Foundation Essentials

Five Formulas in a Single-Dose Packet



Available in 30 packets

Discussion

ProbioMax® Daily DF is a vegetarian, dairy- and gluten-free, four-strain probiotic totaling 30 billion CFU per capsule. ProbioMax Daily DF provides four researched strains of beneficial bacteria, including the extensively studied HN019® strain of *Bifidobacterium lactis*.^[1] These live microorganisms have proven health benefits and well-established safety and have been tested for epithelial cell adhesion and/or resistance to low pH.^[2] To further support resistance to low pH and the delivery of microorganisms to the small intestines, XYMOGEN employs DRcaps™ gastroresistant capsules. These specially designed, innovative capsules help minimize exposure of the actives to stomach acid and ensure more targeted release. Though the gastrointestinal and immune-supportive benefits of probiotics are the most widely studied, scientists continue to find that gut bacteria influence many other aspects of health, including brain function, weight management, detoxification, and cytokine production.*

ActivNutrients® without Iron is a high-quality, hypoallergenic, multivitamin/ mineral blend that includes activated vitamins; folate as Quatrefolic® (5-MTHF); and patented Albion® TRAACS® chelated mineral complexes all provided in vegetarian capsules. Good nutrition is a basis for wellness, and good nutrition usually translates into a stronger immune system and better health. An important aspect of good nutrition is micronutrition (vitamins and minerals). [8-11] According to research by the USDA and other organizations, the American diet is lacking micronutrients. [12-14] In fact, nine out of 10 Americans are missing key micronutrients. [14] Mass food production, storage techniques, poor food choices, and nutrient-depleting preparation methods may contribute to inadequacies. The bottom line is that children and adults are not consuming enough nutrient-rich foods to meet all their most basic vitamin and mineral needs. [13] What's more, some scientists feel that the recommended intakes (e.g., %DV, DRIs, EARs, RDAs) may not meet the requirements of all individuals, especially the chronically ill.*

There are many reasons to select ActivNutrients without Iron. Among them are its balanced nutrient profile for foundational wellness, bioavailable micronutrient forms for optimal absorption and utilization, generous levels of B vitamins, and broad-spectrum antioxidant and phase I detoxification support.*

Omega MonoPure® 650 EC is made using a proprietary MaxSimil composition containing monoglyceride fish oil with no additional ingredients, carriers, or excipients. Each fish-gelatin softgel is enteric-coated, and every batch of fish oil is IFOS five-star certified to ensure the world's highest standards for purity, potency, and freshness. The fish oil is non-GMO, certified sustainable from

Clinical Applications

- » Provides Foundational Supplementation for Overall Health*
- » Supports Intestinal and Microbiome Health*
- » Supports Healthy Magnesium and Vitamin D Levels*
- » Promotes Healthy Immunity*
- » Provides Omega-3 Fatty Acids for Good Nutrition and Healthy Cytokine Production*

Foundation Essentials provides 30 days of supplementation in convenient, once-a-day packets. Each packet provides a daily dose of five XYMOGEN foundational health formulas: ProbioMax® Daily DF, ActivNutrients® without Iron, Omega MonoPure® 650 EC, OptiMag® 125, and D3 2000. These formulas provide high-potency probiotics, an iron-free multiple, IFOS five-star certified omega-3 fatty acids, and extra magnesium and D3. Foundation Essentials can be used for any number of purposes, such as to serve as a kick start to your MedPax® program, basic supplementation while you wait for lab results, or a convenient way to supplement while traveling.*

Scandinavia, and antibiotic-free. Additionally, it is eco-friendly because the greater absorption of EPA and DHA ultimately means that fewer grams of fish oil need to be harvested for the same benefit. Research suggests that consumption of EPA and DHA omega-3 fatty acids may support cardiovascular health. [15] Studies have also shown that fish oils may support healthy cytokine production, promote optimal joint function [16], and support overall brain and nervous system function.*[24]

