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FY 2018 Houston EMA/HSDA Ryan White Part A Service Definition Medical Nutritional Therapy (Last Review/Approval Date: 6/3/16)	
HRSA Service Category Title: RWGA Only	Medical Nutritional Therapy
Local Service Category Title:	Medical Nutritional Therapy and Nutritional Supplements
Budget Type: RWGA Only	Hybrid
Budget Requirements or Restrictions: RWGA Only	<p>Supplements: An individual client may not exceed \$1,000.00 in supplements annually without prior approval by RWGA.</p> <p>Nutritional Therapy: An individual nutritional education/counseling session lasting a minimum of 45 minutes. Provision of professional (licensed registered dietitian) education/counseling concerning the therapeutic importance of foods and nutritional supplements that are beneficial to the wellness and improved health conditions of clients. Medically, it is expected that symptomatic or mildly symptomatic clients will be seen once every 12 weeks while clients with higher acuity will be seen once every 6 weeks.</p>
HRSA Service Category Definition: RWGA Only	Medical nutrition therapy is provided by a licensed registered dietitian outside of a primary care visit and may include the provision of nutritional supplements.
Local Service Category Definition:	<p>Supplements: Up to a 90-day supply at any given time, per client, of approved nutritional supplements that are listed on the Houston EMA/HSDA Nutritional Supplement Formulary. Nutritional counseling must be provided for each disbursement of nutritional supplements.</p> <p>Nutritional Therapy: An individual nutritional education/counseling session lasting a minimum of 45 minutes. Provision of professional (licensed registered dietitian) education/counseling concerning the therapeutic importance of foods and nutritional supplements that are beneficial to the wellness and improved health conditions of clients. Medically, it is expected that symptomatic or mildly symptomatic clients will be seen once every 12 weeks while clients with higher acuity will be seen once every 6 weeks. Services must be provided under written order from a state licensed medical provider (MD, DO or PA) with prescribing privileges and must be based on a written nutrition plan developed by a licensed registered dietitian.</p>
Target Population (age, gender, geographic, race, ethnicity, etc.):	HIV/AIDS infected persons living within the Houston Eligible Metropolitan Area (EMA) or HIV Service Delivery Area (HSDA).
Services to be Provided:	<p>Supplements: The provision of nutritional supplements to eligible clients with a written referral from a licensed physician or PA that specifies frequency, duration and amount and includes a written nutritional plan prepared by a licensed, registered dietitian.</p> <p><i>Nutritional Supplement Disbursement Counseling</i> is a component of</p>

	<p><i>Medical Nutritional Therapy. Nutritional Supplement Disbursement Counseling</i> is a component of the disbursement transaction and is defined as the provision of information by a licensed registered dietitian about therapeutic nutritional and/or supplemental foods that are beneficial to the wellness and increased health condition of clients provided in conjunction with the disbursement of supplements. Services may be provided either through educational or counseling sessions. Also included in this service are follow up sessions with clients' Primary Care provider regarding the effectiveness of the supplements. The number of sessions for each client shall be determined by a written assessment conducted by the Licensed Dietitian but may not exceed twelve (12) sessions per client per contract year.</p> <p><i>Medical Nutritional Therapy:</i> Service must be provided under written order of a state licensed medical provider (MD, DO, PA) with prescribing privileges and must include a written plan developed by state licensed registered dietitian. Client must receive a full range of medical nutritional therapy services including, but not limited to, diet history and recall; estimation of nutrition intake; assessment of weight change; calculation of nutritional requirements related to specific medication regimes and disease status, meal preparation and selection suggestions; calorie counts; evaluation of clinically appropriate laboratory results; assessment of medication-nutrient interactions; and bio-impedance assessment. If patient evaluation indicates the need for interventions such as nutritional supplements, appetite stimulants, or treatment of underlying pathogens, the dietitian must share such findings with the patient's primary medical provider (MD, DO or PE) and provide recommendations. Clients needing additional nutritional resources will be referred to case management services as appropriate and/or local food banks.</p> <p>Provider must furnish information on this service category to at least the health care providers funded by Ryan White Parts A, B, C and D and TDSHS State Services.</p>
Service Unit Definition(s): RWGA Only	<p><i>Supplements:</i> One (1) unit of service = a single visit wherein an eligible client receives allowable nutritional supplements (up to a 90 day supply) and nutritional counseling by a licensed dietitian as clinically indicated. A visit wherein the client receives counseling but no supplements is <u>not</u> a billable <u>disbursement transaction</u>.</p> <p><i>Medical Nutritional Therapy:</i> An individual nutritional counseling session lasting a minimum of 45 minutes.</p>
Financial Eligibility:	Refer to the RWPC's approved <i>FY 2017 Financial Eligibility for Houston EMA Services</i> .
Client Eligibility:	<i>Nutritional Supplements:</i> HIV-infected and documentation that the client is actively enrolled in primary medical care.

