DM: Medical Nutrition Therapy 2008

**DM: MNT and Number/Length of Initial Series of Encounters**

Medical nutrition therapy (MNT) provided by a registered dietitian (RD) is recommended for individuals with type 1 and type 2 diabetes. An initial series of three to four encounters each lasting from 45 to 90 minutes is recommended. This series, beginning at diagnosis of diabetes or at first referral to an RD for MNT for diabetes, should be completed within three to six months. The RD should determine if additional MNT encounters are needed after the initial series based on the nutrition assessment of learning needs and progress towards desired outcomes. Studies based on a range in the number (1-3 individual sessions or a series of 6-12 group sessions) and length (45-90 minutes) report sustained positive outcomes at one year and longer. Studies implementing a variety of nutrition interventions report a reduction in A1C levels, and some studies also report improved lipid profiles, improved weight management, adjustments in medications, and reduction in the risk for onset and progression of comorbidities.

**Strong, Imperative**

**DM: MNT Long-Term Follow-up Encounters**

At least one follow-up encounter is recommended annually to reinforce lifestyle changes and to evaluate and monitor outcomes. Studies report maintained benefit with annual follow-up encounters.

**Strong, Imperative**
outcomes that impact the need for changes in MNT or medication. The RD should determine if additional MNT encounters are needed. Studies involving regular lifestyle intervention sessions (up to 1 per month) report sustained positive outcomes at one year and longer.

**Strong, Imperative**

### Nutrition Assessment

**DM: Assessment and Diabetes 2008**

**DM: Nutrition Assessment**

The RD should assess food intake (focusing on carbohydrate), medication, metabolic control (glycemia, lipids, and blood pressure), anthropometric measurements and physical activity to serve as the basis for implementation of the nutrition prescription, goals and intervention. Individuals who have diabetes should receive MNT tailored by the RD.

**Strong, Imperative**

**DM: Assessment of Glycemic Control 2008**

**DM: Assessment of Glycemic Control**

The RD should assess glycemic control and focus medical nutrition therapy to achieve and maintain blood glucose levels in the target range (target glucose levels noted in the *American Diabetes Association Standards of Medical Care in Diabetes*). Studies evaluating the effectiveness of diabetes MNT at three to six months reported reductions in A1C ranging from 0.25% to 2.9%.

**Strong, Imperative**

**DM: Assess Relative Importance of Weight Management 2008**

**DM: Assess Relative Importance of Weight Management**

The RD should assess the relative importance of weight management for persons with diabetes who are overweight or obese. While modest weight loss has been shown to improve insulin resistance in overweight and obese insulin-resistant individuals, research on sustained weight loss interventions lasting 1 year or longer reported inconsistent effects on A1C.

**Strong, Conditional**

### Nutrition Intervention

**DM: Intervention Options 2008**

**DM: Intervention Options**

The RD should implement MNT selecting from a variety of interventions (reduced energy and fat intake, carbohydrate counting, simplified meal plans, healthy food choices, individualized meal planning strategies, exchange lists, insulin-to-carbohydrate ratios, physical activity and behavioral strategies). Nutrition education and counseling should be sensitive to the personal needs, willingness to change, and ability to make changes of the individual with diabetes. Studies reporting on effectiveness of MNT report a variety in the number and type of MNT sessions that lead to improved outcomes.

**Strong, Imperative**

**DM: Macronutrients 2008**

**DM: Macronutrient Percentages**

The RD should encourage consumption of macronutrients based on the Dietary Reference Intakes (DRI) for healthy adults. Research does not support any ideal percentage of energy from macronutrients for persons with diabetes.

**Strong, Imperative**

**DM: Carbohydrate 2008**

DM: Carbohydrate Intake Consistency

In persons receiving either MNT alone, glucose-lowering medications or fixed insulin doses, meal and snack carbohydrate intake should be kept consistent on a day-to-day basis. Consistency in carbohydrate intake results in improved glycemic control.