OptiMag® 125 contains Albion®'s TRAACS® magnesium lysinate glycinate (mineral amino acid chelate) and Albion's chelated di-magnesium malate—both formulated for enhanced absorption. Magnesium, the fourth most abundant mineral in the body, participates in over 600 enzymatic reactions in nearly all tissues. [17] Deficiency is common and results from poor dietary intake, poor absorption, and excessive losses through urine, stool, perspiration, or lactation. Certain drugs, certain herbs, poor kidney function, excessive alcohol intake, and drinking mostly "soft" water can contribute to magnesium depletion as well. [18] Malic acid (from di-magnesium malate) supports energy production and lactic acid clearance via the Krebs cycle. *[19]

D3 2000 provides 2000 IU of cholecalciferol in each convenient softgel. While vitamin D3 (cholecalciferol) is made in the skin when 7-dehydrocholesterol reacts with sunlight, many things affect the degree to which this biosynthesis occurs, including time of day, seasons, location, smog/pollution, clothing, shade of skin (darker skin requires more sun), and sunscreen use. Low-cholesterol diets and certain cholesterol therapies can also affect vitamin D formation. By some estimates, one billion people worldwide have vitamin D deficiency or insufficiency. [20] Reversing deficiency and maintaining optimal serum vitamin D levels beneficially impacts biochemistry and numerous body systems; this is largely because calcitriol—the physiologically active product of vitamin D—is a secosteroid hormone that targets over 200 genes in a wide variety of tissues. [21,22] As the research demonstrates, vitamin D is clearly imperative for the development, growth, and maintenance of a healthy body from gestation to old age.*[22]

Although D2 and D3 are similar biochemically, D3 was reported to be approximately 87% more potent in raising and maintaining serum calcidiol (body's storage form) concentrations and in producing two- to threefold greater storage of vitamin D than the equimolar D2.*[23]

Foundation Essentials Supplement Facts

Serving Size: 1 Packet Servings Per Container: 30

	Amount Per Serving	%D\
Calories	5	
Total Fat	0.5 g	1%
Vitamin A (75% as natural beta-carotene and 25% as retinyl palmitate)	1120 mcg	1249
Vitamin C (as sodium ascorbate, potassium ascorbate, zinc ascorbate, and calcium ascorbate) $ \\$	125 mg	139%
Vitamin D3 (cholecalciferol)	52.5 mcg (2100 IU)	263%
Vitamin E (as d-alpha tocopheryl succinate and mixed tocopherols)	67 mg	447%
Thiamin (as thiamine mononitrate)	10 mg	833%
Riboflavin (as riboflavin 5'-phosphate sodium)	10 mg	769%
Niacin (as niacinamide and niacin)	32 mg	200%
Vitamin B6 (as pyridoxal 5'-phosphate)	10 mg	588%
Folate (as (6S)-5-methyltetrahydrofolic acid, glucosamine salt) ^{S1}	340 mcg DFE	85%
Vitamin B12 (as methylcobalamin)	250 mcg	10417%
Biotin	500 mcg	1667%
Pantothenic Acid (as d-calcium pantothenate)	100 mg	2000%
Choline (as choline dihydrogen citrate)	18 mg	3%
Calcium (as di-calcium malate, d-calcium pantothenate, and calcium ascorbate) ^{S2}	50 mg	4%
lodine (as potassium iodide)	50 mcg	33%
Magnesium (as di-magnesium malate and magnesium lysinate glycinate chelate) $^{\rm sz}$	175 mg	42%
Zinc (as zinc bisglycinate chelate) ^{s2}	6.5 mg	59%
Selenium (as selenium glycinate complex) ^{S2}	50 mcg	91%
Copper (as copper bisglycinate chelate) ^{S2}	0.5 mg	56%
Manganese (as manganese bisglycinate chelate) ^{S2}	0.25 mg	119
Chromium (as chromium nicotinate glycinate chelate) ^{S2}	250 mcg	7149
Molybdenum (as molybdenum glycinate chelate)s2	25 mcg	56%
Potassium (as potassium glycinate complex and potassium ascorbate) ^{S2}	49.5 mg	19
Fish Oil Concentrate ⁵³ Total Omega-3 Fatty Acids EPA (eicosapentaenoic acid) DHA (docosahexaenoic acid) DPA (docosapentaenoic acid)	650 mg 430 mg 300 mg 130 mg 12 mg	* * *
Proprietary Blend Lactobacillus acidophilus La-14 ^{s4} Bifidobacterium longum BI-05 ^{s4} Lactobacillus plantarum Lp-115 ^{s4}	174 mg (15 Billion CFU†)	*
Bifido (<i>Bifidobacterium lactis</i> HN019) ^{S4}	50 mg (15 Billion CFU†)	*
Inositol	18 mg	*
PABA (para-aminobenzoic acid)	6.5 mg	*
Vanadium (as vanadium nicotinate glycinate chelate) ^{\$2}	375 mcg	*
† Percent Daily Values are based on a 2,000 calorie diet. ** Daily Value not established.		

