HUMAN PRODUCT

TRI-MINS PLUS

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The Calcium Conundrum: Calcium deficiency is not the only cause of Osteoporosis by Callie Zamzow Novak, from the March 2003 DYNA-MITE® Newsletter © DYNAMITE® Marketing, Inc. 2003, used with permission

A ccording to recent media coverage, the most critical nutritional question of the moment pertains to calcium. We are bombarded with concerns about calcium loss at menopause, osteoporosis, bone growth in our children, strong teeth, prevention of bone fractures, heart health and more. The media tends to present highly focused presentations of one-sided stories with limited value and accuracy. While it is true that Americans are experiencing a higher rate of the above-mentioned health issues, it is not realistic to infer that there is a "miracle miner" called calcium. Every element in nutrition has an interrelation with the other elements and we know that some are synergistic*. Whenever one vitamin or mineral is being brought to our attention, especially as a cure, we should always take a look at the bigger picture.

The interrelation of nutritional elements can be very complex. However, gaining a rudimentary understanding means we make better decisions regarding our dietary needs. One of the first diseases that we think of when we mention calcium deficiencies is osteoporosis. Osteoporosis is simply the bones "osteo-" becoming porous "-porosis" and it is a condition that weakens the bones, making them more susceptible to fracture. Recent media coverage and milk advertisements lead us to believe that osteoporosis is strictly a calcium deficiency. However if we take a closer look, we see a greater underlying complexity.

When it comes to osteoporosis, magnesium is a key element to consider. If calcium were "Batman," magnesium would be "Robin;" theirs is a "Dynamic Duo" that needs both elements to be more effective. Magnesium is very important in the uptake of calcium. In fact, some research has shown that magnesium is more important than calcium when it comes to prevention of osteoporosis. Tufts researchers recently found that high magnesium intake predicted high bone mass and less bone loss in older people. In a Swedish study, magnesium, not calcium, helped prevent hip fractures in older women (*Carper*, 2002).

But magnesium isn't just good for bones, it is also influential in the prevention of heart arrhythmia, blocked arteries, high blood pressure, diabetes, migraines, sleeplessness, problem pregnancies, pain and pre-menstrual problems. As with calcium, most American diets do not yield enough magnesium and most of us are, in fact, deficient.

The next big player in the prevention of osteoporosis is phosphorus. Without phosphorus, calcium would not be able to form a strong network within the bones to make them resistant to breakage. But, unlike magnesium and calcium, the influence of phosphorus is usually negative when it comes to osteoporosis because excess phosphorus binds calcium, preventing its uptake. This is worsened by the fact that most Americans consume an excess of phosphorus in soda pop, dairy products and meat. So, while phosphorus is needed for bone formation, our overconsumption of it actually prevents calcium absorption, adding to the osteoporosis problem.

With a more in-depth view of the interrelationship of calcium, magnesium and phosphorus, and the importance of mineral absorption, we can already see that osteoporosis is much more than a calcium deficiency. If we delve a little deeper, we find additional nutritional relationships and synergies that might affect osteoporosis. For example, we know that boron and zinc improve calcium absorption, copper aids in the formation of bone, and research shows that silica plays an imperative role in bone structure and function. We also know that vitamins K, D and B as well as

trace and micro-trace minerals are important in the uptake and use of calcium.

Media coverage of supplementation is at an all-time high and people are taking multi-vitamins more than ever before, but the incidence of osteoporosis is still increasing! This incongruity reveals another piece of the puzzle that involves your body's ability to absorb nutritional supplements. Not all supplements are created equal! People can get 100% of the "RDA" for calcium by eating 2 Tums a day, but the RDA value does not describe how the calcium behaves once in enters your body. The truth about the calcium in Tums and most calcium supplements is that it is in the form of inorganic calcium carbonate or other forms that are found in mineral deposits [see Coral Calcium below]. You can find a lot of calcium in rock, so why don't we just eat dirt? The reason is that we need a median step to transform the inorganic mineral into an organic, useable form. Plants usually do this for us through a process called "chelation."** This is the ideal way to obtain nutrients, but plants can only chelate minerals that are in the soil to begin with and most crop soils today are barren. This is the reason why **DYNAMITE**® chelated minerals are so important to good health.

Unlike the media hype, **DYNAMITE®** takes a much more holistic approach to osteoporosis. As with any condition, we always recommend that people start with **DYNAMITE®** or **DYNAMITE® PlusTM** and **Tri-Mins PlusTM** as a basic supplementation. This combination provides complete nutritional support that 90% of Americans need to live healthfully, including prevention of osteoporosis. After 60 days, you can reassess your personal situation and make minor adjustments depending on your specific needs.

Once again, the media has done their job by bringing important issues to light, but here is a good rule of thumb: If you do not understand how a product might affect your health, take the time to find out. Calcium is a vital nutrient, but if we consume it as though it is a quick fix, it is possible to do more harm than good.

* Synergism (sin-er-jiz-em): The interaction of elements that, when combined, produce a total effect that is greater than the sum of the individual elements.

** Chelation (key-lay-shun): The process of combining a mineral with an organic molecule, such as an amino acid, to make it more bioavailable (increase absorption) to the body.

Bibliography: Carper, J. USA Weekend: Mighty Magnesium. Virginia: Gannett Co., Inc., Aug 30-Sep 1, 2002

A Note on Coral Calcium: Dr. William Wheeler, Director of Nutritional Sciences for one prominent supplement company, says: "Single source calcium/magnesium supplements 'miss the mark' for supporting such important life function. Additionally, single sources such as coral calcium claim to have been 'naturally bio-chemically' altered to contain 'all of the mineral nutrients for life;' again, this is a scientifically impossible claim. Coral is now and will always be calcium carbonate."

In his book Minerals: Right on Target, author Steven N. Harvey states that amino acid chelated minerals, as used in **DYNAMITE®** products, have a proven higher rate of absorption than the inorganics, and especially higher than the carbonate form. Calcium carbonate is actually chalk or limestone, and is the substance used in antacid tablets to suppress stomach acid. needed to digest the calcium.

Why compromise a living eco-system important to the overall health of the planet when more effective and safer (pollution-free) alternatives exist? Those who "feel better" when taking coral calcium have probably been insufficient in mineral intake for quite a while. However, we believe it is far better to build long-term health with appropriate and balanced nutrients than to go for an immediate "symptom reliever."

Adding **TriMins** to your other basics of **Regular** or **Plus** and **Elixir** or **Izmine** will assure that you have a well-balanced mineral blend. Many choose to take the **TriMins** at night since these minerals tend to help induce restful sleep.