Strong, Conditional

DM: Carbohydrate Intake and Insulin Dose Adjustment

In persons with type 1 or type 2 diabetes who adjust their mealtime insulin doses or who are on insulin pump therapy, insulin doses should be adjusted to match carbohydrate intake (insulin-to-carbohydrate ratio). This can be accomplished by comprehensive nutrition education and counseling on interpretation of blood glucose patterns, nutrition-related medication management and collaboration with the healthcare team. Adjusting insulin dose based on planned carbohydrate intake improves glycemic control and quality of life without any adverse effects.

Strong, Conditional

DM: Sucrose and Diabetes 2008

DM: Sucrose Intake

If persons with diabetes choose to eat foods containing sucrose, the sucrose-containing foods should be substituted for other carbohydrate foods. Sucrose intakes of 10 to 35 percent of total energy intake do not have a negative effect on glycemic or lipid responses when substituted for isocaloric amounts of starch.

Strong, Conditional

DM: Non-nutritive Sweeteners and Diabetes 2008

DM: Non-nutritive Sweeteners

If persons with diabetes choose to consume products containing FDA-approved non-nutritive sweeteners, at levels that do not exceed the ADIs, the RD should advise that some of these products may contain energy and carbohydrate from other sources that needs to be accounted for. Research on non-nutritive sweeteners reports no effect on changes in glycemic response.

Fair, Conditional

DM: Glycemic Index and Diabetes 2008

DM: Glycemic Index

If the use of glycemic index is proposed as a method of meal planning, the RD should advise on the conflicting evidence of effectiveness of this strategy. Studies comparing high versus low GI diets report mixed effects on A1C.

Fair, Conditional

DM: Fiber and Diabetes 2008

DM: Fiber Intake and Glycemia

Recommendations for fiber intake for people with diabetes are similar to the recommendations for the general public (DRI: 14 grams per 1000 kcal). While diets containing 44 to 50 grams of fiber daily are reported to improve glycemia; more usual fiber intakes (up to 24 grams daily) have not shown beneficial effects on glycemia. It is unknown if free-living individuals can daily consume the amount of fiber needed to improve glycemia.

Strong, Imperative

DM: Fiber Intake and Cholesterol

Include foods containing 25-30 grams of fiber per day, with special emphasis on soluble fiber sources (7-13 grams). Diets high in total and soluble fiber, as part of cardioprotective nutrition therapy, can further reduce total cholesterol by 2-3% and LDL cholesterol up to 7%.

Strong, Imperative

DM: Protein and Diabetes 2008

DM: Protein Intake and Normal Renal Function
In persons with type 1 or type 2 diabetes with normal renal function, the RD should advise that usual protein intake of approximately 15 to 20% of daily energy intake does not need to be changed. Although protein has an acute effect on insulin secretion, usual protein intake in long-term studies has minimal effects on glucose, lipids, and insulin concentrations.

**Fair, Conditional**

**DM: Protein Intake and Nephropathy**

In persons with diabetic nephropathy, a protein intake of one gram or less per kg body weight per day is recommended. Diets with less than one gram protein per kg body weight per day have been shown to improve albuminuria in persons with nephropathy; however, they have not been shown to have significant effects on glomerular filtration rates (GFR).

**Fair, Conditional**

**DM: Protein Intake and Late Stage Nephropathy**

For persons with late stage diabetic nephropathy (Chronic Kidney Disease [CKD] Stages 3-5), hypoalbuminemia (an indicator of malnutrition) and energy intake must be monitored and changes in protein and energy intake made to correct deficits. A protein intake of approximately 0.7 grams per kg body weight per day has been associated with hypoalbuminemia, whereas a protein intake of approximately 0.9 grams per kg body weight per day has not.

**Fair, Conditional**

**DM: Glucose Monitoring 2008**

**DM: Blood Glucose Monitoring**

For individuals on nutrition therapy alone or nutrition therapy in combination with glucose-lowering medications, self-monitoring of blood glucose (SMBG) is recommended. Frequency and timing is dependent on diabetes management goals and therapies (i.e. MNT, diabetes medications and physical activity). When SMBG is incorporated into diabetes education programs and the information from SMBG is used to make changes in diabetes management, SMBG is associated with improved glycemic control.

