Unintended Weight Loss in Older Adults

UWL: Introduction (2009)

Guideline Title

Unintended Weight Loss (2009) in Older Adults Evidence-Based Nutrition Practice Guideline

Guideline Narrative Overview

The focus of this guideline is on medical nutrition therapy (MNT) for people 65 years and older with unintended weight loss (UWL).

The primary goals of MNT for older adults with unintended weight loss are to increase energy, protein and nutrient intakes, improve nutritional status and improve quality of life.

Guideline Development

This guideline is intended for use by Registered Dietitians (RDs) involved in providing MNT to older adults with UWL. The guideline must be individualized, but it will assist the RD to successfully integrate MNT into the overall medical management of older adults with unintended weight loss. The recommendations in the guideline were based on a systematic review of the literature. Sample topics include:

- Caloric needs
- Diet liberalization
- Modified texture diets
- Medical food supplements
- Enteral nutrition
- Dining environment
- Eating assistance.

The recommendations are based on the work performed by the American Dietetic Association Unintended Weight Loss expert working group. The number of supporting documents for these topics is below:

- *Recommendations:* Nineteen (19)
- *Conclusion Statements:* Twenty-two (22)
- *Evidence Summaries:* Twenty-one (22)
- *Article Worksheets:* One hundred seventy-seven (177).

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 (MNT) 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 in the Methodology section*).

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 Unintended Weight Loss

Scientific evidence supports the effectiveness of medical nutrition therapy (MNT) to increase effectiveness of therapy for UWL. Topics included in this guideline are:

- MNT
- Caloric needs
- Diet liberalization
- Modified texture diets
- Medical food supplements
- Enteral nutrition
- Dining environment
- Eating assistance.

The Registered Dietitian (RD) plays an integral role on the interdisciplinary care team by determining the optimal nutrition prescription and developing the nutrition care plan for older adults undergoing therapy for UWL. Based on the older adult's treatment plan and comorbid conditions, other nutrition practice guidelines such as critical care guidelines, may be needed in order to provide optimal treatment.

Populations to Whom This Guideline May Apply

This guideline applies to older adults with UWL.

Other Guideline Overview Material

For more details on the guideline components, click an item below:

- Scope of Guideline
- Statement of Intent
- 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 older adults with significant medical comorbidities.

Unintended Weight Loss in Older Adults

UWL: Scope of Guideline (2009)

Below, you will find a list of characteristics that describe the **scope** of this guideline.

Guideline Category

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

Clinical Specialty

Cardiology, Colon and Rectal Surgery, Critical Care, Endocrinology, Family Practice, Gastroenterology, Geriatrics, Hematology, Nephrology, Neurological Surgery, Neurology, Nursing, Nutrition, Oncology, Orthopedic Surgery, Pharmacology, Physical Medicine and Rehabilitation, Psychiatry, Psychology, Surgery, Thoracic Surgery

Intended Users

Registered Dietitians, Advanced Practice Nurses, Health Care Providers, Nurses, Occupational Therapists, Pharmacists, Physical Therapists, Physician Assistants, Physicians, Psychologists/Non-physician Behavioral Health Clinicians, Social Workers, Speech-Language Pathologists, Students

Guideline Objective(s)

Overall Objective

- To provide medical nutrition therapy (MNT) guidelines for older adults with unintended weight loss (UWL) to increase energy, protein and nutrient intakes, improve nutritional status and improve quality of life.

Specific Objectives

- To define evidence-based UWL 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 provide the RD with data to make recommendations to adjust MNT or recommend other therapies to achieve desired outcomes
- 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

Aged (65 to 79 years), Male, Female

Target Population Description

Older adults with unintended weight loss.

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

Below you will find the nutrition assessment terms related to unintended weight loss care from *International Dietetics & Nutrition*

Terminology Reference Manual. Standardized Language for the Nutrition Care Process. Third Edition.

