about health care choices in specific clinical circumstances.
- To provide medical nutrition therapy (MNT) guideline recommendations for adult weight management that reduce body weight, prevent further weight gain, and maintain weight loss over a prolonged period

### **Specific Objectives**

- To define evidence-based recommendations for registered dietitians (RDs) that are carried out in collaboration with other healthcare providers
- To guide practice decisions that integrate medical, nutritional and behavioral elements
- To reduce variations in practice among RDs
- To promote self-management strategies that empower the patient to take responsibility for day-to-day management and to provide the RD with data to make recommendations to adjust MNT or recommend other therapies to achieve clinical outcome
- To enhance the quality of life for the patient, utilizing customized strategies based on the individual's preferences, lifestyle, and goals
- To develop content for interventions that can be tested for impact on clinical outcomes
- To define the highest quality of care within cost constraints of the current healthcare environment

## **TARGET POPULATION**

- Adult patients 19 years and older who are overweight (body mass index [BMI] of 25.0 to 29.9 kg/m<sup>2</sup>) or obese (BMI  $\geq$ 30.0 kg/m<sup>2</sup>)
- Population groups, medical conditions, or coexisting diagnoses, where these recommendations may be indicated, include:
  - Coronary heart disease
  - Diabetes mellitus (type 2)
  - Gallstones

- Gynecological abnormalities
- Hypertension
- Metabolic syndrome
- Osteoarthritis
- Sleep apnea
- Stress incontinence

## **INTERVENTIONS AND PRACTICES CONSIDERED**

### **Evaluation**

1. Referral to a registered dietitian
2. Nutritional assessment
  - Medical history and relevant laboratory tests for existing comorbidities
  - Nutrition-focused assessment including:
    - Height, weight, body mass index (BMI), and waist circumference
    - Resting metabolic rate
    - Comprehensive diet history, including current dietary intake and receptivity to change
    - Physical activity pattern
    - Psychosocial and economic issues impacting nutrition therapy
    - Consideration of co-morbid conditions and need for additional modifications in nutrition care plan

### **Management/Treatment**

1. Individualized prescription for medical nutrition therapy (MNT) based on:
  - Nutrition counseling and education
  - Dietary interventions (reducing calories, portion control, meal replacements)
  - Physical activity interventions
  - Behavioral interventions (self monitoring, stress management, stimulus control, social support)
  - Pharmacology (weight loss medications) or bariatric surgery, when indicated

## **MAJOR OUTCOMES CONSIDERED**

- Morbidity
- Mortality
- Quality of life
- Weight loss
- Decreased body mass index (BMI)
- Percentage of individuals who meet their treatment goal
- Weight maintenance
- Cost of medical care

## **METHODOLOGY**

### **METHODS USED TO COLLECT/SELECT EVIDENCE**

Hand-searches of Published Literature (Primary Sources)  
Searches of Electronic Databases

## **DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE**

Searches of PubMed and hand searches of other relevant literature were performed on the following topics:

- Determination of resting metabolic rate
- Eating frequency and patterns
- Portion control
- Meal replacements
- Nutrition education
- Low glycemic index diets
- Dairy/calcium and weight management
- Low carbohydrate diet

### General Exclusion Criteria

As a general rule, studies are excluded if the:

- Study sample size is less than 10 in each treatment group
- Drop-out rate was >20%

### Inclusion Criteria

- Study design preferences: clinical trials preferred
- Limited to articles in English

The American Dietetic Association (ADA) has determined that for narrowly focused questions dealing with therapy or treatment, six well designed randomized controlled trials that demonstrate similar results is sufficient to draw a conclusion.

No one study design was preferred for all questions. The preferred study design depended on the type of question. The ADA uses the following principles in the table below for identifying preferred study design.

| <b>Type of Question</b>                | <b>Preferred Study Designs (in order of preference)</b>               |
|--|---|
| Diagnosis questions                    | Sensitivity & specificity of diagnostic test<br>Cross-sectional study |
| Etiology, causation, or harm questions | Prospective cohort<br>Case control study<br>Cross-sectional study     |
| Therapy and prevention questions       | Randomized controlled trial   |

| Type of Question                        | Preferred Study Designs (in order of preference) |
|---|--|
|   | Nonrandomized trial                              |
| Natural history and prognosis questions | Cohort study                                     |

## NUMBER OF SOURCE DOCUMENTS

Not stated

## METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Given)

## RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

### Grading the Strength of the Evidence for a Conclusion Statement or Recommendation Conclusion Grading Table

| Strength of Evidence Elements  | Grade I<br>Good/Strong  | Grade II<br>Fair   | Grade III<br>Limited/Weak  | Grade IV<br>Expert Opinion Only  | Grade V<br>Grade I Assignment                         |
|--|---|--|--|--|---|
| <b>Quality</b> <ul style="list-style-type: none"> <li>Scientific rigor/validity</li> <li>Considers design and execution</li> </ul> | Studies of strong design for question<br><br>Free from design flaws, bias and execution problems                                | Studies of strong design for question with minor methodological concerns<br><br>OR<br><br>Only studies of weaker study design for question | Studies of weak design for answering the question<br><br>OR<br><br>Inconclusive findings due to design flaws, bias or execution problems | No studies available<br><br>Conclusion based on usual practice, expert consensus, clinical experience, opinion, or extrapolation from basic research | No evidence that pertains to question being addressed |
| <b>Consistency</b><br><br>Of findings across studies   | Findings generally consistent in direction and size of effect or degree of association, and statistical significance with minor | Inconsistency among results of studies with strong design<br><br>OR<br><br>Consistency with minor exceptions                               | Unexplained inconsistency among results from different studies<br><br>OR<br><br>Single study unconfirmed by                              | Conclusion supported solely by statements of informed nutrition or medical commentators  | NA  |