	<i>Medical Nutritional Therapy:</i> HIV-infected resident and documentation that the client is actively enrolled in primary medical care.
Agency Requirements:	None.
Staff Requirements:	The nutritional counseling services under this category must be provided by a licensed registered dietician. Dieticians must have a minimum of two (2) years experience providing nutritional assessment and counseling to PLWHA.
Special Requirements: RWGA Only	<p>Must comply with Houston EMA/HSDA Part A/B Standards of Care, HHS treatment guidelines and applicable HRSA/HAB HIV Clinical Performance Measures.</p> <p>Must comply with the Houston EMA/HSDA approved Medical Nutritional Therapy Formulary.</p>

FY 2019 RWPC “How to Best Meet the Need” Decision Process

Step in Process: Council		Date: 06/14/18
Recommendations:	Approved: Y: _____ No: _____ Approved With Changes: _____	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: Steering Committee		Date: 06/07/18
Recommendations:	Approved: Y: _____ No: _____ Approved With Changes: _____	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: Quality Improvement Committee		Date: 05/15/18
Recommendations:	Approved: Y: _____ No: _____ Approved With Changes: _____	If approved with changes list changes below:
1.		
2.		
3.		
Step in Process: HTBMN Workgroup		Date: 04/24/18
Recommendations:	Financial Eligibility:	
1.		
2.		
3.		

MEDICAL NUTRITION THERAPY

Medical nutrition therapy provides nutrition supplements and nutritional counseling to persons living with HIV (PLWH) outside of a primary care visit by a licensed registered dietician based on physician recommendation and a nutrition plan. The purpose of such services can be to address HIV-associated nutritional deficiencies or dietary needs as well as to mitigate medication side effects.

(**Graph 1**) In the 2016 Houston HIV Care Services Needs Assessment, 38% of participants indicated a need for *medical nutrition therapy* in the past 12 months. 32% reported the service was easy to access, and 7% reported difficulty. 23% stated that they did not know the service was available.

(**Table 1**) When barriers to *medical nutrition therapy* were reported, the most common barrier types was education and awareness (34%). Education and awareness barriers reported include lack of knowledge about service availability and location.

GRAPH 1-Medical Nutrition Therapy, 2016

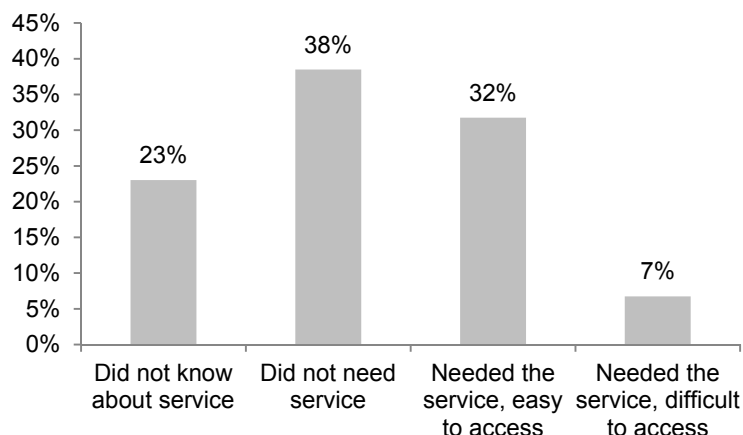


TABLE 1-Top 5 Reported Barrier Types for Medical Nutrition Therapy, 2016

	No.	%
1. Education and Awareness (EA)	10	34%
2. Administrative (AD)	4	14%
3. Eligibility (EL)	4	14%
4. Interactions with Staff (S)	3	10%
5. Wait (W)	3	10%

