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ESSENTIALS

SYNERGISTIC CAL-MAG

Key minerals for bone and muscle function, with synergistic vitamin D3

Nutritional Information

One Tablet provides:

		*%NRV
Vitamin D3	2.5 µg	50
Mineral amino acid blend	667 mg	
providing:		
Calcium	100 mg	12.5
Magnesium	100 mg	27

*NRV = Nutrient Reference Values

Take one to three tablets daily with food. Swallow with water.



SUMMARY

- Provides a balanced ratio of calcium and magnesium
- Contains vitamin D to help calcium absorption
- Chelated mineral form for optimum absorption and utilisation
- Vitamin D3 for superior blood levels of vitamin D

DESCRIPTION

Quest Synergistic Cal-Mag provides a balanced ratio of calcium, magnesium and vitamin D which contribute to the maintenance of normal bone, teeth and muscle function. Supplementing with calcium and vitamin D may help reduce the risk of bone fractures and the progression of osteoporosis. Women of menopausal age are recommended to take a calcium and vitamin D supplement for bone health. Magnesium helps the body utilise calcium efficiently and is a key nutrient for muscle health. Calcium and magnesium are also important to support the functioning of the nervous system. Children going through puberty have an increased requirement for calcium and magnesium to support growth spurts at this time. Calcium, magnesium and vitamin D should be taken together for a synergistic approach to bone health.

HOW DOES SYNERGISTIC CAL-MAG SUPPORT BONE HEALTH?

Calcium

Calcium, a structural component of bone: Calcium is the major structural component of bone in the form of a calcium phosphate salt called hydroxyapatite. Evidence suggests that peak bone mass and subsequent bone losses are related to calcium intake. Calcium and vitamin D supplementation has been demonstrated, in a large number of clinical trials, to reduce the risk of fracture, bone loss and osteoporosis¹.

Bone remodelling: Bones are constantly being remodelled. There is a constant process of using calcium from the bones and replacing it. Calcium is used to maintain the pH equilibrium of the blood, for nerve communication, contraction of muscles and for digestive enzymes. The bones are the body's largest store of calcium, so if dietary calcium is inadequate, calcium will be used from the bones and not replaced.

Magnesium

Balancing magnesium with calcium: Magnesium is found abundantly in the bone and tooth structural matrix. Magnesium works in balance with calcium and facilitates calcium absorption. One study increased the magnesium intake of 19 post-menopausal women on hormone replacement therapy. A significant bone mineral density increase was observed after just 1 year².

Magnesium for vitamin D metabolism: Magnesium is required for over 300 enzymatic processes within the body, including the activation of vitamin D, which helps to regulate calcium homeostasis and influences the maintenance and growth of bones. Deficiency in magnesium is associated with skeletal deformities³.

Vitamin D

Calcium absorption: Vitamin D is a major stimulator of intestinal calcium absorption and facilitates cellular calcium absorption. Vitamin D is often found to be deficient in modern civilisations due to our lack of sunlight, and supplementation is recommended to anyone at risk of deficiency or bone disorders.

Osteoblast stimulation: Vitamin D promotes osteoblast (bone-secreting cell) differentiation and bone matrix calcification⁴. Vitamin D binds to VDR receptors on the osteoblasts to stimulate calcification.

Regulating disordered bone metabolism: Vitamin D is an immune regulator and aids with self tolerance, T and B lymphocytes and immune regulatory cells. People with autoimmune conditions and autoantibodies generally have disordered bone metabolism which can result in bone mineral loss. This is partially due to the way in which inflammatory markers interact with bone cells⁵, and the presence of osteoprotegerin antibodies which occur in a variety of autoimmune conditions⁶. Increasing vitamin D levels may help to regulate these antibodies and slow disease progression.

SYNERGISTIC CAL-MAG FOR NERVOUS HEALTH

Calcium for nerve excitation: Calcium is required for the excitation and communication of nerves. Each nerve action is triggered by an action potential. This is a signal that triggers the nerve to open up calcium channels to allow calcium to flow in. The influx of calcium triggers the synaptic vesicles to release neurotransmitter which neurotransmitter binds to the receptors on the relevant cell and triggers the relevant response.

Magnesium for the production of neurotransmitters: Magnesium is required for the production of neurotransmitters GABA and dopamine which help to balance mood in the body and modulate the stress response.

Vitamin D for nerve pain: Inadequate vitamin D results in a source of nociception, a response from the nervous system to a potentially harmful stimuli that can stimulate pain in the body. Low vitamin D also causes impaired neuromuscular function among patients with chronic pain⁷.

WHY ARE AMINO ACID CHELATED MINERAL SUPERIOR?

Minerals chelated to amino acids have a greater absorbency within the gut compared to other forms of the minerals. Each mineral has differing stability within the gut and when joined to various compounds. Inorganic mineral forms such as oxides, sulfates and carbonates are not used effectively by the body. They are also disassociated from each other one in the presence of stomach acid and can cause irritation to the gut. Amino acid chelated minerals however have a neutral charge, and an increased bond to each other. This allows them intact as they move further into the gut and bind to specific receptor sites, optimising mineral absorption. Scientific studies have demonstrated that amino acid chelated calcium is absorbed as much as 2 times better than other forms of calcium (e.g. calcium carbonate).

ARE THERE ANY PRECAUTIONS BEFORE OR WHILE TAKING SYNERGISTIC CAL-MAG?

This product is intended exclusively for adults and is not recommended for:

- Children
- Pregnant or breastfeeding women

Consult health professional before taking Synergistic Cal-Mag alongside medication.

FEATURES

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- Vitamin D3 for superior blood levels of vitamin D

HEALTH NEEDS



BONES



SENIOR'S HEALTH

SCIENTIFIC REFERENCES

1. Nutrition. 1997; 13; 7-8; 664-686
2. The Journal of Reproductive Medicine [01 May 1990, 35(5):503-507
3. The Journal of the American Osteopathic Association, March 2018, Vol. 118,
4. J Investig Med. 2011; 59(6): 881-886.
5. Calcif Tissue Int. 2017.
6. Scand J Prim Health Care. 2010; 28(3): 166-171.
7. J Investig Med. 2011; 59(6): 881-886.