| <b>Strength of Evidence Elements</b>   | <b>Grade I<br/>Good/Strong</b>   | <b>Grade II<br/>Fair</b>  | <b>Grade III<br/>Limited/Weak</b>  | <b>Grade IV<br/>Expert Opinion Only</b>         | <b>Grade V<br/>Grade I Assignment</b> |
|--|--|---|--|---|---------------------------------------|
|  | exceptions at most   | across studies of weaker designs  | other studies  |   |                                       |
| <b>Quantity</b> <ul style="list-style-type: none"> <li>Number of studies</li> <li>Number of subjects in studies</li> </ul>           | <p>One to several good quality studies</p> <p>Large number of subjects studies</p> <p>Studies with negative results having sufficiently large sample size for adequate statistical power</p> | <p>Several studies by independent investigators</p> <p>Doubts about adequacy of sample size to avoid Type I and Type II error</p> | <p>Limited number of studies</p> <p>Low number of subjects studies and/or inadequate sample size within studies</p>  | Unsubstantiated by published studies            | Relevant studies have not been done   |
| <b>Clinical Impact</b> <ul style="list-style-type: none"> <li>Importance of studies outcomes</li> <li>Magnitude of effect</li> </ul> | <p>Studied outcome relates directly to the question</p> <p>Size of effect is clinically meaningful</p> <p>Significant (statistical) difference is large</p>                                  | Some doubt about the statistical or clinical significance of effect   | <p>Studies outcome is an intermediate outcome or surrogate for the true outcome of interest</p> <p>OR</p> <p>Size of effect is small or lacks statistical and/or clinical significance</p> | Objective data unavailable                      | Indicate area for future research     |
| <b>Generalizability</b><br><br>To population of interest   | Studied population, intervention and outcomes are free from serious doubts about generalizability  | Minor doubts about generalizability   | Serious doubts about generalizability due to narrow or different study population, intervention or   | Generalizability limited to scope of experience | NA                                    |

| <b>Strength of Evidence Elements</b> | <b>Grade I<br/>Good/Strong</b> | <b>Grade II<br/>Fair</b> | <b>Grade III<br/>Limited/Weak</b> | <b>Grade IV<br/>Expert Opinion Only</b> | <b>Grade V<br/>Expert Opinion Only<br/>Grade I Assignment</b> |
|--------------------------------------|--------------------------------|--------------------------|-----------------------------------|---|---|
|                                      |                                |                          | outcomes studied                  |   |   |

This grading system was based on the grading system from: Greer N, Mosser G, Logan G, Wagstrom Halaas G. *A practical approach to evidence grading. Jt Comm. J Qual Improv.* 2000; 26:700-712. In September 2004, The ADA Research Committee modified the grading system to this current version.

## **METHODS USED TO ANALYZE THE EVIDENCE**

Review of Published Meta-Analyses  
Systematic Review with Evidence Tables

## **DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE**

### **Step 1: Formulate the question**

Specify a question in a defined area of practice; or state a tentative conclusion or recommendation that is being considered. Include the patient type and special needs of the target population involved, the alternatives under consideration, and the outcomes of interest.

### **Step 2: Gather and classify evidence reports**

Conduct a systematic search of the literature to find evidence related to the question, gather studies and reports, and classify them by type of evidence. Classes differentiate primary reports of new data according to study design, and distinguish them from reports that are a systematic review and synthesis of primary reports.

### **Step 3: Critically appraise each report**

Review each report for relevance to the question and critique for scientific validity. Abstract key information from the report and assign a code to indicate the quality of the study by completing quality criteria checklist.

### **Step 4: Summarize evidence in a narrative and an overview table**

Combine findings from all reports in a table that pulls out the important information from the article worksheets. Write a brief narrative that summarizes and synthesizes the information abstracted from the articles that is related to the question asked.

### **Step 5: Develop a conclusion statement and grade the strength of evidence supporting the conclusion**

Develop a concise conclusion statement (the answer to the question), taking into account the synthesis of all relevant studies and reports, their class and their quality ratings. Assign a grade to indicate the overall strength or weakness of evidence informing the conclusion statement.

## **METHODS USED TO FORMULATE THE RECOMMENDATIONS**

Expert Consensus

### **DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS**

The expert work group, which includes practitioners and researchers with a depth of experience in the specific field of interest, develops the disease-specific guideline. The guideline development involves the following steps:

#### **Review Evidence Based Conclusions**

The work group meets to review the materials resulting from the evidence analysis, which may include conclusion statements, evidence summaries, and evidence worksheets.

