

APPETITE LOSS

What's the Problem, and How Do You Diagnose It?

Appetite loss is simply a decreased interest in eating. Although diagnosing it would seem obvious—you could care less when mealtime approaches, and even trying to force yourself to eat can seem difficult—it may be helpful to actually keep a diary that lists everything consumed over the course of a few days. Then you and your doc and/or nutritionist can assess whether you're taking in healthful quantities and types of food. The problem with just "making a guess" is that some of the causes of appetite loss, especially depression, may adversely affect your ability to properly assess how well you're doing at food intake. If you take careful notes, the diary may be much more accurate in telling the tale.

What are the Causes?

Appetite loss is another of those symptoms that can have multiple causes, and it's not uncommon for several to be contributing to the problem.

- **Almost any infection can result in a decreased appetite**, usually because of the resulting fever, abnormal levels of cell-produced chemicals called cytokines (a part of your immune response), fatigue, and generally lousy feeling that accompany many infections. At times, HIV infection itself, especially when viral loads are high and cytokines like tumor necrosis factor-alpha are elevated, can contribute to appetite loss.
- **Abnormal levels of hormones, especially low testosterone, can also result in appetite suppression.** This is another reason to always include regular testing of hormone levels in your standard blood tests.
- **Nutrient deficiencies can also contribute to a lack of desire to eat.** And this can be a vicious circle: an initial appetite loss (from any cause) causes inadequate nutrient intake, and then the lack of nutrients perpetuates a malnutrition-induced appetite loss, which of course means that you don't take in enough nutrients to eliminate this cause, and so on and so on.
- **Depression will often suppress appetite.** It's very important to consider whether this may be contributing to an appetite problem, and obtain the appropriate psychological or psychiatric assessment to determine what treatments may be appropriate.
- **Drug side effects contribute to appetite loss in many.** There are many different meds, including not only antiretrovirals but those used in the treatment of infections and other conditions, that can cause appetite problems so be sure to check all the possible side effects of any of the drugs you're taking to see if appetite loss is listed. [A great resource for information on all the drugs being used in HIV disease, including all their possible side effects, is www.aidsmeds.com.] In some cases, drugs will directly suppress the appetite. In other cases, there may be an indirect effect when they create changes in the senses of smell or taste, the result of which is disinterest in eating because the food tastes or smells disgusting.

Another indirect source of appetite loss is the nausea that some meds cause. That queasy feeling can make the very thought of eating impossible (see *Nausea*, below). Although discontinuing any drugs that are contributing to this problem will usually quickly restore appetite, in too many cases this may not be a possibility so other approaches to stimulate the appetite will be needed.

What are the possible treatments?

As with any of the symptoms that may have multiple causes, treating appetite loss effectively will require first eliminating as many of the causes as possible. Then if appetite does not fully return, it will be necessary to consider the use of appetite stimulants.

- **Obviously, any known infection must be appropriately treated, and any combination of symptoms that might indicate an as yet undiagnosed infection should stimulate an appropriate diagnostic work up.**
- **If a high viral load indicates that HIV may be contributing to this problem, and especially if no other probable appetite suppressor seem to be present, this would be another factor to consider in deciding on beginning HAART.**
- **If an assessment of all the medications you're currently taking indicate that one or more might be causing appetite suppression, discuss with your doc possible substitutes.**
- **If hormone testing has shown that levels are low, appropriate hormone replacement therapy should be considered.** Testosterone replacement may be particularly important for full restoration of appetite. (See NYBC's *Self-Care Guide* for details.)
- **If depression has been diagnosed, it will be very important to get all the treatments you need to resolve this problem.** Don't forget that this may include not only psychotherapy or drug treatments but also hormone replacement, exercise, and other approaches. (See *Depression, Anxiety, Insomnia, and Other Mental Problems*.)

□ **It will also be crucial to restore nutrient intake to optimal levels.** This must include improved eating, whether that is accomplished through sheer willpower and scheduled intake or through the use of appetite stimulants. In addition, the use of micronutrient supplements to help reverse or prevent the malnutrition that may result from appetite loss is important.