**Fair, Conditional**

**DM: Frequency of Blood Glucose Monitoring**

For persons with type 1 or type 2 diabetes on insulin therapy, at least three to eight blood glucose tests per day are recommended to determine the adequacy of the insulin dose(s) and guide adjustments in insulin dose(s), food intake and physical activity. Some insulin regimens require more testing to establish the best integrated therapy (insulin, food, and activity). Once established, some insulin regimens will require less frequent self-monitoring of blood glucose (SMBG). Intervention studies that include self-management training and adjustment of insulin doses based on SMBG result in improved glycemic control.

**Strong, Conditional**

**DM: Possible Need for Continuous Glucose Monitoring or More Frequent SMBG**

Persons experiencing unexplained elevations in A1C or unexplained hypoglycemia and hyperglycemia may benefit from use of continuous glucose monitoring (CGM) or more frequent SMBG. It is essential that persons with diabetes receive education as to how to calibrate CGM and how to interpret CGM results. Studies have proven the accuracy of CGM and most show that using the trend/pattern data from CGM can result in less glucose variability and improved glucose control.

**Fair, Conditional**

**DM: Prevention and Treatment of CVD 2008**

**DM: CVD and Cardioprotective Nutrition Therapy**

Cardioprotective nutrition interventions for the prevention and treatment of cardiovascular disease (CVD) should be implemented in the initial series of encounters. Diabetes is associated with an increased risk for CVD and glycemic control may improve the lipid profile.

**Strong, Imperative**

**DM: CVD and Cardioprotective Nutrition Interventions**

Cardioprotective nutrition interventions for prevention and treatment of CVD include reduction in saturated and trans fats and dietary cholesterol, and interventions to improve blood pressure. Studies in persons with diabetes utilizing these interventions report a reduction in cardiovascular risk and improved cardiovascular outcomes.

**Strong, Imperative**

**DM: Weight Management 2008**

**DM: Diabetes and Weight Management**

The RD should advise that glycemic control is the primary focus for diabetes management. While decreasing energy
intake may improve glycemic control, it is unclear whether weight loss alone will improve glycemic control. Sustained weight loss interventions lasting 1 year or longer reported inconsistent effects on hemoglobin A1C.

**Fair, Conditional**

**DM: Physical Activity 2008**

**DM: Type 2 Diabetes and Physical Activity**

In persons with type 2 diabetes, 90 to 150 minutes of accumulated moderate-intensity aerobic physical activity per week as well as resistance/strength training three times per week is recommended. Both aerobic and resistance training improve glycemic control, independent of weight loss. Physical activity also improves insulin sensitivity and decreases risk for cardiovascular disease and all-cause mortality.

**Strong, Conditional**

**DM: Type 1 Diabetes and Physical Activity**

Individuals with type 1 diabetes should be encouraged to engage in regular physical activity. Although exercise is not reported to improve glycemic control in persons with type 1 diabetes, individuals may receive the same benefits from exercise as the general public—decreased risk for cardiovascular disease and improved sense of well-being.

**Fair, Conditional**

**DM: Physical Activity and Insulin/Insulin Secretagogue Use**

The RD should instruct individuals on insulin or insulin secretagogues on the safety guidelines to prevent hypoglycemia (frequent blood glucose monitoring and possible adjustment in insulin dose or carbohydrate intake). Research indicates that the incidence of hypoglycemia during exercise may depend on baseline glucose levels.

**Fair, Conditional**

**DM: Coordination of Care and Diabetes 2008**

**DM: Coordination of Care**

The RD should implement MNT and coordinate care with an interdisciplinary team. An interdisciplinary team approach is necessary to integrate MNT for patients with diabetes into overall management.

**Consensus, Imperative**

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**Nutrition Monitoring and Evaluation**

**DM: Monitor & Evaluate and Diabetes 2008**

**DM: Monitoring and Evaluation**

The RD should monitor and evaluate food intake, medication, metabolic control (glycemia, lipids, and blood pressure), anthropometric measurements and physical activity. Research reports sustained improvements in A1C at 12 months and longer with long-term follow-up encounters with an RD.

**Strong, Imperative**

**DM: Evaluation of Glycemic Control**

The RD should primarily use blood glucose monitoring results in evaluating the achievement of goals and effectiveness of MNT. Glucose monitoring results can be used to determine whether adjustments in foods and meals will be sufficient to achieve blood glucose goals or if medication additions or adjustments need to be combined with MNT.