#### **Formulate Recommendations for the Guideline Integrating Conclusions from Evidence Analysis**

The work group uses an expert consensus method to formulate recommendations, taking into account the following:

- Recommendations for what the dietitian should do and why
- Rating of recommendations based on strength of supporting evidence
- Label of Conditional (clearly define a specific situation) or Imperative (broadly applicable to the target population without restraints on the pertinence)
- Risks and Harms of Implementing the Recommendations, including potential risks, harms, or adverse consequences
- Conditions of Application, including organizational barriers or conditions that may limit application
- Potential Costs Associated with Application
- Recommendation Narrative
- Recommendation Strength Rationale, evidence strength and methodological issues
- Minority Opinions, when the expert working group cannot reach consensus on a recommendation
- Supporting Evidence

## **RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS**

### **Criteria for Recommendation Rating**

| Statement Rating | Definition | Implication for Practice |
|------------------|------------|--------------------------|
|------------------|------------|--------------------------|



| Statement Rating | Definition  | Implication for Practice  |
|------------------|---|---|
| <b>Strong</b>    | A <b>Strong</b> recommendation means that the workgroup believes that the benefits of the recommended approach clearly exceed the harms (or that the harms clearly exceed the benefits in the case of a strong negative recommendation), and that the quality of the supporting evidence is excellent/good (grade I or II)*. In some clearly identified circumstances, strong recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits strongly outweigh the harms. | Practitioners should follow a <b>Strong</b> recommendation unless a clear and compelling rationale for an alternative approach is present.  |
| <b>Fair</b>      | A <b>Fair</b> recommendation means that the workgroup believes that the benefits exceed the harms (or that the harms clearly exceed the benefits in the case of a negative recommendation), but the quality of evidence is not as strong (grade II or III)*. In some clearly identified circumstances, recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits outweigh the harms.   | Practitioners should generally follow a <b>Fair</b> recommendation but remain alert to new information and be sensitive to patient preferences.   |
| <b>Weak</b>      | A <b>Weak</b> recommendation means that the quality of evidence that exists is suspect or that well-done studies (grade I, II, or III)* show little clear advantage to one approach versus another.   | Practitioners should be cautious in deciding whether to follow a recommendation classified as <b>Weak</b> , and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role. |
| <b>Consensus</b> | A <b>Consensus</b> recommendation means that Expert opinion (grade IV)* supports the guideline recommendation even though the available scientific evidence did not present consistent results, or controlled trials were lacking.  | Practitioners should be flexible in deciding whether to follow a recommendation classified <b>Consensus</b> , although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.                                      |

| Statement Rating             | Definition  | Implication for Practice   |
|------------------------------|---|--|
| <b>Insufficient Evidence</b> | An <b>Insufficient Evidence</b> recommendation means that there is both a lack of pertinent evidence (grade V)* and/or an unclear balance between benefits and harms. | Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as <b>Insufficient Evidence</b> and should exercise judgment and be alert to emerging publications that report evidence that clarifies the balance of benefit versus harm. Patient preference should have a substantial influencing role. |

\*Conclusion statements are assigned a grade based on the strength of the evidence. Grade I is good; grade II, fair; grade III, limited; grade IV signifies expert opinion only and grade V indicates that a grade is not assignable because there is no evidence to support or refute the conclusion. The evidence and these grades are considered when assigning a rating (Strong, Fair, Weak, Consensus, Insufficient Evidence - see chart above) to a recommendation.

Adapted by the American Dietetic Association from the American Academy of Pediatrics, Classifying Recommendations for Clinical Practice Guideline, Pediatrics. 2004;114:874-877.

## COST ANALYSIS

An analysis was performed of potential costs associated with application of the recommendations in the guideline.

## METHOD OF GUIDELINE VALIDATION

External Peer Review  
Internal Peer Review

## DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Each guideline is reviewed internally and externally using the AGREE (Appraisal of Guidelines for Research and Evaluation) instrument as the evaluation tool. The external reviewers consist of a multidisciplinary group of individuals (may include dietitians, doctors, psychologists, pharmacists, nurses, etc.). The review is done electronically. The guideline is adjusted by consensus of the expert panel and approved by American Dietetic Association's Evidence-Based Practice Committee prior to publication on the Evidence Analysis Library (EAL).

## RECOMMENDATIONS

### MAJOR RECOMMENDATIONS

**Note from the National Guideline Clearinghouse (NGC) and the American Dietetic Association (ADA):** Several recommendations of this guideline were based on the evidence analysis done by the National Heart Lung and Blood Institute (NHLBI). The NHLBI guidelines were based on a systematic review of the

literature and the evidence statements and recommendations were categorized by levels of evidence ranging from A to D. Refer to the [NHLBI Web site](#) for definitions of those grades.

Ratings for the strength of the recommendations (Strong, Fair, Weak, Consensus, Insufficient Evidence), conclusion grades (I-V), and statement labels (Conditional versus Imperative) are defined at the end of "Major Recommendations."

## **Adult Weight Management (AWM) Classification of Overweight and Obesity**

### **AWM: Body Mass Index (BMI)-Classification of Overweight and Obesity**

BMI and waist circumference should be used to classify overweight and obesity, estimate risk for disease, and to identify treatment options. BMI and waist circumference are highly correlated to obesity or fat mass and risk of other diseases (NHLBI report).

**Fair**, Imperative

### **AWM: Body Weight-Classification of Overweight and Obesity**

Body weight and waist circumference should be used to determine the effectiveness of therapy in the reassessment. BMI and waist circumference are highly correlated to obesity or fat mass (NHLBI report).

