

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)

HIV/AIDS

H/A: Introduction (2010)

Guideline Title

HIV/AIDS (2010) Evidence-Based Nutrition Practice Guideline

Guideline Narrative Overview

The focus of this guideline is on medical nutrition therapy (MNT) for individuals with HIV/AIDS.

The primary goals of MNT are:

- To delay HIV disease progression
- To prevent and treat malnutrition
- To maximize food and water safety practices
- To minimize the impact of other comorbidities on the progression of HIV infection, from birth through adulthood.

Guideline Development

This guideline is intended for use by Registered Dietitians (RDs) involved in providing MNT to individuals with HIV/AIDS. The application of the guideline must be individualized to assist the Registered Dietitian to successfully integrate MNT into the overall medical management of individuals with HIV/AIDS. The recommendations in the guideline were based on a systematic review of the literature.

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

- *Recommendations:* Nineteen (19)
- *Conclusion Statements:* Thirteen (13)
- *Evidence Summaries:* Thirteen (13)
- *Article Worksheets:* One hundred and fifty-two (152).

At the time of this publication, the majority of research has been completed in the adult population; therefore, clinical judgment is crucial in the application of these guidelines for individuals in other age groups and settings.

To view the guideline development and review process, click [here](#).

Contributors

See Project Team for the list of expert workgroup members, analysts and contributors for this project.

Application of the Guideline

This guideline will be accompanied by a set of companion documents to assist the practitioner in applying the guideline. A 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 HIV/AIDS

Scientific evidence supports the effectiveness of medical nutrition therapy to increase effectiveness of therapy for HIV/AIDS. Topics included in this guideline are:

- Medical nutrition therapy and dietitian intervention
- Caloric needs
- Macronutrient composition
- Vitamin and mineral supplementation
- Treatment of hyperlipidemia
- Treatment of diarrhea/malabsorption
- Education on food and water safety
- Physical activity

The Registered Dietitian plays an integral role on the interdisciplinary care team by determining the optimal nutrition prescription and developing the nutrition care plan for patients undergoing therapy for HIV/AIDS. Based on the patient'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 individuals with HIV/AIDS.

Other Guideline Overview Material

For more details on the guideline components, click on the following in the Introduction tab:

- 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 patients with significant medical co-morbidities.

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Scope of Guideline (2010)

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

Guideline Category

Assessment of Therapeutic Effectiveness, Counseling, Evaluation, Management, Prevention, Screening, Technology Assessment, Treatment

Clinical Specialty

Allergy and Immunology, Cardiology, Critical Care, Dentistry, Emergency Medicine, Endocrinology, Family Practice, Gastroenterology, Geriatrics, Hematology, Infectious Diseases, Internal Medicine, Nephrology, Nursing, Nutrition, Obstetrics and Gynecology, Oncology, Pediatrics, Pharmacology, Preventive Medicine, Psychiatry, Psychology, Pulmonary Medicine, Surgery

Intended Users

Registered Dietitians, Advanced Practice Nurses, Health Care Providers, Nurses, Pharmacists, Physician Assistants, Physicians, Respiratory Care Practitioners, Social Workers, Students, Substance Use Disorders Treatment Providers

Guideline Objective(s)

Overall Objective

- To provide MNT guidelines for HIV/AIDS to promote and maintain optimal nutrition status and prevent and manage other nutrition-related diseases and comorbidities in people with HIV infection.

Specific Objectives

- To define evidence-based HIV/AIDS 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

Infant (Newborn to 1 month), Infant (1 to 23 months), Pre-school Child (2 to 5 years), Child (6 to 12 years), Adolescent (13 to 18 years), Adult (19 to 44 years), Middle Age (45 to 64 years), Aged (65 to 79 years), Advanced Aged (80 years and over), Male, Female

Target Population Description

Individuals with HIV/AIDS.

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 HIV/AIDS care from *International Dietetics & Nutrition Terminology Reference Manual. Standardized Language for the Nutrition Care Process*. Third Edition.

