

## **SOME USEFUL THINGS TO IMPROVE ↑BONE DENSITY**

[Lemon egg](#) or calcium citrate can keep one very alkaline and lessen osteoporosis. I am going to try the following myself. I am taking a half a magnesium at night twice a week with 2 ounces of grape juice in mineral water. For the next four months I am going to take magnesium without any calcium or dairy (no butter, alas!) for four months to see if this will rapidly change my magnesium/calcium ratios.

Studies also show that magnesium supplements, even when used without calcium, increase bone density. In two such studies, bone density was increased, within nine months, by 7% and 8%.

Studies show that vegans have stronger bones than meat and milk product eaters, especially after the age of 50.

Absorbable Calcium Alone Will Not Reverse Osteoporosis; this is virtually impossible to happen if your magnesium levels are low.

## **CAUSES FOR LOW BONE DENSITY**

- Osteoporosis Cause #1 -- Low Magnesium / High Calcium Ratio (countries that drink the most dairy have the highest rates of osteoporosis).
- Osteoporosis Cause #2 -- Female / Male Hormones Are Low
- Osteoporosis Cause #3 -- Low Thyroid Function  
Other causes that accelerate osteoporosis.
- Low Vitamin D levels
- Low Vitamin K Levels
- Excess Acidity
- Imbalance of DHEA and Cortisol
- Lack of Physical Activity
- Certain medications
- Certain illnesses

## **LIFE STYLE CHANGES**

- Stop soda drinks.
- Reduce consumption of dairy products.
- Increase Magnesium Intake
- Reduce stress—cortisol causes calcium to be pulled from the bones.
- More Sun—Increase Vitamin D Intake
- Eat Greens—Increase Vitamin K Intake
- Weight Bearing Exercises—walking, doing squats or push-ups, or working out with weights

## **FOODS IMPROVE LOW BONE DENSITY**

- Apple—phloridzin
- Dark grapes, cherries—polyphenols

- Onion–peptide GPCS
- Watermelon, papaya, pink grapefruit–lycopene

### **Apples–phloridzin**

French researchers have discovered that the flavonoid phloridzin found in apples, and especially in the peel, can protect you from osteoporosis by improving inflammation markers and increasing bone density.<sup>1</sup> Apples are a good source of polyphenols, which have been shown to increase the production of osteoblasts, cells in charge of bone deposition. In fact, apples are one of the most potent fruit sources of polyphenols.<sup>2</sup>

A medium apple is also an excellent source of vitamin C, essential for the production of collagen, which maintains bones and cartilage, fiber, plus a wide variety of bone–building polyphenols (besides phloridzin), trace minerals and flavonoids.

Fiber moves toxins through the intestinal tract and helps prevent them from being circulated to the liver. Ensuring liver health is a good way to ensure bone health, as poor liver function has been connected to osteoporosis.<sup>3</sup>

What makes apples such a powerful bone–building fruit is the unique combination of antioxidants along with valuable density enhancing minerals. One example is boron, a little–known mineral found in apples. Boron supports the function of important bone–healthy nutrients such as calcium, magnesium, phosphorous and vitamin D.

### **Dark grapes, cherries–polyphenols**

"Dietary Intake and Major Food Sources of Polyphenols in Finnish Adults" study found that dark grapes, bilberries, cherries, apples, blackberries and blueberries were all good sources. Fruit juices, such as grape juice, can render especially high levels of polyphenols. Florida State University study that touts prunes as “the most effective fruit in both preventing and reversing bone loss.”<sup>4</sup> is further evidence of the bone–building effect of polyphenol plant pigments that have been shown to increase the production of osteoblasts.

Increasing bone density plums when tested against figs, dates, and raisins. The same polyphenols are present in a wide variety of produce such as cantaloupe, cherries, pears, broccoli and cabbage.

Blackberries, raspberries, currants, kiwifruit, concord (purple) grapes, figs and tangerines also contain oxalates in very small quantities, small enough to ignore as it relates to calcium absorption.

### **Onions–peptide GPCS**

Swiss researchers conducted an experiment at the University of Basel and found that the onion peptide GPCS ( $\gamma$ -glutamyl-propenyl-cysteine sulfoxide) reduced bone breakdown in rats.<sup>5</sup>

Amazingly, when isolated bone cells from rats were exposed to parathyroid hormone in order to stimulate bone loss, GPCS-treated cells retained significantly more bone minerals – including calcium – in comparison to cells that were not exposed to GPCS.

Yet another study has shown that eating the humble onion on a daily basis does more than just increase bone density; the results have revealed that postmenopausal women were able to lower their hip fracture risk when eating an onion a day.<sup>6</sup>

Additionally, the high sulfur content of onions has a direct effect on the formation of connective tissue such as tendon and cartilage. Sulfur is present in all long chain polysaccharides called glycosaminoglycans (GAGS), with the exception of hyaluronic acid. GAGs make up cartilage, tendons and synovial fluid. Tendons are especially important to maintaining strong bones since they attach muscles to bones, so the muscles' contractions can be transferred across the joints and pull on the bones.

Besides being a good source of the potent anti-inflammatory quercetin, onions contain other bone-smart nutrients such as vitamin C, vitamin B6, folate, manganese, chromium, molybdenum, potassium, phosphorus and copper, all of which play an important role in bone health.

### **Watermelon, papaya, pink grapefruit–lycopene**

Antioxidants protect cells from the damaging effects of free-radicals, and studies have shown that lycopene in particular protects and stimulates osteoblasts.<sup>7</sup>

Another study has shown that those who consumed tomato juice or who took lycopene supplements – both providing 30 mg of lycopene – showed markedly reduced urinary levels of a bone breakdown protein called NTx.<sup>8</sup>

If you eat tomatoes the bioavailability or absorption of lycopene is greatest when tomatoes are cooked with olive oil, since the lycopene in the raw tomato is converted into trans-lycopene, which is more readily absorbed.<sup>9</sup>

## References

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