- Food and nutrient intake
- Diet history
- Diet order
- Diet experience
- Eating environment
- Energy intake
- Food and beverage intake
- Fluid/beverage intake
- Food intake
- Enteral/parenteral intake
- Protein intake
- Vitamin intake
- Mineral/element intake
- Medication and herbal supplements
- Food and nutrition knowledge
- Beliefs and attitudes
- Adherence
- Mealtime behavior
- Food/nutrition program participation
- Safe food/meal availability
- Food and nutrition-related supplies availability
- Physical activity and function
- Nutrition-related ADLs and IADLs
- Physical activity
- Nutrition quality of life
- Anthropometric measurements (height, weight, usual body weight, weight change)
- Biochemical data, medical tests and procedures (metabolic rate profile, nutritional anemia profile, protein profile, vitamin profile)
- Nutrition-focused physical findings (overall appearance, extremities, skin)
- Personal history (physical disability, mobility)
- Patient/client/family medical/health history (integumentary)
- Social history (living/housing situation)
- Energy needs
- Macronutrient needs (estimated protein needs)
- Fluid needs
- Micronutrient needs.

B. Nutrition Diagnosis

Below you will find the nutrition diagnoses related to unintended weight loss care from *International Dietetics & Nutrition Terminology Reference Manual. Standardized Language for the Nutrition Care Process.* Third Edition.

- Increased energy expenditure
- Inadequate energy intake
- Inadequate oral food/beverage intake
- Inadequate intake from enteral/parenteral nutrition
- Inappropriate infusion of enteral/parenteral nutrition
- Inadequate fluid intake
- Increased nutrient needs
- Malnutrition
- Inadequate protein-energy intake
- Inadequate protein intake
- Inadequate vitamin intake (vitamin D)
- Inadequate mineral intake
- Swallowing difficulty
- Biting/chewing (masticatory) difficulty
- Altered GI function
- Impaired nutrient utilization
- Altered nutrition-related laboratory values
- Food-medication interaction
- Underweight
- Involuntary weight loss
- Food- and nutrition-related knowledge deficit
- Harmful beliefs/attitudes about food- or nutrition-related topics
- Not ready for diet/lifestyle change
- Limited adherence to nutrition-related recommendations
- Undesirable food choices
- Physical inactivity
- Excessive physical activity
- Inability or lack of desire to manage self-care
- Impaired ability to prepare foods/meals
- Poor nutrition quality of life
- Self-feeding difficulty
- Intake of unsafe food
- Limited access to food.

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.

Below you will find the nutrition interventions related to unintended weight loss care from *International Dietetics & Nutrition*

Terminology Reference Manual. Standardized Language for the Nutrition Care Process. Third Edition. .

- Meals and snacks
- Enteral/parenteral nutrition
- Medical food supplements
- Vitamin and mineral supplements
- Feeding assistance
- Feeding environment
- Nutrition-related medication management
- Nutrition education
- Nutrition counseling
- Coordination of nutrition care.

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.

Below you will find the nutrition monitoring and evaluation terms related to unintended weight loss care from *International Dietetics & Nutrition Terminology Reference Manual. Standardized Language for the Nutrition Care Process.* Third Edition.

- Eating environment
- Energy intake
- Fluid/beverage intake
- Food intake
- Enteral/parenteral intake
- Protein intake
- Food and nutrition knowledge
- Beliefs and attitudes
- Adherence
- Mealtime behavior
- Physical activity and function
- Nutrition-related ADLs and IADLs
- Physical activity
- Anthropometric measurements (height, weight, usual body weight, weight change)
- Biochemical data, medical tests and procedures (metabolic rate profile, nutritional anemia profile, protein profile, vitamin profile)
- Nutrition-focused physical findings (overall appearance, extremities, skin)
- Personal history (physical disability, mobility)
- Patient/client/family medical/health history (integumentary)
- Social history (living/housing situation)
- Energy needs
- Macronutrient needs (estimated protein needs)
- Fluid needs
- Micronutrient needs.

- Unintended Weight Loss in Older Adults
- Unintended Weight Loss (UWL) in Older Adults Guideline (2009)
- UWL: Introduction (2009)

Unintended Weight Loss in Older Adults

UWL: Statement of Intent (2009)

Unintended Weight Loss in Older Adults Statement of Intent

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

While the evidence-based nutrition practice guideline represents a statement of promising practice based on the latest available evidence at the time of publication, the guideline is not intended to overrule professional judgment. Rather, it 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 and Family Preference

This guideline recognizes the role of patient and family 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

1. Slawson DC, Shaughnessy AF. Becoming an information master: using POEMs to change practice with confidence. Patient-Oriented Evidence that Matters. *J Fam Pract*. 2000 Jan;49(1):63-7. Erratum in: *J Fam Pract* 2000 Mar;49(3):276.

