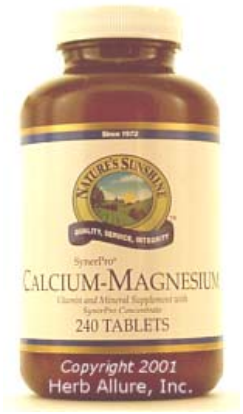

SynerPro® Calcium-Magnesium

Stock #3194-9 (240 tablets)

SynerPro Calcium–Magnesium provides a combination of essential minerals and trace minerals that function together to promote adequate calcium absorption and utilization, insure healthy bone development and maintenance, and prevent bone loss. Each tablet of SynerPro Calcium-Magnesium contains:

Vitamin D's most important function is to maintain sufficient blood levels of calcium—vitamin D facilitates calcium absorption from food and reduces urinary calcium loss in order to keep calcium in the body and spare calcium stores in the bones. Vitamin D is also required for the proper utilization of magnesium, as well as the breakdown and utilization of phosphorus, which is needed for bone formation. Incidentally, recent research shows that low levels of vitamin D contribute to the progression of osteoarthritis. Vitamin D participates in other body functions as well, including normal blood clotting and cardiac function, blood cell formation, immune system activity and blood sugar regulation. It is important to note that bile acid sequesterants (i.e. cholestyramine and colestipol) reduce the absorption of fat-soluble vitamins such as vitamin D.[1-5]

Calcium is the most plentiful mineral in the body, with about 99% stored in bones and teeth. Calcium is a lifelong dietary requirement, necessary for muscle contractions, nerve transmission, immune system maintenance, regular heartbeat, and the production of biological energy. Calcium also safeguards the body against cardiovascular disease by reducing high blood pressure and lowering cholesterol. In addition, menopause symptoms have been treated with calcium, magnesium and vitamin D—a deficiency of calcium available for absorption causes a decrease in estrogen output. Likewise, calcium can also help reduce symptoms of PMS, including preventing premenstrual tension and menstrual cramps. Furthermore, research published in the *New England Journal of Medicine* suggests that calcium may offer protection against colon cancer. Of course, calcium has been successfully used in the prevention and treatment of osteoporosis. Taking calcium supplements in the evening appears to be better for preventing osteoporosis than taking calcium in the morning; plus, since an acidic environment enhances calcium absorption, taking calcium with meals has been shown to improve overall calcium absorption without the need for added hydrochloric acid (HCl). Incidentally, calcium requires sufficient magnesium and vitamin D for absorption and utilization—calcium cannot be properly absorbed without adequate amounts of vitamin D.[1-4,6-9]

Phosphorus is the second most abundant mineral in the body, following calcium. Not surprisingly, phosphorus is needed for calcium to function properly, and phosphorus works with calcium to build and maintain healthy bones and teeth. Dietary phosphorus supplementation has been shown to speed the healing process in bone fractures, while also reducing the expected calcium loss in such patients. Phosphorus has also been used successfully in the treatment of osteomalacia and osteoporosis. Phosphorus absorption depends on sufficient calcium and vitamin D. Most dietary phosphorus (about 70% in foods) is absorbed from the intestine into the bloodstream. Approximately 88% of the phosphorus that is absorbed is then stored in the bones and teeth, along with calcium, although antacids can deplete phosphorus storage.[2,8]

Magnesium transports calcium into the cells and is necessary for calcium to function properly. Magnesium is an essential component in the formation of bone and protein—nearly 70% of the body's supply of magnesium is found in the bones. Magnesium also works closely with calcium to regulate both blood pressure and muscle activity, and in the blood-clotting process. In addition, magnesium helps maintain the acid-alkaline (pH) balance of the body. Magnesium deficiency is common among individuals taking "potassium-depleting" prescription drugs (i.e. loop and thiazide-like diuretics), antibiotics, oral contraceptives, or if taking too many laxatives. Also, dietary magnesium intake among the general population is often suboptimal—estimates indicate that as much as 60% of the U.S. population may be at risk for magnesium deficiency. Symptoms of magnesium deficiency include anxiety, aggression, loss of appetite, convulsions/seizures, cramps, depression, fatigue, hearing loss, impotence, insomnia, muscle spasms, neuropsychiatric disturbances, nervousness, tremors and weakness.[1,2,5,9-13]

Zinc is an important component in the calcification of bones, with the highest concentrations found in the bones, as well as in the eyes, hair, liver, prostate and semen. Zinc is necessary for optimal development of bone matrix and sustaining bone density. The bone matrix is a collagen-based foundation on which bones are built, which promotes bone strength and resistance to fractures. In addition, zinc may play a role in the activity of osteoblasts (bone-building cells). The most significant effect of zinc deficiency is impaired or stunted growth. Recent research suggests that high calcium intake, coupled with inadequate zinc intake, may increase the potential for zinc

deficiency. Thus, an increase in calcium intake should be complemented by zinc supplementation.[5,8,14-17]

Copper is a trace mineral needed to build elastin and collagen, which are important components of bones and connective tissues. Copper is believed to protect bones and joints from degeneration and osteoporosis. Subclinical copper deficiency may be a contributing factor to bone loss in the elderly. Clinical studies indicate that copper supplementation, in conjunction with calcium and other minerals, increases spinal bone mineral density in postmenopausal women. Copper also functions as an essential component of the antioxidant enzyme, superoxide dismutase (SOD), to protect cell membranes from free radical damage.[2,5,8,16-18]

Boron appears to increase the amount of calcium absorbed from food and lower the amount excreted by the body. These effects may help to keep bones strong. Recent animal and human studies also suggest that boron may be important for brain function and performance and hormone regulation, as well as prevention of osteoporosis and osteoarthritis. Boron may also strengthen the immune system, boost energy utilization, and affect cholesterol production.[19-20]

SynerPro concentrate base is a proprietary blend of herbs and cruciferous vegetables, which provide a rich source of powerful antioxidants, cancer-fighting enzymes, and important vitamin and minerals, including calcium and magnesium, beta-carotene, vitamin C and vitamin K.[21-26]

Numerous antibiotics, bile acid sequesterants, certain chemotherapy drugs, corticosteroids, NSAIDs, and thyroid hormones may interfere with or impair calcium absorption and may increase calcium excretion. Likewise, calcium supplementation may in turn, decrease the absorption and bioavailability of tetracycline, thus reducing the drug's effectiveness. For these reasons, calcium supplements should be taken at separate times from drug administration.[1]

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