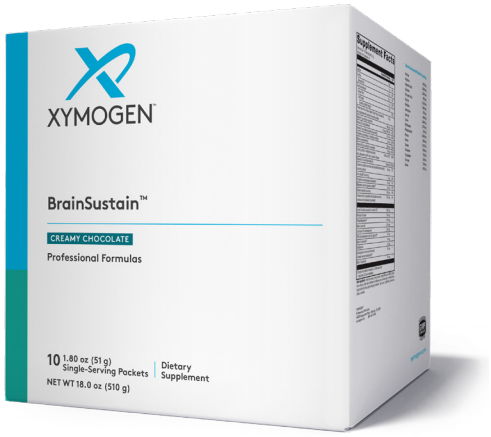
BrainSustain™ & BrainSustain™ for Kids



BrainSustain™ is available in Creamy Chocolate and Vanilla Delight
BrainSustain™ for Kids is available in Vanilla Delight

Clinical Applications

- Support Brain Health and Healthy Recall Ability*
- Provide Nutrients That Support Antioxidant Mechanisms*
- Supply Protein and Amino Acids for Neurotransmitter Production*

BrainSustain™ & BrainSustain™ for Kids *represent more than 30 years of neuroscience research. Designed to address brain health, structure, and function, these formulas contain a variety of nutrients and cofactors that support mitochondrial energy production, antioxidant systems, neurotransmitter production, and cell membrane integrity.**

Discussion

EVNol™, currently found in Creamy Chocolate and Vanilla Delight and not in BrainSustain for Kids, is a patented, full-spectrum, pure d-mixed–tocotrienols complex. This advanced tocotrienol ingredient is derived from sustainable red palm fruit oil—a scientifically validated source. It is primarily composed of the four tocotrienol isomers (alpha, beta, gamma, and delta) in natural ratios. EVNol also provides d-alpha tocopherol and phytonutrients that are naturally extracted with the tocotrienols. The result is a natural and wholesome tocotrienol complex. The extraordinary protective benefits of tocotrienols on brain cells (e.g., white matter) and neurons have been demonstrated in in vitro, animal, and human studies.[1-3] A large, placebo-controlled human trial investigated the effects of tocotrienols on white matter lesions (WML). Individuals taking the placebo showed an increase in WML volume, while those taking 200 mg of EVNol twice a day (equivalent to approximately 68 mg pure d-mixed tocotrienols) remained essentially unchanged.[2] Scientists later determined that in order to achieve brain protection, the required plasma level of tocotrienols is just 588.6 nanomolar, which equates to approximately 31.25 mg of pure d-mixed tocotrienols/day.*[4,5]

Furthermore, several studies have shown that good vitamin E status, especially tocotrienols, is associated with cognitive health and reduced risk of cognitive impairment in older adults.[5,6] In a cross-sectional multicenter study on elderly subjects, researchers at the Aging Research Center at Karolinska Institutet in Stockholm found that cognitively normal individuals had better mean plasma levels of vitamin E, especially tocotrienols, and lower oxidative damage markers.[5] Other research has demonstrated that combined tocopherol and tocotrienol administration supports healthy liver conditions and liver triglyceride metabolism.*[7-10]

EVNol has a self-affirmed GRAS (generally recognized as safe) designation. It is 100% vegetarian-based and is derived from non-GMO sources.

N-Acetyl-Cysteine (NAC) is a precursor to glutathione—a tripeptide active in detoxification and antioxidant systems. Research suggests that NAC hinders the formation of free radicals that can contribute to oxidative stress in the brain.*[11]

Phosphatidylserine (PS) is a phospholipid that is highly concentrated in the brain and plays a key role in neuronal energy production and communication. The body must synthesize the PS it needs for brain health because very little is found in food. Supplementation can help maintain normal brain levels of PS and thereby support brain functions that are dependent on this vital phospholipid.[12-14] For some individuals, changes in brain function may be related to "age-related decline in nutrition,"[15] and early nutrition intervention may be warranted. These BrainSustain formulas contain safe-source PS from non-GMO soy.*

Acetyl-L-Carnitine (ALCAR) supports nerve health.[16] It is able to cross the blood-brain barrier where it stabilizes cell membranes, provides antioxidant support, and helps maintain brain cell health.[17-19] In addition, ALCAR supports neuronal energy production, facilitates transport of fuel and waste products into and out of mitochondria, and supports production of acetylcholine, a neurotransmitter essential to the processes of learning and concentration.*[18,20]

Alpha-Lipoic Acid has fat- and water-soluble properties and therefore imparts intracellular and extracellular protection against oxidative stress. With its low molecular weight, alpha-lipoic acid is easily absorbed in the gastrointestinal tract. It then enters circulation, crosses the blood-brain barrier, and reaches the brain where it can support antioxidant activity and regenerate glutathione, vitamin E, and vitamin C.*[21,22]