2. Slawson DC, Shaughnessy AF, Ebell MH, Barry HC. Mastering medical information and the role of POEMs--Patient-Oriented Evidence that Matters. *J Fam Pract*. 1997 Sep;45(3):195-196.
3. Shaughnessy AF, Slawson DC. POEMs: patient-oriented evidence that matters. *Ann Intern Med*. 1997 Apr 15;126(8):667.

Unintended Weight Loss in Older Adults

UWL: Guideline Methods (2009)

General and Specific Methods for Unintended Weight Loss (UWL) in Older Adults 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

To view descriptions of search criteria and findings for each topic covered in this guideline select Specific Methods from the Introduction section.

History of the Development of This Guideline

This guideline is the first edition of the ADA Unintended Weight Loss in Older Adults Evidence-Based Nutrition Practice Guideline.

- Unintended Weight Loss in Older Adults
- Unintended Weight Loss (UWL) in Older Adults Guideline (2009)
- UWL: Introduction (2009)

Unintended Weight Loss in Older Adults

UWL: Specific Methods (2009)

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.

Consensus-rated recommendations were not developed using ADA's evidence analysis process, but based on consensus documents. Therefore, these recommendations do not have links to *Search Plans.*

To view the recommendations, select Major Recommendations from the left menu bar.

Unintended Weight Loss (UWL) in Older Adults Evidence-Based Nutrition Practice Guideline

UWL: Nutrition Screening
Search Plan and Results
Search Plan and Results
Search Plan and Results

UWL: Medical Nutrition Therapy
Search Plan and Results

Assessment

UWL: Assessment of Nutritional Status
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results

UWL: Assessment of Food, Fluid and Nutrient Intake
Search Plan and Results
Search Plan and Results

UWL: Assess Anthropometric Measurements
Search Plan and Results
Search Plan and Results

Diagnosis

UWL: Nutrition Diagnosis of Involuntary Weight Loss
Search Plan and Results

Intervention

UWL: Resident Involvement in Meal Planning
Search Plan and Results

UWL: Diet Liberalization
Search Plan and Results

UWL: Indications for Medical Food Supplements
Search Plan and Results
Search Plan and Results

UWL: Caloric Needs
Search Plan and Results

UWL: Feeding Assistance
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results

UWL: Dining Environment
Search Plan and Results

UWL:Collaboration for Texture Modified Diets
Search Plan and Results

UWL: Evaluation and Treatment of Depression
Search Plan and Results

UWL: Appetite Stimulants
Search Plan and Results

Monitoring and Evaluation

UWL: Monitor and Evaluate Nutritional Status
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results
Search Plan and Results

UWL: Monitor and Evaluate Food, Fluid and Nutrient Intake
Search Plan and Results
Search Plan and Results

UWL: Monitor and Evaluate Anthropometric Measurements
Search Plan and Results
Search Plan and Results

The following recommendations were not analyzed through ADA's evidence analysis, but developed based on available consensus documents. See these specific recommendations and references under Major Recommendations.

- *UWL: Assessment of Nutritional Status*
  The Role of Nutrition in Pressure Ulcer Prevention and Treatment: National Pressure Ulcer Advisory Panel/European Pressure Ulcer Advisory Panel, 2009. Accessible at www.npuap.org.
- *UWL: Enteral Nutrition*
  A.S.P.E.N. Enteral Nutrition Practice Recommendations. Bankhead R, Boullata J, Brantley S, Corkins M, Guenter P, Krenitsky J, Lyman B, Metheny NA, Mueller C, Robbins S, Wessel J, and the A.S.P.E.N. Board of Directors. *J Parenter Enteral Nutr* 2009;33(2) March/April:122-167. Originally published online Jan 26, 2009. The online version of this article can be found at: http://pen.sagepub.com

Korner U, Bondolfi A, Buhler E, MacFie J, Meguid MM, Messing B, Oehmichen F, Valentini L, Allison SP. Ethical and legal aspects of enteral nutrition. *Clin Nutr* 2006;25:196-202.

