

# Nutrition Quarterly

## Bone Health & HIV

Did you know that most adults in the United States do not get enough calcium? Ethnic minorities and women are at highest risk.

### What happens when I do not eat enough calcium?

Calcium is the most important mineral of the skeleton. It gives strength to your bones and teeth. It also allows your, blood, nerves and muscles, including the heart, to function properly. When we do not eat enough calcium and our blood levels become low, our bones break down calcium to replenish the blood supply. Over time, this can cause our bones to become soft (osteopenia) or porous (osteoporosis). These 2 conditions increase the risk of bone fractures.

### How does HIV affect bones?

HIV can increase the risk of osteopenia and osteoporosis. Some studies have shown the HIV virus increases bone loss and decreases bone formation. A common side effect of HIV drugs is also bone loss. However, if you eliminate other risk factors

that cause bone loss, you can live with strong healthy bones for years to come.

### Risk Factors

- Low body weight or significant and undesirable weight loss.
- Soda containing phosphorus, like colas, are associated with bone loss because it causes an imbalance of calcium and phosphorus in your bones.
- Excessive sodium (salt) intake from items like canned soup and frozen dinners cause calcium loss. You should not eat over 2,400mg of sodium per day.
- Excessive caffeine intake through foods like coffee, soda and chocolate. You should not drink more than 2 - 8oz cups of caffeinated drinks per day.
- Alcohol, smoking and recreational drugs have toxic chemicals that may increase the loss of minerals from your bones.

### How much calcium do I need?



Meeting your calcium requirement everyday is important to reduce bone loss. Your daily requirement is:

- 19-50 yrs old: 1000mg
- 50 yrs old: 1200-1500mg
- Adults with bone loss: 1500-2000mg

While best way to obtain calcium is by drinking low-fat milk and dairy products, you can also find calcium in other foods such as soy milk and tofu with added calcium (fortified), beans, broccoli, cabbage, bok choy, kale, and turnip greens. You can find the calcium content of certain foods on page 2.



Sources:

National Osteoporosis Foundation [www.nof.org](http://www.nof.org)

## Weight Training

Lack of exercise, especially resistance exercise, increases your risk of osteoporosis. Resistance exercises with weights help strengthen bones and muscles. It also helps burn fat.

Ideally, you want to focus on a few muscle groups like triceps (arms), pectorals (chest) and deltoids (shoulders), and perform one set of eight to twelve repetitions followed by two sets of four to six repetitions at a heavier weight.

Since muscles actually grow while they rest, it is important that you rest 1 day before training the same muscle group again. It is also important to include variety in your workouts. Over time, your body grows accustomed to the same repetitive motions, so be sure to introduce different exercises.

Apart from the physical benefits, exercising is also a proven mood enhancer, since it



releases endorphins, the body's natural "feel good" chemicals, associated with feelings of happiness and relaxation.

Yoga is also a form of resistance exercise. Take advantage of GMHC's weekly yoga class, as well as other classes offered in the program.

Check the Wellness Calendar for details.

Source: American Council on Exercise <http://www.acefitness.org/>

## Supplement Spotlight

Calcium's Support Team:  
*Magnesium & Vitamin D*

While calcium is the most important mineral for bone health, it needs help from vitamin D and magnesium to it's job! So if you feel you are not eating enough calcium rich foods, consider taking a calcium supplement with vitamin D and magnesium.

### Magnesium

Magnesium is a mineral that works with calcium to build and strengthen bones, keep muscles and nerves healthy and help your blood circulate smoothly.

Top magnesium-containing foods include: halibut, spinach, swiss chard, almonds and soy beans. Even though magnesium is found in many foods, most Americans do not get enough magnesium from their diets. Because this mineral is so important, it's a great idea to find a calcium supplement that includes at least 300mg of magnesium. Calcium supplements alone can cause constipation, but adding magnesium can promote regular bowel movements.

### Vitamin D

Vitamin D is a hormone that enhances calcium absorption. Without vitamin D, bones can become thin and brittle. It is also important for immune function.

While milk is fortified with vitamin D, other good sources are salmon, tuna, sardines and egg yolks. Our skin can make vitamin D when it is exposed to the sun, but age, skin pigment and the sun's strength can limit the amount of vitamin D your skin can make. That's why it's best to take a supplement that has at least 400 IU.

Taking a calcium supplement for bone health is a great idea. Choosing a supplement that also has magnesium and vitamin D will maximize calcium's benefits!

Source: National Institutes of Health Office of Dietary Supplements: <http://ods.od.nih.gov>

**Are you interested in:  
Boosting your immune system?  
Taking supplements-but not  
sure what to take?  
Gaining or losing weight?  
The Nutrition Department can  
help!  
Call 212-367-1259 or 212-367-  
1263 to make an appointment.**



## Veggie of the Month: KALE

Looking for a vegetable that will help you maintain strong bones? Kale happens to have two of the most important minerals needed for bone strength: calcium and magnesium! Kale is a dark green curly -leaf vegetable related to cabbage and collard greens that is growing in popularity.

One cup of cooked kale adds 36 calories to our day and provides 3 grams of fiber. Besides calcium and magnesium, kale also contains 354% of our daily vitamin A needs, 89% of our vitamin C, 27% of our manganese, and a whopping 1,328% Vitamin K! Kale also contains high amounts of lutein, a powerful antioxidant crucial for eye health.

### Quick Calcium Content Guide

Serving size	Food Item	Cal-cium
1 cup	Milk	300 mg
1 cup	Plain yogurt (non-fat)	450 mg
1 cup	Yogurt with fruit (low -fat)	315 mg
1 cup	Soy milk (fortified)	200-300 mg
1 oz	Cheese	175-300 mg
1/2 cup	Tofu (fortified)	260 mg
3 oz	Canned sardines or salmon with bones	210-240 mg
1 cup	Cooked legumes (kidney beans, lentils, black beans)	40-70 mg
1/2 cup	Cooked broccoli, bok choy, kale, cabbage, turnip greens	45-90 mg
1 piece	Tortilla (made from lime processed corn)	45 mg

One of kale's main drawing points is its sulfur-containing phytochemicals. What's the big deal? Recent research suggests they help trigger detoxifying enzymes in our liver.

The phytonutrients in cruciferous vegetables such as kale appear to be very powerful antioxidants. A study at the Fred Hutchsinon Cancer Research Center concluded that men eating 4 servings of vegetables a day lowered their risk of prostate cancer by 35 %. However, those who only had 3 servings of cruciferous vegetables (such as kale, broccoli, mustard greens, and watercress) a week lowered it by 44%!

Kale is one of the more bitter greens, but don't let that dissuade you from making it a must-have vegetable in your household. One great way to prepare it is to sauté it with olive oil, onions, and garlic.

If you have an enlarged thyroid, making kale a staple in your diet is not recommended since it contains nitrogen, which can aggravate your condition. Also, if you are on blood thinners like Coumadin this green vegetable should be avoided since it contains a large amount of vitamin K.

Otherwise, go green and have a blast!



Source:  
<http://www.whfoods.com/genpage.php?name=foodspice&dbid=38#descr>

### Stir Fried Kale

- 3 tablespoons olive oil
- 1 onion, chopped
- 3 cloves garlic, minced
- 1 cup bread crumbs
- 3 bunches kale - washed, dried, and shredded

#### **DIRECTIONS**

Heat oil over medium-high heat in a large frying pan. Add onions and garlic; cook and stir until soft.

Mix in breadcrumbs, and cook and stir until brown.

Stir in kale, and cook until wilted. Serve hot or warm.

Courtesy of <http://allrecipes.com>

