

Catálogo de Productos



 designs for health[®]

ÍNDICE

Conozca sobre nosotros	02
VITAMINAS	
Multivitamínico y Multimineral	03-08
Vitamina D	09-11
Vitamina B6	12-15
Metil Folato	16-19
MINERALES	
Zinc Plus	20-23
Magnesio Quelatos	24-25
Citrato de Magnesio	26-29
Calcio +	30-33
K+2 Potasio	34-37
DEPORTIVOS	
Fórmula Rehidratante	38-41
L-Arginina Plus	42-45
Creatina	46-49
BCAA con Glutamina	50-53
ÁCIDOS GRASOS	
Omegas	54-56
GLA	57-58
MENTAL - EMOCIONAL	
PharmaGABA	59-62
Magnesio L-Treonato	63-65
ANTIOXIDANTES	
Resveratrol	66-69
Ácido R-Lipóico	70-73
DIGESTIVOS	
L-Glutamina	74-77
MÚSCULO-ESQUELÉTICO	
Colágeno	78-83

Fundada en 1989 en los Estados Unidos, Designs for Health® se dedica a producir suplementos naturales de óptima calidad, de grado profesional, y desarrollados con base en evidencia científica, para ayudar a los profesionales de salud y sus pacientes a conseguir resultados exitosos en su salud.

Basados en la filosofía de “Science First”, todos sus suplementos cuentan con amplio soporte científico y con concentraciones de nutrientes en cantidades terapéuticas. Los productos son desarrollados por y para profesionales de la salud.

Cuentan con certificación GMP (Good Manufacturing Practices) de acuerdo con los requerimientos de la FDA y de NSF International. Estas certificaciones aseguran que los productos Designs for Health tienen los ingredientes, las concentraciones, la calidad y la pureza estipulados en sus etiquetas.

Prontamente los suplementos deportivos contarán con certificaciones internacionales anti-dopaje. Todos los productos son garantizados libres de gluten, soy, sabores y edulcorantes artificiales; además los ingredientes son non-GMO (no genéticamente modificados). Los nutrientes son estables, absorbibles y altamente terapéuticos, y dentro de lo posible se incluyen las formas biológicamente activas (para citar un ejemplo, folatos en lugar de ácido fólico).

Designs for Health® es una marca de renombre mundial, con profesionales en la salud utilizando sus suplementos en Estados Unidos Canadá, Inglaterra, Costa Rica, Filipinas, Hong Kong, Australia y prontamente España y Holanda.

En Costa Rica, los productos se han comercializado desde el año 2015, cuentan con los permisos sanitarios del Ministerio de Salud, y son distribuidos de manera exclusiva por la empresa Optimal Living S.A., representada por la Dra. Yasmín Chotocruz.



Multivitamínico y Multimineral

Información Nutricional

Tamaño de la porción: 1 cápsula / Porciones por envase: 120 cápsulas / Dosis máxima: 1 cápsula diaria

Por dosis	Cantidad	% Valor diario	Por dosis	Cantidad	% Valor diario
Vitamina A (palmitato y carotenoides mixtos)	480 µg RAE	53%	Ácido pantoténico (d-calcio pantotenato)	6 mg	120%
Vitamina C (ácido ascórbico)	250 mg	278%	Iodo (iodato de potasio)	75 µg	50%
Vitamina D (colecalférol)	12.5 µg (500 IU)	62%	Zinc (Zinc bisglicinato quelato)	7.5 mg	68%
Vitamina K (K1 fitonadiona, K2 Menaquinona-4 y espectro completo MK-6, MK-7, MK-9)	60 µg	50%	Selenio (selenio glicinato)	100 µg	182%
Tiamina (Vitamina B1 como Tiamina HCl)	1.15 mg	96%	Manganeso (Manganeso bisglicinato quelato)	0.5 mg	21%
Riboflavina (Vitamina B-2)	1.4 mg	85%	Cromo (cromo nicotinato glicinato quelato)	100 µg	285%
Niacina (como Niacinamida y Niacina)	25 mg NE	78%	Molibdeno (molibdeno glicinato quelato)	50 µg	111%
Folato (como [6S]-5-metilteotetrahidrofolato, sal de glucosamina 800 µg)	340 µg DFE	85%	Isómeros de vitamina E (como tocoferoles delta y gamma)	7.5 mg	*
Vitamina B12 (Metilcobalamina)	240 µg	10416%	Boro (como glicina boroorgánica)	1 mg	*
Biotina (d-Biotina)	15 µg	50%			

* Porcentaje de valor diario basado en dieta de 2000 calorías según FDA.

Ingredientes: Vitamina C, niacina, zinc, isómeros de vitamina E, ácido pantoténico, riboflavina, tiamina, boro, manganeso, vitamina A, folato, metilcobalamina, selenio, cromo, iodo, vitamina K, molibdeno, biotina, vitamina D, celulosa (cápsula), celulosa microcristalina (estabilizante), estearato vegetal (antiaglomerante), dióxido de silicio (antiaglomerante).

Uso recomendado: Tome una cápsula diaria con alimentos **Peso Neto:** 77 gramos



NO CONTIENE GLUTEN



Registro Sanitario: SD-US-22-10064

Descripción

El Multivitamínico y Multimineral contiene cantidades óptimas de varios nutrientes, que no son fáciles de obtenerlos de alimentos. Contiene ingredientes de mejor calidad que la mayoría de los multivitamínicos, incluyendo la vitamina E en forma de gamma tocoferoles mixtos, una forma altamente bio-disponible del folato, minerales quelados con aminoácidos para máxima tolerancia y absorción. Estos ingredientes se combinan para tener como resultado un producto de calidad excepcional, diseñado con base en evidencia científica.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓	✓	✓		✓		✓	✓	✓	

Multivitamínico y Multimíneral



Indicaciones

- Complemento de una dieta saludable para estimulación de metabolismo y aumentar energía.
- Fortalecimiento del sistema inmunológico para evitar enfermarse con frecuencia.
- Mejor desempeño atlético y recuperación de la fatiga post ejercional.
- Ideal para los programas de pérdida de peso.
- En toda mujer que use anticonceptivos hormonales o terapia de reemplazo hormonal.

PARTICULARIDADES DEL PRODUCTO:

- Posee minerales altamente absorbibles y que mejor se retienen y utilizan en el cuerpo humano.
- Es el complemento ideal de una dieta tradicional ya que contiene los nutrientes que son más difíciles de obtener de ésta.
- Antioxidantes: vitamina C, E y ácido lipóico.
- Niveles significativos de vitamina B6, folatos y B12 para disminuir la homocisteína (asociada con riesgo cardiovascular y neurológico).
- Cromo para el metabolismo del azúcar en la sangre y grasa corporal. El uso del cromo en pacientes prediabéticos, diabéticos ayuda a mejorar niveles de glicemia, insulina y lípidos.
- Contiene la forma biológicamente activa del Folato (quatrefolic) que funciona mejor que el tradicional ácido fólico.
- Yodo y selenio para dar soporte a la tiroides.
- Boro, para salud ósea y energía mental.
- Biotina para metabolismo de azúcar y grasas.
- Zinc para estimulación inmunológica, síntesis de proteínas y control del apetito.
- Este multivitamínico NO contiene calcio ni magnesio, para poder usarlo por separado en dosis más significativas. Se recomienda de ser necesario complementar con la fórmula CALCIO +.

DOSIS RECOMENDADA:

DOS CÁPSULAS CON EL DESAYUNO.

CADA FRASCO CONTIENE 120 CÁPSULAS

Twice Daily Multi™



A novel concept in defining levels and forms of supplemental vitamins and minerals

By David M. Brady, ND, DC, CCN, DACBN, IFMCP, FACN & Cristiana Paul, MS

THIS INFORMATION IS PROVIDED AS A MEDICAL AND SCIENTIFIC EDUCATIONAL RESOURCE FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ("PRACTITIONERS"). THIS INFORMATION IS INTENDED FOR PRACTITIONERS TO USE AS A BASIS FOR DETERMINING WHETHER TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. ALL RECOMMENDATIONS REGARDING PROTOCOLS, DOSING, PRESCRIBING AND/OR USAGE INSTRUCTIONS SHOULD BE TAILORED TO THE INDIVIDUAL NEEDS OF THE PATIENT CONSIDERING THEIR MEDICAL HISTORY AND CONCOMITANT THERAPIES. THIS INFORMATION IS NOT INTENDED FOR USE BY CONSUMERS.

Twice Daily Multi™ (TDM) is a two-a-day multivitamin designed to provide nutrients that are difficult to obtain in the typical daily diet. Its formulation has been guided by principles of evolutionary biology and human physiological adaptation to a whole food, nutrient-dense diet that supplies adequate energy, guided additionally by common nutrient insufficiencies in the US and by criteria beyond the established Recommended Dietary Allowances (RDAs) and Adequate Intakes (AIs).

TDM includes a tocopherol-free form of vitamin E Isomers, a blend of gamma and delta-tocotrienols, which have unique health and healthy aging benefits, and a unique blend of vitamin K1 with various forms of vitamin K2. It also includes a natural form of folate that addresses common genetic polymorphisms, and an effective dose of vitamin B12 to help overcome various malabsorption syndromes.

Supplement Facts			
Serving Size 2 capsules Servings Per Container 30			
Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Vitamin A (from Palmitate and Mixed Carotenoids)	960 mcg RAE 107%	Pantothenic Acid (as d-Calcium Pantothenate)	12 mg 240%
Vitamin C (as Ascorbic Acid)	500 mg 556%	Iodine (as Potassium Iodide)	150 mcg 100%
Vitamin D (as Cholecalciferol)	25 mcg (1000 IU) 125%	Zinc (as Zinc Bisglycinate Chelate)	15 mg 136%
Vitamin K (as K1 Phytanadione, Vitamin K2 Menaquinone-4 and MenaQ7® Full Spectrum MK-6, MK-7, MK-9)	120 mcg 100%	Selenium (as Selenium Glycinate Complex)	200 mcg 364%
Thiamin (Vitamin B-1)(as Thiamin HCl)	2.3 mg 192%	Manganese (as TRAACS® Manganese Bisglycinate Chelate)	1 mg 43%
Riboflavin (Vitamin B-2)	2.8 mg 215%	Chromium (as TRAACS® Chromium Nicotinate Glycinate Chelate)	200 mcg 571%
Niacin (as Niacinamide and Niacin)	50 mg NE 313%	Molybdenum (as TRAACS® Molybdenum Glycinate Chelate)	100 mcg 222%
Vitamin B-6 (as Pyridoxal-5-Phosphate)	5.2 mg 306%	Vitamin E Isomers (as DeltaGold® delta and gamma tocotrienols)	15 mg *
Folate (as Quatrefolic® [6S]-5-methyltetrahydrofolate, glucosamine salt 800 mcg)	680 mcg DFE 170%	Boron (as Bororganic Glycine)	2 mg *
Vitamin B-12 (as Methylcobalamin)	500 mcg 20833%		
Biotin (as d-Biotin)	30 mcg 100%		

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, vegetable stearate, silicon dioxide.

Comparison of Twice Daily Multi™, estimated Paleolithic diets, average US intakes and US RDA/AI

Table 1 (see link on back) compares the ingredients in TDM to estimated dietary intakes of the corresponding nutrients during the Paleolithic era, the current US RDA/AI, and average US intakes (based on data from NHANES 2001-2002).⁴⁰ The estimated Paleo era nutrient intakes are based on values reported by Cordain,⁶ a recalculation of Cordain's data with more advanced nutrition analysis software, and the evaluation of another sample Paleo diet.¹⁷⁻¹⁹ The data in Table 1 show that average Paleo nutrient intakes are significantly higher than current US RDA/AI, except for molybdenum. A two-capsule serving of TDM offers comparable amounts of essential micronutrients to those found in a 2000 kcal "Paleo-like" diet, with some adjustments based on average US intakes, nutrient bioavailability, and upper tolerable levels.

Magnesium, calcium, iron and copper are not included in TDM because this formula is designed to allow for more flexible and individualized supplementation of these nutrients. They may be derived from the diet or from condition-specific formulas such as OsteoForce™/OsteoForce™ Supreme, Osteoben® or various mineral formulas. Healthcare practitioners may recommend additional supplements based on patients' diets, lifestyle factors and clinical evaluations.

Comparison of Twice Daily Multi™ with other multivitamin/multimineral formulas

The majority of commercially available multivitamin and mineral formulas are designed to meet 100% of the RDA or AI, or some percentage thereof. These levels represent the minimum intake required to reduce risk for overt debility, manifested by deficiency diseases such as scurvy or pellagra; they were not derived for the purpose of optimizing health and physiological function, nor reducing risk for age- or lifestyle-related degenerative diseases.¹

The optimal intake of vitamins and minerals for the general population remains open for debate and is a topic of ongoing research. For example, since 2001, research by Fenech et al. has investigated the potential to redefine the Australian RDAs for folate, B12, and other micronutrients to levels proven to support healthy DNA replication (also referred to as genomic stability), an important determinant of cellular health.¹²⁻¹⁵ Interestingly, the newly proposed Australian RDAs are higher than US RDAs for B12 (7 mcg versus 2.6 mcg) and folate (700 mcg versus 400 mcg), as are the estimated Paleolithic era intakes (see Table 1). This is likely not a coincidence since folate and B12 are necessary for adequate DNA replication, which is in turn critical to successful human evolution.¹⁶

Other multivitamin and mineral formulas contain ingredients at levels 10-100 times higher than the RDA/AI, based on potential to alleviate genetic polymorphisms affecting nutrient status² or to compensate for nutrient depletions resulting from commonly used pharmaceutical drugs. However, with the availability of clinical markers of nutritional deficiencies and genetics-based tests and recommendations, it is no longer necessary to provide such high levels of B vitamins in foundational formulas. Rather, additional nutrients can be supplemented based on relevant tests such as GenomicInsight™ Genomic Health Profile (offered by Diagnostic Solutions). Unlike other DNA tests, GenomicInsight™ enables clinicians to customize reports using the most advanced artificial intelligence, which integrates findings from peer-reviewed research. For example, the levels of vitamins B2, B6, B12 and folate found in TDM are adequate in maintaining healthy homocysteine (Hcy) levels for some individuals but not for those with single nucleotide polymorphisms on particular Hcy metabolic pathways and/or folate receptor activity.²⁰⁻²² The GenomicInsight™ report identifies which of these nutrients are required in higher doses in order to normalize Hcy levels. Other nutritionally relevant tests include NutrEval® (offered by Genova Diagnostics) and ALCAT Functional Cellular Assays (By Cell Science Systems).

The Guiding Principle of Evolutionary Biology

Human physiology was shaped by the type of diet naturally available for millions of years.³⁻⁶ Many researchers believe that optimal health may be best supported by the types and amounts of nutrients humans were exposed to during the Paleolithic era. A large body of research describes common characteristics of “Paleo-like” diets with respect to macro- and micronutrient content.^{6,10,11} Although precise intakes of plant and animal foods, and thus the exact composition of the human diet, may have differed based on season and geographic location, there are overarching general principles that can inform what the human body may be optimally suited to.

Evolutionary biology and cellular studies converge in a new approach for defining optimal intakes of nutrients essential to health and physiological function. This approach provides a rational framework for integrating findings from diverse but overlapping sciences: nutrition, biochemistry, physiology, paleontology and genetics.⁷⁻⁹ This is the foundation for optimizing diet and supplementation plans; beyond this, it is reasonable to make adjustments based on health, clinical status, age, genetics, performance needs and other goals.

Ingredient Highlights

Vitamin E Isomers: provided as DeltaGold®, an annatto-sourced tocopherol-free blend of gamma- and delta-tocotrienols. Tocotrienols have higher antioxidant activity and unique benefits not observed with tocopherols. (See the tocotrienols white paper and Annatto-E™ tech sheet for an extensive discussion of tocotrienol research and the shortcomings of tocopherols.) Tocotrienols are not easily found in common diets and their assimilation is impaired by concurrent consumption of tocopherols. Thus, tocopherols are not included in Twice Daily Multi™; they can easily be obtained through the consumption of nuts, seeds, avocado, various vegetable oils and many animal foods. This also creates the opportunity to supplement at the same time with additional higher doses of tocotrienols from Annatto-E™ or Annatto-E™ Synergy, since their absorption would be impaired by tocopherols.

Vitamin K: provided as two naturally occurring forms—K1 and K2 (as MK-4 and MenaQ7® Full Spectrum as MK-6, MK-7, MK-9). The RDA for vitamin K1 was derived solely based on optimizing blood clotting, but new research shows that higher levels are required to support the roles of vitamins K1 and K2 in bone metabolism, arterial health and more. The precise forms and specific levels of K2 characteristic of a Paleo diet are not known for certain but MK-4 was likely an important component since it is the main form stored in animal foods and in the human body. Consider using Tri-K™ for older men and women, especially postmenopausal women, who may need higher levels of vitamin K. (See the Tri-K™ tech sheet and the vitamin K chapter in the Textbook of Natural Medicine.)¹⁹

Folate: provided as Quatrefolic®, a glucosamine salt 5-MTHF form of folate shown to dissociate easily before absorption and raise plasma folate levels.²⁴ This form of 5-MTHF is likely more bioavailable than naturally occurring folates because they are covalently bonded to polyglutamate chains.²⁴ Folic acid is no longer considered an adequate source of folate for the following reasons: (a) genetic polymorphisms of folate metabolism are common and are responsible for a 35-70% reduced conversion of folic acid to the biological active form, 5-MTHF;^{24,25} (b) synthetic folic acid (derived from fortified foods, or supplements) may increase the risk of various cancers, reduce natural killer (NK) cell activity, and may have other detrimental effects;^{25,26} (c) human physiology is adapted to natural folates. Folic acid is not a naturally occurring molecule and has a distinct pathway of cell entry and different metabolic transformations compared to natural folates. These differences may be responsible for the detrimental effects associated with folic acid.^{25,27}

Vitamin B6: provided in the naturally occurring phosphorylated form, pyridoxal-5-phosphate.

Vitamin B12: provided in the naturally occurring methylcobalamin form. (See the Tricobalamin™ tech sheet for a detailed description of cobalamin metabolism, bioavailability issues and rationale for dosing at levels above the RDA in various populations.)

Niacin: included in two forms, as niacin and niacinamide; both occur naturally in foods.

Vitamin C: provided as ascorbic acid, at higher levels than in most multivitamins because average consumption of vitamin C from food in the US (94 mg) is well below evolutionary intakes (approx. 541 mg), due to diets deficient in fresh fruits and vegetables (see Table 1). It is an antioxidant and essential for optimal immune response, collagen biosynthesis, catecholamine metabolism, and dietary iron absorption.²³ In turn, poor collagen renewal results in impaired integrity of the skin, mucous membranes, blood vessels, and bone.²³ The RDA for vitamin C prevents only the extreme deficiency that results in scurvy; it does not provide for optimal health.²³

Vitamin A: 77% of the vitamin A in this formula is represented by a natural carotenoid mix from palm oil with the remainder as pre-formed vitamin A, retinyl palmitate for a total of 960 mcg RAE. This is based on the fact that the majority of vitamin A sources in the Paleolithic diet were derived from plant-sourced carotenoids rather than pre-formed vitamin A.⁶ Ideally, most vitamin A should be derived from a diet high in vegetables and fruits that provide carotenoids with vitamin A activity.

Mineral chelates: Zinc, manganese, molybdenum, chromium and boron are provided as highly bioavailable chelates. Mineral chelates do not depend on stomach acid for liberation and may be more effective for those with hypochlorhydria or other conditions that impair mineral absorption. Chelated minerals are designed to bypass obstacles to absorption and assimilation, such as food phytates, oxalates, fiber, ionic minerals or even medications that interfere with mineral absorption. Chelates are better tolerated and absorbed and are less likely to cause loose stools or other gastrointestinal discomfort.²⁸

Zinc: This mineral is involved in a multitude of basic biochemical functions. Zinc deficiency is known to have adverse clinical impacts on the epidermal, gastrointestinal, immune, skeletal, reproductive and central nervous systems.²⁹

Chromium: a trace mineral involved in maintaining healthy blood sugar levels and proper carbohydrate and fat metabolism.^{30,31} “Insufficient dietary intake of chromium leads to signs and symptoms that are similar to those observed for diabetes and cardiovascular diseases. Supplemental chromium given to people with impaired glucose tolerance or diabetes leads to improved blood glucose, insulin, and lipid variables.”³⁰

Vitamin D: The amount included in TDM is intended to be augmented by endogenously synthesized vitamin D from sun exposure and/or supplementation using one of Designs for Health’s vitamin D+K formulas, as guided by blood levels.

Iodine and Selenium: essential trace minerals for thyroid hormone synthesis and conversion.^{32,33}

Boron: There is no RDA for boron but this mineral appears to be important for various aspects of physiology. Research in humans and higher order animals support boron as “a bioactive beneficial element” that plays a role in bone health, brain function and immune response.^{34,35}

Biotin: There is no RDA for biotin but it is involved in several critical metabolic pathways, including “gluconeogenesis, fatty acid synthesis, and amino acid catabolism. Biotin might regulate chromatin structures, gene expression, and DNA repair. Animal and human data suggest that poor biotin status adversely affects plasma lipid levels and can cause alopecia or erythematous dermatitis.”³⁶

Table 1: Twice Daily Multi™ ingredients compared to Paleo levels, RDA/AI and average intakes in US

Twice Daily Multi™ Ingredients Serving size: 2 capsules	Amt / 2 caps serving	Unit	Paleo Diet [range] (2000 Kcal) (ref. 6,17,18)	RDA M/F (ref. 1)	AI, M/F (ref. 1)	Average and range of US Intake
Vitamin A (from palmitate & mixed carotenoids from Palm Tree fruit), as follows:	960	mcg RAE		900 / 700		
Vitamin A (Mixed Carotenoids)	1700	IU	22548 [1941-57412]			10,521*
Vitamin A (Retinyl Palmitate)	1500	IU	1712 [143-3440]			1,406*
Vitamin C (as Ascorbic Acid)	500	mg	541 [345-748]	90 / 75		94.4 [24-238]*
Vitamin D (as Cholecalciferol [25 mcg])	1000	IU	469 [20-1540]	-	600-800	[204-288]*
Vitamin K (from K1 and K2), as follows:	120	mcg		ND	ND	
Vitamin K1 (Phytonadione)	90	mcg	716 [409-1000]	-	120 / 90	92.2 [30-222]*(US) 211.7 [9-991]** (EU)
Vitamin K2: MK-4, MK-6, 7, 9, as follows:	30	mcg	ND	ND	ND	29.1 [0.9-128]**
Vitamin K2: MK-4	10	mcg	ND	ND	ND	7.1 [0.5-28.2]**
Vitamin K2: MK-6, 7, 9 (as MenaQ7® Full Spectrum)	20	mcg	ND	ND	ND	21.4 [0-118.4]**
Vitamin B1 (as Thiamin HCl)	2.3	mg	2 [1.2-3.4]	1.2 / 1.1		1.6 [0.8- 3.4]*
Vitamin B-2, Riboflavin	2.8	mg	3 [2.4-4.2]	1.3/ 1.1		2.2 [1.02-4.14]*
Vitamin B-3 (as Niacinamide, Niacin)	50	mg NE	51 [30-66]	16 / 14		22.8 [10.8-41.9]*
Vitamin B5 (as d-Calcium Pantothenate)	12	mg	11 [9-13]	5 / 5		6 (ref.42)
Vitamin B-6 (as Pyridoxal-5-Phosphate)	5.2	mg	5.2 [2.9-6.7]	1.7 / 1.5		3.7 [0.8-3.7]*
Folate (as Quatrefolic® [6S]-5-methyltetrahydrofolate, glucosamine salt) (DFE=dietary folate equivalents)	680	mcg DFE	810 [527-1034]	400		559 [251-1126]*
Vitamin B-12 (as Methylcobalamin)	500	mcg	15 [7-29]	2.4 / 2.4 or 500		5.4 [1.73-12.6]*
Biotin (as d-Biotin)	30	mcg	31 [43-52]	30		[35-70] (ref 43)
Zinc (as Zinc Bisglycinate Chelate)	15	mg	21 [11-32]	11 / 8		12.9 [5.4-22.3]*
Selenium (as Selenium Glycinate Complex)	200	mcg	202 [108-277]	55 / 55		113 [52-195]*
Manganese (as TRAACS® Manganese Bisglycinate Chelate)	1	mg	4.4 [2.8-6.1]	2.3 / 1.8		[2.1-2.2](F), [2.6-2.8](M) (ref.38)
Chromium (as TRAACS® Chromium Nicotinate Glycinate Chelate)	200	mcg	32 [3-61]	35 / 25		[39-54](M), [23-29](F) (ref. 1)
Iodine (as Potassium Iodide)	150	mcg	40 [21-57]	150 / 150		[138-353] (ref. 41)
Molybdenum (as TRAACS® Molybdenum Glycinate Chelate)	100	mcg	34	45 / 45		180 [120-400]*
Boron (as Bororganic Glycine)	2	mg	1.8 [1-2.5]	ND	ND	1 [0.4-2.4]*
Vitamin E isomers (as DeltaGold® delta and gamma tocotrienols)	15	mg	ND	ND	ND	2 (ref. 37)

* NHANES 2001-2002 (ref. 40); ** (ref.19); ND = No data available

Recommended Use:

- Take two capsules per day with meals, or as directed by your health care practitioner.

Complementary formulas: For individualizing supplementation, consider combining Twice Daily Multi™ with the following DFH formulations:

- OsteoForce™, OsteoForce™ Supreme, Osteoben®, or any DFH calcium and/or magnesium products as indicated based on diet, sex, age, and health status
- PaleoGreens®, PaleoReds®, EssentiaGreens™, or other antioxidant formulas based on diet and oxidative stress status
- For additional B12 and/or folate: Tricobalamin™, Trifolamin™, L-5-MTHF (0.5mg, 1mg, 5mg)
- Ferrochel™ for additional iron

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/twice-daily-multi-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Healthcare practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.

MenaQ7® is a registered trademark of NattoPharma ASA, Norway; Patented in the United States and Canada. (US Patent Numbers 8,728,553 & 8,354,129; Canada Patent Number 2,347,387).

DeltaGold® is a registered trademark of American River Nutrition, LLC and protected by US Patent Numbers 6,350,453 and 8,586,109.

TRAACS® is a registered trademark of Albion Laboratories, Inc.



Quatrefolic® is covered by U.S. Patent No. 7,947,662 and is a registered trademark of Gnosis S.p.A.

*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.

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.

