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ESSENTIALS

# SYNERGISTIC CALCIUM

Providing calcium and vitamin D for bone support\*

## Nutritional Information

Three Tablets provides:

		%NRV
Vitamin D	5 µg	100
Mineral amino acid blend	4000 mg	
providing:		
Calcium	1000 mg	125

\*NRV = Nutrient Reference Values

Take three tablets daily with food. Swallow with water.



## SUMMARY

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- Helps to maintain strong bones and reduce the risk of progression of osteoporosis.
- Helps reduce the risk of bone fracture and bone loss.
- Amino acid chelated calcium for superior absorption.
- Vitamin D3 for higher yields of calciferol.
- High strength 1000 mg of calcium.

## DESCRIPTION

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Synergistic Calcium provides calcium and vitamin D needed for 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 risk of progression of osteoporosis. Women of menopausal age are recommended to take a calcium and vitamin D supplement for bone health. Calcium also supports energy metabolism and the actions of digestive enzymes. Calcium supplementation is also recommended for both elderly men and women to help support efficient absorption of nutrients from the diet in later years. Vitamin D, included as a synergistic nutrient, helps to maintain normal blood calcium levels to reduce loss of bone material and also helps to support immune function.

## SYNERGISTIC CALCIUM AND BONE & TEETH HEALTH

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**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 to reduce the risk of osteoporosis.

**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 calcification<sup>1</sup>. 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 cells<sup>2</sup>, and the presence of osteoprotegerin antibodies which occur in a variety of autoimmune conditions<sup>3</sup>. Increasing vitamin D levels may help to regulate these antibodies and slow disease progression.

## SYNERGISTIC CALCIUM FOR MUSCLE HEALTH

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**Muscle contraction:** Calcium is required in the body for the normal contraction of muscles. It is required for excitation of nerves and stimulation of muscle contraction.

**Inflammation inhibitor:** Vitamin D inhibits inflammatory cytokines which has an impact on specific and non-specific pain. Inadequate vitamin D results in a source of nociception, a response from the nervous system to potentially harmful stimuli. Low vitamin D also results in impaired neuromuscular functioning among patients with chronic pain.<sup>4</sup> One study shows a high prevalence of inadequate vitamin D levels in patients with non-specific musculoskeletal pain, headache or fatigue<sup>5</sup>.

## WHAT ELSE IS CALCIUM USED FOR IN THE BODY?

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**Digestive Enzymes:** Calcium is required for the stimulation of pancreatic cells to produce digestive enzymes. Trypsinogen is formed in the pancreas and activates trypsin, a protease enzyme, in the small intestine.

**Energy metabolism:** The flow of calcium in and out of the cells is essential for cellular function. A steady calcium flow is required for the cells to effectively make energy.<sup>6</sup>

## WHY ARE AMINO ACID CHELATED MINERAL SUPERIOR?

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Minerals chelated to amino acids have a greater absorbency within the gut compared to other forms of the minerals. Each mineral has different stability with in the gut and when joined to various compounds. Inorganic mineral forms such as oxides, sulphates and carbonates are not used effectively by the body. They are also disassociated from each other 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 to stay 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 CALCIUM?

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

- Children
- Pregnant or breastfeeding women

Consult a health professional before taking alongside medication.

## FEATURES

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- Helps reduce the risk of bone fracture and bone loss.
- Amino acid chelated calcium for superior absorption.
- Vitamin D3 for higher yields of calciferol.
- High strength 1000 mg of calcium.

## HEALTH NEEDS

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BONES



JOINTS & MUSCLES

## SCIENTIFIC REFERENCES

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1. J Investig Med. 2011; 59(6): 881–886.
2. Calcif Tissue Int. 2017.
3. Bone Abstracts.2013;1:PP383.
4. J Investig Med. 2011; 59(6): 881–886.
5. Pain Med. 2008;9(8):979–84.
6. Cell. 2010; 142; 2; 270–283

