FY 2016 Houston EMA/HSDA Ryan White Part A Service Definition Medical Nutritional Therapy (Revision Date: 03/03/14)			
HRSA Service Category Title: RWGA Only	Medical Nutritional Therapy		
Local Service Category Title:	Medical Nutritional Therapy and Nutritional Supplements		
Budget Type:	Hybrid		
RWGA Only			
Budget Requirements or Restrictions:	Supplements: An individual client may not exceed \$1,000.00 in supplements annually without prior approval by RWGA.		
RWGA Only	Nutritional Therapy: An individual nutritional education/counseling session lasting a minimum of 45 minutes. Provision of professional (licensed registered dietician) 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.		
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:	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.		
	Nutritional Therapy: An individual nutritional education/counseling session lasting a minimum of 45 minutes. Provision of professional (licensed registered dietician) 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 dietician.		
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:

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 dietician.

Nutritional Supplement Disbursement Counseling is a component of Medical Nutritional Therapy. Nutritional Supplement Disbursement Counseling 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.

Medical Nutritional Therapy: 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 dietician. 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 medicationnutrient 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 dietician 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.

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.

Service Unit Definition(s):

RWGA Only

Supplements: 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 dietician as clinically indicated. A visit wherein the client receives counseling but no supplements is <u>not</u> a billable <u>disbursement transaction</u>.

	<i>Medical Nutritional Therapy:</i> An individual nutritional counseling session lasting a minimum of 45 minutes.
Financial Eligibility:	Refer to the RWPC's approved FY 2015 Financial Eligibility for Houston EMA Services.
Client Eligibility:	Nutritional Supplements: 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	Must comply with Houston EMA/HSDA Part A/B Standards of Care, HHS treatment guidelines and applicable HRSA/HAB HIV Clinical Performance Measures.
	Must comply with the Houston EMA/HSDA approved Medical Nutritional Therapy Formulary.

FY 2017 RWPC "How to Best Meet the Need" Decision Process

Step in Process: Council			Date: 06/09/2016
Recommendations:	Approved: Y: No:	If approve	ed with changes list
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Step in Process: Steering Committee			Date: 06/02/2016
Recommendations:	Approved: Y: No:	If approve	ed with changes list
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Step in Process: Quality Improvement Committee			
Step in Process: Q	uality Improvement Committe	ee	Date: 05/19/2016
Step in Process: Q Recommendations:	Approved: Y: No: Approved With Changes:		ed with changes list
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Published on The Well Project (http://www.thewellproject.org)

Home > Vitamins and Supplements

Vitamins and Supplements [1]

Submitted on Jan 13, 2016

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Micronutrients and HIV

Vitamins, minerals, and antioxidants are called micronutrients. Even though the body only needs small amounts, micronutrients are essential for good health. Our bodies use them in the different chemical reactions our cells go through as part of the body's normal functions. While some people get the nutrients they need through a healthy, balanced diet, many people living with HIV (HIV+) need more micronutrients to help heal cells damaged by the virus and support the <u>immune system</u> [2]. Several studies have shown that taking micronutrient supplements can help keep people living with HIV healthier longer.

Vitamins

Vitamins generally fall into one of two categories: (1) fat-soluble, or those that dissolve in fats, and (2) water-soluble, or those that dissolve in water.

When you take in fat-soluble vitamins (through foods or supplements), your body uses what it needs and stores the rest. Fat-soluble vitamins include vitamins A, D, E, and K. It is important not to take too much of these vitamins because they can build up in the body and cause harmful side effects [3]. For example, too much vitamin A (betacarotene) can cause nausea, blurred vision, birth defects, and liver problems.

When you take in water-soluble vitamins, such as B vitamins and vitamin C, your body uses what it needs and filters out the extra into your urine. Side effects from water-soluble vitamins are less common, but can occur. For example, large doses of vitamin C can cause nausea, stomach cramps, and diarrhea.