Other Ingredients: Capsule (hypromellose and water), microcrystalline cellulose, softgel (fish gelatin, vegetable glycerin, and purified water), organic extra virgin olive oil, softgel (bovine gelatin, vegetable glycerin, and purified water), ascorbyl palmitate, acid-resistant capsule (hypromellose, gellan gum, and water), hydroxypropyl cellulose, silica, GRAS enteric coating (ethylcellulose, sodium alginate, purified water, medium-chain triglycerides, oleic acid, vegetable stearic acid, and ammonium hydroxide), stearic acid, magnesium stearate, medium-chain triglyceride oil, and mixed natural tocopherate, medium-chain triglyceride oil, and mixed natural tocopherate.

Contains: Fish (anchovy and/or sardine [sources of fish oil], tilapia and/or pangasius [sources of fish gelatin]). "Colony Forming Unit

DIRECTIONS: Take the contents of one packet daily, or use as directed by your healthcare professional.

Consult your healthcare practitioner prior to use. Individuals taking blood thinners or other medication should discuss potential interactions with their healthcare practitioner. Do not use if packet is damaged.

STORAGE: Keep closed in a cool, dry place out of reach of children.

FORMULATED TO EXCLUDE: Wheat, gluten, soy protein, dairy products, shellfish, peanuts, tree nuts, egg, sesame, ingredients derived from genetically modified organisms (GMOs), artificial colors, artificial sweeteners, and artificial preservatives.



S3. Manufactured using MaxSimil® fish oil. MaxSimil® is a registered trademark of Ingenutra Inc. Protected under U.S. Patents 8,119,690 and 8,198,324; Canadian Patents 2672513 and 2677670.

HOWARU®

S4. HOWARU® and the HOWARU® logo are registered trademarks of DuPont or its affiliates. HN019® is a registered trademark of Fonterra® Limited and is licensed to DuPont Nutrition Biosciences.

