



FAST FACTS ABOUT CHELATED CAL-MAG WITH 1000 IU VITAMIN D TABLETS

Osteoporosis and low bone mass are a major health issue for more than 50 million Americans. By 2020, half of all Americans over 50 years are projected to be at risk of osteoporosis-related fractures. Despite the fact that Americans consume more dairy products and calcium than any other population in the world, we still have one of the highest rates of this debilitating disease. National Health and Nutrition Examination Survey (NHANES) data shows that large percentages of Americans fail to meet the recommendations for optimal calcium, magnesium and vitamin D intake¹. Calcium is critical for the development and maintenance of strong bones and teeth, but emerging science shows that we need more than just calcium to optimize bone health, and the benefits of calcium, magnesium and vitamin D go beyond just bone health.

Why Calcium, Magnesium, and Vitamin D?

- Research shows that adequate calcium and vitamin D as part of a healthy diet, along with physical activity, may reduce the risk of osteoporosis in later life.
- Magnesium helps build strong bones and stimulates calcium uptake.^{2*}
- Calcium and magnesium, necessary for strong bones and teeth, are also critical for cardiovascular health, normal blood pressure, nerve and muscle function, reduction of symptoms of PMS and many enzyme reactions.*
- Vitamin D promotes calcium absorption, and has also been shown to support breast, bone, heart and immune health in recent research.^{3*}
- Daily supplementation of calcium and vitamin D combined may reduce the risk of bone fractures in all adults, regardless of age or gender.^{4*}

Why GNLD Chelated CAL-MAG with 1,000 IU Vitamin D?

- **Supports stronger bones and more.** Perfect blend of chelated calcium and magnesium with high potency vitamin D₃, to support a broad range of health benefits.
- **Proprietary double amino acid chelation** for fast dissolution and maximum absorption of minerals, calcium and magnesium. Prevents irritation to stomach and intestines.
- **Preferred 2:1 ratio** of calcium to magnesium.
- **High potency and bioavailability** with 1,000 IU of readily absorbable and highly bioavailable vitamin D₃.
- **Easy to swallow** coated tablets.
- **Pure & natural.** Pharmaceutically pure, seashell sourced calcium.

* 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.

Based in Nature—Backed by Science



Item # 3404

Supplement Facts

Serving Size 3 Tablets
Servings Per Container 50

Amount Per Serving		% Daily Value
Vitamin D ₃ (as cholecalciferol)	1000 IU	250%
Calcium (as calcium glycinate)	300 mg	30%
Magnesium (as magnesium glycinate)	150 mg	38%

Other ingredients: Powdered cellulose, microcrystalline cellulose, silicon dioxide, magnesium stearate, food glaze, magnesium silicate, sodium croscarmellose and natural color.

1. Moshfegh A, et al. 2009. What We Eat in America, NHANES 2005-2006: Usual Nutrient Intakes from Food and Water Compared to 1997 Dietary Reference Intakes for Vitamin D, Calcium, Phosphorus, and Magnesium. U.S. Department of Agriculture, Agricultural Research Service. [http://www.ars.usda.gov/ba/bhnrc/fsrg]
2. Institute of Medicine. Food and Nutrition Board. Dietary Reference Intakes: Calcium, Phosphorus, Magnesium, Vitamin D and Fluoride. National Academy Press. Washington, DC, 1999.
3. Heaney RP. Long-latency deficiency disease: insights from calcium and vitamin D. Am J Clin Nutr 2003;78:912-9.
4. Abrahamsen B, et al. Patient level pooled analysis of 68 500 patients from seven major vitamin D fracture trials in US and Europe. DIPART (Vitamin D Individual Patient Analysis of Randomized Trials) Group. BMJ. 2010 Jan 12;340:b5463



THE VITAMIN D STORY

TECHNICALLY NOT A VITAMIN

Vitamin D is a fat-soluble micronutrient that is naturally present in very few foods. Technically, it is not a vitamin. Vitamin D is metabolized in the liver and kidneys to become calcitriol, the most powerful seco-steroid hormone in the human body. There are two forms; vitamin D2 and vitamin D3. Vitamin D2 is the form made by plants from the natural sterol ergosterol while D3 is made in the skin of humans and animals from a natural form of cholesterol (7-dehydrocholesterol) and exposure to UVB rays from sunlight.