Minerals

Minerals form the structures in the body (calcium in bone, iron in blood) and play a role in the normal functioning of nerves, muscles, and hormones. Several minerals, including zinc, selenium, and iron have a role in fighting HIV. The role of calcium is especially important for women during the time around menopause (perimenopause) and after menopause [4].

Antioxidants

The body produces molecules called free radicals as part of its normal functioning. Free radicals can damage your body's cells. Certain factors, like infection, pollution, and cigarette smoke can increase the number of free radicals in the body. Antioxidants can keep the extra free radicals from causing damage. Some vitamins, including vitamin C and vitamin E, are antioxidants. Beta-carotene (vitamin A) and selenium are also antioxidants.

Getting Enough

While micronutrients can be found in foods, some people living with HIV cannot meet all their nutrient needs through their diet. People living with HIV who do not to get enough micronutrients may not get them for a number of reasons: because of HIV infection itself, changes in metabolism, poor appetite, diarrhea, poor absorption of nutrients, or HIV-related conditions such as HIV wasting and AIDS.

Micronutrients that are often low in people living with HIV include vitamin A, vitamin D, vitamin E, selenium, zinc, and B complex vitamins (B1, Thiamine; B2, Riboflavin; B3, niacin; B6, Pyridoxine; B12, Cobolamin; and B9, folic acid). Some research shows these low vitamin levels can lead to lower <u>CD4</u> [5] cell counts and worsening of HIV. They can also cause problems like <u>diarrhea</u> [6], neuropathy [7], and skin conditions.

In resource-poor countries, many women do not get enough micronutrients because they do not have access to enough food or good-quality foods. Yet even in resource-rich countries, it is possible to eat well, feel fine, and still not be getting enough of certain vitamins, minerals, and antioxidants.

The Recommended Dietary Allowance (RDA) guidelines are set by the US government to let people know how much of each micronutrient they need each day to maintain good health. Due to dieting, eating unhealthy foods, lack of time, or other pressures, half of all women in the US do not eat what they need to meet even the basic RDA requirements for folic acid, iron, zinc, calcium, magnesium, copper, vitamins A, D, E, and certain B vitamins. This puts women, especially women living with HIV, at particular risk for low levels of micronutrients. In addition, women are more likely not to get enough nutrients because of menstruation [8], pregnancy [9], and menopause [4]

Eating a well-balanced diet should be the basis of any plan to correct micronutrient deficiencies. Since different vitamins and minerals are found in different food groups, it is important to include foods from each group in your diet every day. (Read more about food groups at the USDA's "Choose My Plate [10]" website.)

- Protein group Healthy foods from this group include lean red meats, skinless chicken or turkey, fish, nuts, peanut butter, soy
 products, seeds, beans, quinoa, and peas
- Grains group Healthy foods from this group include whole grain breads, whole grains like oats and wheat, oatmeal, and brown
 rice
- Fruit group Any fresh fruit is a good choice
- Vegetable group Fresh and frozen vegetables are the best
- Dairy group Try to choose one percent or skim (non-fat) milk, low-fat yogurt and cottage cheese, and small amount of cheeses

For more information, see The Well Project's article on nutrition [11].

Taking Supplements

It is important to get as many of the vitamins and minerals you need from food as possible. This is because nutrients found in food are better for your body than nutrients found in supplements. While supplements do not replace a well-balanced diet, they can help you get the additional micronutrients you need. Supplements include vitamins, minerals, herbs, and other related products used to boost the nutritional content of your diet. Supplements are available in pill, capsule, tablet, powder, or liquid form.

Speak to your health care provider and see a registered dietician for a nutritional evaluation. They can help you determine what combination of diet changes and supplementation you need.