**Consensus, Imperative**

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- Diabetes Type 1 and 2

**Diabetes Type 1 and 2**

**DM: Introduction (2008)**

Guideline Overview

Guideline Title
Diabetes Type 1 and 2 (2008) Evidence-Based Nutrition Practice Guideline

Guideline Narrative Overview

The focus of this guideline is on medical nutrition therapy (MNT) for adults with type 1 or type 2 diabetes. Primary goals of MNT for adults with diabetes are to achieve and maintain normal blood glucose levels as safely as possible, a lipid profile that reduces risk for cardiovascular disease, and blood pressure in an ideal range.

Type 1 diabetes is primarily a disease of insulin deficiency. The first priority of MNT for adults requiring insulin is to integrate insulin therapy into their usual eating and physical activity pattern.

Type 2 diabetes is a progressive disease that results from defects in insulin action (insulin resistance) and insulin secretion (insulin deficiency). Priorities of MNT progress from lifestyle interventions for prevention of diabetes to MNT alone for diabetes management to MNT in combination with glucose-lowering medications to MNT with insulin. MNT is based on metabolic goals, strategies proven to assist in the achievement of goals, and lifestyle changes that the adult with diabetes is willing and able to make.

Guideline Development

This guideline is intended for use by Registered Dietitians (RDs) involved in providing MNT for adults with diabetes. The guideline must be individualized based on the needs of the adult with diabetes, but it will assist the registered dietitian (RD) to successfully integrate MNT into the overall medical management of type 1 and type 2 diabetes. The recommendations in the guideline were based on a systematic review of the literature. Topics include:

- Process for providing MNT for adults with diabetes
- Carbohydrate—distribution/amount, sucrose, glycemic index, fiber
- Protein
- Blood glucose monitoring
- Prevention and treatment of cardiovascular disease
- Weight management
- Physical activity

The recommendations are based on the work performed by the ADA diabetes evidence analysis work group. The number of supporting documents for these topics is below:

- Recommendations: 18
- Conclusion Statements: 15
- Evidence Summaries: 15
- Article Worksheets: 202

To view the guideline development and review process, click here.

Application of the Guideline

This guideline will be accompanied by a set of companion documents (i.e., a toolkit) to assist the practitioner in applying the guideline. The toolkit will contain materials such as the Medical Nutrition Therapy protocol, documentation forms, outcomes management tools, client education resources and case studies. The toolkit is currently under development and will undergo pilot-testing through the ADA’s Dietetic Practice-Based Research Network prior to publication.

Revision

The literature search will be repeated for each guideline topic on an annual basis to identify new research that has been published since the previous search was completed. Based on the quantity and quality of new research, a determination will be made about whether the new information could change the published recommendation or rating.

If a revision is unwarranted, then the search is recorded, dated and saved until the next review and no further action is taken. If the determination is that there could be a change in the recommendation or rating, then the supporting evidence analysis question(s) will be re-analyzed following the standard ADA Evidence Analysis Process (see ADA Evidence Analysis Manual).

When the analysis is completed, the expert workgroup will approve and re-grade the conclusion statements and recommendations. The guideline will undergo a complete revision every three to five years.

Medical Nutrition Therapy and Diabetes

Scientific evidence supports the effectiveness of medical nutrition therapy to increase effectiveness of diabetes therapy. Topics included in this guideline are:

- Use of medical nutrition therapy and dietitian intervention
- Reduction of blood glucose levels
- Reduction of hemoglobin A1C
- Reduction of blood pressure
- Reduction of risk factors for cardiovascular disease

The registered dietitian plays an integral role on the interdisciplinary healthcare team by making the optimal nutrition prescription and developing the nutrition intervention plan for patients undergoing diabetes therapy. Based on the client's treatment plan and comorbid conditions, other nutrition practice guidelines, such as adult weight management, hypertension, disorders of lipid metabolism, critical illness and nutrition care in bariatric surgery may be needed in order to provide optimal treatment.

Populations to Whom This Guideline May Apply

This guideline applies to adults with type 1 or type 2 diabetes mellitus.