Vitamina D

Información del Suplemento

Tamaño de la porción: 1 cápsula
Porciones por envase: 120

Por porción	% valor diario	
Vitamina D (colecalfiferol)	2000 IU	500%
Vitamina K	200 µg	250%

Otros ingredientes:

L-leucina, celulosa microcristalina

NO CONTIENE GLUTEN



USO RECOMENDADO: Como suplemento nutricional, tome una cápsula diaria, acompañada de una comida o como recomendado por su médico. Dosis máxima diaria: dos cápsulas al día.

ADVERTENCIA: Consulte con su médico antes de usar este producto si usted está tomando coumadina, warfarina o algún otro medicamento anticoagulante.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.

Registro Sanitario: SD-US-22-03152



Descripción

Este producto provee dosis clínicamente significativas de vitamina D3 y vitamina K (en la forma de K1). Ambas vitaminas son esenciales para el metabolismo óseo y la salud arterial, cognitiva, emocional, y para el balance de sistema inmunológico.

Las dosis varían entre los 2,000 y 10,000 IU diarios basado en los niveles de vitamina D total medidos por laboratorio.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓	✓	✓	✓	✓			✓		✓

Vitamina D



Indicaciones

- La meta terapéutica de la Vitamina D es mantener los niveles en sangre de 50 a 100 ng/ml (óptimo).
- La vitamina D en combinación con Vitamina K son esenciales para la densidad ósea, integridad vascular y para mantener el balance del sistema inmunológico.
- Ideal para pacientes que no reciben suficiente exposición solar.
- La súper-hormona de la menopausia y andropausia, ya que la conversión de vitamina D a su forma biológicamente activa depende de niveles adecuados de hormonas reproductivas, especialmente de estradiol.
- Se ha demostrado que la vitamina D estimula la neuro-génesis por lo que debe ser parte del tratamiento de los diferentes tipos de demencia.

PARTICULARIDADES DEL PRODUCTO:

- Contiene Vitamina D (colecalférol) 2000 IU y Vitamina K 200 mcg (formas biológicamente activas).
- Indicado para mantener niveles óptimos a largo plazo
- El usar la vitamina D sin vitamina K aumenta el riesgo de calcificación de tejidos blandos y arterias.
- Se encuentra en alimentos como pescados grasos (salmón y atún), en hongos, hojas verdes y en menor cantidad en productos lácteos.

DOSIS RECOMENDADA:

CORTO PLAZO PARA AUMENTAR NIVELES EN SANGRE: 6000-8000 IU DIARIOS

LARGO PLAZO: 2000-4000 IU DIARIOS

CADA FRASCO CONTIENE 120 CÁPSULAS

Vitamin D Synergy

Vitamin D with added vitamin K

Vitamin D Synergy contains 2,000 IU of vitamin D3 as cholecalciferol, along with vitamin K, which assists in some of vitamin D's crucial functions. Evidence indicates that vitamin D3 is more effective than the D2 form, which is the form most commonly used in fortified foods.

Vitamin D plays a role in supporting the immune system and is a key player in bone health and calcium regulation in the body. When the body needs calcium, vitamin D stimulates the intestines to absorb more calcium from foods and reduces the amount of calcium the kidneys release into urine to be excreted. When blood levels of calcium are low, vitamin D triggers a natural hormonal process that allows calcium to be released from bones to restore proper blood levels.

Technically speaking, vitamin D is not an "essential" nutrient, because the human body can synthesize it: it's made in a biochemical reaction when UVB rays from sunlight interact with cholesterol stored in our skin. However, many people do not get adequate sunlight exposure, and many live at latitudes where the angle of the sun doesn't result in optimal natural vitamin D synthesis throughout most of the year.

Additional reasons to supplement with vitamin D

- Foods that are naturally rich in vitamin D—such as shellfish, fatty fish, and cod liver oil—are not regular parts of many people's diet.
- Several commonly used medications interfere with healthy digestion, and proper digestion and absorption of dietary fat is essential for assimilating vitamin D into the body.
- Since cholesterol is converted to vitamin D, those taking statin drugs, which reduce the body's internal synthesis of cholesterol, may have less "raw material" from which to generate vitamin D.
- Individuals with obesity tend to have much lower levels of vitamin D than people at lower weights, even when they supplement with the same amount or get the same degree of sun exposure.
- Aging skin has a natural reduced capacity for vitamin D synthesis. By age 75, vitamin D levels may be as much as 25% lower than in younger individuals.

Why add vitamin K?

Vitamin K is included in this formula because it acts like a "traffic cop" for calcium in the body. When vitamin D stimulates increased absorption and retention of calcium, vitamin K performs the important function of directing the calcium where to go: it helps deposit it where it's needed, such as in bones and teeth, and directs it away from undesirable destinations, such as building up in the joints, arteries, or forming stones in the kidneys. The form of vitamin K in this product is K1. While K2 is the form with higher activity for calcium trafficking, the body can convert K1 to K2.

Recommended Use: As a dietary supplement, take one capsule per day with a meal, or as directed by your health care practitioner.

Vitamina B6

Información del Suplemento

Tamaño de la porción: 1 cápsula
Porciones por envase: 120

Por porción	Cantidad	% Valor diario
Vitamina B6 (como piridoxal-5-fosfato)	50 mg	2500%

Otros ingredientes:

Celulosa microcristalina, estearato vegetal.

NO CONTIENE GLUTEN

USO RECOMENDADO: Como suplemento a la dieta, tome una cápsula diaria o como recomendado por su médico. Dosis máxima diaria: 2 cápsulas al día.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-22-03153



Descripción

La vitamina B6 se encuentra en tres diferentes formas: piridoxina HCl, piridoxal y piridoxamina. Todas deben convertirse en piridoxal-5-fosfato (P-5-P) en el hígado, que es la forma biológicamente activa. Este producto provee P-5-P, que el cuerpo utiliza y es necesaria para una serie de procesos tales como: producción de GABA, conversión de 5-HTP a serotonina, y la descarboxilación de la L-Dopa a dopamina. También es necesaria para la producción de glucosa, el metabolismo de amino ácidos y lípidos.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	BALANCE HORMONAL	CARDIOVASC	EMOCIONAL	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓	✓		✓	✓		✓		✓	✓

Vitamina B6



Indicaciones

- Síndrome de túnel carpal
- Neuropatías periféricas
- Síndrome premenstrual y dominancia estrogénica
- Edema y retención de líquidos
- Náusea del embarazo
- Niveles elevados de homocisteína
- Diabetes gestacional
- Diabetes tipo 2
- Ansiedad
- Depresión
- Fatiga

PARTICULARIDADES DEL PRODUCTO:

- El piridoxal-6-fosfato es la forma biológicamente activa de vitamina B6 que es la que el cuerpo utiliza, no hay necesidad de conversión
- La B6 es necesaria para la producción de GABA, de la conversión del 5-HTP a serotonina, y en el paso de L-Dopa a dopamina. También es parte esencial del metabolismo de la glucosa, de aminoácidos y de lípidos.
- NO DUDE EN COMBINAR EL B6 CON MAGNESIO PARA OPTIMOS RESULTADOS

DOSIS RECOMENDADA:

50-150 MG DIARIOS (UNA A TRES CÁPSULAS CON COMIDAS)

CADA FRASCO CONTIENE 120 CÁPSULAS

P-5-P – Pyridoxal 5 Phosphate



Active vitamin B6 for supporting neurotransmitter synthesis and healthy metabolism

By David M. Brady, ND, DC, CCN, DACBN & Amy Berger, MS, CNS

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Vitamin B6 is found in three forms – pyridoxine hydrochloride, pyridoxal, and pyridoxamine – all of which must be converted into activated pyridoxal-5-phosphate (P-5-P) by the liver. ^{1,2} P-5-P is the form of vitamin B6 the body ultimately uses. It is an essential cofactor for over 100 enzymes, mostly related to protein and amino acid metabolism, including the synthesis of select neurotransmitters. ³ It is also critical for heme production, as well as carbohydrate metabolism and fatty acid synthesis.

P-5-P is recommended for people whose ability to convert the other forms of vitamin B6 into this active coenzyme is impaired, as seen in the elderly, children on the autism spectrum, those with impaired liver function, and those with celiac disease or other conditions that interfere with nutrient absorption. It may also be useful for people with conditions that respond to higher doses and better absorption of B6, such as:

- Carpal tunnel syndrome
- Peripheral neuropathies
- PMS (including water retention)
- Morning sickness
- High homocysteine levels
- Gestational and type 2 diabetes
- Depression/Anxiety
- Fatigue

Vitamin B6 is widely available in foods, but certain metabolic states and commonly prescribed pharmaceutical drugs may interfere with its absorption and/or induce a need for increased intake above that typically obtained through the diet. Oral contraceptives and chronic use of NSAIDs can interfere with absorption of B6. ^{4,5} (Many oral contraceptives carry with them increased risk for venous thromboembolism, and the reduced B6 levels may be a contributing factor. ^{4,6}) Moreover, celiac disease, increased small intestinal permeability (“leaky gut”) and other conditions that interfere with nutrient absorption may increase the need for B6. ³

Neurotransmitter Synthesis

P-5-P is a required cofactor for the aromatic L-amino acid decarboxylase enzyme (AADC), which catalyzes the conversion of 5-HTP to serotonin, and L-Dopa to dopamine. Low B6 status may be why some individuals do not experience any benefit upon supplementation with L-tryptophan or 5-HTP. Serotonin is widely regarded for its role in supporting a positive mental outlook; marginal B6 status is associated with depressive symptoms in older adults. ⁷

The GABA/glutamate cycle is another neurotransmitter system that requires P-5-P. The vitamin is a cofactor for glutamate decarboxylase, the enzyme that converts glutamate to GABA, as well as for GABA transaminase, which catabolizes GABA to regenerate glutamate. ³ Additionally, P-5-P functions as a coenzyme of 5-aminolevulinic acid synthase, which is involved in the synthesis of heme, the iron-carrying component of hemoglobin. ^{8,9} Considering the critical role of hemoglobin in transporting oxygen, combined with the function of P-5-P in neurotransmitter synthesis, it is not surprising that B6 insufficiency is associated with depression and fatigue. Low serum levels of B6 and iron are also associated with panic attacks and hyperventilation severe enough to require hospital visits. ¹⁰

Carbohydrate Metabolism & Fatty Acid Synthesis

B6 is required for gluconeogenesis and glycogenolysis, two processes that are essential for maintaining steady blood glucose and energy levels. P-5-P is a coenzyme for glycogen phosphorylase, the enzyme that catalyzes the cleavage of glucose-1-phosphate molecules from stored glycogen in the liver and muscle tissue. ¹¹ For this reason, much of the P-5-P in the human body is found in muscle bound to glycogen phosphorylase. P-5-P is also a coenzyme for some of the enzymes of gluconeogenesis, whereby amino acids are converted into glucose. Transaminase enzymes all require P-5-P as a cofactor; reactions catalyzed by transaminases include amino acid-interconversion and transforming amino acids into substrates for gluconeogenesis or intermediates of the ATP-producing citric acid cycle. Because of its association with muscle glycogen phosphorylase, B6 occurs mostly as the active P-5-P form in meat (including poultry and fish), while plant foods contain B6 mostly as pyridoxine. ³

The role of B6 in both neurotransmitter synthesis and blood glucose regulation may be a link between depression and type 2 diabetes. Inflammation and other physiological stressors may upregulate the conversion of tryptophan into kynurenine (KYN), a substrate for biosynthesis of NAD. B6 is a cofactor for key enzymes of the KYN/NAD pathway, and insufficiency shunts KYN metabolism away from NAD production and towards synthesis of xanthurenic acid (XA) and kynurenic (KYNA) acid. These substances and their metabolites interfere with the production, release and physiological activity of insulin, leading researchers to propose that upregulation of these pathways due to vitamin B6 deficiency may underlie an association between diabetes and depression.¹² Studies in rats also support a role for B6 in healthy pancreatic function.¹³

B6 insufficiency may interfere with elongation of highly unsaturated fatty acids from their omega-6 and omega-3 precursors, as one of the enzymes involved in this process—delta-6-desturase—requires B6. Animal studies suggest the greatest reduction is in DHA, which could have profound implications for brain health.¹⁴ B6 insufficiency may also elevate the n-6:n-3 ratio, which may be a contributing factor to cardiovascular disease risk and overall inflammation.¹⁵

Additional Roles for Vitamin B6

In addition to its roles in macronutrient metabolism and neurotransmitter synthesis, studies support a beneficial role for active B6 in a wide array of other health concerns:

- **Carpal Tunnel Syndrome (CTS):** Study results are mixed, but the preponderance of evidence suggests that supplemental B6 helps reduce CTS symptoms of pain, numbness, tingling and hand weakness, and may even obviate the need for surgery.^{16,17} Low plasma P-5-P levels are also associated with severity of rheumatoid arthritis, which may reflect an increased need for this vitamin in inflammatory states.¹⁸ (Note, however, that reduced plasma P-5-P levels may not reflect whole-body status, since muscle tissue is the main store of the vitamin.)
- **Premenstrual Syndrome (PMS):** Supplemental B6 may be helpful for alleviating the psychological and somatic symptoms of PMS.¹⁹ Symptom reduction is typically largest for depression and anxiety, likely owing to the role of B6 in neurotransmitter synthesis, but B6 may also reduce water retention and somatic symptoms, such as headache, low back pain, and breast tenderness. In a study looking at supplemental magnesium and B6 for the reduction of PMS severity, magnesium resulted in statistically significant improvement compared to placebo, but the combination of B6 with magnesium led to even greater improvements.²⁰
- **Morning Sickness:** B6 may be effective for reducing the nausea and vomiting some women experience during the early part of pregnancy. Compared to placebo, supplemental B6 reduced nausea significantly, with a more moderate reduction in episodes of vomiting.^{21,22} While much of the research on B6 and morning sickness employs pyridoxine, researchers speculate that P-5-P is likely the active antiemetic form of the vitamin.²³
- **Elevated Homocysteine:** P-5-P plays critical roles in one-carbon metabolism for methylation, activation of folate, and nucleic acid synthesis.²⁴ As P-5-P is required for the transsulfuration of homocysteine to cysteine, B6 deficiency can lead to elevated blood levels of homocysteine. Elevated homocysteine may be irritating to the blood vessel endothelium, potentially facilitating development of atherosclerosis and cardiovascular disease. Optimizing levels of B6 and other nutrients involved in these mechanisms can help reduce homocysteine levels.²⁵ Research indicates that in some patients, B vitamin insufficiency may be the primary cause of elevated homocysteine.²⁶

SUPPLEMENT FACTS

Serving Size 1 capsule

Amount Per Serving	% Daily Value	
Vitamin B-6 (Pyridoxal-5-Phosphate)	50 mg	2500%

Other Ingredients: Microcrystalline cellulose, cellulose (capsule), vegetable stearate.



Recommended Use:

- As a dietary supplement, take one capsule per day, or as directed by a health care practitioner.

For a list of references cited in this document, please visit:

<http://catalog.designsforhealth.com/assets/itemresources/P-5-PRferences.pdf>

Metil Folato

Información del Suplemento

Tamaño de la porción: 1 cápsula
Dosis máxima: 2 cápsulas diarias

Por porción	% diario recomendado
Folato 500 µg (850 µg DFE) (como [6S]-5-metiltetrahidrofolato, sal de glucosamina)	213%

Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Otros ingredientes: Espinaca orgánica en polvo, celulosa microcristalina, celulosa (cápsula), L-leucina.

Uso recomendado: Tome una cápsula por día.

NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-02242



GLUTEN
FREE



DAIRY
FREE



SOY
FREE



PESTICIDE
FREE



NO
FILLERS



LAB
TESTED

Descripción

Este suplemento provee el folato en su forma natural, un miembro de la familia de las vitaminas del complejo B. Contiene 500 mcg de metilfolato (L-5-MTHF) por cápsula, la cual es su forma bioidéntica, bioactiva, que circula en la sangre y que se encuentra en diversos alimentos. En la naturaleza, ocurre solamente en su forma de isómero 6S, al igual que en este suplemento. El metil folato Designs for Health® es un derivado patentado que ha demostrado gran biodisponibilidad y solubilidad, así como larga estabilidad.

El metilfolato es un nutriente esencial para el crecimiento y la división celular, por lo tanto los requerimientos se duplican durante el embarazo. Además tiene un rol esencial en el metabolismo de la homocisteína. El metabolismo de la homocisteína es esencial para múltiples reacciones bioquímicas del cuerpo.

Metil Folato



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	DIGEST	DEPORTIVO	ADICCIONES
✓		✓	✓	✓			

Folato vs. Ácido fólico:

Los folatos se encuentran naturalmente en la naturaleza. Por el contrario, el ácido fólico es una sustancia oxidada y sintética que se usa en muchos suplementos, medicamentos y en la fortificación de los alimentos, pero no se encuentra como tal en la naturaleza. El cuerpo debe convertir el ácido fólico en su forma utilizable L-5-MTHF. Este suplemento provee la forma activa por lo que la conversión es innecesaria, y es una suplementación superior y más segura que evita la acumulación de ácido fólico.

Se recomienda realizar la prueba genética L-5-MTHFR para identificar los individuos con la variación genética que les impide sintetizar su propio L-5-MTHF.

Indicaciones

- Para el mantenimiento de niveles óptimos de homocisteína
- Para el adecuado desarrollo fetal
- Para el soporte de una función mental adecuada
- Ayuda en el alivio de la tensión nerviosa
- Para el alivio del insomnio crónico
- Ayuda a mantener una función cardiovascular saludable

USO RECOMENDADO:

COMO SUPLEMENTO A LA DIETA, TOME UNA CÁPSULA DIARIA O COMO RECOMENDADO POR SU PROFESIONAL DE SALUD.

CADA FRASCO CONTIENE 120 CAPSULAS VEGETARIANAS

L-5-MTHF

Methylated folate, as the all natural 6S isomer; available in 500 mcg, 1,000 mcg and 5,000 mcg capsules

By David M. Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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L-5-MTHF provides folate in a bioidentical, bioactive form, 5-methyltetrahydrofolate. L-5-MTHF (the “L” signifying that it is the all-natural [6S] isomer) is the active circulating form of folate found in the body and one of the several forms found in food. In nature it is found only as this [6S] isomer, which is why DFH provides 5-MTHF in this natural form rather than the mixed (or racemic) form. L-5-MTHF was designed for patients with demonstrated increased need for folate, such as those with either the A1298C or C677T MTHFR mutation.

Our L-5-MTHF uses the patented folate derivative Quatrefolic®. This innovative form of folate has demonstrated high bioavailability and solubility as well as long lasting stability. Quatrefolic® L-5-MTHF helps to increase blood folate levels much better than folic acid.

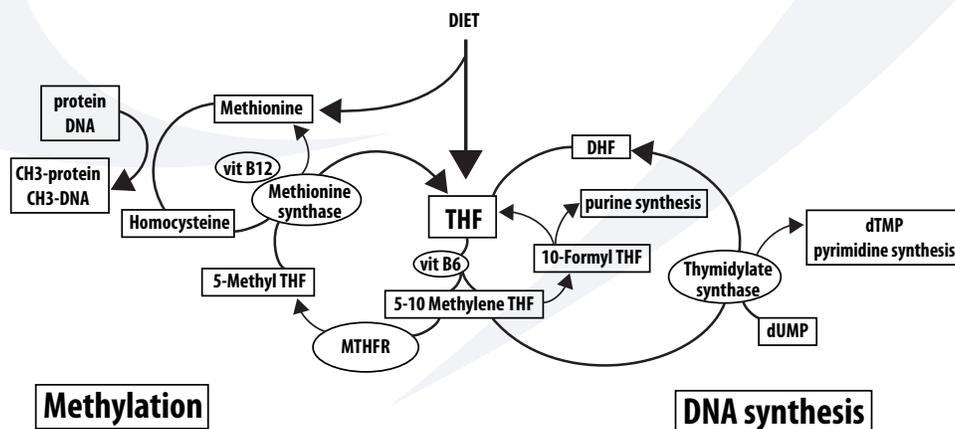
Folate and Human Health

Folate is one of the most essential nutrients needed during rapid cell division and growth. It is no surprise that pregnancy doubles the need for dietary folates. Folate coenzymes play a vital role in metabolism through two different pathways: the synthesis of DNA from its precursors (purines/thymidines) and the homocysteine (methionine) pathway. 5-MTHF is needed for the conversion of homocysteine to methionine which allows for the production of S-adenosylmethionine (known as SAME). The importance of this is that SAME is the universal methyl donor. Methyl-group donation is vital to proper cell replication and differentiation, and to many biochemical conversion processes, including the synthesis of serotonin, melatonin, and DNA.

Folate vs. Folic Acid

While folates are naturally occurring in food, folic acid is a fully oxidized, synthetic compound (pteroylmonoglutamic acid) used in most dietary supplements and in food fortification, but is not found in nature. Designs for Health uses only natural folates found in food rather than folic acid. Due to enzyme defects or deficiencies, many people do not properly convert folic acid into natural folates including 5-MTHF.

Although folic acid has been associated with several health benefits, such as reduction of neural tube defects and homocysteine, 5-MTHF supplementation would be a better way to reap these benefits since it is already activated and not associated with high levels of unmetabolized folic acid in the blood, as unmetabolized folic acid is implicated in an increase in the number of cancer deaths in the US. New research has emerged raising concern over the safety of chronic intake of high levels of folic acid from fortified foods, beverages, and dietary supplements.



The MTHF Reductase enzyme, or MTHFR, plays a prominent role in the homocysteine pathway, a chemical reaction involving folates. One of this enzyme's functions is to process homocysteine, changing it to methionine which is then used to make SAME, the most important methyl donor in the body. To be more specific, reduction of 5,10-methylenetetrahydrofolate (methyleneTHF) to 5-methyltetrahydrofolate (methylTHF), the primary methyl donor for methionine synthesis, is catalyzed by the MTHFR enzyme. See diagram above.

Having a mutation in the MTHFR gene impacts how well the MTHFR enzyme performs. A MTHFR deficiency may lead to hyperhomocysteinemia. There are several MTHFR gene mutations which result in a mild to severe impairment of the activity of the MTHFR enzyme, the most characterized mutation being C677T (C677T MTHFR mutation).

This gene mutation makes a patient more susceptible to:

- coronary heart disease
- stroke
- preeclampsia (high blood pressure in pregnant women)
- birth defects including neural tube defects
- suboptimal methylation issues

Methylation issues caused by this gene mutation are due to a decrease in SAMe production, again the body's primary methyl donor. Research studies have correlated this with demyelination of the brain and spinal cord.

L-5-MTHF should be considered when high doses of folate are needed

Individuals who have tested homozygous with either the A1298C or C677T MTHFR mutation, or those with elevated homocysteine levels, should be using L-5-MTHF as the preferred form of folate supplementation. This may be more effective for them than other forms of folic acid or folates.

Note:

L-5-MTHF should not be taken simultaneously with the cholesterol-lowering agents cholestyramine or colestipol because they may decrease the absorption of folate.

L-5-MTHF May Benefit:

- Pregnant women and women wishing to become pregnant who have familial history of depression, high homocysteine levels, or genetic defect in MTHFR. Note: All pregnant women should consider taking Prenatal Pro™ as their comprehensive multivitamin, which can be combined with L-5-MTHF if higher levels of folate are needed.
- Women with abnormal pap smears (precancerous)
- Those with very high homocysteine levels not responding quickly to Homocysteine Supreme™ (consider using them together)
- Dialysis patients
- Organic acid testing (as included in the DFH metabolic profiles) that reveals elevated FIGLU (marker used to identify folate deficiency)
- Patients with family history of dementia/vascular dementia
- Patients with depression
- Long-term alcoholism
- Long-term use of oral contraceptives
- Persistent use of the following medications known to lower folate levels:
 - high doses of NSAIDs (i.e., ibuprofen and aspirin)
 - anticonvulsants: phenytoin, phenobarbital, and primidone
 - trimethoprim (antibiotic), pyrimethamine (antimalarial), triamterene (blood pressure medication), and sulfasalazine (treatment for ulcerative colitis)

**L-5-MTHF 500 mcg
120 capsules**

Supplement Facts		
Serving Size 1 capsule		
Amount Per Serving	% Daily Value	
Folate	850 mcg DFE	213%
(as Quatrefolic® [6S]-5-methyltetrahydrofolate, glucosamine salt 1000 mcg)		

Other Ingredients: Organic spinach powder, microcrystalline cellulose, cellulose (capsule), L-leucine.

**L-5-MTHF 1 mg
60 & 120 capsules**

Supplement Facts		
Serving Size 1 capsule		
Amount Per Serving	% Daily Value	
Folate	1700 mcg DFE	425%
(as Quatrefolic® [6S]-5-methyltetrahydrofolate, glucosamine salt 2000 mcg)		

Other Ingredients: Organic spinach powder, microcrystalline cellulose, cellulose (capsule), L-leucine.

**L-5-MTHF 5 mg
60 capsules**

Supplement Facts		
Serving Size 1 capsule		
Amount Per Serving	% Daily Value	
Folate	8500 mcg DFE	2125%
(as Quatrefolic® [6S]-5-methyltetrahydrofolate, glucosamine salt 10000 mcg)		

Other Ingredients: Organic spinach powder, microcrystalline cellulose, cellulose (capsule), L-leucine.



Zinc Plus

Información del Suplemento

Tamaño de la Porción: 1 cápsula

Porciones por envase: 90

Dosis máxima: 1 cápsula diaria

Por porción	Cantidad	% valor diario
Riboflavina (vitamina B-2)	5 mg	385%
Vitamina B-6 (piridoxal-5-fosfato)	5 mg	294%
Zinc (zinc bisglicinato quelato)	30 mg	294%
Molibdeno (molibdeno glicinato quelato)	250µg	556%
Taurina	400 mg	*
Ácido málico	30 mg	*

*Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Ingredientes: Taurina, zinc, ácido málico, riboflavina, vitamina B6, molibdeno, celulosa (cápsula), celulosa microcristalina (estabilizante), estearato vegetal (anti aglomerante).

Uso recomendado: Tome una cápsula diaria con alimentos.