(**Table 2 and Table 3**) Need and access to services can be analyzed for needs assessment participants according to demographic and other characteristics, revealing the presence of any potential disparities in access to services. For *medical nutrition therapy*, this analysis shows the following:

- More male than females found the service accessible.
- More African American/black PLWH than other race/ethnicities found the service accessible.
- More PLWH age 25 to 49 found the service accessible than other age groups.
- In addition, more rural and unstably housed PLWH found the service difficult to access when compared to all participants.

TABLE 2-Medical Nutrition Therapy, by Demographic Categories, 2016

Experience with the Service	Sex		Race/ethnicity				Age		
	Male	Female	White	Black	Hispanic	Other	18-24	25-49	50+
Did not know about service	24%	19%	21%	24%	23%	14%	54%	23%	18%
Did not need service	37%	42%	40%	35%	40%	71%	29%	36%	45%
Needed, easy to access	32%	31%	30%	34%	31%	14%	13%	35%	29%
Needed, difficult to access	6%	8%	9%	7%	5%	0%	4%	6%	8%

TABLE 3-Medical Nutrition Therapy, by Selected Special Populations, 2016

Experience with the Service	Unstably Housed ^a	MSM ^b	Out of Care ^c	Recently Released ^d	Rural ^e	Transgender ^f
Did not know about service	35%	22%	0%	18%	40%	14%
Did not need service	28%	37%	100%	34%	34%	36%
Needed, easy to access	30%	35%	0%	42%	14%	45%
Needed, difficult to access	8%	7%	0%	5%	11%	5%

^aPersons reporting housing instability ^bMen who have sex with men ^cPersons with no evidence of HIV care for 12 mo.

^dPersons released from incarceration in the past 12 mo. ^eNon-Houston/Harris County residents ^fPersons with discordant sex assigned at birth and current gender

Ryan White Part A
HIV Performance Measures
FY 2016 Report

Medical Nutritional Supplements

HIV Performance Measures	FY 2015	FY 2016	Change
75% of clients for whom there is lab data in the CPCDMS will be virally suppressed (<200)	396 (79.7%)	378 (77.8%)	-1.9%
90% of clients diagnosed with wasting syndrome or suboptimal body mass will improve or maintain body mass index (BMI) in the measurement year	7 (58.3%)	9 (75.0%)	16.7%



HIV and the Role of Nutritional Supplements

Understanding How They Help (and When They Might Harm)

By [Dennis Sifris, MD and James Myhre](#) - Reviewed by a [board-certified](#) physician.
Updated September 06, 2016

Proper nutrition is as important to the long-term health and well-being of a person living with [HIV](#) as it is to anyone else. But oftentimes, dietary needs require adjustments as the body responds to different medications or the disease itself.

Vitamins and minerals can often be depleted during severe or prolonged bouts of [diarrhea](#), the condition of which can be induced by certain infections or medications.

Changes in body fats, also associated with [treatment](#) or HIV infection, can demand marked changes to one's diet.

Far more concerning, however, is the impact on malnutrition on people with HIV. Vitamin A and B-12 deficiency, for example, has been associated with faster disease progression in both resource-rich and resource-poor settings. Low serum levels of micronutrients, commonly seen in malnourished individuals, demand greater vitamin intake—often in the way of nutritional supplements.

Without question, nutritional supplements have their place in the treatment of malnutrition or a diagnosed deficiency, whether it be caused by an HIV-related condition or poor nutrition itself. This is particularly true in late-stage disease when weight loss and [HIV wasting](#) are frequently seen.