**Fair**, Imperative

## **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of C and D**

### **Adult Weight Management (AWM) Comprehensive Weight Management Program**

#### **AWM: Comprehensive Weight Management Program**

Weight loss and weight maintenance therapy should be based on a comprehensive weight management program including diet, physical activity, and behavior therapy. The combination therapy is more successful than using any one intervention alone.

**Strong**, Imperative

## **Recommendation Strength Rationale**

- **NHLBI Evidence Category of A**

### **Adult Weight Management (AWM) Optimal Length of Weight Management Therapy**

## **AWM: Optimal Length of Therapy**

Medical nutrition therapy for weight loss should last at least 6 months or until weight loss goals are achieved, with implementation of a weight maintenance program after that time. A greater frequency of contacts between the patient and practitioner may lead to more successful weight loss and maintenance.

**Strong**, Imperative

### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A, B, C, D**

## **Adult Weight Management (AWM) Realistic Weight Goal Setting**

### **AWM: Realistic Weight Goals**

Individualized goals of weight loss therapy should be to reduce body weight at an optimal rate of 1 to 2 lbs per week for the first 6 months and to achieve an initial weight loss goal of up to 10% from baseline. These goals are realistic, achievable, and sustainable.

**Strong**, Imperative

### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A and B**

## **Adult Weight Management (AWM) Determination of Resting Metabolic Rate**

### **AWM: Determining Energy Needs**

Estimated energy needs should be based on resting metabolic rate (RMR). If possible, RMR should be measured (e.g., indirect calorimetry). If RMR cannot be measured, then the Mifflin-St. Jeor equation using **actual** weight is the most accurate for estimating RMR for overweight and obese individuals.

Refer to the original guideline document for the Mifflin-St. Jeor equations.

**Strong**, Conditional

### **Recommendation Strength Rationale**

- **Conclusion statements are Grades I and II**

## **Adult Weight Management (AWM) Reduced Calorie Diets**

### **AWM: Reduced Calorie Diet**

An individualized reduced calorie diet is the basis of the dietary component of a comprehensive weight management program. Reducing dietary fat and/or carbohydrates is a practical way to create a caloric deficit of 500 to 1000 kilocalories (kcal) below estimated energy needs and should result in a weight loss of 1 to 2 lbs per week.

**Strong**, Imperative

#### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A**

#### **Adult Weight Management (AWM) Eating Frequency and Patterns**

##### **AWM: Eating Frequency and Patterns**

Total caloric intake should be distributed throughout the day, with the consumption of 4 to 5 meals/snacks per day including breakfast. Consumption of greater energy intake during the day may be preferable to evening consumption.

**Fair**, Imperative

#### **Recommendation Strength Rationale**

- **Conclusion statements are Grade II**

#### **Adult Weight Management (AWM) Portion Control**

##### **AWM: Portion Control**

Portion control should be included as part of a comprehensive weight management program. Portion control at meals and snacks results in reduced energy intake and weight loss.

**Fair**, Imperative

#### **Recommendation Strength Rationale**

- **Conclusion statements are Grade III**

#### **Adult Weight Management (AWM) Meal Replacements**

##### **AWM: Meal Replacements**

For people who have difficulty with self selection and/or portion control, meal replacements (e.g., liquid meals, meal bars, calorie-controlled packaged meals) may be used as part of the diet component of a comprehensive weight management program. Substituting one or two daily meals or snacks with meal replacements is a successful weight loss and weight maintenance strategy.

**Strong**, Conditional

**Recommendation Strength Rationale**

- **Conclusion statements are Grade I**

**Adult Weight Management (AWM) Nutrition Education**

**AWM: Nutrition Education**

Nutrition education should be individualized and included as part of the diet component of a comprehensive weight management program. Short term studies show that nutrition education (e.g., reading nutrition labels, recipe modification, cooking classes) increases knowledge and may lead to improved food choices.

**Fair**, Imperative

**Recommendation Strength Rationale**

- **Conclusion statements are Grade III**

**Adult Weight Management (AWM) Low Glycemic Index Diets**

**AWM: Low Glycemic Index Diets**

A low glycemic index diet is **not** recommended for weight loss or weight maintenance as part of a comprehensive weight management program, since it has not been shown to be effective in these areas.

**Strong**, Imperative

**Recommendation Strength Rationale**

- **Conclusion statement is Grade I**

**Adult Weight Management (AWM) Dairy/Calcium and Weight Management**

**AWM: Dairy/Calcium and Weight Management**

In order to meet current nutritional recommendations, incorporate 3 to 4 servings of low fat dairy foods a day as part of the diet component of a comprehensive weight management program. Research suggests that calcium intake lower than recommended levels is associated with increased body weight. However, the effect of dairy and/or calcium at or above recommended levels on weight management is unclear.

Refer to the original guideline document for dietary reference intakes for calcium.

**Fair**, Imperative

## **Recommendation Strength Rationale**

- **Conclusion statement is Grade III**

## **Adult Weight Management (AWM) Low Carbohydrate Diet**

### **AWM: Low Carbohydrate Diet**

Having patients focus on reducing carbohydrates rather than reducing calories and/or fat may be a short term strategy for some individuals. Research indicates that focusing on reducing carbohydrate intake (<35% of kcals from carbohydrates) results in reduced energy intake. Consumption of a low-carbohydrate diet is associated with a greater weight and fat loss than traditional reduced calorie diets during the first 6 months, but these differences are not significant after 1 year.