Peso neto: 60 gramos



NO CONTIENE GLUTEN • NO CONTIENE INGREDIENTES GMO

Registro Sanitario: SD-US-22-05544



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

Zinc Plus es una fórmula única de zinc quelado mejorada con vitaminas B2 y B6, molibdeno, taurina y ácido málico para una suplementación óptima de zinc. Estos nutrientes trabajan con el zinc para facilitar las funciones vitales y las reacciones enzimáticas. Los niveles adecuados de zinc son esenciales para el funcionamiento saludable de todas las células del cuerpo, es el oligoelemento intracelular más abundante del cuerpo.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	PIEL	CARDIOVASC	MENTAL-EMOCIONAL	METABOLICO	REPRODUCTIVO	INMUNOLOGICO
✓	✓	✓	✓	✓	✓	✓

Zinc Plus



Indicaciones

- Diabetes tipo 2, hiperinsulinemia compensatoria
- Trastornos de la conducta alimenticia
- Cobre elevado
- Visión, gusto y olfato
- Caída de cabello
- Salud inmunológica
- Salud de la próstata
- Salud de la piel: acné
- Salud sexual y reproductiva
- Estrés y depresión

PARTICULARIDADES DEL PRODUCTO:

- El zinc y la taurina trabajan juntos para apoyar una visión saludable y ayudar al funcionamiento óptimo del sistema nervioso central.
- El molibdeno ayuda a reducción la excreción del zinc.
- La vitamina B6 ayuda a mantener estables los niveles de zinc.
- Cada cápsula de Zinc Plus proporciona 30 mg de zinc y cantidades clínicamente relevantes de estos nutrientes accesorios.

9-DOSIS RECOMENDADA: UNA CÁPSULA DIARIA

CADA FRASCO CONTIENE 90 CÁPSULAS

Zinc Supreme™

Natural support for healthy zinc levels



By David M. Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

Zinc Supreme™ is a unique chelated zinc formula enhanced with vitamins B2 and B6, molybdenum, taurine and malic acid for optimal zinc supplementation. These nutrients work with zinc to facilitate vital functions and enzymatic reactions. Zinc and the amino acid taurine work together to support healthy vision and aid in optimal functioning of the central nervous system. Molybdenum helps reduce the excretion of zinc, and vitamin B6 has been shown to help maintain zinc levels. Each one-capsule serving of Zinc Supreme™ provides 30 mg of zinc along with clinically relevant amounts of these accessory nutrients.

Adequate zinc levels are essential for the healthy functioning of every cell in the body. The beneficial effects of zinc are extensive because this mineral is the body's most abundant intracellular trace element and at least 200 zinc-dependent enzymes have been identified.¹ Zinc is essential for growth and physical development and for the metabolism of proteins, fats, and carbohydrates. Most aspects of reproduction in both males and females require zinc. This mineral is also vitally important to the immune system. Practically every enzyme reaction in the brain involves zinc and so do the development and function of the central nervous system. The highest concentrations of zinc are in the brain, ears and eyes. Some individuals are poor absorbers of this mineral but most cases of zinc deficiency are due to poor diet, chronic stress, vegetarianism, or excessive alcohol intake. Some deficiencies result from exposure to toxic metals, such as cadmium from cigarettes or excess copper from copper-lined tap water pipes.

Severe deficiency is associated with skin changes, diarrhea, hair loss, mental disturbances, and recurrent infections as a result of impaired immune function.² Marginal zinc deficiency may contribute to poor wound healing, type 2 diabetes, prostate enlargement, cataracts, ulcers, food allergies, toxic metal accumulation, osteoporosis, decreased sense of taste or smell, hearing impairments, blood sugar imbalances, and skin disorders including acne, eczema, and psoriasis.

Type 2 Diabetes/Insulin Resistance

Zinc may help support healthy blood sugar regulation in the body.³ One study showed that lower consumption of dietary zinc and low serum zinc levels were associated with an increased prevalence of coronary artery disease and type 2 diabetes and several of their associated risk factors including hypertension, hypertriglyceridemia and other factors suggestive of mild insulin resistance.⁴ Zinc supplementation may assist the pancreas in manufacturing insulin and supporting proper function of cell membrane insulin receptors.⁵ Zinc is also important for a healthy pregnancy; zinc supplementation in women with gestational diabetes resulted in greater improvement to the metabolic profile compared to placebo (lower fasting glucose, insulin and HOMA-IR, and less of an increase in triglycerides).⁶

Eating Disorders

Poor dietary habits predispose teenagers to many mineral deficiencies, and insufficient zinc stores are associated with both anorexia and bulimia. In one study, women with anorexia receiving zinc supplementation gained double the amount of body weight compared to those who did not receive zinc.⁷ Zinc also improved their desire to eat.

Elevated Copper

Copper imbalance can result from zinc deficiency. The zinc-to-copper ratio in the body is optimal at approximately 15:1. Inadequate zinc levels may result in functional copper excess. Poor diet, vegetarianism, and certain lifestyle habits (e.g., smoking) can create zinc deficiency which may cause an imbalance with copper. Ceruloplasmin is a copper-binding protein needed for proper copper utilization. Unhealthy adrenal glands have difficulty making ceruloplasmin. This can be a major cause of copper build-up (unusable copper) or copper toxicity. Taking birth control pills, hormone replacement therapy, or drinking tap water from copper-lined pipes may also lead to elevated copper and decreased zinc. This elevation in copper may lead to migraine headaches, damage to the eyes⁸ and possibly macular degeneration, preeclampsia,⁹ breast cancer,¹⁰ lymphoma, depression, anxiety, schizophrenia, and chronic leukemia.¹¹ Other symptoms of elevated copper include acne, adrenal insufficiency, anemia, PMS, mind racing, candida overgrowth, osteoarthritis, and viral infections.

Vision, Taste, and Smell

Zinc is essential for the maintenance of vision, taste, and smell.¹² Night blindness and other ophthalmic problems may result from zinc deficiency. Zinc is highly concentrated in neurons of the olfactory bulb, which may explain its key role in the senses of taste and smell.¹³ Poor zinc status is prevalent among the elderly and a decline or loss of these olfactory senses is a common problem for this age group.^{14,15} Supplementation with zinc may help improve taste and smell in some of these individuals.

Immune Health

Zinc is involved in virtually every aspect of immunity. Zinc has antiviral activity, including activity against several viruses that cause the common cold.¹⁶ A clinical study found that using zinc lozenges reduced cold symptoms from an average of seven days to four days.¹⁷ Supplementation with zinc stimulates synthesis of white blood cells and generally supports the activity of other immune system components such as neutrophils, T lymphocytes, and tumor-fighting natural killer (NK) cells.¹⁸ Zinc is also required for producing thymulin, the major hormone of the thymus gland.¹⁹ A reduction of thymulin may result in impaired immune function.

Prostate Health

Zinc supplementation has been shown to reduce the size of the prostate and symptoms of benign prostatic hyperplasia (BPH) due its critical involvement in many aspects of hormone metabolism.²⁰ BPH is reaching epidemic proportions among men over 50 years of age and is tied to a lifetime of inadequate zinc intake. Frequent urge to urinate and other symptoms of an enlarged prostate diminish with zinc supplementation. Insulin resistance or chronic hyperinsulinemia may be a major contributor to BPH,²¹⁻²³ so the role of zinc in supporting blood sugar regulation may also underlie its beneficial effects on BPH.

Skin Health

Several studies have demonstrated the effectiveness of zinc in the treatment of acne. In a study of advanced acne in both men and women, zinc levels were significantly lower than those without acne.²⁴ There may be a role for chronically elevated insulin in acne as well,^{25,26} so as is noted for BPH, the role of zinc in blood sugar regulation is a potential mechanism underlying its efficacy for acne. Although some individuals see dramatic improvement with zinc supplementation, the majority will not see results immediately. Weeks or months may pass before one sees a noticeable difference in the appearance of the skin.

Sexual Health

Although it has a reputation as a “male” nutrient and an aphrodisiac for men, zinc is fundamental to the sexual and reproductive health of both genders. Zinc is required for fertility and in men is used in virtually every aspect of male reproduction, including hormone metabolism, sperm formation, and sperm motility.²⁷ Zinc deficiency is characterized by decreased testosterone levels and sperm counts. Zinc levels are typically much lower in infertile men with low sperm counts. Infertile men receiving a zinc supplement showed increases in both lower-than-normal testosterone levels and sperm count.²⁸ In women, zinc deficiency may lead to pregnancy-related problems, including spontaneous abortion, toxemia, premature birth, low birth weight, growth retardation, and delivery problems.

Stress and Depression

Stress lowers zinc body stores and leaves one vulnerable to weakened immune function, fertility problems, acne, depression and other symptoms of elevated copper, potential prostate problems and impaired cognition. Prolonged psychological stress may be a contributor to depressive disorders. Animal models show that psychological stress decreases total zinc levels and induces zinc dyshomeostasis in the hippocampus.^{29,30} Even marginal zinc deficiency may contribute to the pathophysiology of major depression, with research supporting a beneficial role for zinc supplementation in individuals with depressive symptoms³² or major depressive disorder, including additive effects when combined with antidepressant medication.^{33,34}

Supplement Facts

Serving Size 1 capsule

Amount Per Serving	% Daily Value	
Riboflavin (Vitamin B-2)	5 mg	385%
Vitamin B-6 (as Pyridoxine HCl)	50 mg	2941%
Zinc (as Zinc Bisglycinate Chelate)	30 mg	273%
Molybdenum (TRAACS® Molybdenum Glycinate Chelate)	250 mcg	556%
Taurine	400 mg	*
Malic Acid	30 mg	*

*Daily Value not established.

Other Ingredients: Microcrystalline cellulose, cellulose (capsule), vegetable stearate.

Recommended Use:

- As a dietary supplement, take one capsule per day with a meal, or as directed by your health care practitioner.

For a list of references cited in this document, please visit:

http://catalog.designsforhealth.com/assets/itemresources/ZincSupreme_References.pdf

*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.

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.

Magnesio

Información del suplemento

Tamaño de la porción: 2 cápsulas
Porciones por envase: 120

Por porción	Cantidad	% Valor diario
Magnesio	300 mg	75%
(TRAACS® magnesio bisglicinato buffer quelado – de magnesio bisglicinato quelado y óxido de magnesio)		

Otros ingredientes: celulosa (cápsula) y estearato vegetal.

NOTA: puede variar el color, tamaño y forma de la cápsula de un lote a otro.

TRAACS® y el símbolo Albion Medallion son marcas registradas de Albion Laboratories, Inc.

NO CONTIENE GLUTEN
NO CONTIENE INGREDIENTES GMO

USO RECOMENDADO: como suplemento nutricional, tome dos cápsulas al día o como recomendado por su médico. Dosis máxima diaria: tres cápsulas al día.

AVISO: este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-18-02801



Descripción

El quelato de magnesio buffered contiene una forma de magnesio altamente absorbible, cada cápsula provee 150 mg de magnesio elemental. Tiene una alta tolerancia intestinal. No debe producir ningún síntoma gastrointestinal desfavorable, que lo produce la suplementación de otros tipos de magnesio, y esto es por la estabilidad que ofrece el quelato formado por dos moléculas de glicina y union de magnesio.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓		✓	✓	✓		✓			✓

Magnesio



Indicaciones

- Ayuda con el control de la presión arterial
- Calcificación de hueso y piezas dentales
- Relajante muscular
- Ayuda a restaurar el sueño
- Relaja el cuerpo y la mente (efecto anti-ansiedad)
- La deficiencia de magnesio se relaciona con el desarrollo de la diabetes, síndrome metabólico.
- La deficiencia de magnesio aumenta la depresión y la ansiedad
- Ayuda a mejorar las fluctuaciones en el estado de ánimo por su beneficio en la serotonina y dopamina
- Mejora la respuesta a los tratamientos con antidepresivos
- Se ha demostrado su beneficio en personas perfeccionistas, nerviosos y sensibles al ruido
- Muy útil en el tratamiento de los ataques de pánico
- Muy útil en el tratamiento de las fobias
- Y en el tratamiento de la hipoglicemia

¿CÓMO IDENTIFICAR CLINICAMENTE LA DEFICIENCIA DE MAGNESIO? Un paciente que presente síntomas como este puede mejorar con magnesio:

- Fatiga o debilidad
- Ritmos cardíacos anormales
- Espasmos musculares
- Tics oculares
- Ataques de ansiedad y pánico
- Asma
- Depresión
- Diabetes
- Hipertensión
- Insomnio
- Migrañas
- Fibromialgia, calambres, dolor de espalda crónico
- Problemas nerviosos
- Síndrome premenstrual
- Intestino permeable, intestino irritable

DOSIS RECOMENDADA:

DE 1 A 4 CÁPSULAS DIARIAS

CADA FRASCO CONTIENE 240 CÁPSULAS

Citrato de Magnesio

Información del Suplemento

Tamaño de la dosis: 4 gramos (una cucharadita)
Porciones por envase: 60

Por porción	Cantidad	% valor diario
Magnesio (citrato de magnesio)	300 mg	80%

Otros ingredientes: Sabor natural a limón, stevia certificada orgánica en polvo, dióxido de silicón.

NO CONTIENE GLUTEN

NO CONTIENE INGREDIENTES GMO

USO RECOMENDADO: Como suplemento nutricional, tome 4 gramos (aproximadamente una cucharadita) por día o según se lo recomiende su médico. Dosis máxima diaria: dos cucharaditas al día.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres



Registro Sanitario: SD-US-15-05573



Descripción

El citrato de magnesio en polvo provee 300 mg de magnesio por cucharadita. La vía de administración es conveniente ya que permite variar la dosis según las necesidades de cada paciente. Este producto ayuda a suavizar la materia fecal cuando el consumo de fibra no es suficiente para combatir el estreñimiento. Además, ayuda con la relajación muscular y a promover el sueño.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
		✓			✓	✓			✓

Citrato de Magnesio



Indicaciones

- Estreñimiento: ayuda con la relajación del colon, cuando la fibra no es suficiente. Actúa como un suavizante de las heces al aumentar el fluido en el intestino delgado. No da dolor abdominal.
- Piedras renales: el citrato reduce el riesgo de la formación de cálculos renales de calcio. Además ayuda a desintegrar las piedras renales calcificadas. Una baja concentración de ácido cítrico es un factor de riesgo para la formación de estas piedras. Hay un efecto alcalinizador de la orina.
- Insomnio: ayuda con la relajación muscular, un consumo bajo de magnesio se asocia con una mala calidad del sueño.
- Relajación muscular y prevención y tratamiento de calambres y contracturas musculares
- Tiene un efecto ansiolítico

PARTICULARIDADES DEL PRODUCTO:

- Se mezcla en agua o jugo
- Delicioso sabor a limón
- Por ser en polvo, es fácil ajustar la dosis según tolerancia intestinal
- No contiene fructosa, sucrosa ni edulcorantes artificiales

DOSIS RECOMENDADA

SEGÚN TOLERANCIA INTESTINAL 1-3 CUCHARADITAS DIARIAS

CADA FRASCO CONTIENE 240 GRAMOS

Magnesium



By David M. Brady, ND, DC, CCN, DACBN & Amy Berger, MS

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Magnesium is an essential mineral that serves as an enzyme cofactor for over three hundred biochemical reactions in the body, including those of glycolysis, the first step in harnessing energy from carbohydrates.¹ Magnesium follows potassium as the second most abundant intracellular cation (positively charged electrolyte) in the body.² The adult human body contains approximately 25 grams of magnesium, over 60% of which is found in the skeleton. Muscle tissue contains about 27%, with the bulk of the balance found in other intracellular areas, and less than 1% occurring in the blood.³

As a structural component of the hydroxyapatite mineral matrix of bone, a natural calcium channel blocker, muscle relaxant, facilitator of calming effects upon the nervous system, and a required element for electrolyte balance and proper functioning of sodium-potassium pumps, magnesium plays a crucial role in supporting physical strength and mobility, muscle contraction, neurological health, cardiac function, and psychological balance. Magnesium's role as an enzyme cofactor for processes that generate ATP underlies its importance for maintaining energy levels and metabolic efficiency.

BENEFITS

- **Bone health:** The practice of supplementing solely with calcium, in the absence of required vitamin and mineral cofactors, may not have the intended effect of reversing or preventing bone loss. Magnesium is an essential element of the physical structure of bone tissue and helps contribute to maintaining healthy bones.
- **Compromised digestion:** Patients with compromised digestive function—such as those who have been on long-term proton pump inhibitors (PPIs) or other stomach acid-reducing drugs—may benefit from extra magnesium, as hypochlorhydria may prevent adequate liberation of minerals from their food bases, including magnesium. Continued use of PPIs may inhibit proper absorption of oral magnesium.⁷⁻⁹ Long-term use of acid blockers is increasingly linked to low mineral status, as well as bone fractures.
- **Cardiovascular function:** Owing to its role in muscle contraction and relaxation, and nerve conduction, magnesium may help support healthy cardiovascular function and blood pressure levels. Hypomagnesemia is associated with cardiac arrhythmias, ischemic heart disease, sudden cardiac death, hypertension, transient ischemic attacks (TIA), stroke, and pre-eclampsia.^{10,11} Moreover, magnesium is a cofactor for the desaturase enzymes involved in synthesizing anti-inflammatory and vasodilating prostaglandins (PGE1). As such, it has been shown to reduce blood pressure in hypertensive patients, with those having the highest blood pressure exhibiting the most favorable and significant responses. The effect is even greater when magnesium is combined with potassium, and when sodium levels are lowered. Additionally, magnesium supplementation may have an additive effect when combined with hypertensive drugs, contributing to an even greater reduction in blood pressure.¹²
- **Diabetes & insulin resistance:** Research supports that magnesium deficiency is associated with, and may exacerbate, insulin resistance and diabetes. Magnesium plays a key role in insulin-mediated glucose uptake. Reduced intracellular magnesium concentration results in lower activity of the tyrosine-kinase enzyme required for proper functioning of the insulin receptor, which may contribute to insulin resistance. Many studies have demonstrated positive effects on the metabolic profile of type-2 diabetics supplementing with magnesium.^{13,14}
- **Chronic headaches:** Migraine headaches and milder forms of headaches have long been known to respond to magnesium supplementation. Patients experiencing active migraines show rapid and significant relief upon intravenous magnesium infusion. For more practical long-term treatment, regular oral supplementation has also been shown to reduce the frequency of migraines.^{15,16}
- **Bowel function/chronic constipation:** Magnesium draws water into the lower GI tract, making stools softer and easier to pass. This property underlies the traditional use of Epsom salt (magnesium sulfate) as a saline laxative. Magnesium citrate has been employed in pre-colonoscopy emptying of the colon, with fewer unpleasant side-effects and better patient tolerance than the more common polyethylene glycol preparations.¹⁷
- **Kidney stones:** The delicate balance between calcium and magnesium suggests that adequate magnesium levels may protect against inappropriate deposition of calcium in the soft tissue. Low magnesium levels are common in patients prone to developing kidney stones. Increased urinary magnesium concentrations have been shown to reduce the formation, and decrease the size, of calcium oxalate crystals, possibly by forming soluble complexes with oxalate. Magnesium may also reduce absorption of oxalates by binding exogenous oxalate in the intestine.^{18,19}

VARIOUS FORMS OF MAGNESIUM

MAGNESIUM BISGLYCINATE CHELATE (Magnesium Chelate Powder & Tablets, Magnesium Buffered Chelate):

A highly absorbable form of elemental magnesium chelated to two molecules of the amino acid glycine. The amino acid chelate is absorbed via dipeptide channels, bypassing the usual active transport and passive diffusion routes for intestinal ion absorption, where magnesium would otherwise compete with other minerals. This method of delivery allows larger amounts of magnesium to be absorbed more quickly and be better retained by the body, as compared to many other forms.²⁰ Moreover, the breaking of the bonds between magnesium and glycine allows the body to use both the mineral and the amino acids, making this a more physiologically natural and nutritionally beneficial process than other chelated mineral delivery mechanisms, such as EDTA. The magnesium-glycine complex protects magnesium from binding to dietary phytates and tannins, therefore enhancing its bioavailability.²⁰ This unique form of magnesium has been shown to be effective for individuals with the greatest impairments in magnesium absorption, including those with inflammatory bowel conditions, among whom the prevalence of overt magnesium deficiency may be as high as 86%.²¹ Compared to healthy subjects, those with compromised intestinal mineral absorption excrete twice as much magnesium when given in insoluble salt form (such as Mg oxide), as opposed to a chelate. This amino acid chelate may be especially beneficial for those who require high doses of magnesium, as relatively high doses lead to fewer unwanted gastrointestinal effects that may present with other forms of supplementation. Chelated magnesium has been shown to reduce the pain associated with dysmenorrhea and the frequency and severity of leg cramps in pregnant women.^{22,23}

MAGNESIUM MALATE (Magnesium Malate): A highly bioavailable form of magnesium bound to malic acid. Malic acid is a compound found naturally in fruits and vegetables, and is responsible for the tart flavor of rhubarb and green apples. Malate is an intermediary of the ATP-generating Krebs cycle, so it may help support adequate energy levels. As a result, high-dose magnesium malate has been used successfully to improve symptoms of fibromyalgia.²⁵

MAGNESIUM CITRATE (MagCitrato Powder) : A soluble organic salt form of magnesium that helps promote bowel relaxation. It also supports the ability to fall asleep, and may be combined with inositol or taurine to help promote a restful night's sleep, with less waking during the night. Magnesium citrate exhibits greater bioavailability than inorganic and insoluble forms of the mineral.²⁴

MAGNESIUM THREONATE (NeuroMag™): A form of magnesium chelated to threonic acid, a metabolite of vitamin C. It is superior to other forms of magnesium at getting through the blood brain barrier because it is able to transport magnesium ions across lipid membranes, including those of brain cells. Compared to other forms, this compound is especially effective at increasing magnesium levels in cerebrospinal fluid. Animal models employing magnesium threonate have demonstrated the compound's promise in protecting neural plasticity in the brain and supporting synaptic density, which may contribute to better cognitive function and enhanced memory. Therefore, this magnesium chelate may be beneficial for age-related cognitive decline.²⁶ It has also been shown to protect against reductions in short-term memory associated with neuropathic pain.²⁷

MAGNESIUM CHLORIDE (MagneGel™ Transdermal Gel): A soluble inorganic salt form of magnesium that is effective when applied topically and absorbed cutaneously. Aside from contributing to total body magnesium absorption, topical magnesium may directly improve the condition of the skin it is applied to. Transdermal magnesium has been shown to aid inflammatory skin conditions such as psoriasis, atopic dermatitis, and chronically dry skin. Compared to placebo, soaking in a magnesium chloride-rich solution resulted in reductions in transepidermal water loss, leading to better skin hydration and reduced roughness in patients with atopic dry skin.²⁸

Calcio +

Información del suplemento

Tamaño de la porción: 4 cápsulas

Porciones por envase: 30

Por porción	Cantidad	% Valor diario
Calcio (como DimaCal® Di-calcio malato ascorbato de calcio)	500 mg	38%
Magnesio (como Di-magnesio malato)	200 mg	48%
Vitamina C (como ascorbato de calcio)	100 mg	111%
Isómeros de vitamina E (como DeltaGold® tocotrienoles delta y gamma)	50 mg	*
Zinc	5 mg	45%
Trans-Geranylgeraniol (GG-Gold®)	5 mg	*
Boro (como glicina bororgánica)	4 mg	*
Manganeso	2 mg	87%
Cobre	1 mg	111%
Vitamina K (como vitamina K1 fitonadiona, vitamina K2 menaquinona-4)	1050 µg	875%
Vitamina D (como colecalciferol)	25 µg (1000 IU)	125%

* Valor diario no establecido

Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Ingredientes: Croscarmelosa de sodio (desintegrante), celulosa microcristalina (antiaglomerante), hidroxipropilcelulosa (gelificante), estearato de origen vegetal (antiaglomerante), cubierta clara de hidroxipropilmetilcelulosa y gliceril triacetato (viscosantes), dióxido de silicón (antiaglomerante).

PESO NETO: 500 gramos

Uso recomendado: Como complemento a la dieta, tome cuatro tabletas al día con comidas.

Dosis máxima: 4 tabletas diarias.

Advertencia: Este producto contiene vitamina K. Consulte con su médico antes de usarlo si está tomando aspirina, coumadina, warfarina o antibióticos.

NO CONTIENE GLUTEN • NO CONTIENE INGREDIENTES GMO



Registro Sanitario: SD-US-22-11699



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

Esta es una fórmula única que provee una combinación sinérgica de nutrientes para el mantenimiento de huesos saludables y regeneración de la densidad ósea. Proporciona calcio, magnesio, potasio, boro junto con vitaminas C, D y K – todos combinados es una fórmula altamente absorbible y bio-disponible. Es ideal para combinarse con el MULTI DOS AL DIA.