But what about everyone else? Do people with HIV inherently need nutritional supplements? Do these products complement therapy in a way that either reduces the incidence of infection, delays disease progression, or reconstitutes a person's key immune functions?

Or are we just hoping they will?

Putting the Supplements Industry into Context

According to the U.S. Centers for Disease Control and Prevention (CDC), nearly half of all Americans consume [dietary supplements](#), including vitamins, minerals and herbals. This expansive range of products is regulated by the U.S. Food and Drug Administration (FDA), which defines dietary supplements simply as products “intended to add further nutritional value to (supplement) the diet.”

<https://www.verywell.com/hiv-and-the-role-of-nutritional-supplements-49506>

In accordance with this definition, multivitamins and other nutritional supplements are regulated as a category of food, rather than as a pharmaceutical product. They neither have to go through stringent, pre-market safety and effectiveness testing, nor does the FDA have the authority to require such testing.

Instead, the FDA relies primarily on post-market surveillance—monitoring consumer complaints and requiring manufacturers to maintain a roster of adverse events. However, these adverse event reports (AERs) are only sent in instances of serious to life-threatening side effects. Mild to moderate events, such as headache or gastrointestinal distress, are not reported unless the manufacturer voluntarily chooses to do so.

This is in stark contrast to the pharmaceutical industry, which spends an average of \$1.3 billion dollar *per drug* in research & development costs in order to obtain FDA approval.

In 2011, sales of dietary supplements hit \$30 billion in the U.S., more than twice the size of the global HIV drugs market.

Can Supplements "Boost" Immunity?

Good nutrition by means of a balanced diet can help ensure proper immune function *in conjunction* with the timely and informed use of [antiretroviral medications](#).

The role of vitamins and other nutritional supplements, by contrast, remains debatable.

Confusion is rife in the consumer marketplace, often fueled by manufacturer claims about products which are thinly supported by research. And while the FDA tries to regulate these claims, a 2012 assessment by the Department of Health and Human Services reported that as much as 20% of the supplements reviewed made wholly prohibited claims, oftentimes around the issue of “immune support.”

It’s not so much that these claims are patently false. It simply that the evidence referred to is generally inconclusive or anecdotal at best.

A number of manufacturers, for instance, regularly point to a 2004 study by the Harvard School of Public Health, which looked at the effect of multivitamins on disease progression in 1,097 HIV-positive, pregnant women in Tanzania. At the end of the trial, 31% who had taken the supplements had either died or acquired an [AID-defining illness](#) versus 25% in placebo group.

Based on this evidence, the researchers concluded that the daily use of a multivitamins (specifically B, C and E) not only delayed HIV progression, but provided “an effective, low-cost means of delaying the initiation of antiretroviral therapy in HIV-infected women.”

Upon publication of the research, a number of manufacturers pointed to the study as “scientific proof” of their product’s immune-boosting properties. What most failed to do, however, is contextualize the study, ignoring the numerous co-factors that contributed to the results—not

least of which are the high levels of poverty, hunger and malnutrition that exist within an indigent African population.

Ultimately, nothing in the study suggested that multivitamins, in and of themselves, would demonstrate the same benefits—or afford the same conclusions—in the resource-rich settings like the U.S. or Europe.

Results from follow-up studies have been largely inconsistent, including a 2012 study which showed that high-dose multivitamins might actually increase the risk of death in severely malnourished individuals. Others clinical studies have shown benefits only in those with advanced disease ([CD4 counts](#) under 200 cell/mL), while others still have shown no benefit at all.

What most studies have supported is the *safety* of multivitamins in recommended daily doses, particularly for people with HIV who are either undernourished or in advanced stages of disease.

When Supplements Do More Harm Than Good

Far less is known about the benefits of individual vitamins, minerals, and other trace elements. A number of studies in recent years have focused on the role of [selenium](#), a non-metal mineral with known antioxidant properties. Research seems to suggest that the loss of selenium in early HIV infection parallel the loss of CD4 cells at a time when malabsorption and malnutrition are generally not seen to be factors.