Key Therapies

Improving food intake is crucial. Otherwise, you could remain trapped in the vicious circle where your low appetite is causing malnutrition which in turn is contributing to a low appetite. You simply must consume adequate nutrients. This may mean having to eat on a schedule, regardless of how you feel, and substituting multiple smaller snacks for three big meals. Even if you don't feel hunger pangs by the next scheduled intake, the rule here is that you just sit down and do the best you can to eat as much as possible. If it's early in your day, eat a good breakfast; if your day is halfway along, eat a good lunch; if you've reached your normal dinnertime, just sit down and eat. Period.

Anything that helps spark interest in food should be tried—new seasonings or substitutes for foods that taste odd, sauces to cover metallic-tasting protein foods, staying away from the area where food is being cooked (to the greatest extent possible) to avoid any smells that might seem repulsive, serving foods after they have cooled in order to lessen objectionable smells, and keeping lots of tasty snacks around so that any moment of appetite can be used to your advantage.

When sitting down to a whole meal seems impossible, drinking a meal may seem a lot easier. Warm soups can be a good source of additional nutrients. They're easy to consume and your body requires less energy to digest them. Having some warm tasty soup as an appetizer may also stimulate your appetite for other foods. If your appetite is really low, puree the soup in a blender or food processor in order to make a thick, creamy broth that will require no chewing. For the most nutrient-rich soups that meet all your personal dietary needs (low in fat if that's a problem for you, made without milk if you've become lactose-intolerant, and so on), making your own will be best. Homemade soup is actually a very simple thing to prepare. It can provide a hot, hearty meal or snack with very little effort.

Another easy-to-consume calorie and nutrient-rich possibility is the right kind of blender drink. HIV nutrition expert Chester Myers, Ph.D., long ago developed an excellent recipe for a healthy blender drink that you can make yourself. Just blend together rice milk (such as *Rice Dream*) or regular milk (if there's no problem with lactose intolerance) or juices (fresh-squeezed juices that contain the pulp are best), combined with half a large banana (or a whole small one) and other fresh or frozen fruits (frozen blueberries, peaches, strawberries, blackberries, raspberries, mangoes, and so on are widely available and a quick and easy nutrient-packed addition) and a few tablespoons of *Knudsen Coconut/Pineapple Nectar* for the medium chain triglycerides (MCTs) and, of course, the piña colada taste. Instead of or in addition to the coconut milk as the source of MCTs, you can add a lot of calories with a tablespoon or two of coconut cream or oil, or MCT oil, available in most health food stores. MCTs are an excellent source of calories because they do not cause diarrhea, a possible problem with other fat forms. Because many people with appetite loss may not be reaching the desired level of daily protein intake with the other foods being eaten, it may also be important to add a couple of tablespoons of high-quality protein powder. Among the best of the available protein powders are the whey protein products such as American Whey, Build Fast, Build Mass, Designer Protein, Nutrivir, Regeneration, Fermented Soy Essence, Ultimate Balance Whey, and Thorne Research Hydrolyzed Lactalbumin Protein Powder. Another good protein source is Jarrow Rice Protein Powder. You can add vanilla or other flavorings to this blender drink, if desirable. A few tablespoons of yogurt will make the drink creamier, and give you some health-promoting "good" bacteria. And if you prefer the iciness of a smoothie, you can add ice when you blend this drink.

You can up the nutrient punch of such a drink with additions of glutamine powder (often very important for those with malabsorption, diarrhea, or wasting; add a heaping tablespoon), ground flax seed (for fiber and omega-3 fatty acids) or a small amount of flaxseed oil (a teaspoon or two for the omega-3's), lecithin powder (a natural emulsifier which will make the drink creamy and may have cardiovascular benefits; add a tablespoon or two), and/or almond butter or cashew butter (for a tasty source of additional protein and good fats; just don't overdo if you have fat intolerance).