NO CONTIENE GLUTEN NO CONTIENE LACTEO FORMULA VEGETARIANA NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
				✓		✓			✓

Calcio +



Indicaciones

- Siempre que sea necesario estimular la regeneración: osteopenia, osteoporosis, descalcificación dental, cicatrización de fracturas
- En casos de necesitar absorción y disponibilidad de minerales: malabsorción, calambres, menopausia natural, inducida o quirúrgica y andropausia

PARTICULARIDADES DEL PRODUCTO:

- Ratio 2:1 calcio-magnesio, el cual es un rango óptimo para el balance mineral 1000 IU (25 µg) de Vitamina D para el apoyo de la salud del hueso y optimizar la actividad del calcio y magnesio.
- 1000 µg de vitamina K1 y 50 µg de K2 (como MK-4) para apoyar la activación (carboxilación) de la osteocalcina, proteína que deposita calcio en el hueso
- 5 mg de geranilgeraniol para apoyar la conversión de vitamina K1 a K2
- 50 mg de vitamina E delta y gama tocotrienoles (como DeltaGold®) para optimizar respuestas inflamatorias y la salud ósea
- Minerales quelados para óptima absorción y bio-disponibilidad, y para mejorar la tolerabilidad gastrointestinal

DOSIS:

CUATRO CÁPSULAS DIARIAS CON COMIDAS EN DOSIS DIVIDIDAS

NO DUDE EN UTILIZAR LA COMBINACIÓN DEL CALCIO + Y MULTI DOS AL DÍA, CASI SIN DUPLICAR LA CANTIDAD DE NUTRIENTES

CADA FRASCO CONTIENE 120 CAPSULAS

OsteoForce™

Support for Bone Health and Integrity*



By David M. Brady, ND, DACBN, IFMCP, FACN and Kendra Whitmire, MS, CNS

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OsteoForce™ is a unique blend of highly absorbable vitamins and minerals formulated to support healthy bones.* This formula features calcium and magnesium that are bound to malic acid for enhanced absorption, along with chelated forms of zinc, copper, and manganese for superior bioavailability.*

Ingredient Highlights

- 2:1 calcium-to-magnesium ratio — optimal ratio for mineral balance
- 1,000 IU (25 mcg) of vitamin D to support bone health and optimal calcium and magnesium activity*
- 1,000 mcg of vitamin K1 and 50 mcg of vitamin K2 (as MK-4) to support complete activation (carboxylation) of osteocalcin, the protein that deposits calcium in the bone
- 5 mg of geranylgeraniol to support the conversion of vitamin K1 to K2 (as MK-4)
- 50 mg of vitamin E delta- and gamma-tocotrienols (as DeltaGold®) to support a healthy inflammatory response and bone health*
- Chelated minerals for enhanced absorption and bioavailability and reduced gastrointestinal complaints

Vitamin D plays an important role in calcium homeostasis and bone health as part of its activity in the body. The bioactive form of vitamin D [1,25-dihydroxyvitamin D or 1,25(OH)2D] supports the mobilization of calcium from bone when intestinal calcium absorption decreases to maintain calcium homeostasis. Vitamin D receptors increase calcium absorption in the intestines, regulate bone resorption, and mediate active reabsorption of calcium in the kidneys.¹⁻⁴

Vitamin D may have a direct effect on bone health by regulating the proliferation, differentiation, and maturation of osteoblasts and osteoclasts. It may also regulate bone mineralization and bone formation by upregulating gene expression for encoding type 1 collagen, osteocalcin, and ostopontin.²⁻⁴

Deficiency of vitamin D is associated with an increased risk of rickets, osteomalacia, osteopenia, and osteoporosis.⁵ A meta-analysis of 11 observational studies found an association between an increase of 25 nmol/L of 25-hydroxyvitamin D [25-(OH)D] concentration and an adjusted relative risk of 0.93 for any fracture and 0.80 for hip fractures.⁶ Clinical studies have found that vitamin D supplementation supports bone health in individuals with a 25-OHD of <30 nmol/L.⁷

Calcium (as DimaCal® Di-Calcium Malate, Calcium Ascorbate): Calcium and other mineral components strengthen bones and hard tissues. After osteoblasts build the base, bone is mineralized when there are normal levels of calcium and phosphate and no inhibitors. Although 99% of calcium in the body exists in the bone as the main structural mineral, the other 1% is tightly controlled to ensure availability for key physiological processes. When dietary levels of calcium are insufficient to maintain calcium homeostasis, calcium is taken from the bone. Studies have found that maintaining normocalcemia has priority over maintaining bone structure and health.^{1,8,9}

Studies on Calcium Plus Vitamin D Supplementation: Studies demonstrate a more effective result with combined calcium and vitamin D supplementation. Meta-analyses found that combined supplementation with vitamin D and calcium was associated with a 6% to 15% reduction of risk of any fracture and 16% to 30% reduced risk of hip fractures.^{6,10} A Cochrane systematic review determined that there is a high quality of evidence for vitamin D plus calcium supplements to reduce the risk of hip fractures.

The research also found a statistically significant reduction in the incidence of new nonvertebral fractures and a reduced risk of any type of fracture.¹¹ Vitamin D and calcium supplementation may also support fracture healing and post-traumatic bone turnover.¹²

Benefits*

- Supports normal bone density
- Supports bone health and integrity

Supplement Facts

Serving Size 4 capsules
Servings Per Container 30

Amount Per Serving	% Daily Value
Vitamin C (as Calcium Ascorbate)	100 mg 111%
Vitamin D (as Cholecalciferol)	25 mcg (1000 IU) 125%
Vitamin K (as Vitamin K1 Phytonadione, Vitamin K2 Menaquinone-4)	1050 mcg 875%
Calcium (as DimaCal® Di-Calcium Malate, Calcium Ascorbate)	500 mg 38%
Magnesium (as Di-Magnesium Malate)	200 mg 48%
Zinc (as Zinc Bisglycinate Chelate)	5 mg 45%
Copper (as TRAACS® Copper Bisglycinate Chelate)	1 mg 111%
Manganese (as TRAACS® Manganese Bisglycinate Chelate)	2 mg 87%
Vitamin E Isomers (as DeltaGold® delta and gamma tocotrienols)	50 mg *
Trans-Geranylgeraniol (GG-Gold®)	5 mg *
Boron (as Bororganic Glycine)	4 mg *

*Daily Value not established.

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, vegetable stearate.

Magnesium (as Di-Magnesium Malate): Approximately 50% to 60% of the total body magnesium content is stored in the bones, where magnesium ions improve the solubility of phosphorus and calcium hydroxyapatite and influence crystal size and formation. Magnesium also induces the proliferation of osteoblasts.¹³ Magnesium deficiency is associated with a decrease in osteoblastic and osteoclastic activity, bone fragility, and osteopenia. Low dietary magnesium intake was found to be associated with a significant decrease of bone mineral density of the hip and whole body, along with T scores.¹⁴⁻¹⁷

There is an important relationship between magnesium and vitamin D. Magnesium is required for the enzymes involved in vitamin D metabolism and activation, including the key enzymes 25-hydroxylase and renal 1-alpha-hydroxylase. Magnesium deficiency reduces the levels of active vitamin D, and magnesium supplementation optimizes vitamin D levels. Vitamin D increases absorption of magnesium.¹⁸⁻²⁰

Calcium and magnesium also have an important relationship, with an optimal ratio of 2:1. When calcium levels are low, magnesium deficiency reduces parathyroid hormone (PTH) secretion. Restoring magnesium levels can support increasing calcium levels and PTH without requiring additional calcium. Magnesium deficiency is associated with excess calcium released from bone, which may impact bone health and the risk of osteoporosis.¹⁸

Vitamin K and Geranylgeraniol (GG): Vitamins K1 and K2 activate osteocalcin (Oc), which should be maximally carboxylated so that Oc binds calcium (Ca) and transports it inside bones and teeth. Ninety percent of vitamin K is deposited in the tissues in the form of vitamin K2 (as MK-4), with the rest mostly as K1.²¹ The adequate intake (AI) for vitamin K1 of 120 mcg for men and 90 mcg for women can only support blood-clotting proteins, but more is needed for the extra-hepatic roles of vitamins K, which include the control of Ca transport between tissues.²² Vitamin K1 is deposited as phylloquinone and partially converted to vitamin K2 (as MK-4), with the aid of geranylgeraniol pyrophosphate (GG-PP), a metabolic intermediate synthesized in the mevalonate pathway.^{21,22} Vitamin K2 (as MK-4) has unique genetic and metabolic effects in human physiology, which are believed to be due to its GG component. GG may be supplemented from plant extracts and is converted to GG-PP in human physiology.²²

In clinical studies, a dose of 1 mg of vitamin K1 increased the percentage of carboxylated osteocalcin to >95%.²³⁻²⁵ Vitamins D and K have a synergistic relationship, including their support of bone health. A meta-analysis found that supplementing with a combination of vitamin D and K (especially K2) significantly increased total bone mineral density and significantly decreased undercarboxylated osteocalcin.²⁶ Vitamin K also supports the activities of calcium and magnesium on bone health. One clinical study found that a dose of 0.1 mg of vitamin K1 resulted in a 1.3% increase in bone density for menopausal individuals when supplemented along with vitamin D, calcium, and magnesium.²⁵ The dose of vitamin K2 (as MK-4) at 50 mcg in OsteoForce™ falls in the middle range of average vitamin K2 intakes (12 mcg to 128 mcg per day) in a modern population.²¹

Vitamin C: Vitamin C suppresses osteoclast activity, acts as a cofactor for osteoblast differentiation, and participates in collagen formation.¹⁵ Meta-analyses have found that a higher intake of vitamin C is associated with a 33% lower risk of osteoporosis and a lower risk of hip fractures with higher bone mineral density at the femoral neck and lumbar spine, as there is a dose-dependent relationship.^{27,28}

Additional Nutrients

OsteoForce™ includes additional nutrients and compounds to support bone health.* Zinc increases osteoblast activity, promotes collagen synthesis, activates bone formation, and inhibits osteoclastic bone resorption.²⁹ Copper is an enzyme cofactor, including activating lysyl oxidase to induce lysine crosslink formation in collagen and elastin. Additionally, it supports the maintenance of the bone matrix.²⁹ Manganese supports bone matrix synthesis and calcification.²⁹ Boron supports calcium metabolism, bone growth, bone remodeling and maintenance, and increases levels of 25-hydroxyvitamin D3.²⁹ Vitamin E isomers (as DeltaGold® delta- and gamma-tocotrienols) support a healthy inflammatory response to support bone health.*³⁰

Recommended Use: Take 4 capsules daily or as recommended by your health-care practitioner.

Warning: Consult your health-care practitioner before using this product if you are taking Coumadin, warfarin, or other anticoagulant medications.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/api/library-assets/literature-reference---osteoforce-tech-sheet-references>

DeltaGold® and GG-Gold® are registered trademarks of American River Nutrition, LLC and protected by US Patents 8,586,109 and 7,989,006.
DimaCal® and TRAACS® are registered trademarks of Albion Laboratories, Inc.

*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.

To contact Designs for Health, please call us at (860) 623-6314, or visit us on the web at www.designsforhealth.com.

K+2 Potasio



Información del Suplemento

Tamaño de la Porción: 1 cápsula
Porciones por envase: 120
Consumo máximo: 1 cápsula diaria

Por porción		% diario
Potasio (como bicarbonato de potasio y glicinato de potasio)	300 mg	6%
Valor energético	0 kcal (0 kJ)	
Proteína	0 g	
Grasas (lípidos)	0 g	
Carbohidratos (hidratos de carbono)	0 g	
Fibra dietética	0 g	
Sodio	0 g	

No es fuente significativa de grasa saturada
Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Otros ingredientes: Estearato vegetal (aglutinante).

Uso recomendado: Como suplemento a la dieta, tome una cápsula diariamente, o como recomendado por su médico.

NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-02243



GLUTEN
FREE



DAIRY
FREE



SOY
FREE



PESTICIDE
FREE



NO
FILLERS



LAB
TESTED

Descripción

Este suplemento provee 300 mg de potasio por cápsula, una dosis mayor que la que normalmente ofrecen los suplementos en el mercado (99 mg por cápsula). Es una fórmula única por su potencia, estabilidad y tolerabilidad.

Beneficios del potasio para la salud:

- Regulación de la presión arterial
- Para la contracción y relajación muscular
- Función cardiovascular
- Motilidad intestinal y regularidad
- Función neurológica
- Densidad ósea
- Niveles de energía estables

K+2 Potasio



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	PESO	MÚSCULO ESQUELÉTICO	DEPORTIVO
		✓		✓	✓	✓	✓

Las siguientes condiciones aumentan los requerimientos diarios de potasio:

- Uso o sobreuso de laxantes
- Uso de diuréticos
- Dieta ketogénica o baja en carbohidratos
- Historia de litiasis renal
- Pacientes con factores de riesgo para eventos cerebrovasculares e hipertensión arterial
- Alcoholismo

El consumo insuficiente de potasio produce síntomas tales como:

- Letargo y fatiga
- Debilidad muscular
- Calambres musculares y contracturas
- Poca motilidad intestinal que lleve a distensión abdominal, estreñimiento y dolor abdominal
- Puede contribuir a un estado de ánimo decaído

PARTICULARIDADES DEL PRODUCTO:

Esta fórmula está compuesta por bicarbonato de potasio y potasio unido al aminoácido glicina, que provee una potencia y estabilidad óptimas. Esto también mejora la absorción y biodisponibilidad del nutriente. El efecto alcalinizador del bicarbonato provee mayor soporte nutricional para mantener niveles de presión arterial adecuados y una adecuada densidad ósea.

DOSIS:

COMO SUPLEMENTO A LA DIETA, TOME UNA CÁPSULA DIARIA CON COMIDAS, O COMO RECOMENDADO POR SU PROFESIONAL EN SALUD.

CADA FRASCO CONTIENE 120 CÁPSULAS VEGETARIANAS

K+2 Potassium



By David M. Brady, ND, DC, CCN, DACBN & Amy Berger, MS, CNS

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

K+2 Potassium is a uniquely formulated potassium product composed of potassium bicarbonate and potassium bound to the amino acid glycine, which gives this product optimal potency, stability and tolerability.

Potassium is the third most abundant mineral in the body after calcium and phosphorus. Total body potassium content is about 30-40 grams, 98% of which is contained inside cells, mostly in skeletal muscle¹. Potassium is the most abundant positively charged intracellular electrolyte. Potassium concentrations are about 30 times higher inside cells than outside, compared to the concentration of sodium, which is 10 times lower inside cells than outside.² This difference is what creates the membrane potential, an electrochemical gradient across the cell membrane essential for proper muscle contraction, nerve impulse transmission, hormone secretion from endocrine glands, and cardiac muscle function. As much as 20%-40% of an adult's resting energy expenditure is dedicated to maintaining this critical electrochemical balance, via sodium-potassium-ATPase pumps.²

Potassium is abundant in vegetables, fruits, beans and nuts, with smaller amounts in animal foods. Owing to this relative ubiquity, overt potassium deficiency is rare, but suboptimal intake may lead to signs and symptoms of insufficiency, which may include fatigue, lethargy, muscle weakness, cramping or twitching, heavy legs, constipation, intestinal paralysis (resulting in delayed gastric emptying, bloating and abdominal pain), and cardiac arrhythmias.^{1,2} Inadequate dietary intake does not typically result in hypokalemia (dangerously low blood potassium), but the risk factors for potassium deficiency in the sidebar should be noted.

Potassium in Health

Potassium is best regarded for its roles in lowering blood pressure, reducing risk for stroke, supporting bone health and reducing risk for kidney stones.

Low potassium intake may be a risk factor for hypertension, especially when combined with high sodium intake. A meta-analysis of randomized controlled trials of potassium supplementation for lowering blood pressure found that potassium is effective for this purpose in both normotensive and hypertensive subjects, with the effect being more pronounced in those with hypertension. Reduction in BP was correlated significantly with decreased urinary sodium-to-potassium ratio and increased urinary potassium.³ Similar findings were observed in a separate meta-analysis of RCTs, which found that potassium supplementation induced a modest but significant reduction in BP in patients with primary hypertension.⁴ The effects may be more pronounced in subjects whose baseline dietary potassium intake is low.⁵

Several epidemiological studies suggest that higher potassium intakes are associated with reduced risk for stroke. A meta-analysis from the American Heart Association looking at potassium intake and stroke risk found that individuals with the highest potassium intake had a 13% reduced risk for stroke compared to those with the lowest intake, and that the intake associated with the lowest risk of stroke was 3500 mg/day.⁶

Risk factors for potassium deficiency or insufficiency:

- Chronic dieting for weight loss
- Prolonged strenuous exercise, especially in hot weather (potassium loss in sweat)
- Chronic kidney failure
- Alcoholism
- Vomiting and/or diarrhea from illness (including inflammatory bowel disease) or overuse/abuse of laxatives and emetics
- Use of pharmaceutical drugs that cause potassium loss (e.g., hydrochlorothiazide, furosemide, "loop" diuretics)
- Magnesium deficiency may lead to potassium depletion

A high sodium-to-potassium intake is also associated with hypertension and cardiovascular disease.⁷ A review that included randomized trials of the effect of dietary salt reduction and/or increased potassium intake on blood pressure, target organ damage, cardiovascular disease, and mortality found that high salt intake increases blood pressure and plays a role in endothelial dysfunction and cardiovascular morbidity and mortality.⁸ Potassium, on the other hand, was demonstrated to attenuate these, with an association with reduced stroke rate and risk for cardiovascular disease.

Who May Benefit*:

- Individuals with hypertension
- Those at increased risk for stroke
- Individuals with a history of kidney stones
- People on ketogenic/low-carb diets
- Those taking potassium-wasting drugs

High potassium intakes are associated with greater bone mineral density (BMD) in postmenopausal women. A prospective study of elderly women (age 70-80) showed that those in the highest quartile of urinary potassium excretion had significantly greater BMD at 5 years than those in the lowest quartile.⁹ A study of postmenopausal women and men over age 50 in Korea showed that higher potassium intakes (assessed via food frequency questionnaire) are associated with greater BMD in both populations.¹⁰

Potassium-rich foods (especially vegetables and fruit) tend to also be precursors to alkalizing bicarbonate ions, which buffer acids in the body.² The modern American diet is relatively low in alkaline-forming foods and higher in acid-forming foods (grain, dairy, meat). If the availability of bicarbonate ions is insufficient for maintaining normal pH, alkaline calcium salts may be liberated from bone in order to neutralize the metabolic acidity. K+2 Potassium provides potassium bicarbonate to address this from both angles. The acid/alkaline buffering by bone tissue is not universally accepted, however, and there are other mechanisms by which potassium may support bone mass, such as by directly suppressing calcium resorption or bone mineral dissolution or both, independent of its alkalizing effects.¹¹

The potassium bicarbonate in K+2 Potassium may also help reduce risk for kidney stones. Diets high in potassium are associated with higher urine pH and reduced risk for stones,¹² and low urinary pH is the strongest factor in the development of uric acid stones.¹³ A prospective cohort study of over 45,000 men showed that those in the highest potassium intake quintile had substantially lower relative risk for stone formation compared to those in the lowest quintile after 14 years of follow-up.¹⁴ (For patients with kidney stones, consider adding DFH's MagCitrates powder to increase urinary citrate.)

Recommended Use: As a dietary supplement, take one capsule per day, or as directed by your health care practitioner.

Caution: Monitor potassium status in patients taking potassium-sparing diuretics (amiloride, spironolactone), ACE inhibitors and angiotensin receptor blockers (ARBs), which may increase risk for hyperkalemia, particularly when impaired kidney function is also present. Monitor potassium status in those taking loop and thiazide diuretics, which may lead to hypokalemia.¹⁸

For a list of references cited in this document, please visit:

https://catalog.designsforhealth.com/assets/itemresources/K+2_Potassium_References.pdf

Fórmula Rehidratante

Información del Suplemento

Tamaño de la porción: 8 gramos (aprox. dos cucharaditas)

Porciones por envase: 30

Consumo máximo: dos cucharaditas diarias

Por porción	% diario	Por porción	% diario
Calorías	10 (41,89 KJ)	Cloruro	187mg 6%
Grasa total	0 g	Potasio (como bicarbonato de potasio 90 mg y aspartato de potasio 76 mg)	166 mg 5%
Grasa saturada	0 g	Sodio (como cloruro de sodio)	112 mg 5%
Carbohidratos totales	3 gr 1%	Magnesio (como di-magnesio malato 76 mg; ascorbato de magnesio 5 mg)	81 mg 20%
Proteína	0 g	Bioflavonoides cítricos	14 mg *
Vitamina C (como ácido ascórbico, ascorbato de calcio, ascorbato de magnesio)	1734 mg 2890%	Quercetina	13 mg *
D-Ribosa	757 mg *	Rutina	7mg *
Taurina	379 mg *		

No es fuente significativa de grasa saturada.

*Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Otros ingredientes: Otros ingredientes: Sabores naturales (saborizante), dextrina de tapioca (espesante), dióxido de silicio (antiaglomerante), extracto de hoja de stevia orgánica en polvo (endulzante), ácido cítrico (conservante).

Uso recomendado: Como suplemento a la dieta, mezcle 8 gramos (aprox. dos cucharaditas) en 10-12 onzas de agua diariamente, o como recomendado por su médico.



NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-01890



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

La fórmula rehidratante es una combinación completa y balanceada de electrolitos y antioxidantes, para lograr hidratar de manera óptima el cuerpo, especialmente después de sudoración profusa. Contiene potasio, sodio, cloruro y magnesio, los principales electrolitos del cuerpo humano.

La D-Ribosa es esencial en la función cardíaca, en la recuperación posterior al ejercicio y en la producción de energía. La taurina regula el flujo de electrolitos.

Además contiene vitamina C y otros antioxidantes como la quercetina y bioflavonoides cítricos. La vitamina C favorece la salud cardiovascular al estimular la producción de colágeno (componente estructural de los vasos sanguíneos).

Este producto tiene un agradable sabor a naranja-limón, es libre de azúcar. Es endulzado con Stevia.

Fórmula Rehidratante



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	PESO	MÚSCULO ESQUELÉTICO	DEPORTIVO
		✓		✓	✓		✓

Indicaciones:

- Favorece la salud cardiovascular y niveles sanos de presión arterial y balance de fluidos.
- Rehidratación en casos de diarrea, vómito y sudoración excesiva.
- Ayuda a reponer la pérdida de electrolitos causada por el ejercicio.
- En el manejo del estrés ocasional, al apoyar el funcionamiento de las glándulas suprarrenales, encargadas del equilibrio hidro-electrolítico. Un estado de deshidratación puede intensificar las reacciones de estrés agudo.

USO RECOMENDADO:

COMO SUPLEMENTO A LA DIETA, MEZCLE 8 GRAMOS (DOS CUCHARADITAS) EN 10-12 ONZAS DE AGUA, 1 O MÁS VECES AL DÍA, SEGÚN RECOMENDACIÓN DE SU PROFESIONAL EN SALUD. PUEDE MEZCLARSE EN CUALQUIER AGUA O BEBIDA, PUEDE CONGELARSE PARA CONSUMIR COMO PALETA.

CADA FRASCO CONTIENE 240 GRAMOS (30 PORCIONES)

Electrolyte Synergy™



Comprehensive electrolyte formula

By David M. Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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Electrolyte Synergy™ is a complete and balanced electrolyte formula to help promote optimal hydration, especially after excessive sweating or other fluid loss.* This product has a delicious natural lemon-orange flavor, is sugar-free, and gets its sweetness from small amounts of the natural herb stevia.

Electrolytes play a critical role in the body. The main electrolytes found in the body are potassium, sodium, chloride and magnesium. Through a biochemical process, electrolytes become ions that can conduct electricity. The body requires these electrical signals as a means of communication within itself. Electrolyte function is critical to specific areas such as cardiovascular health, adrenal health, diabetes and endurance exercise.

Cardiovascular Health

Potassium is especially important due to its role in heartbeat regulation and muscle function, specifically that of muscle contraction.¹ When potassium is not properly balanced, hyperkalemia (abnormally high levels of potassium) can occur, or if potassium levels drop too low, hypokalemia can occur. These conditions, and others associated with this imbalance, can create cardiac abnormalities which can be potentially life-threatening. It is difficult to assess the true concentration of these minerals in the body, because blood levels may be maintained in the normal ranges at the expense of levels elsewhere. The body works hard to regulate mineral levels, since any steep fluctuation — either too low or too high — may result in dangerous heart arrhythmias. Low potassium can result in elevated sodium within the cell because the two must be maintained at the proper ratio. Therefore, the proper balance of these chemicals is of critical importance in keeping fluid levels normal and thus, blood pressure regulated. Regulation of the flow of potassium and magnesium intercellularly and extracellularly is also important in the regulation of blood pressure.

This formula also contains vitamin C, along with quercetin and bioflavonoids found naturally in citrus fruit. Vitamin C supports the cardiovascular system by helping to build healthy collagen, which is one of the main structural components of blood vessels. Additionally, vitamin C and these synergistic compounds offer anti-inflammatory, antioxidant, and vasoprotective benefits, including helping to maintain capillary integrity.²⁻⁷ Abnormal capillary leakiness may result in aches, pains and weakness in the extremities, nighttime leg cramps, and easy bruising/bleeding from even very minor trauma.

Adrenal Stress

In today's high-stress society, adrenal burnout and other hormonal disturbances are commonplace. Weak adrenals, for example, make the body unable to hold onto potassium. The adrenal glands produce three major groups of steroid hormones collectively called corticosteroids - the mineral corticoids, the glucocorticoids, and the sex hormones. The mineral corticoids are produced by the outermost layer of the adrenal cortex and regulate the mineral content of the blood. During times of stress, the body's need for vitamin C may be increased, as vitamin C is crucial for healthy adrenal function.⁸

Hyponatremia is considered the most common electrolyte imbalance, where sodium levels are lower than normal. This condition is closely connected to disorders of the parathyroid glands, which help control the amount of calcium in the blood (normal calcium levels help maintain muscle control). Parathyroid hormone (PTH) acts as a counter to calcitonin. When calcium levels drop in the blood, PTH releases calcium into the blood from stores in bone tissue. The sodium imbalance in hyponatremia can be attributed to abnormal anti-diuretic hormone, aldosterone, or kidney function (the kidneys work to keep electrolyte levels in the blood constant despite changes in the body).⁹

Supplement Facts

Serving Size 8 grams (approx. one scoop)

Servings Per Container 30

Amount Per Serving	% Daily Value	Amount Per Serving	% Daily Value
Calories	10	Potassium (as Potassium Bicarbonate, Potassium Aspartate)	170 mg 4%
Total Carbohydrate	3 g 1%**	D-Ribose	757 mg *
Vitamin C (as Ascorbic Acid, Calcium Ascorbate, Magnesium Ascorbate)	1734 mg 1927%	Taurine	379 mg *
Magnesium (as Di-Magnesium Malate, Magnesium Ascorbate)	80 mg 19%	Citrus Bioflavonoids	14 mg *
Chloride (as Sodium Chloride)	190 mg 8%	Quercetin	13 mg *
Sodium (as Sodium Chloride)	110 mg 5%	Rutin	7 mg *

*Daily Value not established.

**Percent Daily Values are based on a 2,000 calorie diet.

Other Ingredients: Natural flavors, tapioca dextrin, silicon dioxide, certified organic stevia leaf extract (*Stevia rebaudiana*), citric acid.

Diabetes

Diabetes is the most obvious metabolic disease that can bring about the need for electrolyte balance. Among the telltale symptoms of diabetes are intense thirst and abnormally frequent urination, which are associated with an electrolyte imbalance involving sodium. When the body has adequate fluids, coupled with the appropriate amount of insulin, sodium and other chemicals tend to balance out. Diabetic ketoacidosis is a complication treated with intravenous fluids (to dilute the glucose levels in the system and rehydrate the dehydrated person), with insulin (to aid in helping glucose get into the cells), and with electrolytes (usually potassium, sodium, phosphates, and bicarbonates) which also aid in getting glucose into the cells and correcting the acidosis created by dangerously high ketone levels.^{10,11} Two of the most common electrolytes that need replacing are potassium and sodium. Patients living with diabetes and other metabolic diseases are often prone to electrolyte imbalances. A product such as Electrolyte Synergy™ can act as a balancing agent when the body is unable to properly balance itself.*

Who should take Electrolyte Synergy™?