As compelling as this relationship might seem, research has not yet been able to support any true benefit of selenium supplementation, either in the avoidance of HIV-related illness or the reconstitution of CD4. Similar results have been seen with magnesium and zinc supplements, whereby increases in plasma levels have had no correlative association to either disease progression or outcome.

The prolific use of supplements by some HIV-positive people is underpinned by the belief that “natural” products provide natural immune support that can readily complement HIV therapy.

This is often not the case. In fact, a number of supplements can have a profoundly *negative* impact on people with HIV, either by interfering with the metabolism of their drugs or by causing toxicities that mitigate any possible benefit of supplementation.

Among the potential concerns:

- **Megadose Vitamin A** – High doses of vitamin A (above 25,000 IUs daily) can increase the risk of liver toxicities, internal bleeding, spontaneous fractures, and weight loss. The World Health Organization (WHO) does not recommend the use of vitamin A supplements in pregnant, HIV-positive women, with research showing that a daily 5,000 IU dose might actually increased the risk of [mother-to-child transmission](#).

- **Megadose Vitamin C** – While some research has suggested that high doses of vitamin C may play a significant role in cellular immunity, evidence is highly contradictory. What we do know is that high doses of vitamin C can cause gastrointestinal distress and diarrhea (the latter of which can impact absorption of certain HIV medications). Vitamin C doses above 1000 mg per day are also known to reduce [Crixivan \(indinavir\)](#) levels in some.
- **Vitamin B6 (pyridoxine)** – Excessive intake of vitamin B-6 (above 2,000 mg per day) can cause reversible nerve damage, exacerbating [peripheral neuropathy](#) in HIV-positive patients already affected by the condition.
- **Vitamin E** – High doses of vitamin E (above 1,500 IUs) can interfere with blood clotting, while prolonged, excessive use can result in diarrhea, muscular weakness, and nausea.
- **[St. John's Wort \(hypericin\)](#)** – An herbal preparation popularly used to treat mild depression, St. John's Wort is known to reduce the levels of all protease inhibitor (PI) and non-nucleoside reverse transcriptase inhibitor (NNRTI)-class drugs, putting the patient at risk of drug resistance and treatment failure.
- **Garlic** – Garlic pills and supplements have been shown to reduce serum levels of certain HIV drugs, particularly [Invirase \(saquinavir\)](#) which can be reduced by half when taken concurrently with garlic supplements. By contrast, fresh or cooked garlic are not seen to affect serum drug levels.
- **Grapefruit Juice** – An 8 oz. glass of fresh grapefruit juice taken with Crixivan can reduce serum drug levels by 26%, while a similar size glass of glass can increase Invirase levels by up to 100% (increasing potential side effects). While grapefruit juice should not necessarily be omitted from one's diet, it should not be taken either two hours before or two hours after a drug dose.

Take Home Messages

The importance of proper nutrition and healthy, balanced diet cannot be overstressed. Nutritional counseling may help those with HIV better understand their dietary needs in order to better:

- Achieve and maintain a healthy body weight.
- Maintain healthy [lipids levels](#), including cholesterols and triglycerides.
- Foresee dietary complications that may result from some [antiretroviral medications](#).
- Address dietary complications that may arise from [HIV-related symptoms](#).
- Implement food measures to avoid possible food-borne [opportunistic infections](#).

The role of exercise cannot be ignored, with benefits to both physical and mental health (including a reduction in the risk in [HIV-associated neurocognitive impairment](#)).

<https://www.verywell.com/hiv-and-the-role-of-nutritional-supplements-49506>

In terms of supplementation, a daily multivitamin can help ensure that micronutrient needs are met, particularly in those unable to achieve nutritional goals.

However, taking vitamins in excess of their recommended daily allowance is not advised. There is also no data to support the use of herbal supplements in either treating HIV infection or increasing the efficacy of antiretroviral drugs by reducing the [HIV viral load](#).