Coenzyme Q10 (CoQ10) plays a pivotal role in energy generation because it transports electrons in the mitochondrial electron transport chain. CoQ10 also donates electrons, helping to protect the brain from oxidative stress and further supporting neuronal cell health.*[23]

Continued on page 3

***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.**

BrainSustain™ Creamy Chocolate Supplement Facts

Serving Size: 1 Packet (about 51 g)
Servings Per Container: 10

	Amount Per Serving	%Daily Value
Calories	180	
Total Fat	5 g	6%‡
Saturated Fat	1.5 g	8%‡
Total Carbohydrate	19 g	7%‡
Dietary Fiber	8 g	29%
Total Sugars	6 g	**
Includes 5g Added Sugars		10%
Protein (from Pea Protein Isolate, Rice Protein Concentrate, and ingredients with naturally occurring protein)	19 g	
Vitamin C (as calcium ascorbate)	400 mg	444%
Vitamin D3 (cholecalciferol)	25 mcg (1000 IU)	125%
Vitamin E (as d-alpha tocopheryl succinate)	134 mg	893%
Riboflavin (as riboflavin 5' phosphate sodium)	25 mg	1923%
Niacin (as niacinamide)	200 mg	1250%
Vitamin B6 (as pyridoxal 5'-phosphate)	50 mg	2941%
Folate (as ([6S]-5-methyltetrahydrofolic acid, glucosamine salt[S1] and as calcium folinate)	1360 mcg DFE	340%
Vitamin B12 (as methylcobalamin)	1000 mcg	41,667%
Calcium (as calcium ascorbate and ingredients with naturally occurring calcium)	60 mg	5%
Iron (naturally occurring)	5 mg	28%
Phosphorus (as dipotassium phosphate)	50 mg	4%
Magnesium (as di-magnesium malate)[S2]	50 mg	12%
Sodium (naturally occurring)	420 mg	18%
Potassium (from dipotassium phosphate and ingredients with naturally occurring potassium)	240 mg	5%
Acetyl-L-Carnitine (as acetyl-L-carnitine HCl)	800 mg	**
N-Acetyl-L-Cysteine	300 mg	**
Phosphatidylserine[S3]	200 mg	**
Alpha-Lipoic Acid	200 mg	**
Coenzyme Q10 (as ubiquinone)	200 mg	**
DHA (docosahexaenoic acid from algal oil)[S4]	50 mg	**
Mixed Tocotrienols[S5]	50 mg	**
Benfotiamine	50 mg	**
Glucoraphanin (from broccoli extract)(*Brassica oleracea italica*) (seed)[S6]	30 mg	**
Mixed Tocopherols	18 mg	**

‡ Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value not established.

Other Ingredients: Dried cane syrup, cocoa powder, natural flavors (no MSG), inulin (from chicory), high-oleic sunflower oil, cellulose gum, xanthan gum, medium-chain triglyceride oil, taurine, glycine, fungal proteases[S7], guar gum, L-glutamine, stevia leaf extract, and silica.

DIRECTIONS: Mix the contents of 1 packet (51 g) into 8-12 oz chilled water and consume once daily, or use as directed by your healthcare professional. Adjust amount of water to desired sweetness and thickness.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional.

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

FORMULATED TO EXCLUDE: Wheat, gluten, yeast, soy protein, dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, artificial colors, and artificial sweeteners.

S1. Quatrefolic® is a registered trademark of Gnosis S.p.A. Produced under U.S. patent 7,947,662.

S2. Albion® is a registered trademark of Albion Laboratories, Inc

S3. Sharp•PS® GREEN is a registered trademark of Enzymotec Ltd.

S4. *life'sDHA*® is a registered trademark of DSM.

S5. EVNol™ (formerly known as Tocomin®) is a trademark of ExcelVite. Tocotrienols are extracted and concentrated from sustainably sourced Malaysian red palm oil. Protected by U.S. patent 5,157,132.

S6. TrueBroc® is protected by trademarks and patents of Brassica Protection Products LLC: www.brassica.com/ip

S7. AMINOGEN® is a registered trademark of Innophos Nutrition, Inc.