**Fair**, Conditional

## **Recommendation Strength Rationale**

- **Conclusion statement is Grade II**

## **Adult Weight Management (AWM) Physical Activity**

### **AWM: Physical Activity**

Physical activity should be part of a comprehensive weight management program. Physical activity level should be assessed and individualized long-term goals established to accumulate at least 30 minutes or more of moderate intensity physical activity on most, and preferably, all days of the week, unless medically contraindicated. Physical activity contributes to weight loss, may decrease abdominal fat, and may help with maintenance of weight loss.

**Strong**, Imperative

## **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A, B, and C**

## **Adult Weight Management (AWM) Multiple Behavior Therapy Strategies**

### **AWM: Multiple Behavior Therapy Strategies**

A comprehensive weight management program should make maximum use of multiple strategies for behavior therapy (e.g., self monitoring, stress management, stimulus control, problem solving, contingency management, cognitive restructuring, and social support). Behavior therapy in addition to diet and physical activity leads to additional weight loss. Continued behavioral interventions may be necessary to prevent a return to baseline weight.

**Strong**, Imperative

#### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A and B**

#### **Adult Weight Management (AWM) Medication as Part of a Comprehensive Program**

##### **AWM: Use of Weight Loss Medications**

Food and Drug Administration (FDA)-approved weight loss medications may be part of a comprehensive weight management program. Dietitians should collaborate with other members of the health care team regarding the use of FDA-approved weight loss medications for people who meet the NHLBI criteria. Research indicates that pharmacotherapy may enhance weight loss in some overweight and obese adults.

**Strong**, Imperative

#### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of A, B and C**

#### **Adult Weight Management (AWM) Bariatric Surgery for Weight Loss**

##### **AWM: Bariatric Surgery for Weight Loss**

Dietitians should collaborate with other members of the health care team regarding the appropriateness of bariatric surgery for people who have not achieved weight loss goals with less invasive weight loss methods and who meet the NHLBI criteria. Separate ADA evidence based guidelines are being developed on nutrition care in bariatric surgery.

**Strong**, Imperative

#### **Recommendation Strength Rationale**

- **NHLBI Evidence Categories of B**

#### **Definitions:**

#### **Conditional versus Imperative Recommendations**

Recommendations can be worded as **conditional** or **imperative** statements. Conditional statements clearly define a specific situation, while imperative statements are broadly applicable to the target population without restraints on their pertinence. More specifically, a conditional recommendation can be stated in if/then terminology (e.g., If an individual does not eat food sources of omega-3



fatty acids, then 1g of EPA and DHA omega-3 fatty acid supplements *may* be recommended for secondary prevention).

In contrast, imperative recommendations "require," or "must," or "should achieve certain goals," but do not contain conditional text that would limit their applicability to specified circumstances. (e.g., Portion control should be included as part of a comprehensive weight management program. Portion control at meals and snacks results in reduced energy intake and weight loss).

### Levels of Evidence

| <b>Strength of Evidence Elements</b>   | <b>Grade I<br/>Good/Strong</b>   | <b>Grade II<br/>Fair</b>  | <b>Grade III<br/>Limited/Weak</b>  | <b>Grade IV<br/>Expert Opinion Only</b>  | <b>Grade V<br/>No Assignment</b>                      |
|--|--|---|--|--|---|
| <b>Quality</b> <ul style="list-style-type: none"> <li>Scientific rigor/validity</li> <li>Considers design and execution</li> </ul> | Studies of strong design for question<br><br>Free from design flaws, bias and execution problems   | Studies of strong design for question with minor methodological concerns<br><br>OR<br><br>Only studies of weaker study design for question    | Studies of weak design for answering the question<br><br>OR<br><br>Inconclusive findings due to design flaws, bias or execution problems | No studies available<br><br>Conclusion based on usual practice, expert consensus, clinical experience, opinion, or extrapolation from basic research | No evidence that pertains to question being addressed |
| <b>Consistency</b><br><br>Of findings across studies   | Findings generally consistent in direction and size of effect or degree of association, and statistical significance with minor exceptions at most | Inconsistency among results of studies with strong design<br><br>OR<br><br>Consistency with minor exceptions across studies of weaker designs | Unexplained inconsistency among results from different studies<br><br>OR<br><br>Single study unconfirmed by other studies                | Conclusion supported solely by statements of informed nutrition or medical commentators  | NA  |
| <b>Quantity</b> <ul style="list-style-type: none"> <li>Number of studies</li> <li>Number of subjects in</li> </ul>                 | One to several good quality studies<br><br>Large number of subjects studies  | Several studies by independent investigators<br><br>Doubts about adequacy of  | Limited number of studies<br><br>Low number of subjects studies and/or inadequate  | Unsubstantiated by published studies   | Relevant studies have not been done                   |