Here are some basic recommendations:

- Take a multivitamin/multimineral supplement (without extra iron) every day
- · Multivitamins should be taken with food and a full glass of water to help absorption and prevent stomach upset
- Consider a B complex vitamin and an antioxidant supplement in addition to your multivitamin. If you are vegetarian, consider
 getting your vitamin B12 level checked; if it is low, it is important to ask your provider for the correct amount of B12 to take.
- Because women are at higher risk for <u>bone disease [12]</u>, make sure you are getting 1,000 milligrams of calcium (1,200 milligrams if you are over 50) from foods or supplements each day. Women who are menopausal do not have the estrogen levels to support new <u>bone growth [12]</u>. If you are menopausal, it is important for you to take calcium supplements for the rest of your life.
- Humans make vitamin D by being outdoors and exposing our skin to the sun. Many people are low in vitamin D, which is important for absorbing and using calcium. It is important to have your vitamin D level checked and to ask your provider for the correct amount of vitamin D to take if your level is low. The RDA for vitamin D is 600 units (or 15 micrograms) per day.
- Iron may be too low in women, especially during their menstrual periods. This can lead to <u>anemia</u> [13]. However, it is not recommended that people living with HIV take extra iron without their health care provider's advice.
- Because studies have shown that St. John's Wort (Hypericum perforatum) affects the levels of protease inhibitors and non-nucleoside reverse transcriptase inhibitors in the blood, the US Food and Drug Administration (FDA) recommends that those taking any HIV drugs not take St. John's Wort. St. John's Wort is an herb commonly used as an anti-depressant.
- If you are planning to <u>get pregnant</u> [14], speak to your health care provider about prescription pregnancy vitamins that contain folic acid. Folic acid needs to be taken before becoming pregnant, since the first six to eight weeks of pregnancy is the most important time for folic acid to protect the developing baby's nervous system.

You may also want to consider:

- Alpha-lipoic acid: for its antioxidant properties and diabetic neuropathy. Suggested dose: 20-50 mg per day for general antioxidant properties, 200-300 mg per day for diabetic neuropathy. Reportedly tolerated well up to 600 mg per day.
- Carnitine (also called acetyl-L-carnitine): to support proper metabolism. It may also help with neuropathy [7]. Suggested dose: 500 mg to 3000 mg (3 g) per day.
- Coenzyme Q10: acts as an antioxidant and supports immune function. Suggested dose: 30-200 mg per day.
- Cysteine (also called N-acetyl-L-cysteine, or NAC): the body converts cysteine to glutathione, a powerful antioxidant. Suggested
 dose of NAC: 500 mg per day to start; people living with HIV may take up to 4,000 mg per day, with your health care provider's
 supervision.
- Probiotic supplement: these contain "healthy bacteria" like acidophilus to support digestion and immune health. Having healthy bacteria in your gut helps your body absorb more nutrients and make the most of what you eat. A suggested dose of Lactobacillus acidophilus (L. acidophilus), one of the most common probiotics, is one to two billion colony-forming units (CFUs). The dose depends on the health condition being treated. Those using probiotics may take as many as 15 billion CFUs per day for intestinal health with their health care provider's supervision.

Because of the potential for side effects and interactions with medications, supplements should be taken only under the supervision of a knowledgeable health care provider.

Deciding which supplements to take can be difficult and confusing because there are so many different kinds on the market. Try not to make your selections based on price, fancy or expensive packaging, or product promises. Instead, read the label to see what is really inside.

Micronutrients are essential to your body's healthy functioning. However, making sure you get enough nutrients without taking too much can be tricky. You can play it safe by speaking to your health care provider or an HIV-knowledgeable dietician about what supplements to take and possible side effects [3] or interactions [15] with your HIV drugs.

Additional Resources

Select the links below for additional material related to vitamins and supplements.