Electrolyte Synergy™ can be an important aid in supporting cardiovascular health and replenishing electrolytes lost during exercise, particularly during warmer weather or after an intense session that results in significant sweating.¹²⁻¹⁷ This formula includes taurine, which supports healthy blood pressure and regulates the flow of electrolytes in and out of the cell. It also governs osmotic control (prevents dehydration and catabolism), is a natural diuretic, and aids insulin function.¹⁸⁻²¹ D-Ribose is included in this powdered formula because of its importance for cardiac function, exercise recovery and energy production.^{22-25*}

This complete and balanced electrolyte formula can be used to improve symptoms of dehydration after excessive diarrhea or vomiting, or after excessive sweating. Athletes may benefit from regular use of Electrolyte Synergy™. Chronic stress can lead to low levels of one or more of these electrolytes, especially magnesium and potassium. Symptoms may include fatigue, lethargy, dizziness, cramping or twitching, tachycardia, arrhythmia, heavy legs, irritability and/or noise sensitivity. Patients with sodium-sensitive hypertension should not take Electrolyte Synergy™. This product is not recommended for patients with a pacemaker, nor for patients with high blood sodium or potassium levels. Children can take Electrolyte Synergy™ during any illness involving diarrhea or vomiting to prevent dehydration.*

Recommended Use:

As a dietary supplement, mix 8 grams (approx. one scoop) in 10-12 ounces of water per day, or as directed by a health care practitioner.

Mix into any beverage, sports bottle, or mix with water and place in ice racks to make into popsicles.

L-Arginina Plus

Información del Suplemento

Tamaño de la porción: 7 gramos (aprox. dos cucharaditas)

Porciones por envase: 30

Consumo máximo: 7 gramos diarios

Por porción		% diario
L-Arginina	1,5 gr	*
L-Citrulina	1,5 gr	*
Taurina	1 gr	*
Creatina	675 mg	*
Vitamina C (como ácido ascórbico)	300 mg	333%
Extractos de uva y manzana (<i>Vitis vinifera</i>) (fruta) (<i>Malus pumila</i>) (cáscara) estandarizados para contener 95% polifenoles	250 mg	*
Magnesio	120 mg	30%
L-Glutatión	100 mg	*
Ácido pantoténico	100 mg	2000%
Folato (como Quatrefolic® [6S]-metiltetrahidrofolato, sal de glucosamina)	170 µg DFE	43%

*Valor diario no establecido.

Otros ingredientes: Sabores naturales (saborizante), ácido cítrico (conservante), extracto de hoja de stevia (endulzante).

Uso recomendado: Como suplemento a la dieta, mezcle 7 gramos (aprox. dos cucharaditas) en 8-10 onzas de agua diariamente, o como recomendado por su médico.



NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-01899



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

La L-Arginina Plus es una fórmula sinérgica que aumenta las concentraciones de NO (óxido nítrico) en el cuerpo humano, al aumentar su síntesis y reducir su degradación. El NO tiene un rol importante a nivel cardiovascular, en la circulación y en el desempeño muscular. Es también utilizado para aumentar la energía mitocondrial.

Sus principales ingredientes son la L-Arginina y la citrulina, taurina y metilfolato, e incluye una mezcla de polifenoles de la uva y la manzana por su potente acción antioxidante y vasodilatadora; vitamina C para resguardar la integridad vascular. Y la combinación de creatina con magnesio para salud cardiovascular y desempeño atlético, fuerza y crecimiento musculares.

L-Arginina Plus



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	VEGETARIANO	METABÓLICO	PESO	MÚSCULO ESQUELÉTICO	DEPORTIVO
	✓	✓	✓	✓			✓

Indicaciones:

- Salud cardiovascular: al aumentar la producción de óxido nítrico, mejora la función endotelial y relaja las paredes vasculares, ayuda a mantener la presión arterial en rangos saludables. También estimula la salud sexual al mejorar la función eréctil.
- Desempeño atlético: al aumentar el flujo sanguíneo a los músculos y estimular la producción de ATP, aumenta la capacidad de hacer ejercicio de alta intensidad y por mayor duración; la contracción muscular es más eficiente y potencia un mayor efecto anabólico.

DOSIS RECOMENDADA:

7 GRAMOS (UNA MEDIDA) EN 8-10 ONZAS DE AGUA POR DÍA, O COMO RECOMENDADO POR SU PROFESIONAL EN SALUD.

CADA FRASCO CONTIENE 210 GRAMOS (30 DOSIS)

NOx Synergy™

Support for optimal nitric oxide levels

designs for health®

By David M. Brady, ND, DC, CCN, DACBN, IFMCP, FACN & Amy Berger, MS, CNS

THIS INFORMATION IS PROVIDED AS A MEDICAL AND SCIENTIFIC EDUCATIONAL RESOURCE FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ("PRACTITIONERS"). THIS INFORMATION IS INTENDED FOR PRACTITIONERS TO USE AS A BASIS FOR DETERMINING WHETHER TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. ALL RECOMMENDATIONS REGARDING PROTOCOLS, DOSING, PRESCRIBING AND/OR USAGE INSTRUCTIONS SHOULD BE TAILORED TO THE INDIVIDUAL NEEDS OF THE PATIENT CONSIDERING THEIR MEDICAL HISTORY AND CONCOMITANT THERAPIES. THIS INFORMATION IS NOT INTENDED FOR USE BY CONSUMERS.

NOx Synergy™ is a comprehensive formula designed to optimize nitric oxide (NO) levels in the body. It is provided in a delicious berry flavored powder for convenient dosing and ease of patient compliance.

NOx Synergy™ may be helpful for:

- increasing the body's production of NO
- extending the half-life of NO in the body
- protecting NO from producing peroxynitrites (harmful free radicals)
- enhancing the production of ATP

Arginine and Citrulline

Arginine is a critical substrate for the synthesis of NO, a compound that relaxes endothelial cells throughout the cardiovascular system. NO also inhibits platelet aggregation and superoxide radical generation. Arginine supplementation has been shown to reverse the endothelial dysfunction associated with common cardiovascular risk factors and also ameliorates symptoms of certain cardiovascular disorders, including coronary and peripheral arterial disease, ischemia/reperfusion injury and heart failure.¹

Supplemental arginine may be beneficial due to high arginase activity in the small intestine, where approximately 40% of arginine is degraded during digestion, and only 50% of dietary arginine enters the systemic circulation.¹

Citrulline is included as an adjunct to arginine, as citrulline is converted to arginine in various cells. Unlike arginine, citrulline is not metabolized in the intestine or liver and does not induce tissue arginase. In fact, it inhibits arginase, and citrulline entering peripheral tissues—particularly the kidneys and vascular endothelium—may be readily converted to arginine, thus raising arginine levels and enhancing NO production.² Studies show that citrulline raises plasma arginine levels significantly higher than arginine itself and has a longer half-life in the body, so citrulline can be thought of as a potent "time-released arginine."³ Research suggests that one of citrulline's primary physiological roles is serving as a precursor to arginine in the kidneys.^{4,5}

In regard to the influence of citrulline on increasing NO synthesis and stimulating a positive downstream effect, a study involving men with mild erectile dysfunction demonstrated that 1.5 g/day of citrulline improved erectile function in 50% of participants.³

NOx Synergy™ includes glutathione as an adjunct to citrulline. The combination of these compounds has been shown to increase plasma levels of NO in humans *in vivo*. It may be particularly beneficial for recovery from intense physical activity and may enhance muscle protein synthesis after resistance training.⁶

Folate (as 5-MTHF)

Folate, as 5-MTHF, is included as a precursor to tetrahydrobiopterin (BH4), a required cofactor for activity of the enzyme nitric oxide synthase (NOS).⁷ Inadequate levels of BH4 result in the generation of superoxide radicals, rather than NO, from endothelial NOS (eNOS).⁸ When low BH4 bioavailability occurs, oxygen activation is "uncoupled" from arginine oxidation, and NOS produces superoxide instead of NO. NOS-derived superoxide reacts with NO to produce highly reactive peroxynitrite radicals, which rapidly oxidize BH4 and trigger uncoupling of NOS. Depletion of BH4 and uncoupling of NOS may result in hypertension, ischemia/reperfusion injury, overload induced heart failure and atrial fibrillation.⁹ Sufficient folate is also required for proper metabolism of homocysteine.¹⁰

Supplement Facts

Serving Size 7 grams (approx. one scoop)

Servings Per Container 30

Amount Per Serving		% Daily Value
Vitamin C (as Ascorbic Acid)	300 mg	333%
Folate (as Quatrefolic® (6S)-5-methyltetrahydrofolate, glucosamine salt 200 mcg)	170 mcg DFE	43%
Pantothenic Acid (as d-Calcium Pantothenate)	100 mg	2000%
Magnesium (from Creatine MagnaPower®)	120 mg	29%
L-Arginine	1.5 g	*
L-Citrulline	1.5 g	*
Taurine	1 g	*
Creatine (from Creatine MagnaPower®)	675 mg	*
Grape and Apple Extracts (<i>Vitis vinifera</i>)(fruit) (<i>Malus pumila</i>)(skin) (standardized to contain 95% polyphenols)	250 mg	*
L-Glutathione (reduced) (as Setria®)	100 mg	*

*Daily Value not established.

Other Ingredients: Natural flavor, citric acid, stevia leaf extract (*Stevia rebaudiana*).

Benefits of NOx Synergy™**

Cardiovascular health: by increasing NO production, endothelial cell function is improved, which causes blood vessel relaxation; supports normal blood pressure; supports sexual health by maintaining erectile function.

Athletic performance: by increasing blood flow to muscles and enhancing ATP production, exercise can be performed at a higher intensity for a longer duration; muscle contraction may be more efficient, potentially leading to a greater anabolic effect. Additionally, antioxidants in NOx Synergy™ may help aid recovery from intense athletics.

Grape (*Vitis vinifera*) and Apple (*Malus pumila*) Extracts

A proprietary combination of apple and grape polyphenols are included for their potent antioxidant and vasodilating properties. These polyphenols have been shown to enhance vasodilation by increasing the activation of the eNOS enzyme. Animal models and *in vitro* research have shown that polyphenols (including those from grapes and apples) are effective for increasing NO synthesis and availability by enhancing eNOS activity.¹¹⁻¹⁴ Studies in humans confirm the health benefits of wine and grape polyphenols.^{15,16} This formula also includes vitamin C for its role in supporting healthy blood vessels. This nutrient is a required cofactor for building collagen, which is a key structural component of blood vessels. Additionally, working synergistically with the antioxidant compounds in grape and apple extracts, vitamin C exerts vasoprotective benefits, including helping to maintain capillary integrity.

Phloretin, a polyphenol most commonly found in apples, has been shown to inhibit the expression of inflammatory cytokine-induced adhesion molecules in aortic endothelial cells. It has also been demonstrated to reduce platelet aggregation, suggesting that phloretin could be protective against the onset and progression of cardiovascular disease.¹⁷ Other apple polyphenols inhibit expression of pro-inflammatory genes in human cells *in vitro* in a dose-dependent manner.¹⁸

Taurine

This sulfonic acid derivative of cysteine has been shown to affect cardiovascular function through multiple mechanisms. It is anti-arrhythmic, hypotensive, and may decrease platelet aggregation.¹⁹ It also has a normalizing effect on cardiac muscle function with regard to calcium status, as it may strengthen contraction at low calcium levels, and beneficially relax the force of contraction at high calcium levels.²⁰ Human and animal studies have shown taurine to reduce intimal thickening, arteriosclerosis, oxidative stress, and inflammation associated with diabetes, hypertension, and smoking-induced vascular events. Taurine supplementation in hypertensive patients has been shown to alleviate hypertension symptoms, as well as reverse arterial stiffness in type 1 diabetics.²¹ Taurine may also have a direct effect on NO by increasing eNOS expression, increasing plasma arginine concentration, and reducing synthesis of asymmetric dimethylarginine (ADMA), a NOS inhibitor.²²

Chelated Creatine/Magnesium Complex

The combination of creatine and magnesium is a synergistic pairing of two compounds with powerful effects on cardiovascular health and muscle performance. The production of ATP involves the transfer of a phosphate group from creatine to ADP, and this transfer is dependent on the availability of magnesium ions. The chelated creatine/magnesium complex in this formula provides a stable, highly effective form of creatine with the presence of magnesium, wherein magnesium repletion facilitates the anabolic activity of creatine.

Magnesium is well-regarded for its hypotensive and relaxing effects, and a magnesium deficiency is associated with several conditions related to blood vessel function and blood flow.²³ Creatine has long been recognized for its beneficial effects on muscle performance and lean body mass.²⁴⁻²⁷ Supplemental creatine stimulates strength and muscle mass, but its efficacy is limited by the lactamation reaction, which transforms some creatine into anabolically inert creatinine. Pairing creatine with magnesium inhibits this conversion, thus increasing the amount of creatine available for supporting muscle cells.

Supplementing with this creatine/magnesium chelate helps increase muscle strength as well as the speed of muscle mass growth, since larger amounts of ATP may facilitate greater force stimuli and muscle contraction. Creatine has also been demonstrated to increase muscle anaerobic capacity and aerobic recovery by stimulating mitochondrial activity.²⁸ According to research, the effects of a combined magnesium/creatine chelate are significantly more potent than the administration of creatine and magnesium from separate sources.^{29,30} The effect of the anthocyanins in this product on NOS and oxidative stress may offer additional benefits for athletic performance as an ergogenic aid and to facilitate recovery.^{31,32}

Recommended Use

- Mix 7 grams (approx. one scoop) in 8-10 ounces of water per day, or as directed by your health care practitioner.

For a list of references cited in this document, please visit:

<https://www.designsforhealth.com/techsheet-references/nox-synergy-references.pdf>

Dosing recommendations are given for typical use based on an average 150 pound healthy adult. Health care practitioners are encouraged to use clinical judgement with case-specific dosing based on intended goals, subject body weight, medical history, and concomitant medication and supplement usage.



Quatrefolic® is a registered trademark of Gnosis S.p.A. | Setria® is a registered trademark of KYOWA HAKKO BIO CO., LTD.
Creatine MagnaPower® is a registered trademark of Albion Laboratories, Inc. Covered by Patent 6,114,379 and patents pending.

Creatina

Información del suplemento

Tamaño de la porción: 2 cápsulas

Porciones por envase: 30

Dosis máxima: 2 cápsulas diarias

Por porción	% diario	
Monohidrato de creatina buferada	1.8 g	*

*Valor diario no establecido



Otros ingredientes: Celulosa (cápsula), estearato vegetal.

Uso recomendado: Tomar dos cápsulas diarias, o como recomendado por su profesional de salud.

Nota: Color, sabor y densidad pueden variar de un lote a otro.

NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-01897



Descripción

Esta fórmula contiene 900 mg de monohidrato de creatina buferada en cada cápsula. La mayoría de los efectos no deseados que produce la suplementación de altas dosis de Creatina (náusea, vómito, distensión y dolor abdominal) son producidos por la creatinina (un metabolito de la creatina). Este producto, por tener un pH mayor a 12, no se convierte en creatinina, por lo que no produce los efectos secundarios mencionados, y a la vez asegura una mayor concentración de creatina en los músculos y otros tejidos. Esto produce mejores resultados y evita la necesidad de hacer dosis de carga, a diferencia de la mayoría de los suplementos de creatina.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	PESO	VEGETARIANO	DEPORTIVO
	✓			✓		✓	✓

Creatina



Indicaciones:

- Como suplemento para deportistas, para aumentar masa muscular y mejorar el rendimiento atlético.
- Para personas que siguen dietas vegetarianas y buscan aumentar su masa muscular.
- Diabetes
- Síndrome metabólico
- Pacientes encamados

DOSIS RECOMENDADA: 1-2 CÁPSULAS DIARIAS

CADA FRASCO CONTIENE 60 CÁPSULAS

Para mejores resultados se recomienda combinar con el Ácido R-lipóico

KreAlkalyn Pro[™]

Buffered Creatine Monohydrate

By David Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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KreAlkalyn Pro[™] is a very stable, bioavailable and pH balanced, form of the well researched creatine monohydrate. KreAlkalyn Pro[™] will be ideal for anyone with sensitivities to stimulants who may still want to reap the many benefits of ingesting creatine on a daily basis. With an impressive 900 mgs of this unique buffered creatine monohydrate ingredient per capsule, only 1 or 2 capsules per day are required to reach optimal cellular levels.

Aging is Associated with Low Muscle Creatine Levels

Creatine is possibly the most promising anti-aging supplement available in the industry today. A tremendous amount of research has been published between 1998 and now that has helped us to understand this very important nutrient and how it functions in the human body. Creatine supplementation, in a stabilized, alkaline form so it does not raise creatinine, does so much more than simply help athletic performance and muscle building. Creatine supplementation has numerous physiological effects, which have the potential to substantially reduce morbidity and mortality.

Aging is associated with lower skeletal muscle creatine and phosphocreatine levels. After age 30, phosphocreatine resynthesis rates after exercise fall 8% per decade. In a double-blind placebo-controlled study, in which subjects had a leg immobilized for two weeks then underwent an exercise rehabilitation program, creatine supplementation resulted in more rapid restoration of strength and muscle mass. Creatine should therefore benefit older individuals who are recovering from bed-rest or immobilization of a limb due to injury, surgery or illness.

About 95% of the body's creatine is found in the skeletal muscles, particularly type 2 fibers. Creatine is also found in other tissues, including the brain, heart, endothelial cells, macrophages, kidneys, liver, smooth muscles and testes. The body has a limited capacity for creatine synthesis and those individuals who consume creatine-rich foods have higher creatine tissue levels. Dietary creatine is most concentrated in herring, pork, beef, salmon and tuna. Consistent with this fact, vegetarians appear to have lower tissue creatine concentrations. **Low phosphocreatine levels result in lower levels of ATP.** Greater phosphocreatine levels translate into greater cellular energy production. With regard to skeletal muscle, phosphocreatine is involved primarily in the first ten seconds of very high intensity contraction.

Creatine supplementation can increase tissue concentrations to a level that is unobtainable through diet alone. The activity of the creatine transporter plays an important role in the ultimate response to creatine supplementation. It is one thing to raise plasma creatine levels through supplementation but the benefits from creatine come only through transport into the cell, by the creatine transporter. Insulin has clearly been demonstrated to stimulate cellular creatine uptake. There is evidence that the insulin sensitizing compound alpha lipoic acid can facilitate cellular creatine accretion. High intensity exercise promotes creatine transport into the muscles that are worked. In vitro studies have also shown stimulation of the creatine transporter by IGF-1, triiodothyronine (T3), and norepinephrine.

Supplement Facts

Serving Size 2 capsules

Servings Per Container 30

Amount Per Serving	% Daily Value
Kre-Alkalyn [™]	1800 mg *
(as buffered creatine monohydrate)	

*Daily Value not established.

Other Ingredients: Microcrystalline cellulose, vegetable stearate.

Insulin Sensitivity

There are several lines of evidence to suggest creatine supplementation improves insulin sensitivity. Insulin resistance appears to be a central metabolic aberration contributing to unhealthy aging and reduced lifespan. This was illustrated by a study involving 208 healthy men who were evaluated for their insulin sensitivity and then followed for an average of six years. They were divided into three groups, according to insulin sensitivity. After the study period, one out of every three men in the tertile with the poorest insulin sensitivity had developed hypertension, type 2 diabetes, cancer, heart disease or stroke. All of the men in the group with the best insulin sensitivity remained healthy. The effects of creatine supplementation that point toward improved insulin sensitivity include lowering of elevated plasma triglyceride and VLDL and total cholesterol levels, increasing muscle glycogen stores, and a trend toward lower fasting blood glucose levels. Additionally, levels of Glut 4 protein were found to increase by 40% in response to creatine supplementation compared to placebo. Glut 4 protein is involved in insulin-stimulated muscle glucose uptake. When combined with supplemental protein and resistance training, creatine resulted in improved glucose tolerance test results.

Kre-Alkalyn®

Kre-Alkalyn® is the only creatine (kree-AT-teen) supplement that does not convert to creatinine (kree-AT-ah-noon), a metabolite of creatine, in the bloodstream before it reaches muscle cells. Many of the unpleasant side-effects of taking high-dose creatine supplementation (i.e., nausea, diarrhea, cramps and bloating) are not from the creatine, but from the metabolite creatinine. Since Kre-Alkalyn® is the only creatine with a pH above 12 it will not convert to creatinine in liquids, including the bloodstream. This results in less of the aforementioned side effects and more creatine delivered to the muscle and other tissues. This means more clinical efficacy at much lower doses (no more "loading") than is required with regular creatine powder.

*Kre-Alkalyn® is an approved supplement by the *International Olympic Committee*.

Who should take KreAlkalyn Pro? Vegetarians, elderly, weekend warriors, diabetics, patients with metabolic syndrome, bedridden individuals, and anyone wishing to increase muscle and/or improve athletic performance.

How to take? 1-2 capsules daily is sufficient for most applications and is recommended for maintenance. May be taken along with Lipoic Synergy, Whey Cool or RiboCarniClear.

References:

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4. Candow DG, Chilibeck PD. Effect of creatine supplementation during resistance training on muscle accretion in the elderly. *J Nutr Health Aging.* 2007 Mar-Apr;11(2):185-8.
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6. Op't Eijnde B, Jijakli H, Hespel P, Malaisse WJ. Creatine supplementation increases soleus muscle creatine content and lowers the insulinogenic index in an animal model of inherited type 2 diabetes. *Int J Mol Med.* 2006 Jun;17(6):1077-84.
7. Balestrino M, et al. Role of creatine and phosphocreatine in neuronal protection from anoxic and ischemic damage. *Amino Acids Abstract* 2002; 23(1-3): 221-229.

BCAA CON L-GLUTAMINA

Información del Suplemento

Tamaño de la porción: 9 gramos (aprox. dos cucharaditas)

Porciones por envase: 30

Consumo máximo: 9 gramos diarios

Por porción	Cantidad	% diario
L-Leucina	2.5 gr	*
L-Glutamina	2.0 gr	*
L-Isoleucina	1.2 gr	*
L-Valina	1.2 gr	*

*Valor diario no establecido.

Otros ingredientes: Sabores naturales (saborizante), extracto de hoja de Stevia orgánica en polvo (*Stevia rebaudiana*) (endulzante), ácido cítrico (conservante), ácido málico (acidulante), dióxido de silicio (antiaglomerante), lecitina de girasol (emulsionante)



NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-01891



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

Esta fórmula sinérgica combina aminoácidos ramificados (BCAA): leucina, isoleucina y valina, con el aminoácido L-Glutamina. La glutamina favorece el desarrollo de la masa muscular y apoya el funcionamiento del sistema inmunológico.

Los BCAA tienen la característica de ser una fuente directa de energía para el músculo esquelético y son intermediarios en la producción de ATP en el ciclo de Krebs. También estimulan la síntesis de proteínas a nivel muscular, previenen la degradación muscular y facilitan la recuperación de la fibra muscular después del ejercicio.

BCAA CON L-GLUTAMINA



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	PESO	MÚSCULO ESQUELÉTICO	DEPORTIVO
✓	✓	✓				✓	✓

Indicaciones:

- Mantenimiento de la masa muscular
- Aumento de la capacidad y resistencia durante el ejercicio físico
- Acelerar la recuperación post ejercicio
- Reducir el dolor muscular causado por el ejercicio

USO RECOMENDADO:

MEZCLE 9 GRAMOS (UNA MEDIDA) EN 10-12 ONZAS DE AGUA, UNA VEZ AL DÍA O COMO RECOMENDADO POR SU PROFESIONAL DE SALUD.

PUEDE TOMARSE ANTES, DURANTE O DESPUÉS DEL EJERCICIO.

CADA FRASCO CONTIENE 270 GRAMOS (30 PORCIONES)

BCAA Powder



Branched-chain amino acids with added L-glutamine

By David M. Brady, ND, DC, CCN, DACBN & Amy Berger, MS, CNS

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BCAA Powder combines the branched-chain amino acids (BCAAs)—leucine, isoleucine, and valine—along with the amino acid, L-glutamine, in a great-tasting, orange flavored powder. BCAAs make up 35% of the essential amino acids in muscle protein, and approximately 40% of the total amino acids required by mammals. BCAAs are unique in that they are a direct source of energy for skeletal muscles while also serving as intermediates in the ATP-producing citric acid cycle. They stimulate the building of protein in muscle, reduce muscle breakdown during exercise, and regulate protein metabolism throughout the body. BCAAs stimulate lean muscle synthesis even in the absence of resistance training, making them an effective raw material for lean tissue maintenance in athletes as well as in populations who are unable to exercise, but are at risk for muscle loss.¹

BCAA Powder may be beneficial for*:

- Sports nutrition - enhancing muscle building and recovery in athletes^{1, 9, 10}
- Sarcopenia - facilitating muscle tissue maintenance in aging populations^{8, 11, 12}
- Post-operative and traumatic injury recovery - reducing muscle mass catabolism¹³
- Cachexia - attenuating muscle wasting in cancer patients, AIDS patients and others¹³

This product is free of sucrose, fructose and artificial sweeteners, and is sweetened with the natural herb stevia.

Athletic Performance and Recovery

BCAAs can be oxidized as a fuel source in skeletal muscle cells. Supplementation with BCAAs before and after exercise has been shown to attenuate exercise-induced muscle damage and promote muscle protein synthesis, making them a useful addition to exercise and bodybuilding regimens. Supplemental BCAAs help reduce post-effort muscle soreness and suppress the rise in creatine kinase and lactate dehydrogenase after exercise, suggesting an inhibitory effect on the breakdown of muscle protein.²⁻⁴ Moreover, due to the increased oxidation of BCAAs during endurance exercise, athletes may have higher requirements for these nutrients than sedentary populations.⁵ Although not considered an athletic performance enhancer, per se, supplemental BCAAs have been shown to reduce the perceived rate of exertion among untrained athletes during physical exertion, which may allow exercisers to increase the intensity of their efforts, potentially leading to improved results.⁶⁻⁷ BCAAs are shown to support the immune system and supplementation may reduce the immunosuppressive effect that strenuous activity has on the immune system.⁸

Maintenance of Muscle Mass

Another area where BCAAs are of particular benefit is in attenuating the breakdown of muscle tissue in post-operative patients and those recovering from physical trauma.¹³ Severe physical stress such as blunt trauma, burn, and septic infection markedly decreases protein levels and increases protein catabolism.¹³ In surgically stressed patients receiving TPN containing 15%, 20%, 47%, and 50% BCAAs, those receiving 47% and 50% had an improved nitrogen balance at days 3 and 7 compared to the other groups.¹³ Another study found BCAA levels significantly reduced in humans with mild traumatic brain injuries (TBI) compared to healthy subjects. The disability rating score in the BCAA-supplemented group of TBI patients was significantly higher than placebo group after 15 days of 19.6g/d of intravenous BCAA supplementation. A systematic review found depressed BCAA levels post-TBI, and that supplementation with BCAAs showed significant improvement post-injury in both animal and human trials.^{13, 14} BCAAs could be a powerful adjunct to post-operative care, particularly for patients who may have been underweight or weakened.