| <b>Strength of Evidence Elements</b>   | <b>Grade I<br/>Good/Strong</b>  | <b>Grade II<br/>Fair</b>  | <b>Grade III<br/>Limited/Weak</b>  | <b>Grade IV<br/>Expert Opinion Only</b>         | <b>Grade V<br/>Expert Opinion Only</b> |
|--|---|---|--|---|--|
| studies  | Studies with negative results having sufficiently large sample size for adequate statistical power  | sample size to avoid Type I and Type II error                       | sample size within studies   |   |  |
| <b>Clinical Impact</b> <ul style="list-style-type: none"> <li>Importance of studies outcomes</li> <li>Magnitude of effect</li> </ul> | <p>Studied outcome relates directly to the question</p> <p>Size of effect is clinically meaningful</p> <p>Significant (statistical) difference is large</p> | Some doubt about the statistical or clinical significance of effect | <p>Studies outcome is an intermediate outcome or surrogate for the true outcome of interest</p> <p>OR</p> <p>Size of effect is small or lacks statistical and/or clinical significance</p> | Objective data unavailable                      | Indicate area for future research      |
| <b>Generalizability</b><br><br>To population of interest   | Studied population, intervention and outcomes are free from serious doubts about generalizability   | Minor doubts about generalizability                                 | Serious doubts about generalizability due to narrow or different study population, intervention or outcomes studied  | Generalizability limited to scope of experience | NA                                     |

This grading system was based on the grading system from: Greer N, Mosser G, Logan G, Wagstrom Halaas G. A practical approach to evidence grading. *Jt Comm. J Qual Improv.* 2000; 26:700-712. In September 2004, The ADA Research Committee modified the grading system to this current version.

### Criteria for Recommendation Rating

| Statement Rating | Definition  | Implication for Practice  |
|------------------|---|---|
| <b>Strong</b>    | A <b>Strong</b> recommendation means that the workgroup believes that the benefits of the recommended approach clearly exceed the harms (or that the harms clearly exceed the benefits in the case of a strong negative recommendation), and that the quality of the supporting evidence is excellent/good (grade I or II)*. In some clearly identified circumstances, strong recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits strongly outweigh the harms. | Practitioners should follow a <b>Strong</b> recommendation unless a clear and compelling rationale for an alternative approach is present.  |
| <b>Fair</b>      | A <b>Fair</b> recommendation means that the workgroup believes that the benefits exceed the harms (or that the harms clearly exceed the benefits in the case of a negative recommendation), but the quality of evidence is not as strong (grade II or III)*. In some clearly identified circumstances, recommendations may be made based on lesser evidence when high-quality evidence is impossible to obtain and the anticipated benefits outweigh the harms.   | Practitioners should generally follow a <b>Fair</b> recommendation but remain alert to new information and be sensitive to patient preferences.   |
| <b>Weak</b>      | A <b>Weak</b> recommendation means that the quality of evidence that exists is suspect or that well-done studies (grade I, II, or III)* show little clear advantage to one approach versus another.   | Practitioners should be cautious in deciding whether to follow a recommendation classified as <b>Weak</b> , and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role. |
| <b>Consensus</b> | A <b>Consensus</b> recommendation means that Expert opinion (grade IV)* supports the guideline recommendation even though the available scientific evidence did not present consistent results, or controlled trials were lacking.  | Practitioners should be flexible in deciding whether to follow a recommendation classified <b>Consensus</b> , although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.                                      |

| Statement Rating             | Definition  | Implication for Practice   |
|------------------------------|---|--|
| <b>Insufficient Evidence</b> | An <b>Insufficient Evidence</b> recommendation means that there is both a lack of pertinent evidence (grade V)* and/or an unclear balance between benefits and harms. | Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as <b>Insufficient Evidence</b> and should exercise judgment and be alert to emerging publications that report evidence that clarifies the balance of benefit versus harm. Patient preference should have a substantial influencing role. |

\*Conclusion statements are assigned a grade based on the strength of the evidence. Grade I is good; grade II, fair; grade III, limited; grade IV signifies expert opinion only and grade V indicates that a grade is not assignable because there is no evidence to support or refute the conclusion. The evidence and these grades are considered when assigning a rating (Strong, Fair, Weak, Consensus, Insufficient Evidence - see chart above) to a recommendation.

Adapted by the American Dietetic Association from the American Academy of Pediatrics, Classifying Recommendations for Clinical Practice Guideline, Pediatrics. 2004;114:874-877.

## CLINICAL ALGORITHM(S)

The following algorithms are provided in the original guideline document:

- Weight management screening
- Weight management treatment
- Energy expenditure
- Assess nutritional status
- Dietary intervention

## EVIDENCE SUPPORTING THE RECOMMENDATIONS

### TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is identified and graded for each recommendation (see "Major Recommendations").

The guideline contains conclusion statements that are supported by evidence summaries and evidence worksheets. These resources summarize the important studies (randomized controlled trials [RCTs], clinical studies, observational studies, cohort and case-control studies) pertaining to the conclusion statement and provide the study details.

## BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

### POTENTIAL BENEFITS

A priority aim and benefit of implementing the recommendations in this guideline would be to improve the percentage of individuals who are able to meet their treatment goal, whether by reducing body weight, preventing weight gain or maintaining weight loss.