References

- Danisco. Strain information: Bifidobacterium lactis HN019[™]. http://www.danisco.com/ fileadmin/user_upload/danisco/documents/products/StrainInfo__HN019_Aug_2013. pdf. Accessed May 13, 2016.
- Danisco. Strain Information Technical Sheets. Madison, WI: Dupont Nutrition and Health. [available upon request]
- Mangiola F, Ianiro G, Franceschi F, et al. Gut microbiota in autism and mood disorders. World J Gastroenterol. 2016 Jan 7;22(1):361-68. [PMID: 26755882]
- Masood MI, Qadir MI, Shirazi JH, et al. Beneficial effects of lactic acid bacteria on human beings. Crit Rev Microbiol. 2011 Feb;37(1):91-98. [PMID: 21162695]
- Drissi F, Raoult D, Merhej V. Metabolic role of lactobacilli in weight modification in humans and animals. *Microb Pathog.* 2016 Mar 23. pii: S0882-4010(15)30152-2. [Epub ahead of print] [PMID: 27033001]
- Nova E, Pérez de Heredia F, Gómez-Martínez S, et al. The role of probiotics on the microbiota: effect on obesity. Nutr Clin Pract. 2016 Feb 11. pii:0884533615620350. [Epub ahead of print] Review. [PMID: 26869611]
- Nowak A, Kuberski S, Libudzisz Z. Probiotic lactic acid bacteria detoxify N-nitrosodimethylamine. Food Addit Contam Part A Chem Anal Control Expo Risk Assess. 2014;31(10):1678-87. [PMID: 25010287]
- Ames BN. A role for supplements in optimizing health: the metabolic tune-up. Arch Biochem Biophys. 2004 Mar 1;423(1):227-34. [PMID: 14989256]
- Toffanello ED, Inelmen EM, Minicuci N, et al. Ten-year trends in vitamin intake in freeliving healthy elderly people: the risk of subclinical malnutrition. J Nutr Health Aging. 2011 Feb;15(2):99-103. [PMID: 21365161]
- Block G, Jensen CD, Norkus EP, et al. Usage patterns, health, and nutritional status of long-term multiple dietary supplement users: a cross-sectional study. Nutr J. 2007 Oct 24;6:30. [PMID: 17958896]
- Fletcher RH, Fairfield KM. Vitamins for chronic disease prevention in adults: clinical applications. JAMA. 2002 Jun 19;287(23):3127-29. [PMID: 12069676]
- 12. Moshfegh AJ, Goldman JD, Ahuja JK, et al. U.S. Department of Agriculture, Agricultural Research Service. What we eat in America, Nhanes 2005-2006. Usual nutrient intakes from food and water compared to 1997 dietary reference intakes for vitamin D, calcium, phosphorus, and magnesium. http://www.ars.usda.gov/SP2UserFiles/Place/12355000/pdf/0506/usual_nutrient_intake_vitD_ca_phos_mg_2005-06.pdf. Published July 2009. Accessed April 22, 2016.
- Sebastian RS, Cleveland LE, Goldman JD, et al. Older adults who use vitamin/mineral supplements differ from nonusers in nutrient intake adequacy and dietary attitudes. J Am Diet Assoc. 2007 Aug;107(8):1322-32. [PMID: 17659898]
- Milk Processor Education Program. What America's missing: a 2011 report on the nation's nutrient gap. https://milklife.com/sites/default/files/field_pdf/ Nutrition/2013/08/08/what_americas_missing.pdf. Accessed April 22, 2016.
- FDA announces qualified health claims for omega-3 fatty acids. U.S. Food and Drug Administration Department of Health and Human Services. http://www.fda.gov/ NewsEvents/Newsroom/PressAnnouncements/2004/ucm108351.htm. Accessed February 27, 2011.
- Proudman SM, Cleland LG, James MJ. Dietary omega-3 fats for treatment of inflammatory joint disease: efficacy and utility. Rheum Dis Clin North Am. 2008 May;34(2):469-79. [PMID: 18638687]
- de Baaij JH, Hoenderop JG, Bindels RJ. Magnesium in man: implications for health and disease. *Physiol Rev.* 2015 Jan;95(1):1-46. [PMID: 25540137]
- Magnesium balance: can you juggle? Albion® Research Notes. Dec;15(4). http://www. albionhumannutrition.com/research-notes/download/doc_details/328-magnesium-balance-can-you-juggle. Accessed May 13, 2016.
- Dean W, Ward J. Kreb's cycle intermediates: maximizing your body's performance. *Nutrition Review.* http://nutritionreview.org/2013/04/krebs-cycle-intermediates/. Accessed April 22, 2016.
- Tsiaras WG, Weinstock MA. Factors influencing vitamin d status. Acta Derm Venereol. 2011 Mar;91(2):115-24. [PMID: 21384086]
- Cannell JJ, Hollis BW. Use of vitamin D in clinical practice. Altern Med Rev. 2008 Mar;13(1):6-20. [PMID: 18377099]
- 22. Vitamin D council. http://www.vitamindcouncil.org/. Accessed April 22, 2016.
- Heaney RP, Recker RR, Grote J, et al. Vitamin d3 is more potent than vitamin d2 in humans. J Clin Endocrinol Metab. 2011 Mar;96(3):E447-52. [PMID: 21177785]
- Cole GM, Ma QL, Frautschy SA. Dietary fatty acids and the aging brain. Nutr Rev. 2010 Dec;68(suppl 2):S102-11. [PMID:21091943]

Additional references available upon request