Typical Amino Acid Profile Per Serving:

Alanine	820 mg	Methionine	210 mg
Arginine	1,660 mg	Phenylalanine	1,050 mg
Aspartic Acid	2,190 mg	Proline	860 mg
Cysteine	190 mg	Serine	1,140 mg
Glutamic Acid	3,220 mg	Taurine	500 mg
Glycine	1,280 mg	Threonine	740 mg
Histidine	470 mg	Tryptophan	190 mg
Isoleucine	860 mg	Tyrosine	730 mg
Leucine	1,600 mg	Valine	950 mg
Lysine	1,370 mg		

BrainSustain™ for Kids Vanilla Delight Supplement Facts

Serving Size: 1 Scoop (About 17.9 g)
Servings Per Container: About 15

	Amount Per Serving	%Daily Value
Calories	80	
Total Fat	3 g	4%‡
Saturated Fat	1 g	5%‡
Total Carbohydrate	7 g	3%‡
Dietary Fiber	2 g	7%
Total Sugars	3 g	**
Includes 3g Added Sugars		6%
Protein (from Pea Protein Isolate and Rice Protein Concentrate)	6 g	
Iron (naturally occurring)	1 mg	6%
Sodium (naturally occurring)	130 mg	6%
N-Acetyl-L-Cysteine	100 mg	**
DHA (docosahexaenoic acid from algal oil)[S1]	50 mg	**
Coenzyme Q10 (as ubiquinone)	50 mg	**
Glucoraphanin (from broccoli extract)(*Brassica oleracea italica*)(seed)[S2]	30 mg	**
Phosphatidylserine[S3]	25 mg	**
Alpha-Lipoic Acid	20 mg	**

‡ Percent Daily Values are based on a 2,000 calorie diet.
** Daily Value not established.

Other Ingredients: Sunflower oil, dried cane syrup, natural flavors (no MSG), inulin (from chicory), medium-chain tryglyceride oil, fungal proteases[S4], cellulose gum, xanthan gum, guar gum, stevia leaf extract, glycine, L-glutamine, and silica.

DIRECTIONS: For children four years of age or older, blend, shake, or briskly stir 1 level scoop (17.9 grams) of BrainSustain™ for Kids into 4-6 oz chilled water or other beverage, or as directed by your healthcare professional. Adjust amount of water to desired sweetness and/or thickness.

Consult your healthcare professional prior to use. Individuals taking medication should discuss potential interactions with their healthcare professional. Do not use if tamper seal is damaged.

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

FORMULATED TO EXCLUDE: Wheat, gluten, yeast, soy protein, animal and dairy products, fish, shellfish, peanuts, tree nuts, egg, sesame, artificial colors, and artificial sweeteners.

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S3. Sharp•PS® GREEN is a registered trademark of Enzymotec Ltd.

S4. AMINOGEN® is a registered trademark of Innophos Nutrition, Inc. AMINOGEN® is protected under U.S. Patent 5,387,422.

Typical Amino Acid Profile Per Serving:

Alanine	330 mg
Arginine	650 mg
Aspartic Acid	860 mg
Cysteine	80 mg
Glutamic Acid	1,270 mg
Glycine	333 mg
Histidine	190 mg
Isoleucine	340 mg
Leucine	630 mg
Lysine	530 mg
Methionine	90 mg
Phenylalanine	410 mg
Proline	340 mg
Serine	400 mg
Threonine	290 mg
Tryptophan	80 mg
Tyrosine	290 mg
Valine	380 mg

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Glucoraphanin (previously Brassica's SGS™, now Brassica's TrueBroc®) is a patented phytochemical derived from broccoli extract. Extensive research suggests that when glucoraphanin is enzymatically converted to sulforaphane (its active form), it safely and effectively supports the Nrf2 system, antioxidant systems, and vital phase II detoxification enzymes.[24,25] This process provides protection from common toxins and xenobiotics.*

DHA (docosahexaenoic acid) is a conditionally essential fatty acid and the main polyunsaturated fatty acid in the brain. DHA supports the structure and function of brain cell membranes, and hence plays a fundamental role in neuronal communication.[26] Studies suggest that DHA supports the biosynthesis and accumulation of PS in neuronal and glial cells as well.*[27]

VegaPro™ is XYMOGEN's proprietary and lactose-free pea/rice protein blend. In BrainSustain and BrainSustain for Kids, VegaPro is coupled with Aminogen®, an enzyme complex that facilitates protein digestion and absorption. Amino acids from protein metabolism provide the precursors needed for neurotransmitter production.*

Micronutrients complete the adult version of this formula's comprehensive design. These include magnesium, calcium, phosphorus, vitamin D3, vitamin E (as mixed tocopherols), and activated B vitamins riboflavin 5'-phosphate (B2), pyridoxal 5'-phosphate (B6), methylcobalamin (B12), and folate as 5-MTHF (5-methyltetrahydrofolate). 5-MTHF supports healthy folate nutrition, especially in individuals with genetic variations in folate metabolism. 5-MTHF is provided as Quatrefolic® for enhanced stability, solubility, and bioavailability.[28,29] In addition, one serving of BrainSustain adult formula provide the same amount of NAC, PS, ALCAR, alpha-lipoic acid, CoQ10, and glucoraphanin as eight capsules of NeuroActives™ BrainSustain™.*

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All XYMOGEN® Formulas Meet or Exceed cGMP Quality Standards.

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