Maillet JO, Potter RL, Heller L. Position of the American Dietetic Association: ethical and legal issues in nutrition, hydration, and feeding. *J Am Diet Assoc* 2002;102(5):716-726.

President's Commission for the Study of Ethical Problems in Medicine and Biomedical and Behavioral Research. Deciding to Forgo Life Sustaining Treatment. No. 83-600503. Washington, DC: Government Printing Office; 1983.

Volkert D, Berner YN, Berry E, Cederholm T, Coti Bertrand P, Milne A, Palmblad J, Schneider S, Sobotka L, Stanga Z, DGEM: Lenzen-Grossimlinghaus R, Krys U, Pirlich M, Herbst B, Schutz T, Schroer W, Weinrebe W, Ockenga J, Lochs H, ESPEN. ESPEN Guidelines on Enteral Nutrition: Geriatrics. *Clin Nutr* 2006;25(2):330-360.

The Role of Nutrition in Pressure Ulcer Prevention and Treatment: National Pressure Ulcer Advisory Panel/European Pressure Ulcer Advisory Panel, 2009. Accessible at www.npuap.org.

- *UWL: Caloric Needs*
  The Role of Nutrition in Pressure Ulcer Prevention and Treatment: National Pressure Ulcer Advisory Panel/European Pressure Ulcer Advisory Panel, 2009. Accessible at www.npuap.org.
- *UWL: Monitor and Evaluate Nutritional Status*
  The Role of Nutrition in Pressure Ulcer Prevention and Treatment: National Pressure Ulcer Advisory Panel/European Pressure Ulcer Advisory Panel, 2009. Accessible at www.npuap.org.

- Unintended Weight Loss in Older Adults
- Unintended Weight Loss (UWL) in Older Adults Guideline (2009)
- UWL: Introduction (2009)

Unintended Weight Loss in Older Adults

UWL: Implementation of the Guideline (2009)

This publication of this guideline is an integral part of the plans for getting the ADA Medical Nutrition Therapy (MNT) evidence-based recommendations on unintended weight loss to all dietetics practitioners engaged in, teaching about or researching the topic. National implementation workshops at various sites around the country and during the ADA Food Nutrition Conference Exposition (FNCE) are planned. Additionally, there are recommended dissemination and adoption strategies for local use of the *ADA Unintended Weight Loss in Older Adults 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 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 continuing professional education units (CPEUs) 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.

- Unintended Weight Loss in Older Adults
- Unintended Weight Loss (UWL) in Older Adults Guideline (2009)
- UWL: Introduction (2009)

Unintended Weight Loss in Older Adults

UWL: Benefits and Risks/Harms of Implementation (2009)

Benefits and Risks or Harms of Implementing the Recommendations

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

Potential Benefits

- Although medical nutrition therapy (MNT) costs and reimbursement vary, MNT is essential for improved outcomes
- A primary goal of implementing these recommendations includes improving an older adult's ability to increase energy, protein and nutrient intakes, improve nutritional status and improve quality of life
- Following these guidelines will increase the likelihood of meeting regulatory requirements.

Risk or Harm Considerations

When using these recommendations:

- To prevent potential adverse outcomes due to overconsumption of a particular nutrient, use clinical judgment
- Patient denial or misclassification of the necessary dysphagia diet may result in aspiration pneumonia due to poor swallowing function
- Use clinical judgment in applying the guidelines when evaluating older adults with unintended weight loss (UWL)
- Failure to make a nutrition diagnosis of involuntary weight loss may lead to lack of treatment and increased risk of mortality
- Continued involuntary weight loss may lead to potential for litigation
- Standard weighing procedures must be followed or weights may be inaccurate
- In some individuals, resting metabolic rate (RMR) estimation may be inadequate or excessive and clinical judgment should be used
- Sufficient feeding assistance may not be available
- Appetite stimulants may result in side effects
- Inadvertent misplacement of the enteral feeding tube
- Overfeeding, underfeeding and social isolation may contribute to greater risks of complications over time.