Please advise your doctor of any supplements you may be taking when discussing the management and treatment of your HIV.

Sources:

U.S. Centers for Disease Control and Prevention (CDC). "Dietary Supplement Use Among U.S. Adults Has Increased Since NHANES III (1999-1994)." NCHC Data Brief. National Center for Health Statistics; Hyattsville, Maryland; April 2011; Number 1.

Fawzi, W.; Msamanga, G.; Spiegelman, D.; et al. "A randomized trial of multivitamin supplements and HIV disease progression and mortality." New England Journal of Medicine. July 2004; 351(1):23-32.

Isanaka, S.; Mugusi, F.; Hawkins, C.; et al. "Effect of high-dose vs standard-dose multivitamin supplementation at the initiation of HAART on HIV disease progression and mortality in Tanzania: a randomized controlled trial." Journal of the American Medical Association. October 17, 2012; 308(15):1535-1544.

Constans, J.; Delmas-Beauvieux, M.; Sergeant, C.; et al. "One-year antioxidant supplementation with beta-carotene or selenium for patients infected with human immunodeficiency virus: a pilot study." Clinical Infectious Diseases. September 1996; 23(3):654-656.

Villamor E.; Msamanga, G.; Spiegelman, D.; et al. "Effect of multivitamin and vitamin A supplements on weight gain during pregnancy in HIV-1-infected women." American Journal of Clinical Nutrition. December 7, 2001; 76(5):1082-1090.



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[Home](#) > Nutrition and HIV

Nutrition and HIV ^[1]

Submitted on Sep 14, 2016

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Nutrition and HIV

Good nutrition is very important for long-term health and well-being. Studies have found that people living with HIV (HIV+) who have a healthy diet and good nutritional status can better tolerate HIV drugs, maintain a healthy weight, and feel better overall.

Nutrients are things like fats, protein, carbohydrates, vitamins, minerals, and other important chemicals. You need proper levels of different nutrients in order to build and repair cells, keep hormones regulated, fight infection, and maintain energy levels. For the most part, we cannot make nutrients. We get what we need from food and when that is not possible, [dietary supplements](#) ^[2].

Good nutrition depends on many things, including:

- What type of food you eat and how much
- How you digest and absorb nutrients
- How different parts of your body use these nutrients

HIV-related changes in any of these factors can affect your nutritional status. Over time, this can lead to a variety of nutritional problems, including:

- Weight loss
- Muscle wasting (loss of muscle)
- High levels of fats and sugars in the blood
- Not enough vitamins and minerals

Many of these HIV-related problems can be avoided, or managed, by eating the right foods.

How Is Nutrition Measured?

Nutritional status can be assessed in many ways, including:

- Weight and other measurements of body fat and muscle mass
- Hemoglobin or hematocrit counts, which measure iron in the blood (hemoglobin helps your red blood cells carry oxygen, which gives you energy)
- Other [blood tests](#) ^[3] to check levels of important fats ([cholesterol and triglycerides](#) ^[4]), proteins (such as albumin), vitamins (B-12, Vitamin D), and minerals (sodium, potassium)

Diet and HIV

A healthy diet is a key part of any HIV treatment plan. A diet is simply any food and drink that you consume regularly. Your diet should give you the nutrients you need to:

- Fight weight and muscle loss
- Keep energy levels high
- Help you get what you need from medications you take
- Minimize the negative impact of HIV drugs

What kind of diet you should follow depends on your weight and your nutritional status (cholesterol, blood sugar, vitamin levels, etc.). A nutritionist or registered dietician can help figure out what type of diet makes the most sense for you. AIDS service organizations and healthcare clinics sometimes have nutritionists on staff.

Women Living with HIV and Nutrition

Nutritional guidelines such as the US Recommended Dietary Allowance (RDA) are set by the government to let people know how much of each nutrient they need each day to maintain good health. However, the RDA does not take into account that HIV infection increases these needs. One study showed that people living with HIV needed between six and 25 times the RDA of some nutrients.