In addition to the post-surgical setting, the muscle-sparing effect of BCAAs may be beneficial in attenuating the dramatic weight loss and muscle wasting that are the most commonly reported causes of morbidity and mortality among cancer patients. Sixty-four patients given perioperative and postoperative BCAA intravenous supplementation for 14 days after a hepatectomy due to hepatocellular carcinoma (HCC) had a 34% decrease in postop morbidity compared with controls (55%), decreased need for diuretic therapy for ascites, and 0 kg weight loss compared with 1.4 kg in the control group.¹³ In another study, patients who received BCAA supplementation in addition to sorafenib treatment for HCC showed to significantly increase overall survival and improve prognosis compared to non-supplemented controls.¹⁵

Synergy with Glutamine

Designs for Health's BCAA Powder combines leucine, isoleucine, and valine with the amino acid, glutamine, for a synergistic effect in building muscle tissue and supporting the immune system, intestinal health, and inflammatory pathways.* Glutamine is the body's most versatile and abundant amino acid; however, during prolonged physiological and metabolic stress, glutamine stores are depleted.¹⁶ BCAA oxidation is a precursor for glutamine synthesis, and many of the beneficial effects of BCAAs for those in catabolic states are related to the synthesis and maintenance of an adequate supply of glutamine.¹¹ Animal studies and clinical trials in humans demonstrate that sufficient supplies of glutamine improve nitrogen balance, recovery from various traumas, and restores immune balance. Glutamine is considered a "fuel for the immune system", regulating leukocyte function and is involved in signaling pathway activation and gene expression. Glutamine status plays a major role in redox balance and for antioxidant protection via the glutamine-glutathione axis, which can dictate overall recovery outcomes for patients at risk for immunosuppression.¹⁷

Post-operative cancer patients receiving infusions of BCAA-enriched amino acid mixtures showed accelerated muscle protein synthesis compared to patients supplemented with mixtures of equal total protein, but not enriched with BCAAs. The BCAA group experienced significant increases in de novo glutamine synthesis, while the isonitrogenous group showed no change in muscle glutamine synthesis.¹⁸

The presence of glutamine in a BCAA supplement may also be an additional boon to athletes. Lowered plasma glutamine may be used as a marker for overtraining without adequate recovery time as the stress caused by prolonged exercise increases the demand for glutamine to support gluconeogenesis. In this scenario, excessive exercise exhausts plasma glutamine levels which may negatively effect the immune system and may lead to intestinal dysfunction. In a controlled clinical trial, elite athletes who were given glutamine supplementation prior to maximal intensity exercise showed lowered levels of phosphorus, creatine kinase and IL-15 levels compared with controls, suggesting that glutamine supplementation may decrease exercise-induced fatigue and enhance inflammatory defenses and immune function.¹⁹ Additionally, glutamine supplementation has been shown to reduce the exercise-induced increase in small intestinal permeability, which leads to inflammation and GI distress post-effort. In a small, randomized, double-blind placebo-controlled study involving healthy, endurance-trained subjects, compared to placebo, supplementation with glutamine for seven days (dosed at 0.9 g/kg of fat-free mass) resulted in significant decreases in exercise-induced intestinal permeability via multiple mechanisms.²⁰ In an animal model induced with activity-based anorexia (ABA), colonic mucosal permeability was enhanced while protein synthesis decreased; however, when given oral glutathione or BCAAs during ABA, intestinal permeability and protein synthesis was restored, and mRNA levels of mucin-2 were increased, a regulatory gut barrier mucus layer.²¹

Supplement Facts

Serving Size 9 grams (approx. one scoop)

Servings Per Container 30

Amount Per Serving	% Daily Value
L-Leucine	2.5 g *
L-Glutamine	2 g *
L-Isoleucine	1.25 g *
L-Valine	1.25 g *

*Daily Value not established.

Other Ingredients: Natural flavors, certified organic stevia leaf extract (*Stevia rebaudiana*), citric acid, malic acid, silicon dioxide, sunflower lecithin.



Recommended Use:

- As a dietary supplement, mix 9 grams (approx. one scoop) into 10-12 ounces of water per day, or as directed by your health care practitioner.
- Can be taken pre, peri or post workout.
- Consider combining with Pure PaleoMeal®, VegeMeal™, WheyCool™, or MycoPure™, or taking it along with food to increase the total BCAA levels as well as protein synthesis.

For a list of references cited in this document, please visit:

http://catalog.designsforhealth.com/assets/itemresources/BCAA-Powder_References.pdf

Omegas

Información del suplemento

Tamaño de la porción: 2 cápsulas
Porciones por envase: 60

Por porción	Cantidad	% valor diario
Calorías	84 kJ	
Calorías de grasa	20	
Grasas totales	2 gramos	3%
Colesterol	5 mg	2%
Grasa saturada	0	
Proteína	0	
Carbohidratos	0	
Sodio	0	

Ácidos grasos Omega-3

Ácido Eicosapentanoico EPA 600 mg

Ácido Docosahexanoico DHA 400 mg

Otros ácidos grasos Omega-3 200 mg

Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

Otros ingredientes: Sabor natural a limón, lipasa, tocoferoles mixtos, gelatina bovina, glicerina, annatto (color natural).

USO RECOMENDADO: Como suplemento nutricional, tome dos cápsulas por día con comida, o como recomendado por su médico. Dosis máxima diaria: 3 cápsulas al día.

ADVERTENCIA: Consulte con su médico antes de tomar este producto, si usted toma reductores de viscosidad de la sangre, planea tener una cirugía o toma coumadina, warfarina o algún otro medicamento anticoagulante. Omegas contiene aceite de pescado en su forma natural de triglicéridos, en un mínimo del 90%. Omegas es molecularmente destilado y filtrado para asegurar su pureza y maximizar la eliminación de metales, pesticidas, PCBs y otros contaminantes. La lipasa agregada es para aumentar la digestibilidad; los tocoferoles mixtos (antioxidantes) son para asegurar la estabilidad del producto.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.

NO CONTIENE GLUTEN



Registro Sanitario: SD-US-15-05580



Descripción

Este producto contiene los ácidos grasos triglicéridos, al igual que se presentan en la naturaleza. El EPA y DHA se encuentran naturalmente en forma de triglicéridos en los peces, y es la forma que el cuerpo humano prefiere. Las investigaciones científicas sobre estos productos han concluido que los aceites de pescado en forma de triglicérido tienen una mayor absorción y bio-disponibilidad, comparados con los aceites en su forma etiléster (EE). Este producto cuenta con el sello TruTG™, que garantiza mínimo un 90% de los omega-3 en la forma de triglicéridos. Estos aceites son destilados molecularmente y filtrados para asegurar su pureza y maximizar la eliminación de metales pesados, pesticidas, solvente, PCB's y otros contaminantes.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓		✓	✓	✓		✓	✓	✓	

Omegas



Indicaciones

- Salud cardiovascular: prevención de ataques al corazón, derrame cerebral, coadyuvante en el tratamiento de la hipertensión arterial. Previenen arritmias, trombosis y formación de placas de ateroma
- Regulan los niveles de colesterol y triglicéridos
- Son antiinflamatorios potentes: usados para el manejo del dolor en artritis inflamatorias y degenerativas
- Hidratación de cartílago y discos de columna.
- Estimulante metabólico para la pérdida de grasa corporal
- Ayuda a combatir la resistencia a la insulina
- Usado en el tratamiento de la prevención de las demencias y enfermedad de Alzheimer
- Especialmente útil en los deportistas ya que potencia la fuerza muscular y el rendimiento aeróbico
- En el deportista ayuda a contrarrestar el efecto oxidativo e inflamatorio del ejercicio
- Refuerzan la inmunidad en los deportistas disminuyendo el riesgo de sufrir lesiones indeseadas.

PARTICULARIDADES DEL PRODUCTO:

- Es un suplemento de alta potencia
- Provee 600 mg EPA y 400 mg DHA por dos cápsulas
- Incluye la enzima digestiva lipasa para mejor digestión y evitar el sabor a pescado que dejan algunos otros suplementos.
- El 90% de estos ácidos grasos están unidos a triglicéridos (sello TruTG). Esta es la forma en que se encuentran en la naturaleza, para una mejor absorción, esto es un 40%-50% más alto que la mayoría de los omegas en el mercado
- Estos aceites son destilados y filtrados para asegurar su pureza, para maximizar la eliminación de metales pesados, pesticidas, PCB's y otros contaminantes
- Hecho con ingredientes no genéticamente modificados
- Por su concentración, es un suplemento ideal para cuando se necesitan dosis altas de DHA-EPA

DOSIS RECOMENDADA: 2 A 4 CÁPSULAS DIARIAS

CADA FRASCO CONTIENE 120 CÁPSULAS

OmegAvail™ Ultra

HIGH POTENCY OMEGA-3 FISH OIL

OmegAvail™ Ultra is a high-potency omega-3 fish oil product, providing 600 mg EPA and 400 mg DHA in each two softgel serving along with the digestive aid lipase for enhanced absorption.

In order to maintain optimum health, the body requires a variety of different fats. Two of these—omega-6 and omega-3 fatty acids—are essential. As a result of industrialized farming practices and modern food processing technology, the American diet is very high in omega-6s, but low in omega-3s. Correcting this imbalance through foods and supplements can be beneficial for the entire body.

The Story Behind Omega-3s

The best sources of omega-3 fats are cold water fish like salmon, sardines, and mackerel. The omega-3s that come from marine animals are different from the plant forms (such as walnuts and flaxseed), in that many people cannot effectively convert the plant forms to the animal forms, which are the more potent and biologically active versions that the body ultimately requires.

Since most people do not consume cold water fish regularly, supplementation is critical for those concerned about any of the health issues listed to the right, and is also recommended for healthy individuals in order to maintain a good baseline balance of fatty acids.

Highlights*

OmegAvail™ Ultra contains the omega-3 fatty acids EPA & DHA:

- **Eicosapentaenoic acid (EPA)** – beneficial for supporting a healthy brain, balanced emotions, skin health, maintaining normal cholesterol levels and modulating the inflammatory response*
- **Docosahexaenoic acid (DHA)** – supports proper brain development and function, visual acuity, maintenance of normal triglyceride levels and blood pressure, eye development and a healthy pregnancy in expectant moms*

Potency – the TruTG™ advantage: OmegAvail™ Ultra contains fish oils in the triglyceride (TG) form—the same way they naturally occur in fish. Most mass-marketed and lower-priced fish oil supplements come in the ethyl ester (EE) form. These are less expensive and more convenient to produce, but they are not as readily recognized, digested, and assimilated in the body as the TG form. In order to receive the maximum benefit from omega-3 supplementation, it is critical to provide these fats to the body in the same way they are found naturally in fish. It is only when consumed in this natural form that they are most easily digested and absorbed. This TruTG™ advantage is especially effective at promoting healthy omega-3 levels in the body.

Purity - OmegAvail™ Ultra also includes mixed tocopherols, which protect these fragile oils from oxidation and rancidity. Additionally, these fish oils are molecularly distilled and filtered to ensure purity and to maximize the removal of metals, pesticides, PCBs, and other contaminants.

Recommended Use:

As a dietary supplement, take two softgels per day with meals, or as directed by your health care practitioner.



Consult with your healthcare practitioner about your specific circumstances and any questions you may have.

*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.

GLA

Información del suplemento		
Tamaño de la porción: 1 cápsula / Porciones por envase: 60		
Por porción	Cantidad	% Valor diario
Calorías	42 kJ	
Calorías de grasa	10	
Proteína	0 g	
Grasa saturada	0 g	
Carbohidratos	0 g	
Sodio	0 g	
Total grasas	1 g	2%*
GLA (Ácido gama linolénico de semillas de Borago officinalis)	240 mg	†

* Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.
 † Valor diario no establecido

USO RECOMENDADO: Como suplemento de la dieta, tome una cápsula al día con cada comida, o como recomendado por su médico. Dosis máxima diaria: 3 cápsulas al día.

ADVERTENCIA: Consulte a un profesional de la salud antes de usar si está tomando algún medicamento o si planea someterse a algún procedimiento médico.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-22-04250

Otros ingredientes: Gelatina, glicerina vegetal, agua purificada.

NO CONTIENE GLUTEN



Descripción

Este producto provee 240 mg de ácido gama-linolénico por cápsula, extraído de las semillas de la planta Borago officinalis. El GLA es esencial para la salud de la piel y para el balance hormonal femenino. El GLA debe considerarse junto con los omegas, para restaurar la salud de la piel.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	BALANCE HORMONAL	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
	✓	✓		✓		✓	✓		

GLA



Indicaciones

- Artritis reumatoidea y otras enfermedades autoinmunes, por su poder anti-inflamatorio síndrome pre-menstrual y dolor menstrual
- Balanceador de las hormonas de la mujer
- Promueve la pérdida de peso al estimular la utilización de la grasa corporal para la producción de energía
- Piel seca, dermatitis atópica y eczemas (combinar con omega 3 para mejores resultados)
- Neuropatía diabética
- Ayuda a preservar la estructura y función de las neuronas y favorece la microcirculación
- Dieta ketogénica, como fuente de Omega 6 saludable (antiinflamatorio)

PARTICULARIDADES DEL PRODUCTO:

- Desde que se ha popularizado la tendencia de las dietas altas en grasas y muy bajas en carbohidratos, debemos conocer cuáles fuentes de grasa son las que más favorecen nuestra salud.
- Los Omega-6 han ganado una mala reputación, pero al igual que los Omega-3, algunos son esenciales, específicamente el ácido gama linolénico (GLA).
- El GLA es un derivado del ácido linolénico, cuyo metabolismo depende de niveles adecuados de vitamina B6, zinc y magnesio. Algunas condiciones que producen deficiencia de este ácido graso son la diabetes (tanto tipo 1 como tipo 2), individuos con problemas de tiroides, cáncer y con infecciones virales crónicas.
- La tendencia a evitar fuentes comunes de Omega-6 en la alimentación (aceite de soya y maíz), tiene su razón en que un consumo elevado de este ácido graso promueve la inflamación.

DOSIS RECOMENDADA:

DOS CÁPSULAS DIARIAS

CADA CÁPSULA CONTIENE 240 MG DE ÁCIDO GAMMA LINOLEICO EXTRAÍDO DE LA PLANTA
BORAGO OFFICINALIS

CADA FRASCO CONTIENE 60 CAPSULAS

PharmaGABA

Información del Suplemento

Tamaño de la Porción: 2 tabletas
 Porciones por envase: 30
 Dosis máxima: 2 tabletas diarias

Por tableta	Cantidad	% valor diario
Ácido gama-aminobutírico (GABA)	100 mg	*

*Valor diario no establecido.

Otros ingredientes: Xilitol, F-MELT®, estearatos vegetales, celulosa microcristalina ácido cítrico, sabores naturales, extracto de hoja de estevia.

Uso recomendado: Como suplemento nutricional, mastique dos tabletas diarias.

ADVERTENCIA: Consulte a un profesional de la salud antes de usar si está tomando algún medicamento o si planea someterse a algún procedimiento médico.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



NO CONTIENE GLUTEN
 NO CONTIENE INGREDIENTES GMO



Descripción

GABA (ácido gama-aminobutírico) es un neurotransmisor del sistema nervioso central. Se sintetiza naturalmente del aminoácido glutamato. El GABA es un neurotransmisor inhibitorio, por lo que calma la actividad neuronal y previene su sobre estimulación. A través de este mecanismo, el GABA es una sustancia calmante que ayuda a control el efecto del estrés y la ansiedad. Mantener niveles adecuados de GABA ayuda a estabilizar el ánimo y mejorar la respuesta ante situaciones estresantes.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	PÉRDIDA PESO	CARDIOVASC	COGNITIVO	EMOCIONAL	DIGEST	DEPORTIVO	ADICCIONES
	✓	✓	✓	✓		✓	✓

PharmaGABA



Indicaciones

- Ansiedad y agitación
- Depresión
- Ataques de pánico
- Adicciones (por comida, fumado y alcohol), ayuda a disminuir la ansiedad
- En programas de pérdida de peso, ayuda a adherirse al plan de alimentación al reducir la ansiedad emocional que lleva a comer
- Fortalece el sistema inmunológico
- A nivel cognitivo: enfoque, concentración y claridad mental
- Desempeño deportivo
- Sueño
- Hipertensión arterial

Contraindicaciones

Este producto no se recomienda para mujeres embarazadas ni en período de lactancia, en niños (solamente bajo supervisión médica). No debe combinarse con Benzodiacepinas (ansiolíticos) ya que éstos tienen su efecto en el sistema GABAérgico. Este producto no debe combinarse con bebidas alcohólicas ya que puede exacerbar el efecto relajante del alcohol.

DOSIS RECOMENDADA:

UNA TABLETA EN LA MAÑANA Y OTRA EN LA NOCHE
MASTICAR O DEJARLA DERRETIR EN LA BOCA
CADA FRASO CONTIENE 60 TABLETAS MASTICABLES

PharmaGABA™

designs for health®

A natural way to attain calm focus

By David Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

THIS INFORMATION IS PROVIDED FOR THE USE OF PHYSICIANS AND OTHER LICENSED HEALTH CARE PRACTITIONERS ONLY. THIS INFORMATION IS INTENDED FOR PHYSICIANS AND OTHER LICENSED HEALTH CARE PROVIDERS TO USE AS A BASIS FOR DETERMINING WHETHER OR NOT TO RECOMMEND THESE PRODUCTS TO THEIR PATIENTS. THIS MEDICAL AND SCIENTIFIC INFORMATION IS NOT FOR USE BY CONSUMERS. THE DIETARY SUPPLEMENT PRODUCTS OFFERED BY DESIGNS FOR HEALTH ARE NOT INTENDED FOR USE BY CONSUMERS AS A MEANS TO CURE, TREAT, PREVENT, DIAGNOSE, OR MITIGATE ANY DISEASE OR OTHER MEDICAL CONDITION.

What is GABA?

GABA (gamma-aminobutyric acid) is a naturally occurring amino acid in the brain and is a major inhibitory neurotransmitter in the central nervous system (CNS). Being an inhibitory neurotransmitter, GABA blocks nerve impulses, slowing down the activity of nerve cells and preventing them from over-firing. Frequent over-firing of brain cells can lead to cell death, meaning that stress can actually kill brain cells. Keeping GABA levels optimal can help prevent this. Thus, GABA serves as a critical calming agent for the body, helping to combat stress and anxiety.

The brain synthesizes GABA from glutamate, an excitatory neurotransmitter. These two neurotransmitters work together in a beautifully orchestrated system of checks and balances. Neurotransmitters are the brain's basic components of communication, and when there is a breakdown in this communication system, brain function becomes affected. In stressful situations, GABA levels in the body can decrease, and this delicate system becomes out of balance. In a study on humans, prefrontal brain GABA levels decreased by 18% after acute psychological stress, specifically threat of shock (Hasler, G, et al, Am J Psychiatry, 2010). Thus, supplementation with PharmaGABA™, a natural, bioidentical GABA, may be of benefit in helping to cope with stressful situations, whether they arise from daily or extreme stress.

PharmaGABA™ may be beneficial for:

- Anxiety/Agitation
- Depression
- Cravings and Addictions – helping to decrease addiction-associated anxiety
- Immune Function
- Focus, Mental Clarity, Concentration
- Sports Performance
- Sleep
- Hypertension

PharmaGABA™

This naturally-sourced GABA is made via a process where the amino acid glutamic acid (glutamate) is fermented using *Lactobacillus hilgardii*, the beneficial bacteria also used to ferment many foods including the vegetables in kimchi, the national dish of Korea. PharmaGABA's chewable tablet delivery allows for rapid and efficient absorption and assimilation. As a result, benefits are felt very quickly.

Anxiety

GABA's role as an inhibitory neurotransmitter is paramount. A study of over 1200 students in China looked at the association of problem behavior with neurotransmitter deficiency in adolescents. Upon completion of two analytical questionnaires it was concluded that deficiencies in neurotransmitters such as GABA may cause behavioral and mental issues, including those of anxiety and depression (Song X, J Huazhong Univ Sci Technolog Med Sci. 2010).

Brain waves are analyzed in order to learn how the brain reacts to real life situations. Alpha waves are produced during meditation, and anytime the body is relaxed and alert. Beta waves, on the other hand, are seen in situations of high stress and where there is difficulty in focus and concentration. Although some believe that GABA does not get through the blood brain barrier, multiple studies have been performed on the effects of oral administration of GABA with remarkable results in a short period of time. In a study of 13 subjects, alpha and beta brain waves were evaluated after oral intake of GABA through the use of EEGs. Results after one hour showed that GABA increased the production of alpha waves while decreasing beta waves, indicating that GABA may help to induce relaxation and reduce anxiety (Abdou AM, et al, Biofactors, 2006). It is believed that GABA supplementation is able to achieve these results by activating the parasympathetic nervous system, a division of the autonomic nervous system responsible for a variety of involuntary bodily processes involved in relaxation.

PharmaGABA™ for Academics & Athletics

Because of GABA's effect on the parasympathetic nervous system, and its ability to help to increase the production of alpha brain waves, supplementation of PharmaGABA™ may be of great benefit in situations where a relaxed state of mind is necessary. If the mind is relaxed, it allows for clear thinking, better focus, and greater concentration. In this respect, GABA has been found to be of benefit in academics, in helping to improve learning capacity.

PharmaGABA™ was given to elementary school students in Japan, to examine GABA's relaxing effect and its potential to improve students' learning efficiency. Results showed that GABA suppressed the secretion of CgA (salivary chromogranin A; secreted in times of psychological stress), demonstrating reduced stress at the time of learning. An increased accuracy rate of testing was also observed, as well as a significant reduction in tension toward learning (as measured by a Manifest Anxiety Scale).

Researchers concluded that PharmaGABA™ was effective in improving students’ learning efficiency and in helping to improve students’ test results (Unpublished data provided by Pharma Foods International Co. Ltd.)

This concept also holds true with respect to athletes and sports performance. Athletes often refer to this state of mind as being “in the zone,” where their ability to relax and focus leads to a greater level of concentration on their performance and a reduction in pre-competition nervousness.

Addictions

Although addictions (such as drug and alcohol) are complicated diseases, they are considered to be brain disorders. More specifically, they are chronic, relapsing disorders caused by disturbances in the neurobiological mechanisms of brain function. In fact, alcoholism and stress share some common neural circuits including the GABAergic system, in particular, the GABA(B) receptor. GABA(B) receptors are involved in controlling the release of GABA and therefore affect depressed moods and pain. Using substances such as drugs and alcohol for recreational purposes is based on the fact that they cause rewarding effects through the pleasure center in the brain. Experiments have shown that modulation of the GABA(B) receptor can greatly affect this reward process. It is this ability to affect the reward process which has led to research relating to GABA’s potential in the treatment of addiction. Evidence suggests that modulators of the GABA(B) receptor can aid in the initiation and maintenance of abstinence, and in the prevention of relapse in some addictions (Tyacke RJ, et al, Pharmacol. 2010)

Help for Smoking Addiction

The anti-anxiety effects of PharmaGABA™ have been shown to be a helpful aid to those trying to quit cigarette smoking. A double-blind study of smokers attempting to stop their use of cigarettes used two different surveys in order to measure the psychological reactions of the participants (Profile of Mood Status and Visual Analogue Scale [intuitive feelings/mood]). Results showed the level of desire to continue smoking was significantly reduced among those taking PharmaGABA™. In addition, lower levels of the salivary protein chromogranin A (CgA) were observed in the PharmaGABA™ group. From this study researchers concluded that the stress derived from quitting or reducing cigarette smoking can be mitigated with the administration of PharmaGABA™ (Yogohoshi H, et al, unpublished study by The Pharma Foods International Co, 2010)

Immune Function

Stress and anxiety impact the immune response and are associated with immunosuppression. GABA has been shown to play a role in enhancing immune function in stressful situations. In one particular study, eight acrophobic subjects (those with a fear of height) were asked to cross a suspended bridge, a truly stressful situation for them. Salivary IgA was monitored during the crossing of the bridge. Stress lowers salivary IgA, while relaxation raises this marker. The placebo group showed marked decrease of their IgA levels, while those given GABA showed significantly higher IgA levels (Adham M, et al, Biofactors, 2006)

Sleep

Another benefit of GABA’s ability to promote relaxation is that it may be helpful in inducing sleep. Certain GABA receptors are highly expressed in the thalamus, the part of the brain that is distinctively important in the control of sleep and wakefulness. GABAergic inhibition in the thalamus is known to play a principal role in the generation of sleep brain waves. Thus, PharmaGABA™ is suitable to take before bedtime to help promote a good night’s sleep and may be ideal for stress-induced insomnia.

Normalizing Blood Pressure

Supplementing with GABA has been shown to help reduce blood pressure in adults with mild hypertension. An eight-week trial was conducted on 50 men and women with systolic blood pressure between 130 and 180mmHg. The results of this study showed a significant reduction in blood pressure with daily supplementation of 80 mg of GABA, as compared to the placebo group (Matsubara F, et al., Japanese Pharmacology & Therapeutics, 2002)

Who Should Not Take: This product is not recommended for pregnant or lactating women, as well as young children, unless under the guidance of a health care practitioner. Use of PharmaGABA™ may conflict with taking anxiety medications. Most prescription drugs for anxiety work on the GABAergic system since this is known to play an important role in the pathophysiology of anxiety disorders. Do not take PharmaGABA™ with excess alcohol consumption as it may exacerbate the relaxation effect of alcohol drastically.

Supplement Facts	
Serving Size 2 tablets	
Servings Per Container 30	
Amount Per Serving	% Daily Value
gamma-Aminobutyric acid (as PharmaGABA™)	200 mg *
*Daily Value not established.	

Other Ingredients: Xylitol, F-MELT®, vegetable stearates, microcrystalline cellulose, citric acid, natural flavors, stevia (leaf) extract, pharmaceutical glaze.



For a list of references cited in this document, please visit:

http://catalog.designsforhealth.com/assets/itemresources/PharmaGABA_References.pdf

Magnesio L-treonato

Información del suplemento

Tamaño de la porción: 3 cápsulas
 Porciones por envase: 30

Por porción	Cantidad	% Valor diario
Magnesio (proveniente de 2 gramos de magnesio L-treonato)	144 mg	34%*

*Valor diario no establecido

Otros ingredientes: celulosa (cápsula), celulosa microcristalina y estearato vegetal.

NO CONTIENE GLUTEN

NO CONTIENE INGREDIENTES GMO

USO RECOMENDADO: como suplemento nutricional, tome tres cápsulas al día o según se lo recomiende su médico. Dosis máxima diaria: tres cápsulas al día.