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

Unintended Weight Loss in Older Adults

UWL: Executive Summary of Recommendations (2009)

Executive Summary of Recommendations

Below are the major recommendations and ratings for the Academy of Nutrition and Dietetics Unintended Weight Loss (UWL) in Older Adults Evidence-Based Nutrition Practice Guideline. View the Guideline Overview for additinal informtion. More detail (including the evidence analysis supporting these recommendations) is available on this website to Academy members and EAL subscribers under Major Recommendations.

To see a description of the Academy Recommendation Rating Scheme (Strong, Fair, Weak, Consensus, Insufficient Evidence), click here.

The UWL Recommendations are listed below. *[Note: If you mouse-over underlined acronyms and terms, a definition will pop up.]*

- Screening and Referral
  UWL: Medical Nutrition Therapy
  Medical nutrition therapy (MNT) is strongly recommended for older adults with unintended weight loss. Individualized nutrition care, directed by a registered dietitian (RD), as part of the healthcare team, results in improved outcomes related to increased energy, protein and nutrient intakes, improved nutritional status, improved quality of life or weight gain.

  Strong
  Imperative
  UWL: Nutrition Screening
  The registered dietitian (RD) should collaborate with other health care professionals, administrators and public policy decision makers to ensure that all older adults are screened for unintended weight loss, regardless of setting. Weight change is included in virtually all validated and unvalidated instruments for nutrition risk screening in older adults. Studies support an association between unintended weight loss and increased morbidity and mortality.

  Strong
  Imperative
  UWL: Instruments for Nutrition Screening
  The registered dietitian (RD) should collaborate with other health care team members and policy makers to ensure that nutrition screening tools have been validated in the older population. The Mini Nutritional Assessment Short Form and the Nutrition Screening Initiative DETERMINE Your Nutritional Health (DETERMINE) instruments are the most widely studied and validated in this population; several other nutrition screening instruments have been developed but not validated in older adults.

  Strong
  Imperative
- Nutrition Assessment
  UWL: Assessment of Food, Fluid and Nutrient Intake

The Registered Dietitian (RD) and/or Dietetic Technician Registered (DTR) should assess and evaluate food, fluid and nutrient intake in older adults with unintended weight loss. Research reports decreased intake of energy and nutrients in older adults who are acutely/chronically ill and/or underweight and those with cognitive impairment and dysphagia.

Strong
Imperative
UWL: Methodologies for Assessment of Food, Fluid and Nutrient Intake
To assess food, fluid and nutrient intake in older adults with unintended weight loss, the Registered Dietitian (RD) and/or Dietetic Technician Registered (DTR) should use quantitative methods (such as calorie counts, percentage of food eaten, individual plate waste studies, etc) rather than qualitative methods (such as interviews) over a period of several days. Research supports multiple days of assessment of food and nutrient intake, and studies report that quantitative methods are necessary to provide estimations of energy intake.

Fair
Imperative
UWL: Assessment of Nutritional Status
The Registered Dietitian (RD) should ensure that the nutrition assessment of older adults with unintended weight loss includes (but is not limited to) the following:

- Anthropometric measurements (e.g. height, weight, weight change)
- Biochemical data, medical tests and procedures
- Client history (e.g. cognitive decline, depression, neurological disease, hydration status, presence of infection and pressure ulcers, recent hospitalization, admission to healthcare communities and female gender)
- Food/nutrition-related history (e.g. loss of appetite, swallowing problems, eating dependency, low physical activity level, decreased activities of daily living)

Assessment of the above factors is needed to effectively determine nutrition diagnoses and plan the nutrition interventions; all of these are associated with adverse health effects in older adults.

Strong
Imperative
UWL: Instruments for Assessment of Nutritional Status
The Registered Dietitian (RD) should collaborate with other health care team members and policy makers to ensure that nutrition assessment tools have been validated in the older population. The Mini-Nutritional Assessment is the most widely studied and validated in this population; several other nutrition assessment instruments have also been developed but not validated.