If you want something pre-prepared, do be careful to avoid the canned or powdered mixes that contain high levels of sugar and the wrong kind of fats. Instead, opt for products that are low in fat (or contain a high proportion of medium chain triglycerides, the type of fat discussed above that is easily taken up and does not cause the digestive problems that other forms of fat may cause), low in sugar (preferably with a dextrose or fructose equivalent of less than 30; this is usually referred to as the DE value; it's a simple way of seeing how high in sugar a given product is), moderately high in good-quality protein (preferably from partially hydrolyzed lactalbumin, or partially hydrolyzed whey protein as long as there is no lactose present, or high quality rice protein) and high in carbohydrates and calories overall. Good possibilities are Metagenics *ProGain* (in Canada, it's called Metagenics *Opti-Health Gain*) or Clintec *Peptamen* (in Canada, it's called Carnation *Peptamen*) or Metagenics *UltraClear Sustain* (in Canada, it's called UltraClear *G.I.*) or Clintec *Nutren 2.0* (in Canada, it's called Carnation *Nutren*), or Ross Labs's *Advera* or Mead Johnson's *Lipisorb* (liquid form).

NYBC and other Supplements for Improving Food Intake

Creatine Monohydrate: One of the building blocks of adenosine triphosphate (ATP), the basic energy unit in the body. Helps increase strength, endurance, and lean body mass. Strenuous exercise and hypermetabolic conditions cause the body, especially in its lean tissue, to rely heavily on creatine phosphate for muscular contraction and other energy requirements within the cell. Red meat provides a good source, but not as concentrated as a supplement. Several supplement forms are available:

Egg white protein is, simply, pure egg whites plus biotin. It contains no carbohydrates or fat; and each serving contains 16 grams of protein, 225 mg of sodium, and 100% of the daily requirement for biotin.

Glutamine is helpful in treating “leaky gut,” a condition in which intestinal tissues are damaged, and in higher doses, aiding in absorption and relieving diarrhea, including that caused by protease inhibitors. It strengthens the intestinal structure and stimulates skeletal muscle protein synthesis.

HMB is Bete-hydroxy-beta-methylbutyrate, a substance used by body-builders to increase weight and improve lean tissue mass. It seems to work by preventing muscle proteolysis (breakdown) during workout sessions.

Juven is a supplemental mix supplying betе-hydroxy-beta-methylbutyrate (HMB), glutamine, and arginine. Arginine is important in protein synthesis, increasing lymphocyte responses, and enhancing wound healing. However, in people with herpes it can trigger an outbreak, so if you have herpes, balance it with at least an equivalent amount of lysine. Juven may be problematic for kidney function; if you use it, monitor blood urea nitrogen (BUN) levels closely and drink lots of water and some cranberry juice daily.

Flax Fiber is ground flax meal and may be helpful primarily as a means to improve digestion. It can also provide some polyunsaturated fatty acids. It contains soluble and insoluble fibers as well as lignans. Other fiber products may work as well; look for one containing both water soluble and insoluble forms of fiber (see Fiber Formula). Insoluble fiber is found in wheat bran, whole-wheat products, popcorn, nuts, seeds, corn, and raw fruits and vegetables; soluble fiber is found in oat bran, apples or applesauce, oatmeal, citrus fruits, beans, apricots, pears or peaches without the skin, and many other vegetables and fruits. Those currently suffering from diarrhea should emphasize soluble fiber and avoid insoluble fiber, which can be too irritating and may worsen the diarrhea.

Medium Chain Triglyceride (MCT)Oil. These are more easily digested oils. If you look at the chemical structure of a fat, it has chains of carbon atoms that come in varying lengths. The shortest is butyric acid, found in butter. Others can be very long. MCTs are those of medium length. The structure of a triglyceride is basically three fatty acids ‘flying’ from the ‘flagpole’ of a molecule of glycerol. Long chain fats are found in meat, milk and many vegetable oils. MCTs are easy for the body to digest since they don’t have to be processed as much by pancreatic enzymes. But they don’t have a lot of essential fatty acids, so this is probably better if you are suffering from diarrhea, fat malabsorption or intolerance. However, if you have had some weight loss but are stabilized, it probably won’t help any more than a multi (*J AIDS & Hu Retro*, 1999;22(3):253-259).

