

Bone Health and Osteoporosis

Jim Golick CCN, LDN

1. Osteoporosis statistics

- a. Over 50% of those over 50 have bone loss—either osteopenia or osteoporosis
- b. Over 14 million US men have osteoporosis or low bone mass.
- c. One quarter of all hip fractures occur in men.

2. Vitamin D critical

a. “An adequate vitamin D intake is associated with a lower risk of osteoporotic hip fractures in postmenopausal women. Neither milk nor a high-calcium diet appears to reduce risk. Because women commonly consume less than the recommended intake of vitamin D, supplement use or dark fish consumption may be prudent.” Willet et al, Brigham and Women’s Hospital and Harvard Medical School, Boston

b. Vitamin D may have a calcium sparing effect, explained the researchers, and as long as vitamin D status is ensured, calcium intake levels of more than 800 mg daily may be unnecessary for maintaining calcium metabolism. *JAMA* (vol 294, no 18, pp2336-2341

3. **An acidic body chemistry**, created by excessive consumption of meat, sugar, most grains, cheese and processed foods can damage bone. Fruits and vegetables neutralize these harmful acids and protect bone. Two to four cups of vegetables and several servings of fruits a day can help maintain healthy bone.

4. **An increased homocysteine level appears to be a strong and independent risk factor for osteoporotic fractures in older men and women.** *NEJM* 350: 2089-2090 Volume 350:2033-2041. [Ed note: Homocysteine levels are related to genetic predisposition as well as amenable to supplementation with vitamins B-12, B-6, folic acid, and trimethylglycine.]

5. **Hormonal influences are key—estrogen, progesterone and testosterone. Consider progesterone cream—but test saliva to ensure adequate but not excessive levels.**

6. Types of Calcium

- a. **Carbonate**—40% elemental Ca, cheapest and richest source. Ok for younger folks with good stomach acid to absorb. Not as good for older folks with impaired digestion. Acts as an antacid (think TUMS). **NEED ACID TO ABSORB OUR MINERALS!**
- b. **Citrate**—more acidic, which is a more preferred form for older persons. Only 20% elemental, so takes twice as much to compare to carbonate.
- c. **Coral Calcium**—carbonate mostly but in ionized form which is body-ready, and easy to assimilate. Also has ~70 trace elements which aid to alkalize and retain bone. Very helpful for acidic blood chemistries, which applies to most of us.
- d. **Calcium Hydroxyapatite**- from veal bone- contains entire bone tissue matrix—an excellent source, especially if with added trace elements like zinc, copper, manganese, boron, etc.

7. Other nutrients essential for strong bones—

- a. **Magnesium**- aids calcium uptake and deposition and strong bones
- b. **Phosphorus**- abundant in diet—but not too much
- c. **Potassium** (fruits and veggies) spares calcium from being robbed to alkalize blood
- d. **Zinc, manganese, copper**-- promote bone growth and strength
- e. **Boron**- helps enhance estrogen and retain calcium in PM women
- f. **Strontium**- has similar bone strengthening properties as calcium
- g. **Vitamin K**-- required to move calcium into the bone matrix and hold it there. It helps keep arteries flexible, thereby supporting a healthy cardiovascular system.

Summary: Weight bearing exercise + healthy diet + low stress + low toxins +

1. **NOW Bone Calcium or Bone Strength**
2. **Progesterone cream, especially if over 50 and/or PM**
3. **Vitamin D 1000-4000 IU depending upon season and sun, geography, skin color.**