Strong
Imperative
UWL: Assess Anthropometric Measurements
The Registered Dietitian (RD) should ensure that older adults are weighed upon initial visit, admission or readmission to obtain a baseline weight, and then weekly thereafter, using standard procedures. Studies support an association between unintended weight loss and increased mortality.

Strong
Imperative

- Nutrition Diagnosis

UWL: Nutrition Diagnosis of Involuntary Weight Loss
The Registered Dietitian (RD) will use clinical judgment in interpreting nutrition assessment data to diagnose unintended weight loss and/or underweight in the older adult. Studies support an association between increased mortality and underweight (BMI < 20 kg/m ^{2} or current weight compared with usual or desired body weight) and/or unintended weight loss (5% in 30 days, or any further weight loss after meeting this criteria).

Strong
Imperative

- Nutrition Intervention

UWL: Estimating Energy Needs of Healthy Older Adults
When estimating energy needs for weight maintenance of healthy older adults, the Registered Dietitian (RD) should prescribe an energy intake of 25 - 35 kcal/kg/day in females and 30 - 40 kcal/kg/day in males. Research reports that applying physical activity levels ranging from 1.25 to 1.75 with measured RMR (via indirect calorimetry) in healthy older adults results in these mean total daily energy estimates.

Fair
Conditional
UWL: Estimating Energy Needs of Underweight Older Adults
When estimating energy needs for weight maintenance of underweight older adults, the Registered Dietitian (RD) should prescribe an energy intake of 25 - 30 kcal/kg/day, or higher energy levels for weight gain. Research reports that applying physical activity levels ranging from 1.25 to 1.5 with measured RMR (via indirect calorimetry) in older adults who are chronically or acutely ill and/or underweight results in these mean total daily energy estimates.

Weak
Conditional
UWL: Collaboration for Modified Texture Diets
The Registered Dietitian (RD) should collaborate with the speech-language pathologist and other healthcare professionals to ensure that older adults with dysphagia receive appropriate and individualized modified texture diets. Older adults consuming modified texture diets report an increased need for assistance with eating, dissatisfaction with foods, and decreased enjoyment of eating, resulting in reduced food intake and weight loss.

Strong
Conditional
UWL: Eating Assistance
The Registered Dietitian (RD) should collaborate with other health care professionals and administrators to ensure that all older adults who need assistance to eat receive it. Research indicates a positive association between eating dependency and poor nutritional status, especially in older adults with dysphagia who receive modified texture diets. In addition, research reports an association between poor nutritional status, frailty, underweight and/or weight loss with cognitive impairment and a decrease in the activities of daily living, including decreased ability to eat independently.

Strong
Conditional
UWL: Dining with Others
The Registered Dietitian (RD) should collaborate with other health care professionals and administrators to encourage all older adults to dine with others rather than dining alone. Research reports improved food intake and nutritional status in older adults eating in a socially stimulating common dining area.

Strong
Imperative
UWL: Improvement of Dining Ambience

The Registered Dietitian (RD) should collaborate with other health care professionals and administrators to promote improvement of dining ambience. Research indicates that improvements in physical environment and atmosphere of the dining room, food service and meals, and organization of the nursing staff assistance may result in weight gain in older adults.

Strong
Imperative
UWL: Creative Dining Programs
The Registered Dietitian (RD) should encourage creative dining programs for older adults. Research indicates that dining programs, such as buffet-style dining and decentralization of food service, demonstrate improvements in food intake and/or quality of life.

Strong
Imperative
UWL: Indications for Enteral Nutrition

The Registered Dietitian (RD) should recommend consideration of enteral nutrition for older adults who are undernourished or at risk of undernutrition; it is clearly indicated in patients with severe dysphagia. Studies support enteral nutrition as a method to provide energy and nutrient intake, promote weight gain and maintain or improve nutritional status or prevent undernutrition.

Strong
Imperative
UWL: Contraindications for Enteral Nutrition
Enteral nutrition may not be appropriate for terminally ill older adults with advanced disease states, such as terminal dementia, and should be in accordance with advance directives. The development of clinical and ethical criteria for the nutrition and hydration of persons through the life span should be established by members of the health care team, including the Registered Dietitian (RD).