Nutrivir is a Medicaid approved tasty formulation of multiple nutrients such as NAC, carnitine, enzymes and vitamins and minerals in a base of whey proteins. It is expensive (one bottle is only a 7 day supply), but is covered by Medicaid. This is an excellent and tasty product of multiple nutrients in a base of (in the vanilla flavor) whey proteins, fructose, maltodextrin, natural vanilla flavor, vanillin, dextrose, and a blend of digestive enzymes (amylase, lipase, cellulase amyloglucosidase, protease and acid protease). It breaks down as 8 grams of fat (yes, 7 as saturated fats-but readily burned medium chain triglycerides), 38 mg cholesterol, 180 mg sodium, 160 mg potassium, 39.5 grams of carbohydrates (it’s sweet; diabetics take note) and 21 grams of protein per serving. Since it has some costly components like carnitine, it ain’t cheap, particularly if used as directed. One bottle is only a 7 day supply.

Regeneration Protein Food is a whey-based food supplement that also contains enzymatically digested rice protein concentrate, soy protein isolate, hydrolyzed lactalbumin, L-glutamine, a complete profile of all the essential amino acids, complex carbohydrates and fiber, a low-dose vitamin/mineral blend, and other valuable nutrients.

Rice Protein, Organic. An easily digested protein supplement that is also vegetarian and hypoallergenic (no gluten, sugar, dairy or soy). Can blend with fruit juice, rice milk or other beverages. Each 15 gram serving has 12 grams of protein, 10 mg of sodium and no fat or cholesterol. About 2 grams of carbohydrates and less than one gram of fiber. It is useful as an alternative to soy and similar products or for those with gastrointestinal sensitivity to other proteins. Compare the cost with other protein products. Contains all the amino acids (with a full description of the average per serving breakdown), which includes arginine (1.3 grams), cystine (310 mg), tryptophan (180 mg), methionine (340 mg) and phenylalanine (740 mg). Phenylketonurics take note. Ingredients include Organic Rice Protein, guar gum and natural

vanilla flavor. Also, not being derived from dairy, it contains no lactose.

Seacure is a concentrate of pre-digested white fish proteins that is very easy to assimilate. It is helpful for weight gain, increased energy, and improved digestion. It's especially helpful for people suffering from malabsorption; it may also help those with liver toxicities as well as to offset drug side effects.

Undenatured **whey protein** appears to inhibit both HIV production and programmed cell-death (apoptosis), in addition to its usefulness in normalizing weight; studies indicate that it also increases levels of glutathione.

NYBC Supplements for Improving Food Intake

Creatine Monohydrate, bulk 500 or 1,000 grams	1 tsp. (5 grams) 4 x daily for the first 5 days, then 1 tsp. after exercise at least once a day.
Egg white protein 1 lb.	1/4 cup added to milk or other liquid. Also can be used in cooking.
Fermented Soy, organic x 15.8oz	16 servings
Flaxseed Oil x 12oz.	1-2 teaspoons
Glutamine Powder x 1,000 g	3-10 teaspoons/day. Take between meals or at the very beginning of a meal.
Glutamine Tabs 900mg x 180	4-12+/day
HMB 500 mg x 180	12/d before meals [4B, 4L, 4D]
Juven 30 packets	2/d
Multi-Flax Fiber x 454 g	1-2tsp/d
Medium Chain Triglyceride Oil x 16 oz	2-3 tablespoons
Jarrow Whey Protein x 2 lbs.	30 servings, four flavors, 1-4 scoops/day divided
Nutrivir x 560 grams	21grams per serving (Medicaid covered)
Rice Protein Powder, organic x 1 lb.	31 servings of 80% protein
Seacure 500 mg x 180	Maintenance: 3 capsules twice daily Weight gain: 12-20d in divided doses.
Ultimate Balance Whey x 750 grams	30 servings , three flavors, 1-4 scoops/day divided

Appetite stimulants may be important, particularly when some of the causes of appetite loss cannot be fully resolved. Marijuana or its synthetic cousin Marinol are particularly powerful appetite stimulants. Some people object to the mental effects, but at least with Marinol they can be lessened by taking the drug before bedtime since the appetite stimulation often carries over into the next day. Megace was used more in the past but it has two serious drawbacks. First, it can suppress testosterone production, clearly an unwanted side effect since testosterone deficiency can actually contribute to appetite loss. And second, use of Megace has recently been tied to osteonecrosis, the death of bone tissue discussed below. (See *Bone Problems*.) The antihistamine cyproheptadine (Periactin), usually prescribed for allergies, can be an effective appetite booster in some, especially children. If other approaches to improving appetite seem inadequate, this might be worth a try.

