

## About Bones and Vitamin D3

Bone is lost without symptoms and only becomes noticeable on x-rays when 30-50% of bone has been lost. The importance of bone health becomes obvious when we consider that the lifetime risk for any fracture is very high and lies within the range of 40–50% in women and 13–22% for men (1). The complexity of bone metabolism demands multiple nutritional factors be addressed, which may explain why treatments using only calcium have not been successful (2). Nutra Cal 2:1 and 1:1 are unique products because each contains all four essential nutrients. A combination of supplemental calcium and vitamin D is associated with increased bone mass, and it has been demonstrated that calcium absorption was 65% higher in subjects with higher Vitamin D levels (3).



### Nutra-Cal™ 1:1

#### Supplement Facts

Amount Per Serving		% Daily Value
Calcium (malate)	100 mg	10%
Magnesium (malate)	100 mg	25%
Vitamin D3 (cholecalciferol)	500 IU	125%
Boron (Boron gluconate complex)	1.5 mg	*
Malic Acid (from magnesium malate, calcium malate)	550 mg	*

\* Daily Value not established.

Other Ingredients: Cellulose, sodium croscarmellose, stearic acid, magnesium stearate, modified cellulose, silica and glycerin.



### Nutra-Cal™ 2:1

#### Supplement Facts

Amount Per Serving		% Daily Value
Calcium (citrate, malate, sulfate, ascorbate)	133 mg	13%
Magnesium (malate, citrate)	67 mg	17%
Vitamin D3 (cholecalciferol)	333 IU	83%
Boron (Boron gluconate complex)	1 mg	*

\* Daily Value not established.

Other Ingredients: Cellulose, sodium croscarmellose, modified cellulose, stearic acid, calcium stearate, silica, and glycerin.

For more information on this products, please visit [www.anaboliclabs.com](http://www.anaboliclabs.com)



## NUTRA-CAL for BONE HEALTH



Human bones are primary storage for the essential mineral calcium, which must be consumed in an appropriate ratio to magnesium. Healthy bone is made up of a complex of materials, requiring adequate magnesium, boron, and Vitamin D for development and maintenance. These three critical components are difficult to obtain through the diet. Depending on your dietary habits, Nutra-Cal 2:1 or Nutra-Cal 1:1 is appropriate.

## Calcium Dosage

For those age four and older, the recommended daily intake of calcium ranges from 1,000 to 1,300 mg per day, which can come from food and supplements (5,6). Nutra-Cal 2:1 can provide up to 800 mg of calcium per day, while Nutra-Cal 1:1 can provide up to 400 mg per day. Unlike calcium carbonate, which must be taken with meals to ensure optimal absorption, the calcium forms used in Nutra Cal are highly absorbable and can be taken with or between meals. Even when calcium citrate and carbonate are given with meals, the citrate variety is better absorbed (3).

## Magnesium

Magnesium supplementation in young females and young adult males has led to a reduction in bone turnover (7,8). We are told that, "these findings raise an intriguing possibility that daily oral magnesium supplementation may be used to suppress bone turnover, which subsequently may lead to reduced bone loss and, thus, may have a potential utility for issues associated with high bone turnover" (7). Daily supplementation with 400 mg of magnesium appears to be an appropriate supportive measure.

## Boron

Epidemiologic evidence indicates that in areas of the world where boron intakes usually are 1.0 mg or less/day, the estimated incidence of joint health issues ranges from 20% to 70%, whereas in areas of the world where boron intakes are usually 3 to 10 mg, the estimated incidence of joint health issues ranges from 0 to 10% (4). Bone appears to be stronger in individuals who supplement with boron (4).



Nutra-Cal is also ideal for vegetarians who may find it difficult to obtain these nutrients in diet



### REFERENCES

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5. Institute of Medicine of the National Academies. Dietary Reference Intakes for Calcium and Vitamin D. <http://www.iom.edu/Reports/2010/Dietary-Reference-Intakes-for-Calcium-and-Vitamin-D/Report-Brief.aspx>
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8. Carpenter TO, DeLucia MC, Zhang JH et al. A randomized controlled study of effects of dietary magnesium oxide supplementation on bone mineral content in healthy girls. *J Clin Endocrinol Metab.* 2006;91:4866-72.

†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.