Other Guideline Overview Material

For more details on the guideline components, use the links on the left to access:

- Scope of Guideline
- Statement of Intent and Patient Preference
- Guideline Methods

Implementation of the Guideline

Benefits and Harms of Implementing the Recommendations

Contraindications

Clinical judgment is crucial in the application of these guidelines. Careful consideration should be given to the application of these guidelines for patients with significant medical co-morbidities.

Diabetes Type 1 and 2


Disease/Condition(s)

The purpose of this guideline is to provide evidence-based recommendations for effective medical nutrition therapy (MNT) in the management of type 1 and type 2 diabetes in adults. This guideline is intended for use by Registered Dietitians (RD) involved in providing MNT for this population. Recommendations have been formulated based on current science and provide information on individualized and group nutrition therapy. The major focus of this guideline is on nutrition assessment, nutrition interventions and nutrition monitoring and evaluation, which promote positive clinical outcomes for type 1 and 2 diabetes.

Below, you will find a list of characteristics that describe the Scope of this Guideline.

Guideline Category

Assessment of Therapeutic Effectiveness, Counseling, Evaluation, Management, Treatment

Clinical Specialty

Endocrinology, Family Practice, Nutrition

Intended Users

Registered Dietitians, Advanced Practice Nurses, Health Care Providers, Nurses, Pharmacists, Physician Assistants, Physicians, Students

Guideline Objective(s)

Overall Objective

• To provide MNT guidelines for type 1 and type 2 diabetes that assist in the normalization and maintenance of glycemia, lipid profiles, and blood pressure.

Specific Objectives

• To define evidence-based diabetes nutrition 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 strategies
• To reduce variations in practice among RDs
• To promote self-management strategies that empower the adult with diabetes to take responsibility for day-to-day management
• To provide the RD with data to make recommendations to adjust MNT or recommend other therapies to achieve desired outcomes
• To enhance the quality of life for the adult with diabetes, utilizing customized strategies based on the individual’s preferences, lifestyle and goals
• To develop guidelines for interventions that have measurable clinical outcomes
• To define the highest quality of care within cost constraints of the current healthcare environment.

Target Population

Adult (19 to 44 years), Middle Age (45 to 64 years), Aged (65 to 79 years), Male, Female

Target Population Description

Adults with type 1 or type 2 diabetes.

Interventions and Practices Considered

This guideline is based on ADA’s Nutrition Care Process and Model, which involves the following steps:

• Nutrition Assessment
• Nutrition Diagnosis
• Nutrition Intervention
• Nutrition Monitoring and Evaluation.

This guideline addresses topics that correspond to the following areas of the Nutrition Care Process. Please refer to the Algorithms in this guideline for a more detailed view of the recommendations and their application within the Nutrition Care Process.
I. Referral to a Registered Dietitian

II. Medical Nutrition Therapy

A. Nutrition Assessment


1. Client history
   - Medical/health history
   - Medication and supplement history
   - Social history
   - Personal history
2. Biochemical data—relevant laboratory values
3. Anthropometric measurements
   - Height, weight and BMI, waist circumference
   - Weight change rate
4. Food/nutrition history
   - Nutrition and health awareness
   - Physical activity and exercise
   - Food availability
   - Psychosocial and economic issues impacting nutrition therapy
   - Consideration of co-morbid conditions and need for additional modifications in nutrition care plan
5. Physical examination findings

B. Nutrition Diagnosis


- Inadequate energy intake (NI-1.4)
- Excessive energy intake (NI-1.5)
- Excessive alcohol intake (NI-1.6)
- Excessive fat intake (NI-5.1.2)
- Inappropriate intake of food fats—specify (NI-5.1.3)
- Excessive protein intake (NI-5.2.1)
- Inadequate carbohydrate intake (NI-5.3.1)
- Excessive carbohydrate intake (NI-5.3.2)
- Inappropriate intake of types of carbohydrate—specify (NI-5.3.3)
- Inconsistent carbohydrate intake (NI-5.3.4)
- Inadequate fiber intake (NI-5.3.5)
- Altered GI function (NC-1.4)
- Altered nutrition-related laboratory value (i.e. glucose) (NC-2.2)
- Food medication interaction (NC-2.3)
- Underweight (NC-3.1)
- Involuntary weight loss (NC-3.2)
- Overweight/obesity (NC-3.3)
- Involuntary weight gain (NC-3.4)
- Food- and nutrition-related knowledge deficit (NB-1.1)
- Not ready for diet/lifestyle change (NB-1.3)
- Disordered eating pattern (NB-1.5)
- Limited adherence to nutrition-related recommendations (NB-1.6)
- Physical inactivity (NB-2.1)
- Inability or lack of desire to manage self-care (NB-2.3)
- Impaired ability to prepare foods/meals (NB-2.4)