AVISO: este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-18-02803



Descripción

Muchos estudios científicos demuestran que las conexiones sinápticas en el hipocampo (región crítica para las funciones cognitivas como el aprendizaje y la memoria) se deterioran durante el proceso natural del envejecimiento. El magnesio L-treonato, que contiene la molécula patentada Magtein®, contiene magnesio quelado al ácido treónico (magnesio L-treonato). Esta molécula es capaz de atravesar la barrera hemato-encefálica, ya que transporta iones de magnesio a través de los lípidos de las membranas celulares, incluyendo los de las neuronas. Investigaciones realizadas en el M.I.T. concluyen que, al aumentar la concentración cerebral de magnesio, por medio de la suplementación del magnesio L-treonato, es una estrategia muy valiosa para estimular las funciones cognitivas y prevenir el deterioro cognitivo relacionado con la edad.

A nivel deportivo se utiliza para mejorar la concentración de los atletas.

Magnesio L-treonato



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
	✓		✓			✓			

Indicaciones

- Mejorar la memoria
- Relajación
- Sueño
- Habilidades cognitivas (concentración, capacidad de aprendizaje, capacidad de toma de decisiones, memoria)
- Demencia senil y enfermedad de Alzheimer
- Síndrome de estrés postraumático
- Ansiedad
- Fobias
- Déficit atencional con hiperactividad
- Depresión
- En terapias anti-envejecimiento

PARTICULARIDADES DEL PRODUCTO:

- Penetra a nivel intracelular y cruza la barrera hemato-encefálica
- No produce diarrea (no actúa como laxante)
- No contiene estearato de magnesio
- Es el tipo de magnesio más vendido por el Dr. Mercola
- Se ha demostrado que éste eleva el nivel de magnesio a nivel cerebral y es una estrategia útil para evitar el deterioro de la capacidad cognitiva relacionada con el estrés y la edad

NeuroMag™



For keeping the brain and neurons healthy

By David M. Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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NeuroMag™ features the unique, patented, chelated mineral Magtein™, which is magnesium chelated to threonic acid (magnesium L-threonate). This ionophore has been found to be superior to other forms of magnesium at getting through the blood brain barrier as it is able to transport ions (in this case magnesium ions) across lipid membranes, including brain cells.

Why magnesium for the brain?

Magnesium deficiency is well known to produce neuropathologies. Only 16% of the magnesium found in whole wheat remains in refined flour, and magnesium has been removed from most drinking water supplies, setting a stage for magnesium deficiency. This is aggravated by the fact that magnesium is depleted by stress, sweating, alcohol consumption and many medications. Magnesium ions regulate calcium ion flow in neuronal calcium channels, helping to regulate neuronal nitric oxide production. In magnesium deficiency, neuronal requirements for magnesium may not be met, causing neuronal damage, which could manifest as memory loss, depression and more.

Anxiety disorders, such as phobias and post traumatic stress disorder, are among the most common mental disorders and are associated with magnesium deficiency. Stress exposure, depending on its intensity and duration, affects cognition and learning. Follows is a direct quote from a study published in the Journal of Neurosciences, 2011: "Studies suggest that enhancement of plasticity in certain brain regions such as the prefrontal cortex (PFC) and/or hippocampus might enhance the efficacy of cognitive therapy. We found that elevation of brain magnesium, by a novel magnesium compound [magnesium-L-threonate (MgT)], enhances synaptic plasticity in the hippocampus and learning and memory in rats. Here, we show that MgT treatment enhances retention of the extinction of fear memory, without enhancing, impairing, or erasing the original fear memory." Even aged rats showed improvement in memory.

Several studies indicate that these same synaptic connections in the brain hippocampus, a critical brain region for learning and memory, decline during aging. Studies have also found low levels of magnesium in the brains of patients suffering from Alzheimer's disease. NeuroMag's Magtein™ was found in animal studies to increase learning ability, working memory, and short- and long-term memory. NeuroMag™ enhances functioning of the hippocampus by improving synaptic plasticity and NMDA (N-Methyl-D-aspartate) receptor-dependent signaling. Researchers at MIT conclude that elevating brain magnesium levels with Magtein™ may be beneficial in enhancing cognitive abilities and preventing age-related memory decline. Increasing plasticity in the prefrontal cortex and amygdala of the brain improves memory because these brain areas are also deeply involved in mediating the effects of exposure to stress on memory.

SUPPLEMENT FACTS		
Serving Size 3 capsules		
Servings Per Container 30		
Amount Per Serving	% Daily Value	
Magnesium (as Magnesium L-Threonate)	144 mg	36%
Magtein™ (as Magnesium L-Threonate)	2 g	*
*Daily Value not established.		

Other Ingredients: Cellulose (capsule), microcrystalline cellulose, vegetable stearate.



How To Take:

- Take 2 grams (3 capsules) for maintenance
- For best results, take NeuroMag™ in divided doses
- Take 3-4 grams for memory loss or recognition difficulties
- Consider combining with Brain Vitale™ capsules

References

1. Effects of elevation of brain magnesium on fear conditioning, fear extinction, and synaptic plasticity in the infralimbic prefrontal cortex and lateral amygdala. Abumaria N, et al. J Neurosci. 2011 Oct 19;31(42):14871-1.
2. Kalzium ist nicht alles. Bush AI. Neuron. 2010 Jan 28;65(2):143-4.
3. Enhancement of learning and memory by elevating brain magnesium. Slutsky I, et al. Neuron. 2010 Jan 28;65(2):165-77.
4. The role of the medial prefrontal cortex-amygdala circuit in stress effects on the extinction of fear. Akirav I, Maroun M. Neural Plast. 2007; 2007:30873. Epub 2007 Jan 16.

Resveratrol

Información del Suplemento

Tamaño de la porción: 1 cápsula

Porciones por envase: 60

Por porción	Cantidad	% Valor diario
TransResveratrol (de 400 mg de la raíz de Polygonum cuspidatum)	200 mg	*
Quercitina	200 mg	*
Lecitina de girasol	100 mg	*

* Porcentaje de valor diario no establecido

Otros ingredientes: Celulosa microcristalina, dióxido de silicón, estearato vegetal.

NO CONTIENE GLUTEN

USO RECOMENDADO: Como suplemento a la dieta, tome una cápsula por día o como recomendado por su médico. Dosis máxima diaria: dos cápsulas al día.

AVISO: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-22-03156



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

Este producto contiene el poderoso polifenol resveratrol el cual se encuentra en el maní, frutos rojos, la cáscara de la uva morada, el vino tinto y la planta Japanese knotweed, también conocida como polygonum. Las investigaciones científicas del resveratrol han demostrado ser un potente antioxidante el cual, entre otras propiedades, actúa como activador de la sirtuína, o sea activa el gen SirT1, que es el que se cree provee su efecto anti-edad. La fuente de polygonum en este producto es estandarizado a un 50% resveratrol, todo en su forma trans.

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FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
✓	✓		✓	✓				✓	

Resveratrol



Indicaciones

- Útil en el tratamiento del hígado graso.
- Anti-envejecimiento
- Para pacientes con alto riesgo de enfermedad cardiovascular: obesidad o hígado graso, dislipidemias, diabetes, resistencia a la insulina
- En prevención de demencias
- Siempre que se desee proveer un efecto anti-oxidante potente

PARTICULARIDADES DEL PRODUCTO:

- Extraído de la raíz de la planta *Polygonum*, que ofrece la forma biológicamente activa, el trans-resveratrol.
- La combinación con la quercetina potencia el efecto antioxidante, especialmente cardiovascular, ayuda a reducir la inhibición plaquetaria y el desarrollo de la aterosclerosis.
- A nivel cerebral tiene efecto neuroprotector, en las condiciones relacionadas con declive cognitivo (demencias), y potencia la regeneración neuronal.
- Ofrece un efecto protector antioxidante potente a nivel cardiovascular, hormonal (estrógeno), anti-cáncer, protector cerebral y antiviral.
- Se ha demostrado su efecto anti-envejecimiento. Tiene el mismo efecto anti-envejecimiento de una dieta baja en calorías.
- Protege de las complicaciones del sobrepeso y la obesidad: diabetes, hígado graso y enfermedad cardiovascular

DOSIS: 1 CÁPSULA DIARIA (200 MG DE TRANS-RESVERATROL)

CADA FRASCO CONTIENE 60 CÁPSULAS

Resveratrol Supreme



A powerful combination of trans-resveratrol, quercetin and sunflower lecithin

By Cristiana Paul, MS & Suzanne Copp, MS

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Exciting research continues to emerge concerning the powerful polyphenol resveratrol, which is found in peanuts, berries, the skin of red grapes, red wine, and in the Japanese knotweed plant also known as Polygonum. Resveratrol is produced by certain plants to act as a natural pesticide. In the case of grapes, it concentrates in the skin and protects the plant from mold and bacterial infection. The harsher the climate in which grapes grow, for example, the more resveratrol is found in wine produced from those grapes.

Research shows that resveratrol provides very potent antioxidant protection, estrogen protection, cardio-protection, cancer protection, viral protection and neuron protection. But probably the most exciting news on resveratrol is that researchers at Harvard Medical School are hopeful that it may actually be capable of increasing human lifespan dramatically! They discovered that resveratrol acts as a sirtuin activator, meaning it activates the SirT1 gene, which, when turned on, slows the aging process. It is believed that the trans-resveratrol form is responsible for this anti-aging effect. The polygonum source used in Resveratrol Supreme is standardized to 50% resveratrol, all in the trans form.

Resveratrol has the same anti-aging effect as cutting calories

A study by the Harvard Medical School and the National Institute of Aging shows that a high dose of resveratrol lowers the rate of diabetes, liver problems and other fat-related ill effects in obese mice by mimicking the well known life-extending effect produced by calorie restriction. Mice fed a high-fat diet had a 31 percent decrease in fat-related deaths for obese mice on the supplement, compared to untreated obese mice.

Treated mice also lived much longer than expected. The treated obese mice were just as agile on exercise equipment as lean mice. Also, "the organs of the fat mice that got the resveratrol looked normal when they shouldn't have," said study lead author Dr. David Sinclair of Harvard Medical School. Resveratrol is also being researched by this group for the treatment of diabetes.

What is effective dosing?

One negative aspect to the otherwise positive resveratrol research is that it would be impossible to consume the amount of resveratrol proven effective from normal food sources. The amounts used in one successful mouse study were approximately 22.4 mg/kg body weight per day. Scaling this amount to human body weights could imply an equivalent human dose of 1.5 to 2.0 grams/day. However, if one compensates for the fact that humans have slower metabolic rates than mice, an equivalent human dose may be closer to 200 mg/day. With this in mind, Resveratrol Supreme was designed as the ultimate high potency, high quality 200 mg trans-resveratrol formulation.

Resveratrol and quercetin are cardioprotective

According to a group of Hungarian researchers, up to 20% of serious vascular events in high-risk vascular patients are attributable to a failure of aspirin to suppress platelet aggregation. These researchers discovered that resveratrol effectively inhibited collagen- and epinephrine-induced aggregation of platelets in these aspirin-resistant patients, which may contribute to its cardioprotective effects in high-risk cardiac patients.

When hamsters were fed an atherogenic diet for 12 weeks and then given resveratrol, quercetin and catechin (all found in red wine), the aortic fatty streak area was significantly reduced in the groups receiving catechin (84%) or quercetin (80%) or resveratrol (76%) in comparison with the controls. The researchers concluded: "These findings demonstrate that catechin, quercetin, and resveratrol at nutritional doses prevent the development of atherosclerosis through several indirect mechanisms." Research on quercetin dihydrate reveals that it lowers lipids by reducing hepatic lipogenesis while also lowering cholesterol absorption. In high-cholesterol fed rats, quercetin dihydrate supplements lowered plasma and hepatic thiobarbituric acid reactive substances (TBARS) and increased the hepatic superoxide dismutase (SOD) and glutathione peroxidase activities.

Maintaining product stability

Designs for Health goes to great lengths to protect all raw materials from potentially damaging heat, light and oxygen by storing them in a climate-controlled environment, and in sealed, opaque containers. Encapsulating and bottling takes place immediately after blending. It has been suggested by some marketers that resveratrol is inherently unstable and prone to convert from the trans to cis form, even though the literature consistently shows that polyphenols, including resveratrol, are extremely stable.

These same marketers go on to suggest that only production as a liquid - cap or gelcap can maintain stability. Since Designs for Health is always 'Science First' focused, the many production possibilities of this product were considered while Resveratrol Supreme was under development. The resulting encapsulated combination of resveratrol from polygonum, quercetin dihydrate, and lecithin proved to be the most effective, economical, and stable formulation. In addition, before and after production, each lot is tested for trans-resveratrol content.

How can we prove resveratrol is stable?

Researchers have proven resveratrol's stability quite conclusively. A study called Resveratrol and its glycon piceid are stable polyphenols states, "Plant extracts containing phytopolyphenols, including resveratrol, are extensively used as nutraceutical supplements. Recent reports allege their lack of stability at ambient conditions. We have studied the stability of resveratrol and its glycon piceid in a mixture with a whole grape extract for 2 years (long-term stability) under Good Manufacturing Practice pharmaceutical protocols (at 60% humidity and 25 degrees C).

The compounds were followed for 4 years under conditions of 'accelerated stability,' at 75% humidity and 40 degrees C, all in the presence of ambient air. Chromatographic analysis did not detect any instability, thus disproving the claims to the opposite." The authors concluded, "No storage precautions are necessary for these nutritional supplements."

Resveratrol and quercetin are neuroprotective

When dopaminergic neurons of the brain were exposed to multiple neurotoxins, resveratrol and quercetin (both sirtuin-activating polyphenols) prevented the decrease of dopaminergic neurons, acting as neuroprotectors. Resveratrol prevented depletion of glutathione and protected against free radicals. Both resveratrol and quercetin have anti-inflammatory action, adding to their ability to protect the heart and nervous system. Researchers have also shown that resveratrol protects brain cells against amyloid beta-induced toxicity.

Resveratrol and quercetin work synergistically

Resveratrol and quercetin are being researched for how they act on the cancer process, including metastasis. Research by Susanne Mertens-Talcott on human leukemia cells reveals that when resveratrol and quercetin are given together they more strongly induce caspase 3 activity, which means they are able to induce an apoptosis effect on the cancer cells.

Resveratrol acts on the process of carcinogenesis by affecting all three phases: tumor initiation, promotion and progression, and suppresses the final steps of carcinogenesis (i.e., angiogenesis and metastasis). Quercetin inhibits a wide range of protein kinases including epidermal growth factor receptor (EGFR) tyrosine kinase and suppresses the secretion of matrix metalloproteinases.

SUPPLEMENT FACTS

Serving Size 1 capsule

Amount Per Serving	% Daily Value
Trans Resveratrol [from 400 mg Polygonum cuspidatum(root)]	200 mg *
Quercetin	200 mg *

*Daily Value not established.

Other Ingredients: Cellulose (capsule), sunflower lecithin, microcrystalline cellulose, vegetable stearate, silicon dioxide.



How to Take:

- As a dietary supplement, take one capsule per day, or as directed by a health care practitioner.

References

- Stef G et al. Resveratrol inhibits aggregation of platelets from high-risk cardiac patients with aspirin resistance. *J Cardiovasc Pharmacol.* 2006 Aug;48(2):1-5.
- Labinskyy N, et al. Vascular dysfunction in aging: potential effects of resveratrol, an anti-inflammatory phytoestrogen. *Curr Med Chem.* 2006;13(9):989-96.
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- Yang H, Baur JA, Chen A, Miller C, Sinclair DA. Design and synthesis of compounds that extend yeast replicative lifespan. *Aging Cell.* 2007 Jan;6(1):35-43. Epub 2006 Dec 5.
- Mertens-Talcott SU, Percival SS. Ellagic acid and quercetin interact synergistically with resveratrol in the induction of apoptosis and cause transient cell cycle arrest in human leukemia cells. *Cancer Lett.* 2005 Feb 10;218(2):141-51.
- Delmas D, et al. Resveratrol as a chemopreventive agent: a promising molecule for fighting cancer. *Curr Drug Targets.* 2006 Apr;7(4):423-42.
- Odbayar TO et al. Comparative Studies of Some Phenolic Compounds (Quercetin, Rutin, and Ferulic Acid) Affecting Hepatic Fatty Acid Synthesis in Mice *J Agric Food Chem.* 2006 Oct 18;54(21):8261-5.

Ácido R-Lipóico

Información del Suplemento

Tamaño de la porción: 1 cápsula

Porciones por envase: 60

Por porción	Cantidad	% valor diario
Biotina	4000 µg	1333 %
Taurina	500 mg	*
Acido R-Lipóico	100 mg	*

* Porcentaje de valor diario no establecido

Otros ingredientes: celulosa (cápsula), bicarbonato de potasio, estearato vegetal y dióxido de silicón.

NOTA: puede variar el color, tamaño y forma de la cápsula de un lote a otro.

NO CONTIENE GLUTEN

USO RECOMENDADO: como suplemento nutricional, tome 1 cápsula por día con comida, o como recomendado por su médico.

Dosis máxima diaria: 2 cápsulas al día.

AVISO: este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no suple una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



Registro Sanitario: SD-US-18-02802



Descripción

El ácido R-lipóico estabilizado es el isómero R del conocido ácido alfa lipóico. Suplementar con la forma R-lipóico tiene ventajas significativas, ya que aumenta su potencia hasta once veces y es una molécula mucho más estable, en comparación con el alfa lipóico. Al unir el ácido R-lipóico a potasio, como en este producto, se garantiza la estabilidad molecular. Este producto es una sal no-hidroscópica y no polimérica (estabilizada).

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIABETES Y PREDIABETES	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
	✓	✓	✓	✓	✓	✓	✓	✓	

Ácido R-Lipóico



Indicaciones

A diferencia del ácido alfa-lipóico, el ácido R-lipóico es una molécula más estable que garantiza mayores beneficios:

- Es un cofactor esencial en los procesos de producción de energía.
- Es un potente anti-oxidante, tanto hidro como liposoluble.
- Esencial en el tratamiento de pacientes diabéticos, polineuropatías diabéticas, cataratas, y enfermedades hepáticas incluyendo el hígado graso.
- Mejora el metabolismo de los carbohidratos: aumenta significativamente la sensibilidad a la insulina, tiene un efecto mimético de la insulina. Mejora el transporte de glucosa mediada por insulina, se ha demostrado que logra disminuir niveles de insulina hasta en un 17%.
- A nivel cardiovascular: trabaja de la mano con otros antioxidantes como la CoQ10, vitaminas C y E y glutatión. Protege contra la peroxidación de los lípidos y reduce el daño por estrés a nivel cardíaco.
- Efecto Anti-inflamatorio: protege contra la neuro-inflamación crónica de la enfermedad de Alzheimer y el declive cognitivo relacionado con la edad, y otras enfermedades crónicas. Tiene un potencial anti-inflamatorio 10 veces mayor que el alfa-lipóico.

DOSIS RECOMENDADA: UNA CÁPSULA DOS VECES AL DÍA.

FRASCO DE 60 CAPSULAS.

Stabilized R-Lipoic Acid



THE HIGHLY EFFECTIVE FORM OF LIPOIC ACID

By Cristiana Paul, M.S.

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Lipoic Acid Chemical Forms: the R and S Isomers

Alpha-Lipoic Acid (or thioctic acid) is synthesized from the amino acid cysteine and octanoic acid in plants and animals as both the R and S isomers, with a great majority as R-lipoic acid and only trace amounts of S-lipoic acid. When alpha-lipoic acid is synthesized in a laboratory, a 50/50 racemic mixture of the R and S enantiomers* results in what we call R/S lipoic acid, which is the most popular form of commercially available lipoic acid (also named RAS lipoic acid or all racemic lipoic acid). Our patients know it as simply alpha lipoic acid. New technological advancements have allowed for the stabilization and isolation of the RLA (R-lipoic acid isomer), which is believed to account for all the benefits seen from studies with R/S lipoic acid. Supplementing with pure RLA, thus eliminating the presence of SLA (S-lipoic acid isomer), creates new opportunities for intensive nutritional support because SLA is believed to interfere with the effectiveness of RLA.^{16-21, 25}

How is Stabilized R-Lipoic Acid Different From Other R-Lipoic Products on the Market?

R-lipoic acid is a highly unstable compound that easily polymerizes into a sticky rubber or glue-like substance if it is not prepared, stored and processed correctly. This may adversely affect bioavailability. Stable RLA is a non-hygroscopic, non-polymeric potassium salt form of RLA. The capsules are heat stable, characterized by fast dissolution rates, high solubility and absorption. They are also free of residual solvents and moisture.

There are wide variations in the R/S ratios and total polymer contents of raw material and finished products now on the market. Few supplement companies have experience with RLA and are unaware of the myriad of problems associated with its encapsulation and stability. Designs for Health's **Stabilized R-Lipoic Acid** is one of the most stable and highly bioavailable forms of R-lipoic acid available on the market.

R-Lipoic Benefits

Lipoic acid is a disulfide compound that is a cofactor in vital energy-producing reactions in the body. It is also a potent biological antioxidant, both water and fat soluble. It is made endogenously in humans and so it is not an essential nutrient. However, many physiological states, such as excessively high blood glucose levels, diabetic polyneuropathy, cataract, liver pathologies and toxic metal load, make lipoic acid conditionally essential. In addition, extensive research indicates that the many roles of alpha-lipoic acid may result in various health benefits, as reviewed here.

*Enantiomers are a set of molecules identical in composition yet with a different spatial conformation which confers them different chemical and physiological properties.

R/S-lipoic acid has been studied for over 30 years and it is approved in Germany as a drug for the treatment of polyneuropathies, such as diabetic and alcoholic polyneuropathies, and liver disease.¹

Recent studies have investigated the effectiveness of RLA versus SLA forms in order to identify their specific effects. It was suspected that RLA, being the majority of the natural form produced in the body, would have a stronger impact than SLA and the results of the research have confirmed this.^{16-21, 25}

Bioavailability

Compared to SLA, RLA causes 50% higher peak plasma levels of lipoic acid and 60-85% higher total absorption.¹² Feeding lipoic acid to animals at risk of cataract caused a 2-7 fold higher uptake of RLA versus SLA in the lens content of lipoic acid, and reduced the development of experimentally produced cataract by 50%.¹⁹

Boosts Energy Production/Mitochondrial Cofactor

RLA is the majority of lipoic acid found in nature and therefore likely to fit better as a cofactor for mitochondrial enzymes pyruvate and alfa-ketoglutarate dehydrogenase.⁵ SLA cannot bind well to these enzymes and actually inhibits them.²⁰ Thus the S-form can oppose the action of the R-form. In the aging rat heart, RLA stimulated ATP production, whereas SLA inhibited it.³

RLA supplementation improves metabolism, measured as oxygen consumption in liver cells, and improves ambulatory activity in supplemented animals, bringing old treated animals to the level of young animals.³ Pre-treatment of brain cells with RLA leads to the restoration of the mitochondrial activity lost due to glutathione depletion.⁶

Enhanced Glucose Metabolism

RLA significantly increases insulin sensitivity, glucose transport, metabolic rate and reduces the gain in body fat associated with aging.¹⁰⁻¹¹ R-lipoic acid has insulin-mimetic effects in glucose uptake in insulin resistant cells and may have therapeutic implications in restoring glucose availability in tissues such as the skeletal muscle.^{13, 16}

Supplement Facts

Serving Size 1 capsule

Amount Per Serving	% Daily Value
Biotin	4 mg 1333%
Taurine	500 mg *
R-Lipoic Acid	100 mg *

*Daily Value not established.

Other Ingredients: Potassium bicarbonate, microcrystalline cellulose, silicon dioxide, vegetable stearate.

The RLA was found to enhance insulin-stimulated glucose transport and non-oxidative/oxidative glucose metabolism by as much as 64%, while SLA had no effect. Also, RLA decreased insulin by 17% while SLA increased it by 15%.¹⁶

Through its positive effects on cellular energy metabolism, RLA attenuates metabolic dysfunction associated with advanced glycation end products (AGEs). AGEs accumulate on long-lived proteins, including beta-amyloid plaques in Alzheimer's disease and contribute to neuronal dysfunction and cell death.²¹

Antioxidant Properties

RLA increases cellular and mitochondrial antioxidant activity, and was able to eradicate the age-related changes in animal models. This effectively attenuates the reported age-related increase in oxidative stress.³

RLA significantly increases or recycles other antioxidants including coenzyme Q10, vitamin C, vitamin E and glutathione.^{3, 5, 6, 11} RLA protects lipids against peroxidation and reverses stress damage in the heart.⁷

Anti-inflammatory Effect

RLA, a membrane permeable antioxidant, prevents the up-regulation of the AGE-induced gene expression responsible for regulating nitric oxide (NO) production. NO oxidizes nitrates and proteins which are markers of a chronic neuroinflammatory condition. This mechanism is relevant for Alzheimer's disease and for many chronic inflammatory conditions.²⁴ RLA reduces inflammation, and is more potent by a factor of 10 over R/S-LA.¹⁷

Metal Chelator

RLA was more effective than the SLA in a battery of metal chelation tests. One hypothesis of the cause of diabetic complications involves overloading by transition metals, which implicates the RLA as more effective in treating diabetic neuropathy.²

Neuroprotection

RLA improves memory, reverses cognitive dysfunction, and protects the brain from neurodegeneration associated with aging. This may be due to its effect on increased ATP production, chelating, antioxidant and anti-glycating capacity.^{6, 7}

Summary of SLA (S-Lipoic Acid) Properties

Until recently it was believed that SLA was physiologically inactive. Results from studies performed in vitro and with animals comparing the R with the S or R/S LA are warranting the use of pure RLA over the racemic ALA, whenever possible. SLA cannot bind with critical mitochondrial enzymes and inhibits ATP production.²⁰ At high concentrations, S-lipoic acid inhibits mitochondrial metabolism. It is metabolized in the outer cell membrane or cytoplasm which may interfere with RLA's ability to penetrate the inner mitochondrial membrane, thus limiting energy production.²⁰ SLA does not improve glucose disposal and slightly increases insulin levels.¹⁶

SLA has some positive benefits, but no advantage over the pure R form. SLA can function as an antioxidant but it recycles 38 times slower than RLA.¹⁴ It also has some metal chelating properties, yet inferior to the R form.¹⁶ Although toxicity studies have proven SLA to be safe up to very high levels, it is clear that SLA is not a metabolically preferred molecule.

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L-Glutamina en Polvo

Información del Suplemento

Tamaño de la dosis: 3 gramos (3/4 de cucharadita)
Porciones por envase: 83

Por porción	Cantidad	% valor diario
L-Glutamina	3 gramos *	

* Valor diario no establecido.