Vitamin and mineral supplements can help make up for the inadequate intake of micronutrients that occurs when eating is decreased. A high-potency multiple vitamin/mineral can be taken. One of the best is SuperNutrition's SuperBlend. A daily dose is 8 big tablets per day, but they will provide a potent array of all the most important micronutrients, a sort of nutritional insurance that's particularly important when your overall food consumption may be inadequate for providing the vitamins and minerals you need for optimal health.

NYBC Selected Vitamin/Mineral Supplements

Ultra Preventive	6/day (2B, 2L, 2D)
Superblend x 240	8/d (2B, 3L, 3D)

There may be additional supplements that will be necessary to restore your body's nutrient status to an optimal level, and thus restore appetite. Deficiencies of zinc are common in HIV+ people and can contribute to appetite loss in several ways, including the distortions in taste and smell that may result from inadequate body levels of zinc. Supplementation with 50 mg to 75 mg of zinc daily (total from all sources, including your multi) may help. Zinc intake must also be balanced with copper; take 3 to 5 mg of copper daily, preferably with a meal when you will not be taking zinc (since they compete for absorption). Deficiencies of vitamin A and vitamin B-6 are also common in HIV disease, and can sometimes contribute to loss of appetite. Supplementation of vitamin A, in doses of 5,000 IU to 10,000 IU daily (pregnant women should limit vitamin A to no more than 5,000 IU daily), preferably in a water soluble form due to the fat malabsorption problems of HIV disease, and vitamin B-6, in doses of 25 to 50 mg, two or three times daily, always taken in conjunction with a B complex, may help.

Ketotifen (Zaditen) is an antihistamine drug, similar to Seldane or Benadryl, that has long been used in Europe to treat allergies and bronchial asthma. It is one of the more promising currently available agents for weight gain for several reasons, not the least of which are that it is immediately available through buyers clubs and quite non-toxic. In fact, it is considered so non-toxic, that it has been widely used in children. One German study showed that after three months on the drug, using doses of 4 mg per day, there were **significant reductions in tumor necrosis factor** and an average weight gain of six pounds. The weight gain was shown to be the appropriate kind because there was a significant increase in body cell mass. In other words, it wasn't just fat but rather the increase in lean tissue that's so important to survival. Another study which combined ketotifen with oxymethalone, an oral anabolic steroid, yielded weight gains of eleven pounds in four weeks, **along with significant reductions in TNF levels.**

Ketotifen also appears to be **protective of the cells in the gastrointestinal tract**, protecting cells in the stomach, small intestine, and colon from toxins. In non-HIV research, it has shown some effectiveness as a treatment for colitis, or inflammatory bowel disease. *Thus, it may also provide some protection against the damage to the intestines commonly caused by inflammation and pathogen-produced toxins.* This could help preserve gut function and, thus, proper absorption of nutrients, making a weight-gain program more likely to succeed. Ketotifen is available only with a doctors prescription.

NYBC Supplements to Restore Nutrient Status

Vitamin A, Water Soluble 10,000 IU	5,000 - 10,000IU/day
B-50 Complex x 250	1 - 3/d (1B, 1L, 1D)
B-6, P5P (best form) 50mg x 100	2/d (1B, 1D)
Copper Sebacate 4mg x 75	1/d (take without Zinc)
Ketotifen 1mg x 50 (doctor's Rx required)	4/d (2B, 2D)
OptiZinc 30mg x 100	1/d (50 to 75 mg maximum total per day)

