

Calcigard® 250

Bioavailable Calcium Citrate

DESCRIPTION

Calcigard® 250, manufactured by Douglas Laboratories®, provides 250 mg of elemental calcium from calcium citrate. Calcigard 250 is available with and without added vitamin D.

FUNCTIONS

The adult human body contains approximately 1,200 g of calcium, of which about 99% is present in the skeleton. Bone is constantly turning over, through a continuous process of formation and resorption. In children and adolescents, the rate of formation of bone mineral predominates over the rate of resorption. In later life, resorption predominates over formation. Therefore, in normal aging, there is a gradual loss of bone.

The remaining 1% of total body calcium is found in the soft tissues and plays important roles in such vital functions as nerve conduction, muscle contraction, blood clotting, membrane permeability, and hormonal signaling. Blood calcium levels are carefully maintained within very narrow limits by the interplay of several hormones (1,25-dihydroxy-cholecalciferol, parathyroid hormone, calcitonin, estrogen, and testosterone) which control calcium absorption and excretion, as well as bone metabolism. Levels of soft tissue calcium are maintained at the expense of bone calcium in the face of inadequate calcium intake or absorption.

Intestinal calcium absorption is generally higher in children than in adults and ranges from 15 to 75% of ingested calcium. Adequate vitamin D status is necessary for normal calcium absorption.

Osteoporosis afflicts a large proportion of the elderly in developed countries. Caucasian and Asian women typically have low peak bone densities, and therefore, are at the greatest risk of developing osteoporosis. It is generally accepted that obtaining enough dietary calcium throughout life can significantly decrease the risk of developing osteoporosis. Among other factors, such as regular exercise, gender and race, calcium

supplementation during childhood and adolescence appears to be a prerequisite for maintaining adequate bone density later in life. But even elderly osteoporotic patients can benefit significantly from supplementation with dietary calcium.

Calcigard 250 provides calcium citrate which is a highly available and well tolerated source of dietary calcium.

Vitamin D is a key regulatory hormone for calcium and bone metabolism. Adequate vitamin D intake is important for ensuring normal calcium absorption and maintaining proper calcium plasma levels. People living in southern regions of the U.S. can derive significant amounts of vitamin D from sunlight dependent synthesis in the skin during the summer, whereas people in the northern states have to rely more on foods and supplements for adequate vitamin D status. This is why Calcigard 250 is available both with (CA2) and without (CA1) vitamin D.

INDICATIONS

Calcigard 250 may be a useful dietary supplement for those at risk for osteoporosis, or anyone who wishes to increase their intake of calcium and other nutritional factors for maintaining good bone health.

FORMULA (CA1)

Each tablet contains:

Calcium (citrate)..... 250 mg**

**elemental content

***optional ingredient

SUGGESTED USE

One to four tablets daily as a dietary supplement, or as directed by a physician. Take with food.

SIDE EFFECTS

No adverse side effects have been reported.

STORAGE

Store in a cool, dry place, away from direct light. Keep out of reach of children.

REFERENCES

- Andon MB, Lloyd T, Matkovic V. Supplementation trials with calcium citrate malate: Evidence in favor of increasing the calcium RDA during childhood and adolescence. *J Nutr* 1994;124 Suppl.1412S-1417S.
- Barger-Lux MJ, Heaney RP. The role of calcium intake in preventing bone fragility, hypertension, and certain cancers. *J Nutr* 1994;124 Suppl.1406S-1411S.
- Belizan JM, Villar J, Bergel E, Pino Ad, Di Fulvio S, Galliano SV, and Kattan C. Long term effect of calcium supplementation during pregnancy on the blood pressure of offspring: follow up of a randomised controlled trial. *BMJ* 1997;315(7013):281-5.
- Bronner F. Calcium and osteoporosis. *Am J Clin Nutr* 1994;60:831-836.
- Fleming KH, Heimbach JT. Consumption of calcium in the U.S.: Food sources and intake levels. *J Nutr* 1994;124 Suppl.1426S-1430S.
- Gillman MW, Hood MY, Moore LL, Nguyen U-SDT, Singer MR, Andon MB. Effect of calcium supplementation on blood pressure in children. *J Pediatr* 1995;127:186-192.
- Horowitz M, Wishart JM, Goh D, Morris HA, Need AG, Nordin BEC. Oral calcium suppresses biochemical markers of bone resorption in normal men. *Am J Clin Nutr* 1994;60:965-968.
- Ito M, Koyama H, Ohshige A, Maeda T, Yoshimura T, Okamura H. Prevention of preeclampsia with calcium supplementation and vitamin D₃ in an antenatal protocol. *Int J Gynecol Obstet* 1994;47:115-120.
- Lee WTK, Leung SSF, Wang S-H, et al. Double-blind, controlled calcium supplementation and bone mineral accretion in children accustomed to a low-calcium diet. *Am J Clin Nutr* 1994;60:744-750.
- Levine BS, Rodman JS, Wienerman S, Bockman RS, Lane JM, Chapman DS. Effect of calcium citrate supplementation on urinary calcium oxalate saturation in female stone formers: Implications for prevention of osteoporosis. *Am J Clin Nutr* 1994;60:592-596.
- Miller GD, Weaver CM. Required versus optimal intakes: A look at calcium. *J Nutr* 1994;124 Suppl.1404S-1405S.
- Pak CYC, Stewart A, Haynes SDS. Effect of added citrate or malate on calcium absorption from calcium-fortified orange juice. *J Am Coll Nutr* 1994;13:575-577.
- Reid IR, Ames RW, Evans MC, Gamble GD, Sharpe SJ. Long-term effects of calcium supplementation on bone loss and fractures in postmenopausal women: A randomized controlled trial. *Am J Med* 1995;98:331-335.
- Strause L, Saltman P, Smith KT, Bracker M, Andon MB. Spinal bone loss in postmenopausal women supplemented with calcium and trace minerals. *J Nutr* 1994;124:1060-1064.
- Teegarden D, Weaver CM. Calcium supplementation increases bone density in adolescent girls. *Nutr Rev* 1994;52:171-173.

**These statements have not been evaluated by the Food and Drug Administration.
This product is not intended to diagnose, treat, cure, or prevent any disease.**

**Manufactured by
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