Consensus
Conditional
UWL: Initiation of Enteral Nutrition
To improve energy and nutrient intake in older adults at nutritional risk, enteral nutrition should be initiated as early as possible after confirming tube placement. Studies support that enteral nutrition can be initiated 3 hours after a percutaneous endoscopic gastrostomy (PEG) tube is placed, and placement is confirmed.

Strong
Imperative
UWL: Route of Enteral Nutrition
For older adults with neurological dysphagia and/or if enteral nutrition is anticipated for longer than 4 weeks, the use of a percutaneous endoscopic gastrostomy (PEG) tube is preferable to nasogastric tubes. Studies report that PEG tube use is associated with fewer treatment failures and improved nutritional status.

Strong
Conditional
UWL: Indications for Medical Food Supplements
The Registered Dietitian (RD) should recommend medical food supplements for older adults who are undernourished or at risk of undernutrition (i.e., those who are frail, those who have infection, impaired wound healing, pressure ulcers, depression, early to moderate dementia and/or after hip fracture and orthopedic surgery). Studies support medical food supplementation as a method to provide energy and nutrient intake, promote weight gain and maintain or improve nutritional status or prevent undernutrition.

Strong
Imperative
UWL: Diet Liberalization
For older adults the Registered Dietitian (RD) should recommend liberalization of diets with the exception of texture modification. Increased food and beverage intake is associated with liberalized diets. Research has not demonstrated benefits of restricting sodium, cholesterol, fat and carbohydrate in older adults.

Strong
Imperative
UWL: Resident Involvement in Meal Planning
The Registered Dietitian (RD) should collaborate with other health care professionals and administrators to encourage older adults' involvement in planning menus and meal patterns, since studies show that this may result in improved food and fluid intake.

Strong
Imperative
UWL: Evaluation and Treatment of Depression
The registered dietitian (RD) should collaborate with other healthcare professionals to consider evaluation and treatment of depression for patients who are undernourished or at risk of undernutrition when medical nutrition therapy (MNT) interventions have not resulted in improved nutrient intake or stabilization of weight. Research reports an association between depression and weight loss or poor nutritional status.

Strong
Conditional
UWL: Appetite Stimulants
When medical nutrition therapy (MNT) interventions for older adults have not resulted in improved nutrient intake and/or stabilization of weight, the Registered Dietitian (RD) should collaborate with other healthcare professionals to consider appetite stimulants. There is no research on the effectiveness of appetite stimulants for older adults that meets the American Dietetic Association criteria for evidence analysis.

Consensus
Conditional

- Nutrition Monitoring and Evaluation

UWL: Monitor and Evaluate Nutritional Status
The Registered Dietitian (RD) should monitor and evaluate the nutritional status of older adults with unintended weight loss, based on the methodology initially used during assessment, including (but not limited to) the following:

- Anthropometric measurements (e.g. weight, weight change)
- Biochemical data, medical tests and procedures
- Client history (e.g. cognitive decline, depression, neurological disease, hydration status, presence of infection and pressure ulcers, recent hospitalization)
- Food/nutrition-related history (e.g. loss of appetite, swallowing problems, eating dependency, low physical activity level, decreased activities of daily living)

Monitoring and evaluation of the above factors is needed to determine the effectiveness of medical nutrition therapy (MNT); all of these are associated with adverse health effects in older adults.

Strong
Imperative
UWL: Monitor and Evaluate Food, Fluid and Nutrient Intake
The Registered Dietitian (RD) and/or Dietetic Technician Registered (DTR) should monitor and evaluate food, fluid and nutrient intake in older adults with unintended weight loss, based on the methodology initially used during assessment. Research reports decreased intake of energy and nutrients in older adults who are acutely/chronically ill and/or underweight and those with cognitive impairment and dysphagia. In addition, research supports multiple days of assessment of food and nutrient intake, and studies report that quantitative methods are necessary to provide estimations of energy intake.

Strong
Imperative
UWL: Monitor and Evaluate Anthropometric Measurements
The Registered Dietitian (RD) should monitor and evaluate weekly body weights of older adults with unintended weight loss, until body weight has stabilized, to determine effectiveness of medical nutrition therapy (MNT). Studies support an association between unintended weight loss and increased mortality.

Strong
Imperative