



# Osteoporosis Battle Plan

## What is osteoporosis?

Osteoporosis is a gradual reduction in normal bone mineral density, mass, and strength resulting in considerable bone thinning and increased vulnerability to fracture. Women are at a greater risk since their peak bone mass is naturally less than that of men due to their smaller size and muscle mass. Premenopausal decrease in progesterone and postmenopausal drop in estrogen also contribute to the greater risk of osteoporosis among women. Osteoporosis is uncommon in men who typically do not experience bone loss until after age seventy. Bone loss is usually greatest in the spine, hips, and ribs, which are the most susceptible to pain, deformity, and fracture. The most catastrophic of fractures, hip fracture, which typically leads to rapid loss of muscle, bone, endurance, strength, and appetite, causes death in 12-20% of cases and long-term nursing home care for 50% of those who survive.

## Causes of osteoporosis:

- Estrogen deficiency is the leading cause of osteoporosis in the menopausal female. When estrogen levels drop during the years around menopause, the cells that remove dead portions of demineralized bone become more sensitive to hormone signals that increase their activity.
- Inadequate stomach acid: stomach acid is essential in order for calcium to be absorbed in the intestines. An estimated 40% of postmenopausal women are severely deficient in stomach acid.
- Inability to convert vitamin D to its most active form: in its most active form, vitamin D stimulates the absorption of calcium within the body. Kidney or liver problems, and/or deficiencies in estrogen, magnesium, boron, and sunlight will inhibit the conversion of vitamin D into its most active form.
- Inappropriate lifestyle/dietary practices: alcohol, coffee, and smoking all cause an increase in the rate of urinary and fecal calcium excretion. Immobilization doubles this rate. A typical American diet high in processed foods, carbonated soft drinks, caffeine, and high protein, sugar, and salt consumption can promote osteoporosis.

## Facts you should know:

- Osteoporosis affects an estimated 20 million people in the U.S., which has the highest incidence of osteoporotic fractures in the world.
- Osteoporosis is responsible for at least 1.5 million fractures a year, including 250,000 hip fractures.
- Nearly one third of all women and one sixth of all men will have a hip fracture in their lifetime.
- In one study, individuals who drank more than three cups of coffee a day increased their risk of osteoporosis by 82%.

## Signs and Symptoms:

<i>Early Symptoms:</i>	<i>Late Symptoms:</i>
Usually none	Loss of height, deformed spinal column
Backache	Severe backache
Bone density tests showing demineralization of the spine and pelvis.	Fractures, especially of the hip and wrist, occurring with minor injury

## Treatment and Prevention:

### 1). Diet

- Limit consumption of foods that promote calcium excretion: salt, sugar, animal protein, soft drinks, alcohol, and coffee.
- Consume a nutrient dense, primarily vegetarian diet rich in whole, unprocessed, preferably organic foods, especially plant foods, and cold-water fish.
- Increase the consumption of green leafy vegetables such as kale, collard greens, parsley, lettuce (except iceberg), cabbage, and spinach that are particularly rich sources of calcium, vitamin K, and boron.
- Some other good sources of vitamin K include broccoli, asparagus, oats, whole wheat, fresh green peas, and green tea.
- Increase consumption of foods rich in calcium: in addition to dairy products, good non-dairy sources of calcium include kelp, bok choy, spinach, greens (collard, mustard, turnip), nuts and seeds (sesame seeds, almonds, chestnuts, walnuts), and beans (garbanzo, soy, tofu). Note: when you eat spinach, to eliminate its oxalic acid, a compound that reduces calcium absorption, immerse the spinach in water and cook first, then drain.
- Increase consumption of magnesium rich foods: kelp, wheat bran, wheat germ, almonds, cashews, blackstrap molasses, Brewer's yeast, buckwheat, English walnuts, rye, tofu, beet greens, soybeans, spinach, and brown rice.
- If fruits and vegetables are grown in soil containing sufficient levels of boron, most will contain it. Since soil levels vary, supplementation may be advisable.

### 2). Nutritional Supplements

- Magnesium – mediates the secretion of hormones that maintain proper calcium concentration in the blood. Women with osteoporosis have been found to have lower bone magnesium content and other indicators of magnesium deficiency. (*We recommend starting a daily green drink regimen including 3 servings of our Green Kamut Blend™, a wheat grass rich in magnesium*)
- **Bio Fruit™** Boron – required for the activation of both estrogen and vitamin D. (*Use our Bio Fruit™ rich in natural boron found in prunes and plums – take 2 servings daily*)
- **Master Amino Complex™** provides essential amino acids needed to develop muscle tissue. Take 1 tablet for every 25 lbs. of body weight daily. Best taken 30 minutes prior to exercise on days when doing physical act
- **Renew Hair Skin & Nails™**
- **Super Male Formula™**

### 3). Bio Identical Hormone Therapy

- Natural progesterone: stimulates the cells that pull calcium, magnesium, and phosphorus from the blood to build bone mass. Use of transdermal natural progesterone has been shown to result in new bone formation of up to a 15% increase in bone mineral density within a 3-year period. Consult a physician if you consider using natural hormone therapy to combat osteoporosis.

## Recommendations:

1. Participate in regular sensible weight-bearing exercise: jogging, aerobics, brisk walking, weight training, and dancing help reverse or at least slow bone loss in postmenopausal women.
2. Spend 20 minutes in direct sunlight with the face and hands exposed without sunscreen daily. Sunlight is essential to the natural production of vitamin D within the body.

3. Consume whole grains at different times than calcium. Whole grains contain a substance that binds calcium and prevents its uptake.
4. Consult your health care professional in order to determine whether calcium supplementation in conjunction with a diet rich in calcium is appropriate. Excess calcium is often deposited in soft tissues, possibly causing arthritis, arteriosclerosis, glaucoma, kidney stones, and other problems.

#### Works Cited

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\*\*\*We do not intend to diagnose, treat, cure or prevent any disease\*\*\*