

# StrongBones

Discover a smarter way  
to healthy bones



- The natural approach to preventing osteoporosis and healing bone injuries
- Formulated for maximum absorption
- **Also available in a boron-free formula**

**ISO 17025**  
Accredited Laboratory



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Osteoporosis is a silent, painless disease in which bones become fragile and more likely to break. Women are four times more likely than men to develop the disease, and often have a hard time getting all of the calcium they need to maintain strong bones. Smoking and too much alcohol can also weaken bones; the lack of weight-bearing exercise can also hinder the ability to build and maintain bone strength.

**StrongBones** uses microcrystalline hydroxyapatite, the most readily absorbable kind of calcium. Plus, it's formulated to create bone-forming cells, increase healthy bone growth, and reverse osteoporosis by forming new bone mass.

Although usually associated with women, osteoporosis has increasingly become a concern for men as well. In fact, almost 30% of all hip fractures and up to 20% of vertebral fractures occur in men. Osteoporosis is insidious, because you can't see or feel what's happening; most people who have the disease don't know it until a bone breaks.

The majority of Canadians get less than half the recommended daily intake of calcium. **StrongBones** is here to help.

**StrongBones** helps build and maintain stronger bones. It contains the right form of calcium for maximum absorption, and a variety of nutrients used by your body as raw materials for reinforcing and building bones. You can rely on **StrongBones** to deliver natural nutrients for stronger, healthier bones.

## What Makes StrongBones Great?

**Microcrystalline Hydroxyapatite<sup>†</sup> (MCHA)** is the most readily absorbable kind of calcium, being identical to the form of calcium found in human bones. MCHA is an organic source of calcium, unlike inorganic calcium that is mined from the earth. Organic compounds are produced by living entities; inorganic compounds are produced by nonliving processes or by human intervention in the laboratory. MCHA is also a rich source of minerals important for bone health, including magnesium and phosphorus.

**Calcium** is essential for healthy bones and teeth. It will increase both bone growth and mineral density, and it will inhibit bone absorption of toxic metals such as lead.

**Phosphorus** is vital for bone and tooth development and cell growth.

**Protein** is imperative for growth. It furnishes the body with energy and builds enzymes, tissue, and hormones.

Magnesium plays a critical role in calcium absorption. The bonding of magnesium with two glycine molecules makes

**magnesium bisglycinate** the most easily absorbed and the best magnesium for a higher percentage absorption.

**Zinc** is vital for collagen formation and protein synthesis. It also helps with the absorption of vitamins A and E.

**Manganese** is essential for bone growth, cartilage formation, and the production of synovial (lubricating) fluid in the joints.

**Copper** helps bone, connective tissue, and collagen formation. Along with vitamin C and zinc, it helps form elastin, the protein that makes up elastic tissue.

In a study conducted by the U.S. government (Department of Agriculture), **boron\*** was found to reduce the amount of calcium lost through the urine by 40% in only eight days. This dramatic figure underscores just how helpful boron is for preventing calcium loss and increasing bone density.

\* Boron can exert a mild estrogenic effect. We have a boron-free formula to alleviate concerns of women with estrogen-dependent diseases.

**Vitamin B<sub>1</sub> (thiamin)** strengthens circulation, blood formation, carbohydrate metabolism, and digestion. It is also an important antioxidant, protecting the body from the effects of aging.

**Vitamin K<sub>2</sub> (menaquinone 4 and 7)** inhibits the formation of the cells within the bones (osteoclasts) that are responsible for bone resorption.

Silica-rich **horsetail** hastens the repair of connective tissue, building strength and elasticity.

**Vitamin D<sub>3</sub> (cholecalciferol)** is the natural form of vitamin D. It is a requisite for the absorption of calcium and phosphorus, which are both essential in the maintenance of bone health.

**Vitamin C** is an antioxidant that is also vital for collagen formation and the repair and growth of connective tissue.

Calcium deficiency contributes to age-related bone loss; consequently, any preventive approach to osteoporosis should include dietary calcium adjustment or supplementation. The ideal calcium supplement would yield the greatest bioavailability. Studies in animals have shown that dietary supplements with certain amino acids, particularly **L-lysine**, can increase calcium absorption.

**L-Proline** is the amino acid necessary for the production of collagen and cartilage for healthy joints, ligaments, and tendons. L-Proline helps maintain healthy skin, by preventing the aging process of skin tissue, and supports DNA synthesis.