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
 - Food intake
 - 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

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

- Inadequate energy intake
- Excessive energy intake
- Inadequate oral food/beverage intake
- Excessive oral food/beverage intake
- Inadequate intake from enteral/Parenteral nutrition
- Excessive intake from enteral/Parenteral nutrition
- Inappropriate infusion of enteral of Parenteral nutrition
- Inadequate fluid intake
- Excessive fluid intake
- Excessive alcohol intake
- Evident protein-energy malnutrition
- Inadequate fiber intake
- Excessive fiber intake
- Altered GI function
- Altered nutrition-related laboratory values
- Underweight
- Involuntary weight loss
- Overweight/obesity
- Involuntary weight gain
- Food- and nutrition-related knowledge deficit
- Swallowing difficulty
- Biting/Chewing (Masticatory) difficulty
- Undesirable food choices
- Physical inactivity
- Inability or lack of desire to manage self-care
- Impaired ability to prepare foods/meals
- Self-feeding difficulty
- 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

Below you will find the nutrition interventions related to HIV/AIDS care from *International Dietetics & Nutrition Terminology Reference Manual. Standardized Language for the Nutrition Care Process*. Third Edition.

- Meals and snacks
- Enteral or Parenteral nutrition
- Medical Food Supplements
- Bioactive Substance Supplements
- Feeding Assistance
- Feeding Environment
- Comprehensive nutrition education
- Nutrition counseling
- Strategies
- Coordination of nutrition care
- Discharge planning and transfer of nutrition care to new setting or provider

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 HIV/AIDS care from *International Dietetics & Nutrition Terminology Reference Manual. Standardized Language for the Nutrition Care Process*. Third Edition.

- Nutrition-related ADLs and IADLs
- Physical activity
- Food and nutrient intake outcomes
- Nutrition-related physical sign/symptoms outcomes
- Nutrition-related patient/client centered outcomes

[Go to Statement of Intent](#)

Back to [Main Menu](#) of HIV/AIDS Guideline

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Statement of Intent (2010)

HIV/AIDS 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 the individual clinician's 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): 63-67. 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.

[Go to Guideline Methods](#)

Back to [Main Menu](#) of HIV/AIDS Guideline

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Guideline Methods (2010)

General and Specific Methods for HIV/AIDS 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 Methods from the Introduction section 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 HIV/AIDS Evidence-Based Nutrition Practice Guideline.

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Specific Methods (2010)

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 is a list of the recommendations and the related evidence analysis questions with a 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 were based on consensus documents. Therefore, these recommendations do not have links to *Search Plans*.

To see the recommendations, click Major Recommendations from the left navigation bar.

HIV/AIDS Evidence-Based Nutrition Practice Guideline

Screening and Referral Recommendations

HIV/AIDS: Medical Nutrition Therapy
[Search Plan and Results](#)

Assessment Recommendations

HIV/AIDS: Assess Food/Nutrition-Related History
[Search Plan and Results](#)

HIV/AIDS: Anthropometric Assessment

[Search Plan and Results](#)
[Search Plan and Results](#)

HIV/AIDS: Energy Needs
[Search Plan and Results](#)

Nutrition Intervention Recommendations

HIV/AIDS: Macronutrient Composition
[Search Plan and Results](#)
[Search Plan and Results](#)
[Search Plan and Results](#)
[Search Plan and Results](#)

HIV/AIDS: Vitamin and Mineral Supplementation
[Search Plan and Results](#)
[Search Plan and Results](#)

HIV/AIDS: Treatment of Diarrhea/Malabsorption
[Search Plan and Results](#)

HIV/AIDS: Encourage Physical Activity
[Search Plan and Results](#)

HIV/AIDS: Educate on Food and Water Safety
[Search Plan and Results](#)

Monitoring and Evaluation Recommendations

HIV/AIDS: 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.

HIV/AIDS: Screening and Referral for MNT
HIV/AIDS: Nutrition Assessment
HIV/AIDS: Coordination of Care
HIV/AIDS: Monitor and Evaluate Food/Nutrition-Related History.

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Implementation of the Guideline (2010)

Implementation of the HIV/AIDS Guideline

This publication of this guideline is an integral part of the plans for getting the ADA Medical Nutrition Therapy (MNT) evidence-based recommendations on HIV/AIDS 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 HIV/AIDS 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 and announced to all ADA Dietetic Practice Groups/Member Interest Groups and State Affiliates. The ADA Evidence Analysis Library will also provide downloadable supporting information and links to relevant position papers.

- [HIV/AIDS](#)
- [HIV/AIDS \(H/V\) Guideline \(2010\)](#)
- [H/A: Introduction \(2010\)](#)

HIV/AIDS

H/A: Benefits and Risks/Harms of Implementation (2010)

Benefits and Risks or Harms of Implementing the Recommendations

Safety issues must be reviewed carefully for each individual. 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 a person's ability to achieve optimal nutrition through healthful food choices and physically active lifestyle.

