(Continued from previous page)

Everyone else can use magnesium in whatever levels they like. The only known effect of excess magnesium is a loose stool that dissipates within 24 hours of reducing magnesium intake. Many natural health practitioners believe the best way of determining ideal magnesium intake is to start with about 300 mg. of magnesium per day, and increase that amount by 150 mg. per week. If you reach a level that causes diarrhea before you reach 1200 mg. per day, cut back to the highest level that did *not* cause it.

Ionic Minerals are Superior to all Others

Minerals occur in foods (and most supplements) as compounds that consist of mineral ions and a "ligand" (citrate, carbonate, malate, ascorbate, lactate, etc.) to which those ions are attached. They are absorbed into the body only after the ions are freed from the ligand and carried into the blood by special carrier proteins.

Mineral ions are freed from their ligands by the hydrochloric acid (HCL) produced in the stomach. As we age, we make less and less of this acid, which makes it harder and harder to free mineral ions from their ligands. Thus, absorbing minerals becomes more difficult.

Obviously, the minerals we can absorb best are those from which the ions can be most easily liberated. Following this logic, the best of all minerals are those that enter the stomach as ions. Since such minerals require no digestion at all, even those with the weakest digestive tracts can absorb them efficiently.

Ionic Fizz Calcium Plus and Ionic Fizz Magnesium Plus are the world's premiere ionic mineral formulas. The Magnesium Plus provides magnesium, potassium, zinc, manganese, copper, boron, silica, and Vitamins A, B-6, B-12, C, D and folic acid, because all these nutrients are vital for building strong bones. The Calcium Plus adds calcium to these nutrients.

Because the minerals in these products are in ionic form when they enter the body, they insure maximum absorption. But, they also balance these minerals as Nature intends. Ionic Fizz Calcium Plus and Magnesium Plus are the only mineral products available anywhere that contain every nutrient needed for strong bones, provide their minerals in 100% ionic form, and balance calcium and magnesium correctly.

Which One Should I Use?

Because 80% of Americans are magnesium deficient, we suggest that everyone use Ionic Fizz Magnesium Plus for 60 to 90 days with NO CALCIUM SUPPLEMENT. This gives the body a chance to saturate every cell with adequate levels of magnesium. Such saturation is hard to achieve when we also supplement calcium, because calcium tends to minimize magnesium absorption.

After 60 to 90 days of using Magnesium Plus, you may switch to Calcium Plus if you need the calcium. The best way to determine your need for calcium is, again, to complete the chart on the preceding page. If your total calcium intake already exceeds 1200 mg., you really don't need calcium, but are probably in desperate need of magnesium. If you are short of 1200 mg., you can use the Calcium Plus in the amount needed to get to that level.

A good rule of thumb for usage follows:

• If you already get between 500-750 mg. of calcium per day, use two scoops of Calcium Plus per day.

• If you get between 750-1000 mg. of calcium per day, use one scoop of Calcium Plus per day, and one scoop of Magnesium Plus per day.

• If you get over 1000 mg. of calcium per day, use three scoops of Magnesium Plus per day (start with one scoop and increase by a half scoop each week until you get to three scoops). If any dosage induces diarrhea, reduce your usage to the highest level at which diarrhea does not occur.

Enjoy!!!

Ionic Fizz Calcium Plus and Ionic Fizz Magnesium Plus are the world's finest mineral supplements, and, although they contain no sugar or artificial sweeteners, they actually taste good. People report all kinds of unexpected benefits from them. No doubt, you will, too. As with all Pure Essence products, they are guaranteed to your complete satisfaction. Thus, if you are anything less than delighted with your personal results, return the unused portion (or empty jar) with your receipt to your place of purchase for a complete refund.

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Calcium Plus

Supplement Facts

Serving Size: One scoop, filled to line (Equals 7 grams)

Ingredient	Amount Per Serving	% DV
Ionic Magnesium	300 mg	75%
Ionic Calcium	250 mg	25%
Ionic Zinc	2 mg	13%
Ionic Manganese	1 mg	50%
Ionic Copper	250 mcg	12.5%
Vitamin C (ascorbic acid)	250 mg	416%
Vitamin A (natural beta carotene)	250 IU	5%
Vitamin B6 (pyridoxine HCL)	1 mg	50%
Vitamin B12 (cyanocobalamin)	30 mcg	500%
Vitamin D (ergocalciferol)	100 IU	25%
Folate (folic acid)	50 mcg	12.5%
Ionic Potassium	100 mg	*
Ionic Boron	500 mcg	*
Silica (bamboo leaf)	60 mg	*

* Daily Value not established

Suggested Usage: One to three servings daily, depending on diet.