Dr. Weil's Anti-Inflammatory Food Pyramid [34]

Micronutrient Supplements Reduce Risk of HIV Disease Progression and Illness (JAMA) [35]

Vitamins, Minerals, and Other Supplements & HIV/AIDS: The Basics (The Body) [36]

Dietary Supplement Fact Sheet (NIH) [37]

Dietary Reference Intakes (USDA) [38]

Health Supplements Nutritional Guide [39]

Dietary Supplements: What You Need to Know (NIH) [40]

Vitamins, Minerals, and Supplements (CATIE) [41]

Vitamins and Minerals (AIDS InfoNet) [42]

Medical Alternative Medicine Index (University of Maryland) [43]

HIV and the Role of Nutritional Supplements (About health) [44]

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Canada's source for HIV and hepatitis C information La source canadienne de renseignements sur le VIH et l'hépatite C

From A Practical Guide to Nutrition for People Living with HIV

2.3 Managing Symptoms and Side Effects

Contents [hide]

Constipation
Diarrhea
Gas and bloating
Lack of appetite
Nausea and vomiting
Problems in the mouth or throat
Weight loss and wasting

Symptoms and side effects are common with HIV. They can be due to HIV infection itself, to co-infection or opportunistic infection, or to HAART. It is important to discuss with your doctor any symptoms you are experiencing, as they may indicate an underlying problem that requires medical treatment. Likewise, make sure you discuss with your healthcare team any side effects you experience—particularly those from anti-HIV drugs—because managing side effects is an important part of staying on your therapy. There are many ways to help you. This section of the guide provides dietary strategies for managing the most common symptoms or side effects.

CATIE also publishes a <u>Practical Guide to HIV Drug Side Effects</u>. Find it online or call 1-800-263-1638 to speak with a treatment information educator.

Constipation

Constipation occurs when the remains of digestion move too slowly though the intestinal tract. Too much water gets reabsorbed in the colon, making the stools hard to pass. People on methadone and those in recovery from some street drugs frequently report constipation problems. The main dietary strategy to counter constipation is to speed movement through the tract by increasing fibre, fluids and exercise.

Figuring out fibre

There are two kinds of fibre, and each kind acts differently in the gut. **Insoluble fibre** is found in foods like wheat bran, the roughage in whole grains and the skins and seeds of fruits and vegetables. This kind of fibre does not dissolve in water and makes food and waste move more quickly through the intestines. Therefore, it is the best kind for treating constipation. **Soluble fibre**, on the other hand, will absorb water and swell. It is found in foods like oatmeal and some fruits. Soluble fibre is good for treating diarrhea and high cholesterol or blood sugar levels. It will not speed up movement through the gut, but it helps constipation by increasing the bulk of the stool.

Keeping your bowels moving

- Increase fibre intake with wheat bran, high-fibre cereals, psyllium, whole grains, legumes (beans and peas), fruits and vegetables. Dried fruits (e.g. prunes, dates, figs, raisins) and bran cereals like All Bran Fibre and 100% Bran are particularly effective.
- Be sure your fluid intake is at least 8 to 10 cups per day (see "Don't forget the fluids").
- Increase activity level. Walking is particularly good, especially after a meal.
- Take your time on the toilet, and try to go at the same time every day.
- If you take calcium supplements, counter their constipating effect with magnesium.
- Avoid using laxatives more than once in a while. If you use them often, the bowel can become dependent on them.

Diarrhea

Diarrhea can occur from HIV infection of some immune cells within the intestine, an opportunistic infection or the side effect of medications. It can result in poor absorption of carbohydrates, fats, proteins and micronutrients, especially if it persists for a long time. Diarrhea occurs when substances pass through the intestines too quickly. There is not enough time to absorb all the nutrients, water and electrolytes. The end result is liquid stools and inadequate absorption. The main dietary strategies to counter diarrhea are to decrease the intake of substances that irritate the intestines and to slow down passage through the tract.