Although costs of medical nutrition therapy (MNT) sessions and reimbursement vary, MNT is 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.

Risk or Harm Considerations

When using these recommendations:

- Review the patient's age, socioeconomic status, cultural issues, health history, and other health conditions.
- Consider referral to a behavioral specialist if psychosocial issues are a concern.
- Consider a referral to social services to assist patients with financial arrangements if economic issues are a concern.
- Use clinical judgment in applying the guidelines when evaluating individuals with HIV/AIDS.

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

-
- [HIV/AIDS](#)
 - [HIV/AIDS \(H/V\) Guideline \(2010\)](#)

HIV/AIDS

H/A: Executive Summary of Recommendations (2010)

Executive Summary of Recommendations

Below are the major recommendations and ratings for the Academy of Nutrition and Dietetics HIV/AIDS Evidence-Based Nutrition Practice Guideline. View the Guideline Overview from the Introduction tab. 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 HIV/AIDS Recommendations are listed below. [Note: If you mouse-over underlined acronyms and terms, a definition will pop up.]

- [Screening and Referral](#)

HIV/AIDS: Medical Nutrition Therapy (MNT)

Medical nutrition therapy (MNT) provided by a registered dietitian ([RD](#)) is recommended for individuals with [HIV](#) infection. Four studies regarding [MNT](#) (with or without oral nutritional supplementation) report improved outcomes related to energy intake, symptoms and cardiovascular risk indices. Two studies regarding nutritional counseling (non-MNT) also report improved outcomes related to weight gain, [CD4](#) count and quality of life.

**Strong
Imperative**

HIV/AIDS: Frequency of Medical Nutrition Therapy (MNT)

The Registered Dietitian ([RD](#)) should provide at least one to two Medical Nutrition Therapy ([MNT](#)) encounters per year for people with HIV infection (asymptomatic) and at least two to six (or more) MNT encounters per year for people with [HIV](#) infection (symptomatic but stable, acute or palliative), based on the following:

- Appropriate disease classifications
- Nutritional status
- Comorbidities
- Opportunistic infections
- Physical changes
- Weight or growth concerns
- Oral or gastrointestinal symptoms
- Metabolic complications
- Barriers to nutrition
- Living environment
- Functional status
- Behavioral concerns or unusual eating behaviors.

Studies regarding [MNT](#) (with or without oral nutritional supplementation) report improved outcomes related to energy intake, symptoms, and cardiovascular risk indices, especially with increased frequency of visits.

**Consensus
Imperative**

HIV/AIDS: Screening for People with HIV Infection

The registered dietitian (RD) should collaborate with other health care professionals, administrators and public policy decision-makers to ensure that all people with HIV infection are screened for nutrition-related problems, based on referral criteria regardless of setting, at every visit. People with HIV infection are at nutritional risk at any time-point during the course of their illness.

**Consensus
Imperative**

HIV/AIDS: Referral for Medical Nutrition Therapy

The RD should collaborate with other health care professionals, administrators and public policy decision-makers to ensure that all people with HIV infection are referred for Medical Nutrition Therapy (MNT) based on nutritional risk. The timeline for referral of patients categorized by nutritional risk is as follows: High risk, to be seen by an RD within one week; moderate risk, to be seen by an RD within one month; low risk, to be seen by an RD at least annually.

**Consensus
Conditional**

- [Nutrition Assessment](#)

HIV/AIDS: Anthropometric Assessment

The registered dietitian (RD) should include the following anthropometric measurements in the initial assessment: Weight, height and body mass index; for children, growth pattern indices. In addition, measurements of body compartment estimates should also be included, such as circumference measurements (mid-arm muscle, waist, hip and waist-to-hip ratio) or measurements of body cell mass and body fat [measured with skinfold thickness measurements, dual energy X-ray absorptiometry ([DXA](#)), bioelectrical impedance analysis ([BIA](#)), or bioimpedance spectroscopy]. Baseline anthropometric measurements provide information for the nutrition assessment and the majority of research in men, women, children and adolescents reports that fat-free mass and fat mass are altered in people with [HIV](#) infection.