Two common ways to gain vitamin D are through the consumption of foods such as fatty fish and other foods specifically fortified with vitamin D and through sunlight when ultraviolet rays touch the skin and trigger vitamin D synthesis.^{1,2}

VITAMIN D TEAMS UP WITH CALCIUM FOR STRONGER BONES

Vitamin D is essential for promoting calcium absorption in the body and for maintaining adequate calcium and phosphate concentrations in the blood to enable normal bone mineralization and growth. Without sufficient vitamin D, bones can become thin, brittle, or misshapen. Vitamin D prevents rickets in children, osteomalacia in adults, and together with calcium, osteoporosis in older adults.^{3,4}

WHY IS VITAMIN D DEFICIENCY ON THE RISE?

As the recommended Adequate Intake (AI) amounts for vitamin D have increased, the sources of vitamin D have decreased. Very few foods contain Vitamin D naturally. The best sources are oily fish and fish liver oils (such as Cod Liver Oil) with smaller amounts in beef liver, cheese and egg yolks.⁵ Most of the vitamin D in the North American diet comes from fortified foods via milk and dairy products, breakfast cereals, and some brands of orange juice. For several health reasons including concerns about cholesterol levels, many of these foods are consumed on a restricted basis.

Vitamin D is also known as the Sunshine Vitamin, as cholecalciferol is formed in the skin when ultraviolet 'UVB' light strikes bare skin. Seasons, geographic latitude, time of day, cloud cover, smog, melanin content, and sunscreen use are among the factors that affect UV radiation exposure and vitamin D synthesis.⁶ Despite the importance of sun in vitamin D synthesis, most people now realize it is prudent to limit exposure of skin to sunlight and tanning beds due to the potential for lifetime cumulative UV damage that can lead to skin cancer.^{7,8} Also, as people age, the amount of vitamin D made in the skin after exposure to sunlight declines, and the body loses some of its ability to convert vitamin D into the active hormone needed for proper calcium metabolism.

Many experts concur that the safest way to ensure optimal vitamin D intake is through dietary supplements.

HOW MUCH VITAMIN D IS ADEQUATE?

The Food and Nutrition Board (FNB) at the Institute of Medicine established an Adequate Intake (AI) for vitamin D in 1997 at 200 IU from birth to 50 years and 400 IU for people 50+, representing the daily intake sufficient to maintain bone health and normal calcium metabolism in healthy people. Since that time, substantial new research has been published to justify a re-evaluation of adequate vitamin D intakes per the FNB's expert committee on vitamin D established in 2008. Many health experts today believe the AI for vitamin D should be increased to 1,000 IU for adults.

OTHER HEALTH RISKS ASSOCIATED WITH VITAMIN D DEFICIENCY

In addition to weaker bones, vitamin D malnutrition can be associated with an increased susceptibility to several chronic diseases, such as high blood pressure, tuberculosis, cancer, periodontal disease, multiple sclerosis, chronic pain, seasonal affective disorder, peripheral artery disease, cognitive impairment, and several autoimmune diseases including type 1 diabetes.⁹

Most People Do Not Get Adequate Amounts of Vitamin D

VITAMIN D		
Age in years	Adequate Intakes (AI, IU)	Rate of Deficiency (%)
Males & Females		
1-3	200	30
4-8	200	41
Males		
9-13	200	47
14-18	200	50
19-30	200	61
31-50	200	55
51-70	400	93
71 and over	600	>97
Females		
9-13	200	53
14-18	200	75
19-30	200	78
31-50	200	68
51-70	400	>97
71 and over	600	>97
Pregnant 19-30	200	37

According to data from the 2005-06 NHANES study and the Food & Nutrition Board, Institute of Medicine, USA.

While ongoing research points to the importance of vitamin D, the facts remain that huge portions of the population do not get nearly enough. As the above chart shows, most groups do not meet the current AI, not to mention the expected recommendations. It is this data that leads many scientists and health professionals to claim we are experiencing a vitamin D crisis.



GNLD PROVIDES MULTIPLE SOURCES OF VITAMIN D

Chelated Cal-Mag with 1,000 IU of Vitamin D₃ provides a unique amino-acid-chelated calcium to help improve absorption in a 2-to-1 ratio with magnesium. GNLD's proprietary double amino acid chelation supports maximum absorption of calcium and magnesium while including a powerful dose of vitamin D₃, the most readily absorbable and highly bioavailable form of vitamin D.

Several other GNLD products contain vitamin D, including:

- Cod Liver Oil
- Vegetarian Multi
- Vita-Squares®
- Liqui-Vite
- Formula IV® and Formula IV® Plus
- Sports 30
- Active 40+
- Stress 30
- Multi-Min
- GR² Control Meal Replacement Shakes

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