

Pathway

MULTI TWO

Multivitamin, Mineral, and Cofactor Supplement



- Carefully formulated to guarantee highest purity and potency
- Incorporates the latest research on nutrient transport and interaction to enhance efficient metabolism
- Contains active coenzyme forms of B vitamins for maximum energy support
- The use of Krebs cycle bionutrients and amino acid chelates optimizes nutrient absorption and utilization
- Contains no sulfates, carbonates, or oxides, which are poorly absorbed by the body
- Complete with powerful antioxidants

Vitamins and minerals are essential for health in that they support almost every function of the body. They optimize metabolism and energy production, activate chemical reactions, repair damaged tissue, guard against free radicals, support the production of neurotransmitters and hormones, and are needed for growth and reproduction.^{1,2,3}

Because most Americans consume far less than five servings of fruits and vegetables daily, it is simply not possible to rely on diet alone for a complete range of nutrients.⁴ Even the best diet cannot guarantee optimal nutrient levels due to high-volume farming methods, chemical fertilizers, and the use of pesticides. In addition, processing, storing, and cooking food further reduces the nutrient content.⁵ Other factors such as environmental toxins, stress, aging, health conditions, medications, and lifestyle habits can also increase one's requirement of vitamins and minerals.

Vitamin deficiencies are common, especially among elderly individuals. Deficiencies of B vitamins, vitamin D, and antioxidants (vitamin A, E, and C) pose a risk factor for developing chronic diseases, such as cardiovascular disease, colon and breast cancer, age-related macular degeneration, as well as osteopenia and fractures.^{6,7} The Journal of the American Medical Association supports these findings and recommends that all adults take vitamin supplements.⁷

However, not all multivitamins are created equal. Many contain unnecessary binders and fillers, artificial colors, preservatives, and provide nutrients in poorly absorbable forms. We have developed Pathway MULTI TWO to be a highly bioavailable multivitamin formula complete with minerals and cofactors in forms that are readily absorbed, transported, and utilized by the body. The vitamins and minerals in MULTI TWO activate the body's metabolic processes, and synergistic cofactors aid in absorption, uptake, utilization, and metabolism of nutrients.

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Each nutrient of Pathway MULTI TWO has been meticulously selected so as to avoid common food allergens, and only contains plant fiber to bind components so the tablets dissolve readily. Pathway MULTI TWO is one of the purest available multivitamin supplements, and is suitable for both vegetarians and hypersensitive individuals.

Beyond its purity, Pathway MULTI TWO boasts many other unique features. For example, it contains coenzyme forms of all of the B complex vitamins. B vitamins are critical to many processes in the body. Because coenzyme B vitamins do not need to be converted by the liver, they are fully activated for maximum absorption and assimilation into cells. Enhanced utilization can make a big difference in energy levels and health benefits. For example, human urinary excretions of methylcobalamin (coenzyme B12) is about one-third that of a similar dose of cyanocobalamin (non-coenzyme B12), indicating substantially greater tissue retention and absorption.⁸

Another feature of Pathway MULTI TWO that makes it a superior formula is that it provides minerals in several different carriers (citrates, malates, glycinate, picolinate, etc). This is designed to give the body choices for enhanced absorption. Non-chelated mineral forms, such as carbonates or oxides, are not included in this formula, due to their poor solubility and bioavailability.^{9,10}

A randomized, placebo-controlled, clinical study concludes that a multi-ingredient vitamin formula with antioxidant properties has measurable effects on homocysteine and LDL oxidation.¹¹ Due to the fact that cardiovascular disease is a leading cause of death for Americans, Pathway MULTI TWO should be one of the core supplements in everyone's health recovery and health maintenance program.