Calming the gut

- Limit your consumption of high-fat foods, sweet drinks, alcohol, caffeine, tobacco and stimulants.
- Limit your intake of insoluble fibre or roughage, such as wheat bran, berries, seeds and the skins of many fruits and vegetables.
- Add more soluble fibre to your meals. Good sources are oatmeal, rice, cream of wheat, applesauce and mashed potatoes. Make rice porridge by cooking 1 cup white rice in 6 cups water or broth for 1 hour or longer. Eat the rice and starchy broth.
- Eat foods high in potassium, such as bananas and potatoes, and salty foods such as canned soups.
- Some people benefit from 500 mg calcium twice a day.
- A daily glutamine supplement of 10 to 30 grams may be beneficial.
- Avoid magnesium supplements and high doses of vitamin C.
- Find out if any complementary or alternative medicines you take are contributing to the diarrhea.
- Replenish fluids by drinking plenty of liquids such as diluted juices or sport drinks (e.g. Gatorade). Or
 try this recipe for a homemade hydration drink: Mix 1 cup orange juice with 3 cups water and ½
 teaspoon salt.
- Try a lactose-free diet by avoiding milk, cheese, yogurt and ice cream. After 2 to 4 weeks, slowly add back yogurt with live culture, then hard cheese, then Lactaid brand milk. Lactose intolerance can develop with prolonged diarrhea.
- Probiotics such as acidophilus and bifidobacter can help replenish the good bacteria in the gut. These are found as supplements and in yogurts with live culture.

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Gas and bloating

Intestinal gas is a normal by-product of digestion and absorption. When it occurs in normal amounts, it may cause some discomfort but is usually quite manageable. The main dietary strategies to treat gas are 1) avoid foods and beverages that create more gas, and 2) eat in a way that regulates contractions of the bowel. While gas and bloating are common side effects of some anti-HIV drugs, they may also be the result of another gastrointestinal problem. If you are experiencing these symptoms, be sure to tell your doctor, as they may require investigation.

Decreasing tummy rumbles

- Eat at regular times to help the bowel become more regulated in its contractions.
- If constipation or diarrhea is a problem, see those sections for more information.
- Eat slowly and chew food well to aid in digestion and to avoid swallowing air.
- Chew less gum and drink fewer carbonated beverages, especially beer, as these add air into the stomach.
- Some very healthy foods like legumes (dried peas and beans), onions, garlic, broccoli and cabbage produce a lot of gas. Instead of dropping them from your diet, try a product like Beano when you eat these foods. Fennel seeds (as a tea, in your cooking or just chewed alone) will also reduce gas and aid indigestion.
- Try to identify the foods that increase the problem. When gas attacks, think of what you ate at the previous meal. Look for patterns. Then see if it helps to reduce or avoid the suspect food.
- Lactaid enzymes taken with dairy products may help.
- Try acidophilus supplements or commercial over-the-counter products that contain simethicone (e.g. GAS-X).

Lack of appetite

Not eating enough due to a lack of appetite is often the driving force behind weight loss and wasting in HIV disease. Lack of appetite may arise due to illness, fatigue, depression, drug side effects or addiction. It is a very common problem and can be difficult to overcome. Dealing with persistent lack of appetite can be depressing and a source of anxiety and stress. In some cases, in spite of best efforts, it is not possible to overcome the lack of appetite, and nutritional status continues to decline.

Eating when not hungry

- Eat often; small amounts add up over the course of the day.
- Consider meal replacement drinks like Boost, Resource or Ensure. These products may be covered by your drug insurance plan. Talk with your healthcare professional or insurance to find out more.
- Eat on a schedule. To remind yourself to eat, use external cues such as an alarm clock, a favourite TV show, the mealtime of a partner or other family members, break times at work or school, or the time you feed the dog or cat.
- Notice when you have your best time of day and eat the most nourishing foods at that time.
- Fresh air or light activity may stimulate appetite, so try to get outside.
- Make every bite count by emphasizing wholesome, nutrient-dense foods.
- Make eating more pleasurable (e.g. share a meal with friends or family).
- Take advantage of offers of help and meal programs.

Boosting the appetite

Appetite stimulants may be effective at improving food intake and promoting weight gain. Sometimes a short course of appetite stimulants can help restore normal appetite. Discuss this option with your doctor if you think you need more help with an appetite problem.