Due to dieting (restrictive eating), eating unhealthy foods, lack of time, and other pressures, some women in the US do not eat what they need to meet even the basic RDA requirements for many nutrients. This puts women, especially women living with HIV, at particular risk for not getting enough nutrients to maintain their health.

However, this does not mean that women living with HIV are necessarily underweight. In fact, in some resource-rich countries like the US, more women living with HIV are overweight or obese than women in the general population. Weight gain is a common side effect [5] of some HIV drugs. Although HIV drugs greatly reduce AIDS-related illnesses and help people live longer, healthier lives, recent research shows that weight gain associated with HIV drugs can increase a woman's risk of diabetes [6]. Since being obese can increase the chances of getting conditions already common for many people living with HIV (e.g., heart disease [7], cancer [8], high blood pressure, high cholesterol), it is important to maintain a healthy weight.

Ways to Improve Nutritional Status

Maintain a Healthy Weight

With a chronic infection like HIV, your body burns more energy (calories). If you are using more than you are bringing in, you may lose weight. It is also possible to eat more calories than you are using, and thus gain weight. Either way, if you are not eating healthy foods, you can suffer from malnutrition and hurt your health.

Some people living with HIV need a higher daily calorie intake to prevent weight loss. Hunger is not always a reliable guide, because you can feel nauseous or turned off by food, even when you need it. If this is the case, speak to your health care provider about ways to manage your nausea [9] or stimulate your appetite.

Eat More Complex Carbohydrates

Carbohydrates are a good source of energy, but can be a problem if you have diabetes [6]. They are found in foods like:

- Bread
- Pasta
- Rice
- Cereal
- Potatoes

Carbohydrates come in different forms. Simple carbohydrates are more easily digested, but can cause your blood sugar to rise sharply. Simple carbohydrates include sugar (as found in sweets, soft drinks), white rice, and white flour. They also occur naturally in fruits and milk.

Complex carbohydrates (also called starches) take longer for your body to digest, and often contain more fiber and other nutrients than simple carbohydrates. Complex carbohydrates include whole grains, beans (legumes), starchy vegetables like corn and potatoes, and brown rice. Because they take longer to digest, complex carbohydrates do not cause blood sugar to rise as sharply as simple carbohydrates and are therefore recommended for people with diabetes.

Eat More Protein to Fight Muscle Loss

Protein (along with physical activity [10]) helps your body build and maintain muscles. During times of infection, protein stored in muscles can get burned as a fuel source. This can lead to loss of muscle, also called muscle wasting.

It is important to try to eat at least three servings of protein every day. A good estimate of a 'serving' is the amount of food the size of your fist. Foods high in protein include:

- Lean meats, including beef, chicken, and pork
- Fish
- Cottage cheese and yogurt
- Eggs
- Beans, chickpeas, soybeans, and nuts

Some animal sources of protein can be high in saturated fats, and should be used in moderation—especially if you have elevated cholesterol or you are at risk for heart disease.

Fiber, Water, Fruits, and Vegetables for Gut Health

A healthy gut is necessary in order for your body to get what it needs from foods, supplements, and medications. Foods high in fiber can help keep your bowel movements regular and support gut health. These include:

- Oats
- Whole grain bread
- Lentils
- Chickpeas
- Beans
- Fruits and vegetables
- Prunes and apricots

Water (8-10 8-oz cups a day, or about two liters), juices, fresh fruits, and vegetables can help you digest and eliminate waste. Drinking more water can help you avoid dehydration and constipation, and reduce the side effects ^[5] of medications.

Animal fat, especially dairy, can make diarrhea worse. If diarrhea is a problem, you may need to cut back on animal fat, fried foods, and sugary foods. It is important to know that juices often contain large amounts of sugar. Sometimes the sugar is natural (from the fruit), and sometimes there is sugar added to the juice (e.g., cane sugar, corn syrup). Either way, juices tend to have more sugar and less fiber than fresh fruit. As a result, juices can make diarrhea worse and people who have diabetes or pre-diabetes ^[6] are advised to drink juices sparingly.