Otros ingredientes: Ninguno.

Aviso: Este producto no debe usarse para el diagnóstico, tratamiento, cura o prevención de alguna enfermedad y no supe una alimentación equilibrada. No utilizar en mujeres embarazadas, en período de lactancia o en niños. Utilícese bajo supervisión médica.



NO CONTIENE GLUTEN
NO CONTIENE INGREDIENTES GMO

Registro Sanitario: SD-US-18-02800



GLUTEN FREE

DAIRY FREE

SOY FREE

PESTICIDE FREE

NO FILLERS

LAB TESTED

Descripción

La glutamina es esencial para la salud inmunológica y la salud del tracto gastrointestinal. En el intestino delgado genera procesos de reparación celular y restauración del funcionamiento normal de los enterocitos. A nivel muscular, estimula el crecimiento de la masa y potencia la fuerza, y es particularmente útil para el mantener el músculo existente. Se utiliza como sustrato para la síntesis protéica y es un precursor anabólico para el crecimiento muscular.

NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABOLICO	DIGEST	DEPORTIVO	KETO PESO	ANTIOX	MUSCULO-ESQ
				✓	✓	✓	✓		✓

L-Glutamina en Polvo



Indicaciones

- Optimiza el crecimiento muscular.
- Estimula la cicatrización de heridas y quemaduras.
- Protege el cuerpo contra el estrés.
- Combate infecciones agudas como el resfrío común.
- Ayuda en el balance de la glicemia.
- Controla los deseos intensos por azúcar y por alcohol.
- Repara el daño celular del intestino permeable y ayuda en el tratamiento de las alergias e intolerancias a alimentos.
- Promueve el balance ácido-base.
- Ayuda a contrarrestar los efectos secundarios de la quimioterapia.

DOSIS RECOMENDADA:

TOMAR 1 ½ CUCHARADITA (7 GRAMOS) EN DOSIS DIVIDIDAS.

PUEDE TOMARSE CON AGUA, JUGO O EN BATIDOS.

Nota: tomar vitamina B6, 50 mg diarios, ayuda a un mejorar el beneficio terapéutico de la glutamina.

CONTRAINDICACIONES: insuficiencia renal y hepática.

L-Glutamine

to support the natural production of dopamine



By David M. Brady, ND, DC, CCN, DACBN & Suzanne Copp, MS

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The functions of glutamine are many and include: substrate for protein synthesis, anabolic precursor for muscle growth, acid-base balance in the kidney, substrate for ureagenesis in the liver, substrate for hepatic and renal gluconeogenesis, an oxidative fuel for intestine and cells of the immune system, inter-organ nitrogen transport, precursor for neurotransmitter synthesis, precursor for nucleotide and nucleic acid synthesis and precursor for glutathione production. ¹

Glutamine is a nutrient with an impressive range of health benefits. It helps balance blood sugar, build lean muscle, and strengthen the body's defenses. How does this amino acid do so many things? Because of its unique Robin Hood-like nature: it distributes nitrogen freely to the cells which need it most. Since many cells throughout the body – including immune, gut and muscle cells – need nitrogen as a fuel and basic building block, giving your body glutamine has powerful and wide-ranging health effects. ² Glutamine is also an excellent brain fuel which helps keep mental energy up and cravings down. ³

Benefits of Glutamine:

- ▶ Optimizes muscle growth
- ▶ Promotes wound healing
- ▶ Protects the body from stress
- ▶ Fights colds & flus
- ▶ Balances blood sugar
- ▶ Helps stop sugar & alcohol cravings
- ▶ Helps heal leaky gut & food allergies
- ▶ Promotes healthy acid-alkaline balance
- ▶ Helps counter the side-effects of chemotherapy

Maintain Muscle Tissue

Glutamine is a must supplement for anyone who skips meals. Why? One of the most important reasons to eat regular meals is to maintain muscle tissue. Your body needs a steady supply of protein or it will break muscle down for energy. For example, when you wake up in the morning, your body is already in the process of breaking down muscle tissue because you have not eaten for approximately 12 hours. To stop this catabolic state, it is important to begin the day with protein, either by eating a healthy protein-rich breakfast or, if that is not possible, by taking 1-2 teaspoons of glutamine in water or juice. By doing so the body will instantly get the nitrogen it needs to build and maintain muscle.

Sports Applications

Glutamine is an ideal supplement to combine with exercise. Prolonged exercise lowers glutamine levels in the body, sometimes for as long as two weeks after the event. ⁴ Glutamine also helps the body store more glycogen, the energy reserve in the liver and muscle that fuels exercise. ⁵ It enhances growth hormone secretion, which in turn increases muscle growth and overall health. ⁶ Glutamine also helps prevent muscle soreness by speeding muscle recovery. Thus, taking a teaspoon before and after exercise is a good idea to help attain maximum results.

Supporting Digestive Health

Glutamine is the single most important nutrient needed for a healthy digestive tract. Glutamine is called "the intestinal permeability factor" because of its ability to maintain the integrity of the intestinal wall. ⁷ It is important to keep our intestinal tract from becoming permeable. If our gut wall allows large food molecules into the body, a host of problems can develop: arthritis, disturbed immune function, autoimmune diseases, food allergies, and even mood disorders and mental illness. This "leaky gut" syndrome can be greatly helped by taking 10-30 grams of glutamine (3-10 tsp.) per day for a month. Glutamine is also beneficial for Crohn's disease, colitis ⁸, inflammatory bowel disease ⁹, ulcers, and diarrhea ¹⁰, and has even been shown to lessen stomach inflammation during chemotherapy. ¹¹

Fighting Colds and Flus

Glutamine is a major energy source for the immune system and its varied cells. ¹² Viral infections from colds and flus to conditions like HIV all dramatically lower glutamine levels, making supplementation essential. ¹³ We never want a glutamine deficiency, because this will lower levels of our protective T cells ¹⁴ and reduce the ability of macrophages to kill viruses and bacteria. ¹⁵ For this reason, glutamine plays a critical role in helping to fight any kind of cold, flu or immune weakness. It is especially important when patients are sick and not able to eat well.

Speeds Wound Healing

Glutamine helps to speed wound healing ¹⁶ and is very important for burn and trauma victims. ¹⁵ The body cannot make enough glutamine to meet its needs during any periods of physical stress or injury, and supplementation is essential under such circumstances. ¹⁷ Glutamine is an ideal nutrient for post-surgical patients, as it improves hospital outcomes and shortens hospital stays. ^{17,18} In cirrhosis, glutamine is also very beneficial. ²⁰ It may not be desirable in very late stage liver failure, however, for then the liver cannot handle glutamine very effectively.

Helping Cancer Patients

Cancer patients may benefit from glutamine supplements because it 1.) enhances immune function 2.) protects the body from side effects from radiation, chemotherapy and surgery and 3.) enhances the effectiveness of chemotherapeutic drugs, including methotrexate. ²¹ Glutamine also protects against infections in patients undergoing bone marrow transplants. ²² Doses used with cancer patients are in the range of 10 to 40 grams (3-14 teaspoons) per day given in divided doses.

More Benefits of Glutamine

Glutamine increases production of glutathione, the main antioxidant of the body. This in turn boosts immune function, protects all tissues from damage, and detoxifies harmful substances. Glutamine is also an important precursor for neurotransmitter substances in the brain, and helps to support brain wellness and mental energy. When 12 grams (four teaspoons) was given to alcoholics, glutamine eliminated alcohol cravings in 75% of those studied. ²³ Glutamine also helps promote milk production in lactating women. Since glutamine dissolves instantly in water and has no taste, the powder form is recommended, although capsules are highly effective, too. For this reason, DFH also offers glutamine in capsules (850 mg per cap). Glutamine is very safe and without side effects.

Glutamine converts to glutamate and back again as a very normal process in the body. Glutamine is not neurotoxic as has been suggested in the book *The Taste That Kills*. Unfortunately, there are many scientifically incorrect inferences in this book.

How to Use Glutamine

Controlling appetite.....	1-3 tsp.
Balancing blood sugar.....	1-3 tsp.
Supporting muscle growth...	3-5 tsp.
Colds & Flus.....	3-10 tsp.
Leaky Gut/Food Allergies....	3-10 tsp.
Wound Healing.....	3-10 tsp.
HIV Infection.....	3-10 tsp.
Cancer/Chemotherapy.....	3-14 tsp.

Glutamine can be taken in water, juice, or mixed into healthy shakes.

Cofactor nutrient: vitamin B6, 50 mg per day, helps the body use glutamine more effectively. Taking 5 tsp. or more per day of glutamine decreases protein needs slightly, as glutamine helps the body use protein more effectively.

Contraindications: liver or kidney failure.

Recommended Use:

- Capsules: As a dietary supplement, take one capsule per day, or as directed by your health care practitioner.
- Powder: As a dietary supplement, take 3 grams (approx. 3/4 teaspoon) per day, or as directed by your health care practitioner.

L-Glutamine Capsules

Supplement Facts		
Serving Size 1 capsule		
Amount Per Serving	% Daily Value	
L-Glutamine	850 mg	*

*Daily Value not established.

Other ingredients: Microcrystalline cellulose, vegetable stearate.

L-Glutamine Powder - 250 grams (also available in 500 grams)

Supplement Facts		
Serving Size 3 grams (approx. 3/4 teaspoon)		
Servings Per Container 83		
Amount Per Serving	% Daily Value	
L-Glutamine	3 g	*

* Daily Value not established.

Other ingredients: Microcrystalline cellulose, vegetable stearate.

For a list of references cited in this document, click the related research link <http://www. needsalinkhere.com>

COLÁGENO

Información del Suplemento

Tamaño de la porción: 13 gramos (una medida)

Porciones por envase: 30

Consumo máximo: 1 medida diaria

Por porción		% diario
Péptidos de colágeno	12,5 g	†
Valor energético	45 kcal (188,4 kJ)	
Proteína	11 g	0%*
Sodio	30 mg	1%
Carbohidratos (hidratos de carbono)	0 g	0
Fibra dietética	0 g	0
Grasas (lípidos)	0 g	0

No es fuente significativa de grasa saturada.

* Porcentaje de valor diario basado en una dieta de 2000 calorías según FDA.

† Valor diario no establecido.

Otros ingredientes: Ninguno.

Uso recomendado: Mezcle 13 gramos (una medida) en ocho onzas de agua diariamente, o como recomendado por su profesional en salud. Para mejores resultados, agregue el polvo antes de agregar el agua.



NO CONTIENE GLUTEN



Registro Sanitario: SD-US-21-01901



GLUTEN FREE



DAIRY FREE



SOY FREE



PESTICIDE FREE



NO FILLERS



LAB TESTED

Descripción

Este suplemento contiene una combinación de tres tipos de péptidos de colágeno patentados:

- FORTIBONE® para mejorar los componentes óseos esenciales (minerales y contenido orgánico con énfasis en la matriz de colágeno)
- FORTIGEL® para mejorar la producción de colágeno en articulaciones, lo que mejora la estructura cartilaginosa
- VERISOL® que en piel estimula la síntesis de colágeno, elastina y glicosaminglicanos, y logra reducir la apariencia de arrugas y mejorar la elasticidad e hidratación del cutis.

El colágeno es un tipo de proteína que representa el 30% de la proteína total del cuerpo humano, y es el principal componente estructural del tejido conectivo. La composición de aminoácidos del colágeno que proviene de la alimentación, es muy similar a la del colágeno humano, lo que hace que éstos péptidos sean ideales para su regeneración y mantenimiento.

COLÁGENO



NO CONTIENE GLUTEN, NO CONTIENE LACTEO, FORMULA VEGETARIANA, NON-GMO

FUNDAMENTAL	ANTIAGING	CARDIOVASC	COGNITIVO	METABÓLICO	PESO	MÚSCULO ESQUELÉTICO	DEPORTIVO
				✓		✓	✓

Indicaciones:

- Densidad y calidad de la masa ósea
- Piel: mejora tono, elasticidad, hidratación y apariencia
- Salud y fortaleza de las uñas
- Salud articular (cartílago, tendones y ligamentos)
- Fuerza muscular
- Salud gastrointestinal
- Durante el proceso de recuperación de lesiones
- Reduce la aparición de arrugas y mejora la apariencia de la celulitis

USO RECOMENDADO:

MEZCLE 13 GRAMOS (UNA MEDIDA) EN 8 ONZAS DE AGUA O COMO RECOMENDADO POR SU PROFESIONAL DE SALUD.

TAMBIÉN PUEDE AGREGARSE A BATIDOS, JUGOS, CAFÉ, TÉ, SOPAS, YOGURT, PURÉ Y POSTRES.

ESTE PRODUCTO NO TIENE SABOR.

CADA FRASCO CONTIENE 390 GRAMOS (30 DOSIS)

Whole Body Collagen

Research proven collagen peptides for bone, joints and skin

By Cristiana Paul, MS & Amy Berger, MS, CNS

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Whole Body Collagen is a synergistic formulation designed to benefit the health of bones, joints, and skin. It contains the research-proven collagen peptide blends Verisol®, Fortigel® and Fortibone®, which are derived from dietary collagen protein and produced with proprietary hydrolyzation technologies in order to optimize their beneficial properties. Other hydrolyzed collagen proteins are available, but they cannot all be assumed to have the same efficacy, due to different amino acid and peptide profiles. In addition, the clinical effects obtained in studies with collagen peptides have not been duplicated with non-collagen type proteins, likely due to collagen's unique composition.³¹

Why Collagen Peptides?

Compared to other proteins, collagen has a unique amino acid composition and a distinct role in human anatomy. Collagen proteins are rich in the modified amino acid hydroxyproline (approx. 12%), and they have an unusually high content of glycine and proline (approx. 22% and 13%, respectively). While other dietary proteins can provide these, collagen is a more concentrated source, and as such, may be a more effective choice when the clinical goal is related to collagen as a structural protein, such as in supporting the strength of bone, tendons and cartilage, as well as the health and appearance of skin.

Collagen accounts for as much as 30% of the body's total protein, especially connective tissue. The amino acid and peptide compositions of dietary collagens are very similar to those in human collagens, making dietary collagen peptides ideal for supporting body collagen turnover and renewal.

Many individuals—the elderly in particular—do not consume adequate protein. Even among those with a higher protein intake, unless nose-to-tail eating is emphasized, the richest sources of collagen—animal skins, bone broth, and tendons—are not typically part of the modern Western diet. Since collagen powder can be incorporated into shakes, smoothies, and other foods and beverages, it is a convenient way to ensure adequate intake of these unique amino acids, and to titrate to higher doses for those who may need greater amounts, such as athletes, aging individuals, those recovering from injury, and menopausal women not on HRT.

For more information on how dietary collagen peptides support body collagen turnover, bone health, and also serve as signaling molecules, see the corresponding addendum:

http://catalog.designsforhealth.com/assets/itemresources/Addendum_on_collagen.pdf

Whole Body Collagen helps support:

- Bone density; bone mass and quality; reduced risk of fracture
- Improved skin elasticity, thickness and hydration; nail health
- Reduced wrinkle formation & cellulite appearance
- Joint tissue health & function involving cartilage, tendons and ligaments
- Healthy blood pressure
- Muscle strength; GI tract health

Highlights

Fortibone® collagen peptide blend: Clinical, pre-clinical and in vitro research is accumulating to support the benefits of collagen peptides for bone health.⁴⁵ This is complementary to the classical approach of ensuring adequate status for bone-supportive nutrients, such as calcium, magnesium, silicon, and vitamins D, K1 and K2. In a study of menopausal women with osteopenia or osteoporosis, compared to placebo, supplementation with 5 g per day of Fortibone® resulted in improvement in bone mineral density (BMD) by 6.4% in the femoral neck and 5.5% in the spine, as well as increased markers of bone formation (PINP), with no change in markers of bone breakdown (CTX 1).²⁸ The placebo group experienced no changes in BMD and PINP but showed an increase in CTX 1. Another study showed that post-menopausal women supplemented with 10 g of a collagen peptide blend (previous version of Fortibone®) for 3 years reported a fracture rate of just 9%, compared to 42% in a group treated only with calcium.⁵³ A study supplemented a 10 g dose of collagen peptides in conjunction with calcitonin and reported a higher reduction in bone resorption than in the intervention group with calcitonin alone.²⁹ Animal studies have also demonstrated benefits of collagen peptide supplementation, including reduced fracture risk, increased BMD, organic mass and collagen content of bone, accelerated fracture healing and improved markers of bone turnover in ovariectomized rats and bone development during growth.^{30-33,36,45}

Based on evidence presented above, supplementation with Fortibone® demonstrates the potential to improve both essential components of bone – the minerals and the organic content, with emphasis on the collagen related matrix. Both of these aspects of bone quality contribute to the demonstrated reduction of fracture rate.⁵⁴

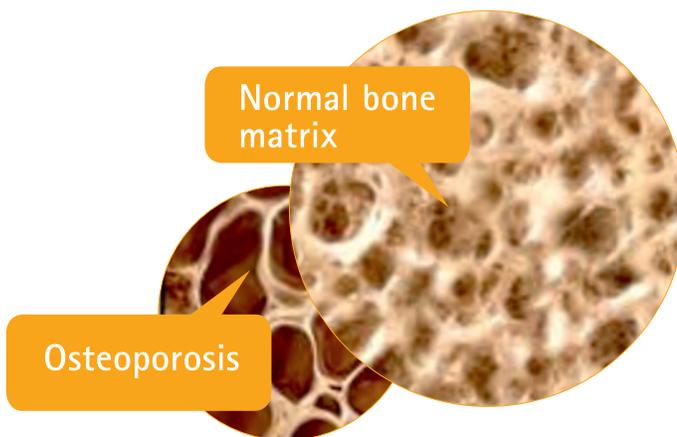


Fig. 1 Healthy versus osteoporotic bone:
Bone quality is determined not only by mineral density but also by organic mass (representing 20% of total bone mass), composed of protein and cells, of which collagen represents 80-90%.

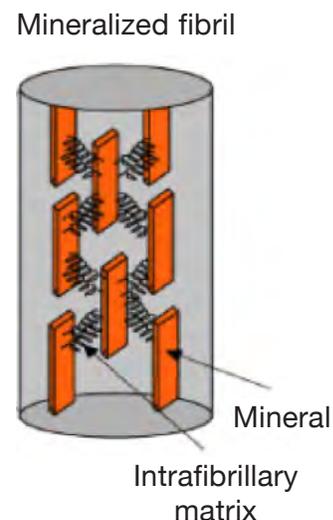


Fig. 2 Bone intrafibrillary matrix components:
collagen fibrils & proteoglycans which bind calcium-phosphate crystals⁴⁶

Fortigel® collagen peptide blend has been shown to improve collagen production in joints, resulting in improved cartilage structure (increased glycosaminoglycans content as evidenced by MRI and joint space by X-ray), reduced osteoarthritis symptoms (pain, stiffness), improved joint function, reduced post-exercise joint pain in young athletes and improved ankle stability.^{16-26,47,48} Most athletic injuries occur at tendon sites, likely because the tendon is often the weakest link in the chain of transmitting mechanical force. Since the tendon is composed of 65-80% collagen, collagen peptide supplementation has potential to support improved tendon strength and elasticity.

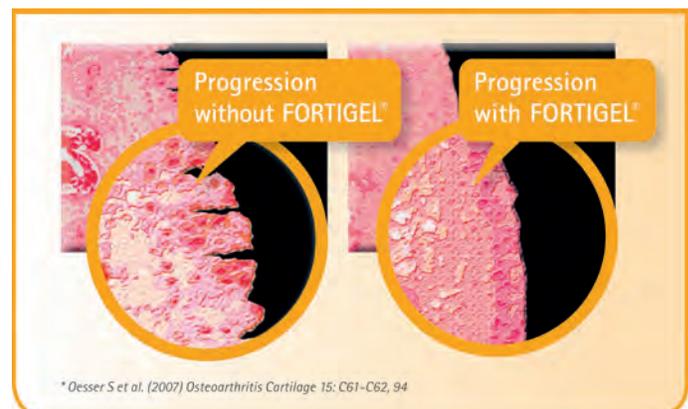


Fig. 3 Aging and joint overuse cause loss of volume and functionality of cartilage and other joint tissues.

Verisol® collagen peptide blend has been shown to upregulate synthesis of collagen, elastin and glycosaminoglycans in the dermal layer of facial skin, resulting in reduced wrinkles, improved skin elasticity and hydration.^{14,15} Verisol® has also demonstrated the ability to improve cellulite appearance by increasing dermal thickness and elasticity.³⁸ These benefits may also be useful in counteracting age-related skin thinning, manifested as a “crepe-like” appearance. Another study has shown that Verisol® supplementation resulted in improved nail growth and reduced occurrence of brittle nails.⁵¹ Verisol® has been shown to reduce inflammatory processes in the skin, with potential for alleviating various clinical inflammatory conditions manifested in epithelial tissues.^{7,8} Various collagen peptides have been shown to speed healing of bed sores in the elderly,⁴³ support healing of stomach ulcerations^{40,41} and to have an anti-inflammatory/healing effect in colitis.³⁹

Age-related changes in skin

Epithelial & dermal layers get thinner due to loss of collagen, elastin, proteoglycans and water binding capacity. This results in wrinkles, dryness, loss of tone & elasticity, cellulite, and “crepe-like” appearance.

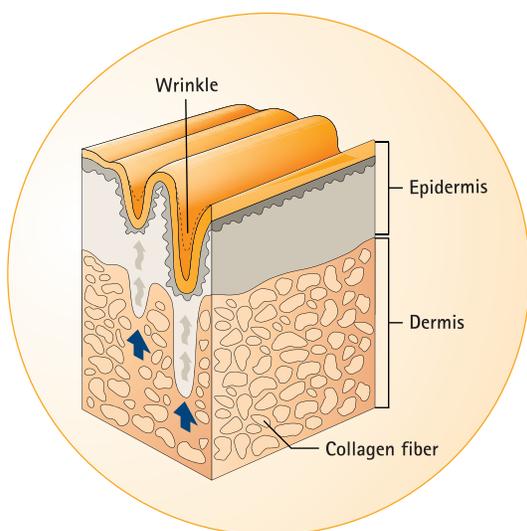


Fig. 4 The anatomy of wrinkles

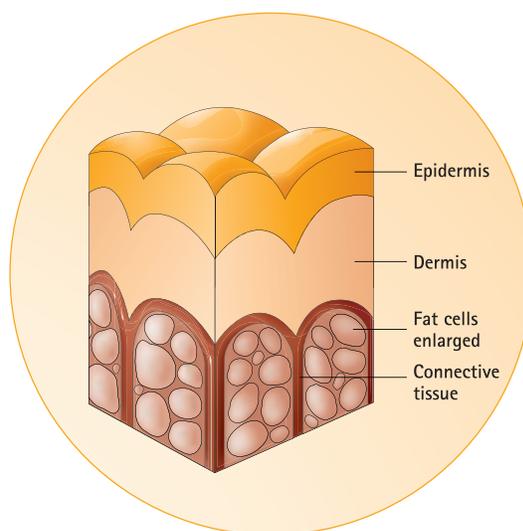


Fig. 5 The anatomy of cellulite: the connective tissue surrounding the fat cells and that composing the skin layer lose elasticity and promote an uneven appearance

Additional Benefits

Maintenance or increase in lean mass. One study reported improved muscle strength and increase in fat free mass (FFM) by 4.2 kg after a 12-week supplementation with 15g/day of an optimized collagen peptide in conjunction with resistance exercise, more than that achieved by exercise alone.⁵⁰ This study also reported a reduction in fat mass of 5.4 kg, which was likely due to an increase in metabolic rate. Another study found that a 50% substitution of dietary protein with a blend of collagen peptides preserved FFM in older sedentary menopausal women, while the same substitution with whey protein caused a slight loss in FFM.²⁷ An animal study suggests that supplementation with a blend of collagen peptides may reduce menopause-related obesity.⁴⁹

Blood pressure support. The study done with Fortibone® discussed above observed a statistically significant reduction of systolic blood pressure (128.1 versus 134.5 mmHg) and diastolic blood pressure (78.6 versus 81.2) in the intervention group but not in the placebo group.²⁸ This study was not designed with blood pressure as an outcome, but these observations are encouraging for more studies to be done, particularly when considering that an animal study (ovariectomized rats) showed that collagen peptide supplementation had a normalizing effect on blood pressure.³⁷ A potential mechanism may have been inhibition of angiotensin converting enzyme (ACE) by collagen peptides. In addition, it's possible that blood pressure elevation may be caused in part by impaired elasticity of the arteries. Since the collagen peptide blend Verisol® was shown to improve elastin content in skin,^{7,8} it is conceivable that it may have the same effect in arterial tissue, an effect that should be investigated in future studies.

Synergistic DFH Products:

- **For general support of collagen metabolism:** C+ BioFizz™, Stellar C™, MSM capsules or powder, Ferrochel® (only if ferritin is low)
- **For skin support:** H-S-N Complete™, H-S-N Complex™ powder
- **For joint support:** Arthroben®, ArthroSoothe™ Supreme, ArthroSoothe™, Glucosamine
- **For bone support:** Vitamin D + K formulas, Tri-K™, OsteoForce™, OsteoForce™ Supreme, Osteoben®, Calcium and Magnesium formulas
- **For GI integrity:** GI Revive™, GastroMend-HP™

Supplement Facts

Serving Size 13 grams (approx. one scoop)

Servings Per Container 30

Amount Per Serving	% Daily Value	
Calories	45	
Protein	11 g	22%*
Sodium	85 mg	4%
Collagen Peptides (from FORTIGEL®, VERISOL® and FORTIBONE®)	12.5 g	†

*Percent Daily Values are based on a 2,000 calorie diet.

†Daily Value not established.

**How to Use**

- As a dietary supplement, mix 13 grams (approx. one scoop) with eight ounces of water per day, or as directed by your health care practitioner. For ease of mixing and best consistency, add powder prior to adding water or other liquid.
- Collagen should not be the sole source of protein, but should be incorporated as part of a diet that contains various complementary proteins. It is considered non-allergenic, a property explained by the fact that it is pre-digested and consists of small peptides that do not have a tri-dimensional shape, and thus does not generally trigger protein allergies.
- Collagen peptides may be added to smoothies, protein powders, or foods and beverages such as coffee, tea, lemonade, cocoa, dairy or non-dairy milks, yogurts, dips, salad dressing, soups, sauces, mashed potatoes/cauliflower, casseroles, and desserts.

Figures 1, 3, 4 & 5 courtesy of GELITA AG

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For a list of references cited in this document, please visit:

http://catalog.designsforhealth.com/assets/itemresources/WholeBodyCollagen_References.pdf



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