Magnesium Plus

Supplement Facts

Serving Size: One sccop, filled to line (Equals 5.7 grams)

Ingredient	Amount Per Serving	% DV
Ionic Magnesium	300 mg	75%
Ionic Zinc	2 mg	13%
Ionic Manganese	1 mg	50%
Ionic Copper	250 mcg	12.5%
Vitamin C (ascorbic acid)	250 mg	416%
Vitamin A (natural beta carotene)	250 IU	5%
Vitamin B6 (pyridoxine HCL)	1 mg	50%
Vitamin B12 (cyanocobalamin)	30 mcg	500%
Vitamin D (ergocalciferol)	100 IU	25%
Folate (folic acid)	50 mcg	12.5%
Ionic Potassium	100 mg	*
Ionic Boron	500 mcg	*
Silica (bamboo leaf)	60 mg	*

* Daily Value not established

Suggested Usage: One to three servings daily, depending on diet.

The FDA has not evaluated these statements.
These products are not intended to diagnose, treat, cure or prevent any disease.

Ionic Fizz is guaranteed to your complete satisfaction. If you are anything less than delighted with your personal results, return the unused portion with your receipt to your place of purchase for a complete refund.

We welcome your questions, comments and suggestions.

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Calcium, Magnesium, Osteoporosis and Cardiovascular Health

Research shows that without Magnesium, Calcium can actually cause bone loss, and may contribute to cardiovascular problems. Ionic Fizz formulas provide safe solutions for stronger bones. One of them is perfect for you.

IonicFizz™: The World's Best Absorbed Minerals

Calcium, Magnesium and Bone Health

For over 50 years, the dairy industry has pitched milk as a wonder food whose calcium is the only protection we need against weak bones. Yet, between foods and supplements, Americans have one of the world's highest calcium intakes, but still suffer from one of the world's highest rates of osteoporosis. While this is blamed on genetic weakness, studies prove otherwise.

To learn if a disease is triggered more by genetics than nutrition, we must study the effects of different diets on members of the same genetic groups. Doing this, we learn that African women in the United States eat at least four times more calcium than African women in Africa, yet *have nine times more osteoporosis.* Asian women in the United States eat at least 60% more calcium than Asian women in Asia, yet *have three times more osteoporosis.* As calcium consumption in Hong Kong and Greece doubled in the last 30 years, *the rate of osteoporosis tripled in Hong Kong, and more than doubled in Greece.* Finally, postmenopausal women in America who consume calcium rich dairy products have over three times more osteoporosis than those who do not. The data makes it clear that nutrition is a more powerful influence than genetics in bone health.

Adding power to these cross cultural comparisons are the Harvard Nurses Study, and a comparable study conducted by the American dairy industry. These studies show that the more dairy products we consume, the more bone we lose (1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11).

Country	Calcium	Magnesium	Ratio	Rate*	Country	Calcium	Magnesium	Ratio	Rate*
S. Africa	196	300	2:3	7	**Finland**	1332	200	>6:1	111
Singapore	389	400	1:1	23	**New Zealand**	1217	200	6:1	119
New Guinea	448	500	1:1	3.1	**Sweden**	1104	200	>5:1	188
Yugoslavia	588	400	3:2	27.6	**United States**	1086	200	>5:1	178

* Worldwide, the rate of osteoporosis is always higher in nations with high calcium intake and high ratios of calcium to magnesium. The healthiest ratios of calcium to magnesium are within the range of 2:3 and 3:2. Ratios of 3:1 or more present problems.

How Magnesium Controls Calcium Deposition in Bones

Bones are living tissues that must be constantly rebuilt via a two part process. In part one (resorption), cells called osteo*clasts* clear old minerals out of bone tissue that has become weak and mottled, and carry it into the blood. In part two (mineralization), osteo*blasts* deposit new minerals and collagen into the areas that have been cleared.

Osteoclasts and osteoblasts are stimulated by hormones called parathyroid hormone (PTH) and calcitonin (CT). PTH encourages osteoclasts to pull calcium *from* the bones, while calcitonin stimulates osteoblasts to deposit calcium *in* them (12). When we lack magnesium, the balance between PTH and calcitonin tilts too far toward PTH. This results in excessive stimulation of osteoclasts, which causes net bone loss (13). *Increasing magnesium is the only natural way to correct this.*

As seen in the chart above, rates of osteoporosis are lowest in cultures where the ratio of calcium to magnesium is between 2:3 and 3:2. The ratio of calcium to magnesium in dairy products is 10:1. In nations with high rates of osteoporosis, the ratio of total calcium to magnesium intake is at least 2:1, usually over 3:1, and often as high as 15:1.

Magnesium: Vital for Calcium Utilization

A vegan diet provides about 500 mg. per day of both calcium and magnesium. Studies show that vegans have stronger bones than omnivores, especially after the age of 50 (14, 18). 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% (15, 16). Another study, by renowned gynecologist Guy Abraham, provided a supplement that included 500 mg. per day of calcium, and 600 mg. of magnesium. Women using this supplement *increased bone mass by over 11% within nine months.*

These studies were considered profound for two reasons. First, bone loss, which was long considered irreversible, was reversed. Second, they show that magnesium is the key to calcium being deposited in bones.