**Strong
Imperative**

HIV/AIDS: Assess Food/Nutrition-Related History

The registered dietitian ([RD](#)) should assess the food and nutrition-related history of people with [HIV](#) infection, including but not limited to:

- Food and nutrient intake, focusing on energy, protein, fat, fiber, sodium, calcium and vitamin D
- Medications/drugs, herbal/dietary supplements and their potential negative interactions
- Knowledge, beliefs and attitudes
- Behavior
- Factors affecting access to food and food and nutrition-related supplies
- Physical activity and function
- Nutrition-related patient and client-centered measures

Several studies report variations in energy and nutrient intake in people with [HIV](#) infection, some were under- and over-estimated requirements. A clear understanding of food and nutrient intake will form the basis for the nutrition diagnosis, prescription and intervention.

**Strong
Imperative**

HIV/AIDS: Nutrition Assessment

The registered dietitian ([RD](#)) should assess the following for people with [HIV](#) infection:

- Food/nutrition-related history, such as knowledge, beliefs and attitudes and factors affecting access to food and food/nutrition-related supplies (see also the Assess Food/Nutrition-Related History recommendation, [click here](#))
- Anthropometrics (see also the Anthropometric Assessment recommendation, [click here](#))
- Biochemical data, medical tests and procedures such as lipid profile, fasting blood glucose, electrolytes, complete blood count and bone density measurements
- Nutrition-focused physical findings
- Client history
 - Patient, client and family medical/health history
 - Social history
- Comparative standards.

Assessment of nutritional and medical status is crucial to quality nutrition care for every person living with HIV infection.

**Consensus
Imperative**

HIV/AIDS: Determining Energy Needs

The registered dietitian ([RD](#)) should use clinical judgment and consider several factors when determining the energy needs of adults and children with HIV infection to maintain a healthy body weight. Factors related to energy needs in people with HIV infection include age, gender, stage of disease, nutritional status, opportunistic infections and comorbidities, inflammation and effects of medications. Although research reports increased *resting* energy expenditure (as much as 5% to 17%) in people with [HIV](#) infection, *total* energy expenditure may be similar to that of healthy control subjects.

**Fair
Imperative**

• **[Nutrition Intervention](#)**

HIV/AIDS: Educate on Food and Water Safety

The registered dietitian ([RD](#)) should educate people with [HIV](#) infection, especially those who are severely immunocompromised (having CD4 levels less than 200 cells per mm³) and others involved in their care, about food and water safety. Studies report that people with HIV infection are more susceptible to foodborne illness and also lack knowledge regarding food safety.

**Strong
Imperative**

HIV/AIDS: Encourage Physical Activity

If not contraindicated, the registered dietitian ([RD](#)) should encourage physical activity for people with [HIV](#) infection. Studies report that performing constant or interval aerobic [exercise](#), progressive resistance exercise or a combination of both, for at least 20 minutes per session at a frequency of three times per week is generally safe in [adults](#) with HIV infection and may lead to significant improvements in strength, endurance, cardiopulmonary fitness and reductions in depressive symptoms.

**Strong
Conditional**

HIV/AIDS: Treatment of Diarrhea/Malabsorption

For people with [HIV](#) infection who have diarrhea/malabsorption, the registered dietitian ([RD](#)) should encourage the consumption of soluble fiber, electrolyte-repleting beverages and medium-chain triglycerides ([MCT](#)) and decrease the consumption of foods that may exacerbate diarrhea. Studies of fat malabsorption reported that consumption of MCT resulted in fewer stools, decreased stool fat and weight and increased fat absorption.

**Fair
Conditional**

HIV/AIDS: Vitamin and Mineral Supplementation

If people with HIV infection can not meet their Recommended Dietary Allowance ([RDA](#)) levels for micronutrients through diet, the registered dietitian ([RD](#)) should recommend vitamin and mineral supplements, especially for calcium and vitamin D. Micronutrient deficiencies are common in [HIV](#)-infected individuals and studies report increased morbidity and mortality in those not taking vitamin supplementation.

**Strong
Conditional**

HIV/AIDS: Macronutrient Composition

- The registered dietitian ([RD](#)) should prescribe an individualized diet with a macronutrient composition based on the Dietary Reference Intakes ([DRI](#)), 20% to 35% of calories from fat, 45% to 65% of calories from carbohydrate, 14g fiber per 1,000kcal and 10% to 35% of calories from protein)
- In people with HIV infection, protein needs are highly individualized. Low-fiber/high-fat diets are associated with fat deposition, insulin resistance and obesity. Studies indicate that diets low in saturated and total fat resulted in reduced triglyceride levels, increased HDL-cholesterol levels and a lower risk of lipohypertrophy.