Nutrients that may help to lower tumor necrosis factor may help restore appetite. This cytokine (cell-produced chemical) is known to be abnormally high in HIV+ people, and is a known appetite suppressant. Two nutrients that may help are N-acetyl-cysteine (NAC), taken in doses of 500 - 1,000 mg, three times per day, and carnitine. Carnitine is available in two forms: L-carnitine (which can be prescribed; the brand name is Carnitor), which should be taken in doses of 1,000 to 2000 mg, three times per day; and L-acetyl-carnitine (available over the counter), which should be taken in doses of 500 to 1,000 mg, twice daily. Note that L-acetyl-carnitine will release four times the amount of free carnitine into the bloodstream, compared to an equivalent dose of plain L-carnitine. Thus, the need for higher doses of L-carnitine to achieve the same effect. In general, a broad spectrum of all the other important antioxidants may also help boost appetite by suppressing tumor necrosis factor. Appropriate TNF-counteracting doses might be vitamin E (800 to 2,000 IU daily), vitamin C (2,000 to 6,000 mg daily, spread across three meals), bioflavonoid complex (1 capsule with each meal), carotenoid complex (1 capsule with each meal), selenium (400 to 600 mcg daily, total from all sources, including your multiple), coenzyme Q-10 (100 to 500 mg daily), and alpha-lipoic acid (200 to 400 mg, three times daily). For more information on the above supplements, please see *NYBC's Core Nutrient Protocols* and *Counteracting Inflammation and Tumor Necrosis Factor* in the *Introduction* as well as the description of *Health-Enhancing Nutrients* in *NYBC's Self-Care Guide*.

Artichoke Leaf (*Cynara scolymus*): Increases flow of bile, inhibits cholesterol biosynthesis and lowers serum lipids, antioxidant, increases liver regeneration, protects liver cells from chemical damage. Specific indications include: Dyspeptic complaints, nausea, vomiting, spasmodic abdominal pain, stomach ache, loss of appetite, constipation, bloating.

Ginger. Ginger root is an appetite stimulant, as well as a nausea suppressant (which may also be needed by many with appetite loss). It can be consumed as a tea or a syrup (available in some health food stores; one good brand is New Chapter) or via capsules containing powdered ginger (2 to 3 capsules, a half hour before meals), or the root itself can be chewed. Tea is easily made by chopping a couple of tablespoons of fresh ginger root, covering it with hot water, and allowing it to steep for five to ten minutes. It is best to consume the ginger 15 to 30 minutes before meals for the best results for appetite stimulation. For those who have both appetite loss and nausea, drinking ginger tea throughout the day may work best.

Herbal and Food Bitters. Certain herbs have a bitter quality that can boost appetite. Bitters are an important class of botanicals to help support normal digestive, assimilative, and eliminative processes. They help to promote the free flow of bile from the liver which helps to stimulate intestinal peristalsis. There are numerous individual herbs such as gentian, yarrow, Oregon grape root, and wormwood, which when prepared as teas, act as digestive bitters. There are also numerous commercial bitter preparations prepared as hydro-alcohol extracts such as **Swedish Bitters**.

Dosage: As tea, 1-2 teaspoons of herb slowly boiled in water for 10 minutes in a covered vessel. Drink 1-3 cups daily. As hydro-alcohol extracts; 1 tablespoon morning and evening.

Beginning a meal with a salad that includes some bitter greens (Swiss chard, dandelion, arugula, watercress and any other bitter leafy green vegetables) may also stimulate appetite. There are also digestive formulas (for example, Swedish bitters) that contain these herbs that can be used prior to a meal as an appetite stimulant.

Botanicals to stimulate appetite:

Artichoke 500mg x 180	4-6d (1-2B, 1-2L, 2D)
Swedish Bitters x 16.90 oz	teaspoon before meals
Ginger Root 6:1 500 mg x 100	2-3, one-half hour before meals

Other Possibilities

Aromatherapy. Essential oils of basil, coriander, fennel, and lemon or other forms of citrus may help provide a more favorable environment for appetite stimulation. Using these can be as simple as putting a few drops on a cotton ball or saturating a Q-tip and leaving it in the room. Some people find that putting these pleasant aromas in the room will help counter any food smells that have come to seem unpleasant (a problem for some people with appetite loss).

Basil essential oil x 1oz	1 drop
Lemon essential oil x 1oz	1 drop
Orange essential oil x 1 oz	1 drop

Obviously, another possibility that is quite effective is marijuana. Unfortunately, the insane war on some drugs cause more harm and solves absolutely nothing, while denying the therapeutic value of a botanical like marijuana that could help thousands. Business as usual—if it makes the multi-billion dollar prison industry happy and keeps the US highest in per capita prisoners (disproportionately black men), then it must be just peachy fine. The civil war still isn't over, it seems (certainly not the fight for racial justice and human rights!)