Magnesium: The Master Nutrient

Magnesium is involved in over 300 different enzyme systems, and vital to the health of every cell in the body. Thus, magnesium deficiency not only prevents calcium from building strong bones, but impairs kidney, adrenal, heart, brain, muscle and digestive functions, compromises nerve transmissions, restricts carbohydrate metabolism, inhibits the activities of "B" complex vitamins, retards new cell growth, slows the production of DNA, and so on.

One of magnesium's most important duties is the formation of ATP, which is the molecule that provides the energy for virtually everything that occurs within cells. When we lack magnesium, ATP is scarce, metabolism slows, homeostasis is more difficult to maintain and fatigue sets in.

Despite the vast importance of magnesium, it remains the nation's most overlooked nutrient. Less than 20% of Americans get even the recommended daily intake of magnesium, which most certified nutritionists believe is artificially low to begin with (19, 20). *Less than one person in 20 gets the 1200 mg. that may be needed for optimal health.*

Calcium, Magnesium and Cardiovascular and Brain Health

When calcium is not deposited in bone tissues, it goes elsewhere. While some is excreted in urine, excess calcium can end up in the kidneys, where it may form stones. In the arteries, it contributes to the plaque that can challenge arterial health. Because calcium triggers muscle contractions, and magnesium supports the relaxation between contractions, an imbalance between these minerals may also undermine the health of the heart itself. Excess calcium may also occur in brain cells, thus compromising memory, thought processes, cognizance, etc.

None of this means we should fear calcium, for it is a vital nutrient. It simply means that Nature builds health through balance, and that a *healthy balance of calcium to magnesium means a ratio of not more than 3 parts of calcium per 2 parts of magnesium.* Many nutritionists consider the ideal ratio to be 1:1.

Magnesium and Blood Sugar

Magnesium is essential to carbohydrate metabolism. Studies suggest that magnesium helps insulin to be secreted, while also helping maintain cellular sensitivity to insulin. Thus, long term magnesium deficiency must inevitably lead to insulin deficiency and/or insulin resistance. In states of diabetes, the disease causes the body to "waste" magnesium through the urine. Thus, magnesium supplementation is important for anyone who is concerned with or has problems with blood sugar levels.

Cramps and Constipation

Calcium is the mineral that promotes muscle contraction. Magnesium is the mineral that helps muscles relax after they contract. Cramps are simply muscles that have contracted, but are not relaxing afterward, and are caused largely by an imbalance between calcium and magnesium. Leg cramps at night are a sure sign of magnesium deficiency.

Magnesium deficiency may undermine heart health because the imbalance between calcium and magnesium encourages heart contractions without sufficient relaxation between contractions. It promotes constipation in the same way when the muscles of the bowel contract normally, but do not relax as they should, thus restricting peristalsis. It is magnesium deficiency that makes the United States and Northern Europe the world's most constipated societies.

How Much Calcium and Magnesium Do I Need?

The United States Recommended Daily Intake for calcium is 1000 to 1500 mg. for adults. The reason we may need more calcium than other cultures is that our diet contains factors that cause calcium to be excreted from the body. Another reason is that we absorb, at best, only about 30% of the calcium from foods and traditional supplements. *Thus, 1000 to 1500 mg. of calcium intake means 300 to 450 mg. of calcium is absorbed.*

For bone health, cardiovascular health, blood sugar control and countless other factors, it is vital that calcium is balanced correctly with magnesium. Proper balance means that we should never get more than three parts of calcium per two parts of magnesium. The ideal balance between these minerals is roughly one to one.

To determine your individual need for calcium and magnesium, complete the chart below. If your total calcium intake is 1200 mg. or above, you don't need supplemental calcium. If you are below that level, you need enough supplemental calcium to reach it.

The *minimum* amount of supplemental magnesium you need is your total calcium intake multiplied by 0.67, minus 200 mg. for the amount you get from foods. The *ideal* level of magnesium you need is your total calcium intake, minus the 200 mg. you get from foods.

1.)	**Average American calcium intake from non-dairy foods**	**500 mg**
2.)	**For each cup of milk, add 300 mg**	_____
3.)	**For each ounce of cheese, add 280 mg**	_____
4.)	**For each cup of yogurt, add 400 mg**	_____
5.)	**Total calcium from dietary sources**	_____
6.)	**Calcium needed from supplements (1200 minus line 5)**	_____

Side Effects of Magnesium Supplementation?

Those with severe kidney disease should not supplement large amounts of magnesium. Instead, they should balance calcium and magnesium with a vegetarian diet. Such a diet helps overcome kidney disease, and also creates a sound calcium and magnesium balance without taxing the already weakened kidney system. *(Continued on next page)*

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