**Fair
Imperative**

HIV/AIDS: Macronutrient Composition for Hyperlipidemia

- For people with HIV infection who have hyperlipidemia, the [RD](#) should encourage consumption of a cardioprotective dietary pattern tailored to the individual's needs to provide a fat intake of 25% to 35% of calories, less than 7% of calories from saturated fat, less than 1% of calories from trans-fatty acids and under 200mg of cholesterol per day
- Research on several lifestyle modification interventions for the treatment of hyperlipidemia in people with HIV infection reports improvements in serum lipid profile. Studies indicate that diets low in saturated and total fat and including omega-3 fatty acids resulted in reduced triglyceride levels, increased HDL-cholesterol levels and a lower risk of lipohypertrophy.

**Strong
Conditional**

HIV/AIDS: Coordination of Care

For people with HIV infection, the registered dietitian ([RD](#)) should implement medical nutrition therapy ([MNT](#)) and coordinate care with an interdisciplinary team and community resources. The interdisciplinary team is composed of health professionals including, but not limited to: [RDs](#), physicians, physician assistants, nurse practitioners, nurses, pharmacists, case managers, substance use disorders treatment providers, respiratory care practitioners, occupational therapists, physical therapists, speech therapists, exercise physiologists, dentists, mental health professionals and treatment adherence counselors. Community resources may include, but are not limited to, food assistance programs, support systems and recreational facilities. This approach is necessary to effectively integrate [MNT](#) into overall management for people with HIV infection.

**Consensus
Imperative**

HIV/AIDS: Educate on Presence of HIV in Breast Milk

The registered dietitian ([RD](#)) should educate women with HIV infection who are pregnant or lactating about the presence of HIV in breast milk.

- In the United States and other parts of the world where replacement feeding is affordable, feasible, acceptable, sustainable and safe, breastfeeding by HIV-infected women (including those receiving antiretroviral drugs) is **NOT** recommended.
- In certain international settings, where replacement feeding is not affordable, feasible, acceptable, sustainable and safe, the registered dietitian ([RD](#)) should refer to the World Health Organization (WHO) guidelines, as well as country-specific Ministry of Health or other locally adapted guidelines, when educating women with HIV infection who are pregnant

or lactating.

Note: Since the evidence was not analyzed using ADA's evidence analysis methodology this recommendation was based on the references cited below and it is rated consensus meaning the Work Group concurs.

Consensus

Conditional

HIV/AIDS: Educate on Medications

For people with HIV infection who are prescribed medications, the registered dietitian (RD) should provide education regarding food and drug interactions, nutrition-related adverse effects and risk of teratogenicity. Adverse effects of medications, including metabolic complications, gastrointestinal disturbances, and compromised nutrition intake, may lead to non-adherence and/or resistance to the prescribed medication regimen and poor nutrition status.

Consensus

Conditional

• **Nutrition Monitoring and Evaluation**

HIV/AIDS: Monitor and Evaluate Food- and Nutrition-Related History

The registered dietitian (RD) should monitor and evaluate the food and nutrition-related history of people with HIV infection, including but not limited to:

- Food and nutrient intake, focusing on energy, protein, fat, fiber, sodium, calcium and vitamin D
- Medications/drugs, herbal/dietary supplements and their potential negative interactions
- Knowledge, beliefs and attitudes
- Behavior
- Factors affecting access to food and food- and nutrition-related supplies
- Physical activity and function
- Nutrition-related patient and client-centered measures.

Several studies report variations in energy and nutrient intake in people with HIV infection. Some were under- and over-estimated requirements. A clear understanding of food and nutrient intake will form the basis for the nutrition diagnosis, prescription and intervention.

Strong

Imperative

H/A: Monitor and Evaluate Anthropometric Measurements 2010

Using the same methodology as in the assessment of anthropometric measurements, the registered dietitian (RD) should monitor and evaluate body weight and height, body mass index, body compartment estimates and for children, growth pattern indices. The majority of research in men, women, children and adolescents reports that fat-free mass and fat mass are altered in people with HIV infection.

Strong

Imperative