**Glucosamine sulfate** is a natural component of cartilage that stimulates the production of connective tissue.

**Methylcobalamin** (vitamin B<sub>12</sub>), the coenzyme form of vitamin B<sub>12</sub>, has been identified as a modifiable risk factor in bone mineral density in research conducted at Tufts University.

Studies in both the U.S. and the Netherlands have shown that **folic acid** supplementation helps prevent bone fractures in the elderly.

**Curcumin** (95% curcuminoids) has a long history of use as an anti-inflammatory, and studies have shown its use in the battle against osteoporosis.

A study at the Framingham Institute in Massachusetts involving 943 men and women discovered a direct correlation between higher intake of the carotenoids found in **lutein** and a lower incidence of hip fractures due to osteoporosis.

**Grape seed extract** (95% proanthocyanidins) has been shown to enhance bone density in animal trials.

The chemicals found in **green tea extract** (75% EGCG) boost activity of the enzyme responsible for bone growth and mineralization, and discourage the activity of the cells that weaken bones (osteoclasts).

The phytochemicals found in **lycopene** protect bone-producing cells (osteoblasts) from oxidative stress.

## References

- Wattford, M. "Glutamine metabolism and function in relation to proline synthesis and the safety of glutamine and proline supplementation." *The Journal of Nutrition* Vol. 138, No. 10 (2008): 2003S–2007S.
- Conigrave, A.D., E.M. Brown, and R. Rizzoli. "Dietary protein and bone health: roles of amino acid-sensing receptors in the control of calcium metabolism and bone homeostasis." *Annual Review of Nutrition* Vol. 28 (2008): 131–155.
- Bonjour, J.P. "Dietary protein: an essential nutrient for bone health." *Journal of the American College of Nutrition* Vol. 24, No. 6 Suppl. (2005): 526S–536S.

## Ingredients (per 6 vegetable capsules) :

Microcrystalline hydroxyapatite (freeze-dried MCHA) . . . . .	3600 mg
Calcium (from calcium hydroxyapatite*) . . . . .	900 mg
Phosphorus (from calcium hydroxyapatite*) . . . . .	450 mg
Protein (from calcium hydroxyapatite*) . . . . .	900 mg
Magnesium (from magnesium bisglycinate) . . . . .	145 mg
Zinc (from zinc monomethionine) . . . . .	9.3 mg
Manganese (from manganese [II] citrate) . . . . .	2.79 mg
Copper (from copper [II] citrate) . . . . .	930 mcg
Boron (from boron citrate) . . . . .	3.36 mg
Vitamin B <sub>1</sub> (thiamin hydrochloride) . . . . .	4.65 mg
Vitamin K <sub>2</sub> (menaquinone-4) . . . . .	83 mcg
Vitamin K <sub>2</sub> (menaquinone-7) . . . . .	10 mcg
Field horsetail ( <i>Equisetum arvense</i> ), 7% silica . . . . .	30 mg
Vitamin D <sub>3</sub> . . . . .	1000 IU = 25 mcg
Vitamin C . . . . .	186 mg
Vitamin B <sub>12</sub> (methylcobalamin) . . . . .	150 mcg
Folate (from calcium L-5-methyltetrahydrofolate) . . . . .	500 mcg
Lutein (from marigold) . . . . .	2 mg
Lycopene . . . . .	5 mg
L-Lysine (L-lysine monohydrochloride) . . . . .	300 mg
L-Proline . . . . .	300 mg
Glucosamine sulfate (crab/shrimp exoskeleton, stabilized with potassium chloride) . . . . .	252 mg
Turmeric ( <i>Curcuma longa</i> ) root extract, 95% curcuminoids, providing curcumin I, demethoxycurcumin, and bisdemethoxycurcumin . . . . .	20 mg
Grape ( <i>Vitis vinifera</i> ) seed extract, 95% proanthocyanidins . . . . .	60 mg
Green tea ( <i>Camellia sinensis</i> ) leaf extract, 75% EGCG . . . . .	42 mg

\* From New Zealand cattle. Guaranteed free of bovine spongiform encephalopathy (BSE) and recombinant bovine growth hormone (rBGH).

**Other ingredients:** Microcrystalline cellulose, natural peppermint flavour, vegetable magnesium stearate, and silicon dioxide in a non-GMO vegetable capsule composed of vegetable carbohydrate gum and purified water.

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## Suggested use:

**Adults:** Take 2 capsules one to three times daily with food or as directed by your health-care practitioner. If you are taking other medications, take this product a few hours before or after them.

Manufactured under strict GMP (Good Manufacturing Practices).

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