## **POTENTIAL HARMS**

### **Overall Risk/Harm Considerations**

Safety issues should be considered for each form of treatment recommended. Factors to consider when exploring treatment options include:

- Certain factors, such as age, socioeconomic status, cultural issues and disease conditions, may need to be taken into consideration in the application of these guidelines.
- Clinical judgment in the application of these guidelines may be necessary for patients with certain conditions such as pregnancy, HIV/AIDS, oncology treatment, severe psychiatric disorders and metabolic diseases such as Prader-Willi Syndrome.
- Classification of obesity and determination of energy needs may not apply to certain individuals.
- Reduction of caloric intake may result in nutritional inadequacies. Therefore, special attention should be paid to maintaining adequate intake of vitamins and minerals.
- Intense physical activity in some individuals who are overweight or obese may contribute to disability or death; thus, consultation with a physician prior to beginning an exercise program should be recommended.
- Adverse side effects have been observed in some patients receiving pharmacotherapy for weight management. Only those drugs approved by the FDA for long-term use have data to support long-term safety and efficacy.
- Weight loss can produce adverse effects and regular monitoring by health professionals is advised.

### **Recommendation Specific Risks/Harms**

#### *Classification of Overweight and Obesity*

- If a patient is very short (under 5 feet) or has a body mass index (BMI) above the 25 to 34.9 range, waist cutpoints used for the general population may not be applicable. In addition, BMI may overestimate body fat in athletes and others who have a muscular build and those with edema. BMI may underestimate body fat in older persons and others who have lost muscle mass.

#### *Reduced Calorie Diet*

- Reduction of caloric intake may result in nutritional inadequacies; therefore, special attention should be paid to maintaining adequate intake of vitamins and minerals.

#### *Low Carbohydrate Diet*

- Safety has not been evaluated for long term, extreme restrictions of carbohydrates (<35% of kcals from carbohydrates). Because of the limited research, practitioner should use caution in suggesting a low carbohydrate diets for even short term use for the following groups:
  - Patients with osteoporosis
  - Patients with kidney disease
  - Patients with increased low-density lipoprotein (LDL)

#### *Physical Activity*

- Intense physical activity in some overweight and obese individuals may contribute to disability or death; thus, consultation with a physician prior to beginning an exercise program should be recommended.

#### *Use of Weight Loss Medications*

- Adverse side effects have been observed in some patients receiving pharmacotherapy for weight management. Only those drugs approved by the U.S. Food and Drug Administration (FDA) for long term use have data to support long term safety and efficacy.

## CONTRAINDICATIONS

### CONTRAINDICATIONS

Clinical judgment is crucial in the application of these guidelines. Careful consideration should be given to certain conditions, such as pregnancy, HIV/AIDS, oncology treatment, severe psychiatric disorders and metabolic diseases such as Prader-Willi Syndrome.

## QUALIFYING STATEMENTS

### QUALIFYING STATEMENTS

- This nutrition practice guideline is meant to serve as a general framework for handling clients with particular health problems. It may not always be appropriate to use these nutrition practice guidelines to manage clients because individual circumstances may vary. For example, different treatments may be appropriate for clients who are severely ill or who have co-morbid, socioeconomic, or other complicating conditions. The independent skill and judgment of the health care provider must always dictate treatment decisions. These nutrition practice guidelines are provided with the express understanding that they do not establish or specify particular standards of care, whether legal, medical, or other.
- This guideline is not intended as a replacement for interventions typically within the scope of practice of a certified exercise physiologist or other professional, for which adequate training in physical activity interventions and other therapies is necessary.
- While the guideline represents a statement of best practice based on the latest available evidence at the time of publishing, they are not intended to

override professional judgment. Rather, they may be viewed as a relative constraint on individual clinician discretion in a particular clinical circumstance.

## IMPLEMENTATION OF THE GUIDELINE

### DESCRIPTION OF IMPLEMENTATION STRATEGY

The publication of this guideline is an integral part of the plans for getting the American Dietetic Association Medical Nutrition Therapy (ADA MNT) evidence-based recommendations on adult weight management to all dietetics practitioners engaged in, teaching about, or researching weight management as quickly as possible. National implementation workshops at various sites around the country and during the ADA Food Nutrition Conference Expo (FNCE) are planned. Additionally, there are recommended dissemination and adoption strategies for local use of the *ADA Adult Weight Management Evidence-Based Nutrition Practice Guideline*.

The guideline development team recommended multi-faceted strategies to disseminate the guideline and encourage its implementation. Management support and learning through social influence are likely to be effective in implementing guidelines in dietetic practice. However, additional interventions may be needed to achieve real change in practice routines.

Implementation of the Adult Weight Management guideline will be achieved by announcement at professional events, presentations and training. Some strategies include:

- **National and Local Events** – State dietetic association meetings and media coverage will help promote the guideline
- **Local Feedback Adaptation** – Presentation by members of the work group at peer review meetings and opportunities for continuing education units (CEUs) for courses completed
- **Education Initiatives** – The guideline and supplementary resources are freely available for use in the education and training of dietetic interns and students in approved Commission on Accreditation of Dietetics Education (CADE) programs
- **Champions** – Local champions have been identified and expert members of the guideline team will prepare articles for publications. Resources are provided that include PowerPoint presentations, full guidelines, and pre-prepared case studies
- **Practical Tools** – Some of the tools that will be developed to help implement the guideline include specially designed resources such as clinical algorithms, slide presentation(s), training, and toolkits

Specific distribution strategies include:

Publication in Full – The guideline will be available electronically at the ADA Evidence Analysis Library website ([www.adaevidencelibrary.com](http://www.adaevidencelibrary.com)) and has been announced to all the ADA dietetic practice groups. The ADA Evidence Analysis

Library will also provide downloadable supporting information and links to relevant position papers.