Correcting nutrient deficiencies is the first and most important step in preventative healthcare. A 1995 study based on published risk reductions found that annual hospital charges for birth defects, low-birth-weight premature births, and coronary heart disease could be reduced by about 40, 60, and 38%, respectively. For the conditions studied, nearly \$20 billion in hospital charges were potentially avoidable with daily use of folic acid and zinc-containing multivitamins by all women of childbearing age and daily vitamin E supplementation by those over 50.¹²

Supplement Facts — Multi-Two		
Serving Size: 2 tablets		
Amount Per Serving		% Daily Value
Vitamin A (as beta-carotene from <i>D. salinas</i>)	10,000 IU	200
Vitamin C (from calcium, magnesium and zinc ascorbates)	275 mg	470
Vitamin E (as d-alpha tocopheryl succinate and mixed tocopherols)	200 IU	670
Vitamin B-1 (20% from thiamin diphosphate and 80% from thiamin HCL)	50 mg	3,330
Vitamin B-2 (30% from riboflavin 5'-phosphate and 70% as riboflavin)	50 mg	2,940
Vitamin B-3 (70% from niacinamide and 30% from niacin)	75 mg	375
Vitamin B-5 (from d-calcium pantothenate)	100 mg	1,000
Vitamin B-6 (20% from pyroxidal 5'-phosphate and 80% from pyridoxine HCL)	100 mg	5,000
Vitamin B-12 (50% as methylcobalamin and 50% from	400 mcg	6,660

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hydroxocobalamin)		
Vitamin D-3 (as cholecalciferol)	400 IU	100
Folate (50% from pure crystalline folic acid and 50% from calcium folinate)	800 mcg	200
Biotin (pure crystalline)	300 mcg	100
Vitamin K (as phyloquinone)	500 mcg	625
Magnesium (from ascorbate, citrate, succinate, alpha-ketoglutarate, fumerate and malate)	100 mg	25
Calcium (from ascorbate, citrate, succinate, alpha-ketoglutarate, fumerate and malate)	50 mg	5
Potassium (from citrate)	99 mg	3
Zinc (from picolinate, citrate, and ascorbate)	25 mg	170
Manganese (from citrate)	2 mg	100
Copper (from sebacate and aspartate)	2 mg	100
Chromium (from polynicotinate and arginate)	200 mcg	170
Molybdenum (from citrate)	150 mcg	200
Selenium (from l-selenomethionine)	75 mcg	110
Kreb's cycle bionutrients (from citrate, succinate, alpha-ketoglutarate, fumerate and malate)	720 mg	*
Inositol (pure crystalline - dextrose free)	200 mg	*
Choline (from bitartrate)	100 mg	*
Betaine HCl	50 mg	*
Quercetin (from <i>Dimorphandra mollis</i>) (pea and pod)	50 mg	*
Aspartic Acid (from mineral asparates)	20 mg	*
Grape Extract (<i>vitis vinifera</i>)(seed, skin and stem)	10 mg	*
Octacosanol (from spinach extract)	500 mcg	*
Vanadium (from citrate)	100 mcg	*
* Daily Value not established		
Other Ingredients: cellulose, magnesium trisilicate, magnesium stearate, pharmaceutical glaze (coating) and natural vanilla flavoring (coating.)		
Contains No Added: wheat, gluten, rye, oats, yeast, corn, egg, soy, sugar, dairy products, wax preservatives, artificial colors or flavors.		
Suggested Use: As a dietary supplement, adults take two (2) tablets daily divided among meals, or as directed by a health care professional. Store in a cool, dry place and away from direct light.		
Keep out of reach of children.		
QUALITY AND POTENCY GUARANTEED		

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Pathway MULTI TWO is available in 60 tablets, 180 tablets, and 120 capsules. The dosage is 2 tablets daily or 4 capsules daily with food, which allows for partial dosing for children, senior citizens, and pets.