Include Foods to Reduce Inflammation

Because the immune system of a person living with HIV is always struggling to get rid of the virus, the immune system of people living with HIV is always activated, or "turned on." An activated immune system produces inflammation. Ongoing inflammation appears to be related to many conditions, including heart disease and cancer.

The good news is there are several foods that can help to reduce inflammation. These include:

- Green leafy vegetables like chard, collards, kale, and spinach
- Bok choy (Chinese cabbage)
- Broccoli
- Beets
- Celery
- Certain fish, like mackerel, salmon, sardines, and tuna
- Certain fruits, like blueberries, cherries, pineapple, and strawberries
- Certain nuts, like almonds and walnuts
- Certain oils, like olive oil and coconut oil
- Certain seeds, like chia seeds and flax seeds
- Certain spices, like turmeric and ginger
- Tomatoes

Supplements

People living with HIV need more vitamins to build and repair tissue. It may not always be possible to get all the micronutrients ^[2] (vitamins and minerals) from foods you eat. Not getting enough micronutrients can cause problems such as anemia ^[11].

While supplements do not replace a well-balanced diet, they can help you get the additional micronutrients you need. Many people living with HIV take a general multivitamin, and some take additional supplementation as needed for specific micronutrients (such as calcium pills for women who do not get enough from their diet). Because several studies have shown that taking a general multivitamin can have health benefits for people living with HIV, many health care providers regularly recommend that their patients living with HIV take multivitamins.

Speak to your health care provider and see a registered dietician for a nutritional evaluation. They can help you determine what combination of dietary changes and supplementation can correct any micronutrient shortages you have.

Practice Food Safety

It is very important to protect yourself against infections that can be carried by food or water:

- Wash your hands before preparing or eating food
- Wash all fruits and vegetables carefully
- Do not eat raw or undercooked eggs or meat
- Use bottled water if the public water supply is not totally safe

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- Bok choy (Chinese cabbage)
- Broccoli
- Beets
- Celery
- Certain fish, like mackerel, salmon, sardines, and tuna
- Certain fruits, like blueberries, cherries, pineapple, and strawberries
- Certain nuts, like almonds and walnuts
- Certain oils, like olive oil and coconut oil
- Certain seeds, like chia seeds and flax seeds
- Certain spices, like turmeric and ginger
- Tomatoes

Taking Care of Yourself

It is not always easy to stick to a well-balanced and healthy diet. However, the benefits of good nutrition are clear. Well-nourished people have a healthier [immune system](#) [12] and are better prepared to fight off infections. In addition, many people living with HIV use food and supplements to manage a variety of complications and [side effects](#) [5].

Your diet and supplements are key parts of your total strategy to fight HIV and stay healthy. Although there are no US nutritional guidelines with specific recommendations for people living with HIV, a well-balanced and varied diet that includes all vitamins and minerals seems to be the best way to go. Work with your health care provider and a dietician or nutritionist on a regular basis to develop the best plan for you.

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Additional Resources

Select the links below for additional material related to nutrition.

- [Diet, Nutrition and HIV \(The Body\)](#) [24]
- [Healthy Eating \(AIDSmap\)](#) [25]
- [Superfoods \(CATIE\)](#) [26]
- [Nutrition and HIV/AIDS \(Unicef\)](#) [27]
- [8 Carbs You Should Be Eating \(Huffington Post\)](#) [28]
- [A Practical Guide to Nutrition for People Living with HIV \(CATIE\)](#) [29]
- [Nutrition and HIV/AIDS \(WebMD\)](#) [30]
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- [Managing Symptoms and Side Effects \(CATIE\)](#) [32]
- [Nutrition and Food Safety \(AIDS.gov\)](#) [33]
- [The Best Protein You Can Eat, According to Nutritionists \(Huffington Post\)](#) [34]
- [Dietary Fats: Know Which Types to Choose \(Mayo Clinic\)](#) [35]
- [Foods That Fight Inflammation \(Harvard Health\)](#) [36]