C. Nutrition Intervention (Planning and Implementation)

Individualized prescription based on:
1. Food/Nutrition Intervention
2. Physical activity Interventions
3. Behavioral Interventions
4. Pharmacotherapy, when indicated


- General/healthful diet (ND-1.1)
- Modify distribution, type, or amount of food and nutrients within meals or at specified time (ND-1.2)
- Specific foods/beverages (ND-1.3)
- Initiate/change nutrition-related medication (ND-6.1 and ND-6.2)
- Initial/brief nutrition education (E-1.1, E-1.2, E-1.3)
- Comprehensive nutrition education (E-2.1, E-2.2, E-2.3, E-2.4, E-2.5)
- Nutrition counseling (C-1.1, C-1.2, C-1.3, C-1.4, C-1.5)
- Strategies (C-2.1, C-2.2, C-2.3, C-2.4, C-2.5, C-2.6, C-2.7, C-2.8, C-2.9, C-2.10)
- Coordination of nutrition care (RC-1.1, RC-1.2, RC-1.3, RC-1.4)

D. Monitoring and Evaluation

The monitoring or progress, measuring of outcomes, and evaluating of outcomes against criteria to determine changes in specific indicators of MNT outcomes.

Although diabetes MNT has the greatest impact at initial diagnosis, it continues to be effective at any time during the disease...
process. Outcomes resulting from nutrition interventions are known in six weeks to three months and evaluation should be done at these times. At three months, if no clinical improvement has been seen in glycemic control or other metabolic outcomes, the RD needs to recommend a change in medication(s).


Nutrition-related behavioral-environmental outcomes (BE-1, BE-2, BE-3, BE-4)

- Food and nutrient intake outcomes (FI-1)
- Nutrition-related physical sign/symptoms outcomes (S-1, S-2)
- Nutrition-related patient/client centered outcomes (PC-1)

Diabetes Type 1 and 2


Statement of Intent

Evidence-based nutrition practice guidelines are developed to help dietetic practitioners, patients and consumers make shared decisions about health care choices in specific clinical circumstances. If properly developed, communicated and implemented, guidelines can improve care.

While they represent a statement of best practice based on the latest available evidence at the time of publishing, they are not intended to overrule professional judgment. Rather, they may be viewed as a relative constraint on individual clinician discretion in a particular clinical circumstance. 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.

The Role of Patient Preference

This guideline recognizes the role of patient preferences for possible outcomes of care, when the appropriateness of a clinical intervention involves a substantial element of personal choice or values. With regard to types of evidence that are associated with particular outcomes, Shaughnessy and Slawson (1-3) describe two major classes. Patient-oriented evidence that matters (POEM) deals with outcomes of importance to patients, such as changes in morbidity, mortality or quality of life. Disease-oriented evidence (DOE) deals with surrogate end-points, such as changes in laboratory values or other measures of response. Although the results of DOE sometimes parallel the results of POEM, they do not always correspond.

When possible, ADA recommends using POEM-type evidence rather than DOE. When DOE is the only guidance available, the guideline indicates that key clinical recommendations lack the support of outcomes evidence.

References


Diabetes Type 1 and 2


General and Specific Methods for Diabetes Type 1 and 2 Guideline

Below are links to both the general methods that ADA has put in place for evidence analysis and creating the guidelines, as well as the specific search methods and criteria for each question.

General Methods

Click here to view a description of the ADA's process of evidence analysis and guideline creation.

Methods for Specific Topics

Select Specific Topic Search Methods (2008) from Introduction on the left to view descriptions of search criteria and findings for each topic covered in this guideline.
History of the Development of This Guideline
This guideline is the first edition of the ADA Diabetes Type 1 and 2 Evidence-Based Nutrition Practice Guideline.

