



Calcium Plus Vitamin D

Stock #1675-0 (200 tablets)

Calcium Plus Vitamin D is a balanced supplement providing a 2:1 ratio of calcium to magnesium. As the name indicates, Calcium Plus Vitamin D contains vitamin D, as well as phosphorus, for improved calcium utilization in the body. As an added bonus, Calcium Plus Vitamin D contains alfalfa herb, a rich source of plant enzymes, to enhance mineral absorption and bioavailability.

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, thus reducing the probability for heart attacks and strokes. In addition, menopause symptoms such as nervousness, irritability, insomnia and headaches 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, recent 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. In fact, calcium cannot be properly absorbed without adequate amounts of vitamin D.¹⁻⁸

Magnesium is involved in almost every function of the body. For example, magnesium is essential for cardiac health, production of ATP energy, formation of bone and protein, healthy functioning of nerves and muscles, and the regulation of blood sugar levels—magnesium plays an important role in insulin secretion and function. Magnesium also helps maintain the acid-alkaline balance of the body. In addition, magnesium transports calcium into the cells and is necessary for calcium to function properly. In fact, nearly 70% of the body's supply of magnesium is found in the bones in conjunction with calcium and phosphorus. Magnesium deficiency is common among individuals taking "potassium-depleting" prescription drugs and can also occur if taking too many laxatives. Symptoms of magnesium deficiency include depression, fatigue, abnormal heart rhythms, loss of appetite and muscle spasm and weakness.^{2,3}

Vitamin D's most important function is to maintain sufficient blood levels of calcium—vitamin D facilitates calcium absorption from food (in the intestinal tract) 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, immune system activity and blood cell formation, and even cell differentiation—a process that may lower the risk of cancer. Vitamin D is also necessary for healthy blood levels of insulin and has been reported to assist the body in processing sugar. Furthermore, the benefits of adequate vitamin D will only occur when the body's calcium and phosphorus requirements are met. It is important to note that bile acid sequestrants (cholestyramine and colestipol) reduce the absorption of fat-soluble vitamins such as vitamin D.^{2,3,5,6}

Phosphorus is the second most abundant mineral in the body, following calcium. Not surprisingly, phosphorus is needed for calcium to function properly. Calcium works with phosphorus to build and maintain healthy bones and teeth—the ratio of calcium to phosphorus in the bones is approximately 2 to 1. 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 the storage. Symptoms of phosphorus deficiency include loss of appetite, weakness, loss of bone mass and loss of calcium.^{3,7}

Alfalfa herb (*Medicago sativa*) has been used as a tonic for digestive disorders, anemia, loss of appetite and poor assimilation of nutrients; as a diuretic for edema (water retention) and arthritis; and, to stimulate breast-milk production in nursing mothers. Alfalfa is a rich source of protein and vitamins A, B1, B6, B12, E and K. Alfalfa also contains appreciable amounts of minerals such as calcium, magnesium and potassium, as well as plant enzymes that enhance the digestion and absorption of nutrients. In addition, animal studies indicate that saponins found in alfalfa leaves block the absorption of cholesterol and may help prevent the formation of atherosclerotic plaques.

Individuals with a history of systemic lupus erythematosus (SLE) should avoid using alfalfa, as it contains the amino acid L-canavanine, which may aggravate symptoms.^{2,8,10-13}

Numerous antibiotics, bile acid sequestrants, 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.¹⁴

Each tablet provides vitamin D (120IU), calcium (250mg), phosphorus (110mg) and magnesium (125mg), in a base of Alfalfa herb (*Medicago sativa*).

References:

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