Megestrol acetate (Megace) is an appetite stimulant that has been used for many years to improve appetite in people with HIV. Studies of Megace in HIV disease have found that people do gain weight, although most of the weight gained is fat, not lean tissue. In spite of this, food intake increases and people feel stronger and more able to be active, which will eventually restore lean body mass. Megace is a drug that mimics the female sex hormone progestin. It should not be used for a long period, as it may affect the levels of other hormones, testosterone in particular.

Marinol, a derivative of THC (the active compound in marijuana), decreases nausea and sometimes increases appetite but has not been found to be that effective at promoting weight gain in people with HIV. The side effects are sleepiness and impaired ability to think clearly, which some people find unacceptable. Taking it at night may decrease these side effects and make it more tolerable.

Marijuana is effective at treating nausea and increasing appetite. In Canada, it is possible to obtain a permit from the federal government to possess and grow marijuana for its therapeutic value. Smoking or eating marijuana prior to meals and snacks increases food intake, but the food choices may not always be the healthiest. Planning ahead can ensure that the appetite-stimulating effects are used to the best nutritional benefit. For more information on medicinal marijuana, read "<u>Cultivating Compassion</u>" in the Summer 2007 issue of CATIE's The Positive Side, available at <u>www.positiveside.ca</u>.

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Nausea and vomiting

Nausea can occur from stomach disorders, opportunistic infection and most commonly as a side effect of many medications. Vomiting, though not as common, is more serious because it can result in nutrient loss and dehydration. The main strategy to counter nausea is to eat foods that are easy to tolerate and to eat often enough to get adequate nutrition.

Nausea is one condition for which it can be best to follow your culture's habits and treatments. For example, people who eat a typical North American diet often prefer bland foods. People who eat a South Asian diet often turn to

sweet, salty, sour or bitter foods to settle an upset stomach.

Keeping food down

- Eat small amounts frequently, at least every 2 to 3 hours. Low blood sugar, which occurs when you don't get enough nutrients, can make nausea worse.
- Cold or room-temperature foods may be easier to tolerate.
- If you are vomiting, remember to drink at least 8 cups of fluid each day.
- Wear loose clothes when eating.
- Try to avoid cooking smells.
- Don't lie down for at least 20 minutes after eating.
- Ginger may be helpful. Drink some flat ginger ale. Stir it to remove the bubbles. To make your own homemade ginger ale, simmer fresh ginger in hot water. Add sugar, maple syrup or honey to taste. Cool and add water or club soda to serve.

Problems in the mouth or throat

People with HIV may experience problems in the mouth or throat due to side effects of medications, damaged or diseased teeth and gums, or opportunistic infections like thrush, chancres or herpes. Anti-HIV drugs sometimes cause abnormal tastes or dry mouth. The most common cause of swallowing problems is esophageal candidiasis (thrush in the throat). The overall strategy to address painful chewing and swallowing is to adjust textures and tastes for more soothing foods and beverages.

Dealing with painful chewing

- If it hurts, don't eat it.
- Don't eat citrus fruits and tomato products, because the acidity in them may irritate mouth sores.
- Choose soft, moist, bland, non-irritating foods, such as oatmeal, pasta, avocados, soups, stews, mashed yams or potatoes, bananas, custards, puddings and fish. Moisten foods with gravy and sauces.
- Try using a straw to drink liquids.
- Try to avoid smoking and alcohol, as they irritate inflamed tissues in the mouth.
- Thrush (*Candida*) thrives on sugar, so limit sweets or rinse your mouth well after sweet foods and drinks.

Dealing with dry mouth and altered tastes

- Choose moist foods or moisten foods with gravy, sauces, water or broth.
- Brush teeth after meals with a soft toothbrush.
- Drink plenty of fluids, especially while eating.
- Avoid commercial mouthwashes, as they can irritate the mouth.
- Try a mouth rinse using $\frac{1}{4}$ teaspoon baking soda to 1 cup cool water. Swirl it in your mouth and then spit it out. Do not swallow.
- Use lip balm.
- For altered tastes, adjust the flavouring of foods to enhance pleasant flavours.
- Try masking unpleasant tastes with marinades, sauces, salt and spices.
- Chocolate and vanilla are good taste and smell stimulants.
- Sugar masks salty tastes and salt masks sweet tastes.
- Use plastic utensils to decrease a metallic taste and use sugar-free gum and candies to cover up a bitter taste.