Additional Multi-Vitamin Benefits: Type II Diabetes, Children's Health & Pregnancy

Further evidence for taking a multivitamin and mineral comes from a randomized, double-blind, placebo-controlled trial, showing that a multivitamin and mineral supplement reduced the incidence of infection and related absenteeism in participants with type 2 diabetes mellitus.¹³ More support comes from a systematic review and meta-analysis finding that maternal consumption of a folic acid-containing prenatal multivitamin is not only associated with a reduction of neural tube defects, but also a decreased risk of other congenital abnormalities, such as cardiovascular defects, limb defects, cleft palate, and urinary tract abnormalities.¹⁴

Multivitamin and multimineral supplements can benefit children as well. A double-blind, placebo-controlled trial found that daily vitamin-mineral supplementation in children ages 6 to 12, supports optimal brain function and academic performance, specifically by increasing nonverbal intelligence.¹⁵ And, a stratified randomized, double-blind, placebo-controlled trial conducted on juvenile delinquents found that correcting nutrient intake, either through a well-balanced diet or low-dose vitamin-mineral supplementation, corrected the low concentrations of vitamins in blood, improved brain function and subsequently lowered institutional violence and antisocial behavior by almost half.¹⁶

1. Liska D, Quinn S, Lukaczer D, Jones DS, Lerman RH. *Clinical Nutrition, a Functional Approach*. 2nd Ed. Gig Harbor, WA: The Institute for Functional Medicine; 2004.
2. Bolander FF. Vitamins: not just for enzymes. *Curr Opin Investig Drugs*. 2006 Oct;7(10):912-5.
3. Bourre JM. Effects of nutrients (in food) on the structure and function of the nervous system: update on dietary requirements for brain. Part 1: micronutrients. *J Nutr Health Aging*. 2006 Sep-Oct;10(5):377-85.
4. Block G, Kahle LL, Patterson BH, Pee D, Rosenberger WF. Fruit and vegetables in the American diet: data from the NHANES II survey. *Am J Public Health*. 1990 Dec;80(12):1443-9.
5. Rumm-Kreuter D, Demmel I. Comparison of vitamin losses in vegetables due to various cooking methods. *J Nutr Sci Vitaminol (Toyko)*. 1990;36 Suppl 1:S7-14.
6. Seddon JM. Multivitamin-multimineral supplements and eye disease: age-related macular degeneration and cataract. *Am J Clin Nutr*. 2007 Jan;85(1):304S-307S.
7. Fairfield KM, Fletcher RH. Vitamins for chronic disease prevention in adults: clinical applications. *JAMA*. 2002 Jun 19;287(23):3127-9.
8. Okuda K, Yashima K, Kitazaki T, Takara I. Intestinal absorptions and concurrent chemical changes of methylcobalamin. *J Lab Clin Med* 1973;81:557-567.
9. Sakhaee K, Bhuket T, et al. Meta-analysis of calcium bioavailability: A comparison of calcium citrate with calcium carbonate. *Am J of Ther*. 1999;6:313-321.

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10. Lindberg JS, Zobitz MM, Poindexter JR, et al. Magnesium bioavailability from magnesium citrate and magnesium oxide. *J Am Coll Nutr.* 1990;9:48-55.
11. Earnest CP, Wood KA, Church TS. Complex multivitamin supplementation improves homocysteine and resistance to LDL-C oxidation. *J Am Coll Nutr.* 2003 Oct;22(5):400-7.
12. Bendich A, Mallick R, Leader S. Potential health economic benefits of vitamin supplementation. *West J Med.* 1997 May;166(5):306-12.
13. Barringer TA, Kirk JK, Santeniello AC, Foley KL, Michielutte R. Effect of a multivitamin and mineral on infection and quality of life. A randomized, double-blind, placebo-controlled trial. *Ann Intern Med.* 2003;138:365-371.
14. Goh YI, Bollano E, Einarson TR, Koren G. Prenatal multivitamin supplementation and rates of congenital anomalies: a meta-analysis. *J Obstet Gynaecol Can.* 2006 Aug;28(8):680-9.
15. Schoenthaler SJ, Bier ID, Young K, Nichols, D, Jansenns S. The effect of vitamin-mineral supplementation on the intelligence of American schoolchildren: a randomized, double-blind placebo-controlled trial. *J Altern Complement Med.* 2000 Feb;6(1):19-29.
16. Schoenthaler SJ, Bier ID. The effect of vitamin-mineral supplementation on juvenile delinquency among American schoolchildren: a randomized, double-blind placebo-controlled trial. *J Altern Complement Med.* 2000 Feb;6(1):7-17.

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