## **IMPLEMENTATION TOOLS**

Clinical Algorithm  
Patient Resources  
Tool Kits

For information about [availability](#), see the "Availability of Companion Documents" and "Patient Resources" fields below.

## **INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES**

### **IOM CARE NEED**

Getting Better  
Living with Illness

### **IOM DOMAIN**

Effectiveness  
Patient-centeredness

## **IDENTIFYING INFORMATION AND AVAILABILITY**

### **BIBLIOGRAPHIC SOURCE(S)**

American Dietetic Association (ADA). Adult weight management evidence based nutrition practice guideline. Chicago (IL): American Dietetic Association (ADA); 2006 May. Various p. [151 references]

### **ADAPTATION**

The levels of evidence was based on the grading system from: Greer N, Mosser G, Logan G, Wagstrom Halaas G. *A practical approach to evidence grading. Jt Comm. J Qual Improv.* 2000; 26:700-712. In September 2004, The American Dietetic Association (ADA) Research Committee modified the grading system to this current version.

The grades of recommendation were adapted by the American Dietetic Association (ADA) from the American Academy of Pediatrics, *Classifying Recommendations for Clinical Practice Guideline, Pediatrics.* 2004;114;874-877.

These recommendations for adult weight management are based on a combination of recent ADA evidence analysis and recommendations from the evidence-based guidelines developed by the Expert Panel on the Identification, Evaluation and Treatment of Overweight and Obesity in Adults, which was convened in May 1995 by the National Heart, Lung, and Blood Institute's Obesity



Education Initiative in cooperation with the National Institute of Diabetes and Digestive and Kidney Diseases.

**DATE RELEASED**

2006 May

**GUIDELINE DEVELOPER(S)**

American Dietetic Association - Professional Association

**SOURCE(S) OF FUNDING**

American Dietetic Association

**GUIDELINE COMMITTEE**

Adult Weight Management Evidence-Based Guideline Workgroup

**COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE**

*Workgroup Members:* Christina Biesemeier, MS, RD, LD, FADA, *Chair*; Ruth Ann Carpenter, MS, RD, LD; Molly Gee, Med, RD, LD; Erica Gradwell, MS, RD, *Workgroup Project Manager/Lead Analyst*; Patricia Harper, MS, RD; Cathy Nonas, MS, RD, CDE; Rebecca Reeves, DrPH, RD, FADA; Sachiko St. Jeer, PhD, RD

**FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST**

In the interest of full disclosure, American Dietetic Association (ADA) has adopted the policy of revealing relationships work group members have with companies that sell products or services that are relevant to this guideline topic. It should not be assumed that these financial interests will have an adverse impact on the content of the guideline, but they are noted here to fully inform readers. Readers of the guideline may assume that only work group members listed below have potential conflicts of interest to disclose.

No work group members have potential conflicts of interest to disclose.

**GUIDELINE STATUS**

This is the current release of the guideline.

The guideline will undergo a complete revision every three to five years.

**GUIDELINE AVAILABILITY**

Electronic copies: Available from the [American Dietetic Association Web site](#).

**AVAILABILITY OF COMPANION DOCUMENTS**

The following are available:

- Executive summary of recommendations. Chicago (IL): American Dietetic Association; April 2008. Available from the [American Dietetic Association Web site](#).
- Adult weight management toolkit. Chicago (IL): American Dietetic Association. Available for purchase from the [American Dietetic Association Web site](#).

## **PATIENT RESOURCES**

Adult weight management toolkit contains patient resources information.

Please note: This patient information is intended to provide health professionals with information to share with their patients to help them better understand their health and their diagnosed disorders. By providing access to this patient information, it is not the intention of NGC to provide specific medical advice for particular patients. Rather we urge patients and their representatives to review this material and then to consult with a licensed health professional for evaluation of treatment options suitable for them as well as for diagnosis and answers to their personal medical questions. This patient information has been derived and prepared from a guideline for health care professionals included on NGC by the authors or publishers of that original guideline. The patient information is not reviewed by NGC to establish whether or not it accurately reflects the original guideline's content.

## **NGC STATUS**

This NGC summary was completed by ECRI Institute on November 7, 2008. The information was verified by the guideline developer on December 9, 2008.

## **COPYRIGHT STATEMENT**

The American Dietetic Association encourages the free exchange of evidence in nutrition practice guidelines and promotes the adaptation of the guidelines for local conditions. However, please note that guidelines are subject to copyright provisions. To replicate or reproduce this guideline, in part or in full, please obtain agreement from the American Dietetic Association. Please contact Kari Kren at [kkren@eatright.org](mailto:kkren@eatright.org) for copyright permission.

When modifying the guidelines for local circumstances, significant departures from these comprehensive guidelines should be fully documented and the reasons for the differences explicitly detailed.

## **DISCLAIMER**

### **NGC DISCLAIMER**

The National Guideline Clearinghouse™ (NGC) does not develop, produce, approve, or endorse the guidelines represented on this site.

All guidelines summarized by NGC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public or private organizations, other government agencies, health care organizations or plans, and similar entities.

Guidelines represented on the NGC Web site are submitted by guideline developers, and are screened solely to determine that they meet the NGC Inclusion Criteria which may be found at <http://www.guideline.gov/about/inclusion.aspx>.

NGC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI Institute, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

© 1998-2009 National Guideline Clearinghouse

Date Modified: 1/5/2009