Dealing with swallowing problems

- Choose softer foods with fewer chunks. Soft, mashed foods and thick liquids like milkshakes and meal replacement drinks are usually easier to tolerate. It may be necessary to puree food in a blender if swallowing is very painful.
- If there is a sensation of choking while eating or drinking, you may be at risk of aspirating food into

the lungs. Be sure to discuss this right away with your healthcare team.

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Weight loss and wasting

Severe weight loss is called *wasting syndrome*. While wasting has several definitions, the following criteria can be used to diagnose wasting:

- loss of 10% of body weight in 6 months or less OR
- 7.5% loss in 3 months or less OR
- 5% loss in 1 month OR
- BMI decreases to below 20 OR
- loss of 5% of body cell mass

Unwanted weight loss remains a serious risk for people with HIV because, as discussed in <u>Nutrition, Weight and HIV</u>, even small losses of body cell mass can be dangerous. The primary strategy for treating weight loss and wasting is to increase food intake to the level needed to promote weight gain. This is achieved with a high-calorie, high-protein diet and a daily multivitamin-mineral supplement.

Increasing calories and protein

- Eat often, at least 5 to 6 times per day.
- Eat high-calorie and high-protein foods like dairy products, nuts, peanut butter and dried fruits. For example, ½ cup of nuts has about 400 calories.
- Drink fluids with calories, such as milk, chocolate milk, soy milk, juices, homemade milkshakes, fortified malted drinks (e.g. Horlick's, Ovaltine) and meal replacement drinks (e.g. Ensure, Boost, Nutren, Resource).
- Try a calorie supplement like Polycose Powder.
- Eat fats as you can. Fats are high in calories but may be hard to digest and can raise blood cholesterol levels.
- Fortify foods and fluids with skim milk powder. One cup of powder has 250 calories and 24 grams of protein.

Nutrition support

Sometimes, no matter how hard a person with HIV tries, it is impossible to gain weight. For people who cannot eat enough, who continue to lose weight or who remain seriously underweight, nutrition support is an option. Nutrition support can be delivered through a feeding tube into the stomach or via an intravenous line directly into the bloodstream. Feeding tubes are used when the digestive system is working but the person is malnourished and cannot eat enough.

For short-term use, a nasogastric tube is placed through the nose and into the stomach. This is most often used during a hospital admission. For the longer term, especially for home-tube feeding, a gastrostomy tube, or *PEG* (percutaneous endoscopic gastrostomy), is surgically placed through the abdominal wall. Special formula is dripped into the stomach and may provide total nutrition or be a supplement to regular food intake.

Most people are reluctant to have a feeding tube because it is seen as invasive and psychologically is a symbol of serious illness. However, studies have shown that people with HIV who do accept this type of feeding gain weight and body cell mass, have improved functional ability and better quality of life. This type of nutrition support can save your life if you really need it.

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Disclaimer

Decisions about particular medical treatments should always be made in consultation with a qualified medical practitioner knowledgeable about HIV- and hepatitis C-related illness and the treatments in question.

CATIE provides information resources to help people living with HIV and/or hepatitis C who wish to manage their own health care in partnership with their care providers. Information accessed through or published or provided by CATIE, however, is not to be considered medical advice. We do not recommend or advocate particular treatments and we urge users to consult as broad a range of sources as possible. We strongly urge users to consult with a qualified medical practitioner prior to undertaking any decision, use or action of a medical nature.

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Information on safer drug use is presented as a public health service to help people make healthier choices to reduce the spread of HIV, viral hepatitis and other infections. It is not intended to encourage or promote the use or possession of illegal drugs.

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