



Bone Up On Calcium Supplementation

Calcium is **vital for bone health in women** starting in childhood, and should be taken in doses of at least 1,200 mg. per day for adult women. Calcium has also been shown to help many women **deal with PMS** (pre-menstrual syndrome) in doses of 1,500 mg. daily.

Calcium supplementation is **also vital for men** over the age of 50 though this is frequently not discussed! Men start out with a higher calcium load because their bones are larger, but they also suffer from Osteopenia and Osteoporosis beginning after age 50 if they don't keep up with calcium intake. Men generally start having problems after age 75 with bone fractures (about 10 years later than women), and they have a much higher complication rate and death rate with fractures than women do - prevention is the key!!

Calcium requires several things for optimum absorption. Without all these factors in place, you may lose a lot of the benefit of your calcium supplement, no matter how much of it you are ingesting:

- 1) An **acid stomach environment**.
- 2) **Vitamin D** in individuals who drink little or no milk (vitamin D fortified), and who have little or NO sun exposure (the sun helps you manufacture Vitamin D). Vitamin D aids in the uptake of Calcium and in the mineralization of bone. You need 400 iu twice daily (total 800 iu daily), which was reported to reduce hip fractures in a March 2003 British Medical Journal Study.
- 3) **Magnesium and phosphorus** present in an appropriate ratio.
- 4) The **amino acids** leucine, arginine and serine for the formation of calcium-amino acid complexes.

With all of these requirements for optimal absorption, is it any wonder that so many people today are overdrawn in the calcium bank?

Forms of Calcium:

- **Calcium Citrate** is the **best absorbed** form of calcium to use. A 1999 study in the *Journal of Clinical Pharmacology* found that the citrate form of calcium was **absorbed 2.5 times better** than the carbonate form of calcium. Calcium citrate is also better tolerated - it does not cause the frequent bloating, gas, and constipation other forms of calcium can.

- Calcium Carbonate** has the highest percentage of calcium but it **is not well absorbed**. It is frequently taken as an antacid (*TUMS* is a flavored calcium carbonate). Remember, the **first requirement for optimal calcium absorption** by the body **is an acid environment**, so the antacid formulation makes calcium carbonate a somewhat self-defeating exercise. This is especially true for people taking other acid reducing medications (*Zantac, Pepcid, Nexium, Prilosec, Prevacid, Protonix*, etc.) and older people who often suffer from digestive acid deficiency. Calcium Carbonate also **binds with other medications taken at the same time** and may decrease or prevent their absorption. Similarly, this binding may cause constipation, bloating, and gas.

Warning: Calcium carbonate from oyster-shells or coral (coral calcium) is no different than calcium carbonate in any other form. It is, after all, a MINERAL. However, coral and oyster-shells carry the possible additional risk of being contaminated with heavy metals (lead, mercury, etc.) that naturally occur in the ocean's oyster bed environment. Be sure to carefully read labels - make sure that the manufacturer guarantees the product to be free from heavy metals!

Percent Calcium in Supplements		Suggested Calcium Intake by Age	
Calcium carbonate	40%	<6mo	210mg.
Bone meal	32%	6-12mo	270mg.
Di-calcium phosphate	31%	1-3yr	500mg.
Dolomite	22%	4-8yr	800mg.
Calcium citrate	21%	9-18yr	1,500mg.
Calcium lactate	13%	19-50yr	1,200mg.
		>50yr	1,200mg.
		SPECIAL CONSIDERATIONS	
		Pregnant / lactating women <19yr	1,300mg.
		Pregnant / lactating women >19yr	1,200mg.
		>50 Yrs not on hormones	1,500mg.

(Adapted from the 1994 NIH Consensus Conference guidelines)

Maximizing Bone Mass:

- Eat a healthy diet high in calcium and magnesium.
- Supplement the diet with additional calcium and magnesium according to the recommended daily allowances for your age.

- Avoid and/or cut down on things that cause calcium to be excreted from the body, including alcohol, caffeine, cigarette smoking, excess protein intake, excess sugar and refined foods.
- Get regular weight bearing exercise - Walk, Jog, Run, and ALWAYS take the stairs rather than the elevator!

Your Best Choices:

Taking all of this into account, **using a calcium supplement that is highly absorbed (Calcium Citrate) is good. Combining it with magnesium, and Vitamin D just makes more sense!**

Our Calcium + Ipriflavone Blend combines these essentials with Ipriflavone. Ipriflavone supports healthy bone maintenance by promoting calcitonin secretion which modulates osteoclast activity and supports healthy bone synthesis and density!

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