- Diabetes Type 1 and 2

Diabetes Type 1 and 2


Search Criteria and Results for Specific Topics
Each evidence analysis topic has a link to supporting evidence, where the **Search Plan and Results** can be found. Here, you can view when the search plan was performed, inclusion and exclusion criteria, search terms, databases that were searched and the excluded articles.

Below are a list of the recommendations and the related evidence analysis questions, with the link to each search plan. Some recommendations are supported by multiple conclusion statements and therefore have multiple search plans listed.

DM: Medical Nutrition Therapy and Diabetes  
[Search Plan and Results](#)

DM: Assessment and Diabetes  
[Search Plan and Results](#)

DM: Assessment of A1C  
[Search Plan and Results](#)

DM: Assess Importance of Weight Management  
[Search Plan and Results](#)

DM: Intervention options  
[Search Plan and Results](#)

DM: Macronutrients  
[Search Plan and Results](#)

DM: Carbohydrate and Diabetes  
[Search Plan and Results](#)

DM: Sucrose and Diabetes  
[Search Plan and Results](#)

DM: Non-nutritive sweetener and Diabetes  
[Search Plan and Results](#)

DM: Glycemic Index and Diabetes  
[Search Plan and Results](#)

DM: Fiber and Diabetes  
[Search Plan and Results](#)

DM: Protein and Diabetes  
[Search Plan and Results](#)

DM: Self-Monitoring of Blood Glucose and Diabetes  
[Search Plan and Results](#)

DM: Prevention and Treatment of CVD and Diabetes  
[Search Plan and Results](#)

DM: Weight Management and Diabetes  
[Search Plan and Results](#)

DM: Physical Activity and Diabetes  
[Search Plan and Results](#)

DM: Coordination of Care and Diabetes  
[Search Plan and Results](#)

DM: Monitor and Evaluate and Diabetes  
[Search Plan and Results](#)

Diabetes Type 1 and 2


Implementation of the Guideline

This publication of this guideline is an integral part of the plans for getting the ADA MNT evidence-based recommendations on diabetes to all dietetics practitioners engaged in, teaching about or researching diabetes 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 Diabetes Type 1 and 2 Evidence-Based Nutrition Practice Guideline for Adults.

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 diabetes type 1 and 2 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 launch the guideline
- Local Feedback Adaptation – Presentation by members of the work group at peer review meetings and opportunities for CEUs for courses completed
- Education Initiatives – The guideline and supplementary resources will be 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 will be identified and expert members of the guideline team will prepare articles for publications. Resources will be 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 presentations, training and toolkits.

Specific distribution strategies include:

Publication in full: The guideline is available electronically at the ADA Evidence Analysis Library website and announced to all ADA Dietetic Practice Groups. The ADA Evidence Analysis Library will also provide downloadable supporting information and links to relevant position papers.


Benefits and Risks/Harms of Implementing the Recommendations

Safety issues must be reviewed carefully for each adult. General benefits and risks associated with implementation of the guideline are addressed for each recommendation.

Potential Benefits

A primary goal of implementing these recommendations includes improving an adult’s ability to achieve optimal nutrition through healthful food choices and a physically active lifestyle. MNT employing either a series of individual or group sessions and employing a variety of nutrition interventions also report improvements in glycemia, lipid profiles and blood pressure, improved weight management, decreased need for medications, and reduction in the risk for onset and progression of comorbidities.

Although costs of MNT sessions and reimbursement vary, medical nutrition therapy sessions are essential for improved outcomes. MNT education can be considered cost effective when considering the benefits of nutrition interventions on the onset and progression of comorbidities versus the cost of the intervention. Furthermore, MNT can be considered cost effective as interventions for prevention or delay of type 2 diabetes saves the cost of the intervention.

Risk/Harm Considerations

When using these recommendations:

- Review the patient’s age, socioeconomic status, cultural issues and other health conditions.
- Consider a referral to a behavioral specialist if psychosocial issues are a concern.
- Use clinical judgment when evaluating patients with long-standing diabetes and co-morbid conditions.

In addition to the above, a variety of barriers may hinder the application of these recommendations.