360 Brain Food

Clinical Applications

- Supports Brain Health and Healthy Recall Ability*
- Provides Nutrients That Support Antioxidant Mechanisms*
- Supplies Protein and Amino Acids for Neurotransmitter Production*

*360 Brain Food represents more than 30 years of neuroscience research. Designed to address brain health, structure, and function, 360 Brain Food contains a variety of nutrients and cofactors that support mitochondrial energy production, antioxidant systems, neurotransmitter production, and cell membrane integrity.**

All 360º Medicine Formulas Meet or Exceed cGMP Quality Standards

Discussion

N-Acetyl-Cysteine (NAC) As a source of the conditionally essential amino acid 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.*[1]

Phosphatidylserine A phospholipid that is highly concentrated in the brain, phosphatidylserine (PS) plays a key role in neuronal energy production and communication. We must synthesize the PS we need for brain health as very little is found in food. Also, supplementation can help maintain normal levels in the brain and support those functions dependent on this vital phospholipid.[2-4] For some individuals, changes in brain function may be related to "age-related decline in nutrition,"[5] and early nutrition intervention may be warranted. 360 Brain Food contains safe-source PS from non-GMO soy and contains no animal products.*

Acetyl-L-Carnitine (ALCAR) The ALCAR form of the amino acid L-carnitine is found to have multifaceted roles in supporting nerve health.[6] It is able to cross the blood-brain barrier where it stabilizes cell membranes, provides antioxidant support, and helps maintain brain cell health.[7-9] 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.*[8,10]

Alpha-Lipoic Acid Having both fat- and water-soluble properties, alpha-lipoic acid provides 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.*[11,12]

Coenzyme Q10 (CoQ10) 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.*[13]

Broccoli Seed Extract The patented form of the phytochemical in broccoli called glucoraphanin (SGS™) is a key ingredient in 360 Brain Food. 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.[14,15] This process provides protection from common toxins and xenobiotics.*

DHA (docosahexaenoic acid) A conditionally essential fatty acid, DHA is 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.[16] Studies suggest that DHA is found to support the biosynthesis and accumulation of PS in neuronal and glial cells as well.*[17]

Vegan Protein Blend 360º Medicine's proprietary pea/rice protein blend Vegan Protein Blend is coupled with Aminogen® to facilitate protein digestion and absorption, and is lactose free. Amino acids from protein metabolism provide the precursors needed for neurotransmitter production.*

Micronutrients 360 Brain Food adult formula contains additional micronutrients for neurosupport, including 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 5-methyltetrahydrofolate (folate). 5-MTHF (5-methyltetrahydrofolate)supports healthy folate nutrition, especially in those with genetic variations in folate metabolism. In 360 Brain Food, 5-MTHF is provided as Quatrefolic® for enhanced stability, solubility, and bioavailability.[19] In addition, two scoops of 360 Brain Food adult formula provide the same amount of NAC, PS, ALCAR, alpha-lipoic acid, CoQ10, and glucoraphanin as eight capsules of Neuro Advance.*

***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.**

Russ Canfield, MD
505.795.7111
66 Avenida Aldea
Santa Fe, NM 87507

360 Brain Food

360 Brain Food Vanilla

Supplement Facts

Serving Size: 2 Scoops (43 g)
Servings Per Container: 15

Amount Per Serving		
Calories 150		
Calories from Fat 25		
	Amount Per Serving	%Daily Value*
Total Fat	3 g	5%
Saturated Fat	1 g	5%
Trans Fat	0 g	
Cholesterol	0 mg	0%
Total Carbohydrate	14 g	5%
Dietary Fiber	3 g	12%
Soluble Fiber	3 g	
Sugars	6 g	
Protein	19 g	

Vitamin C (as calcium ascorbate)	400 mg	667%	Sodium	250 mg	10%
Vitamin D3 (as cholecalciferol)	1000 IU	250%	Potassium	250 mg	7%
Vitamin E (as mixed tocopherols)	200 IU	667%	N-Acetyl-Cysteine	300 mg	**
Thiamin (as benfotiamine)	50 mg	3333%	Phosphatidylserine	200 mg	**
Riboflavin (as riboflavin 5'-phosphate)	25 mg	1471%	Acetyl-L-Carnitine	800 mg	**
Niacin (as niacinamide)	200 mg	1000%	Alpha-Lipoic Acid	200 mg	**
Vitamin B6 (as pyridoxal 5'-phosphate)	50 mg	2500%	Coenzyme Q10	200 mg	**
Folate (400 mcg as calcium folinate and 400 mcg as 5-methyltetrahydrofolate†)	800 mcg	200%	Broccoli Extract (*Brassica oleracea italica*) (seed)(30 mg sulforaphane glucosinolate)(SGS™)	273 mg	**
Vitamin B12 (as methylcobalamin)	1000 mcg	16667%	DHA (docosahexaenoic acid from algal oil)	50 mg	**
Calcium (as calcium ascorbate)	50 mg	5%			
Phosphorus (as potassium phosphate)	50 mg	5%			
Magnesium (as Di-Magnesium Malate)	50 mg	13%			

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

Other Ingredients: Vegan Protein Blend (Proprietary blend of pea protein isolate, rice protein concentrate, L-glutamine, L-glycine, and taurine), evaporated cane juice, sunflower oil, inulin (from chicory), natural flavors (no MSG), medium-chain triglycerides, Aminogen®, potassium citrate, xanthan gum, guar gum, sodium chloride, sodium citrate, and stevia leaf extract.

Produced under US patents 5,725,895; 5,968,505; 5,968,567; 6,177,122; and 6,242,018 licensed from Brassica Protection Products LLC; SGS is a trademark of Brassica Protection Products.

Di-Magnesium Malate covered by Albion Laboratories, Inc. U.S. Patent. 6,706,904 and patents pending.

Aminogen® is a registered trademark of Triarco Industries. Aminogen® is protected under U.S. patent 5,387,422.

† Quatrefolic® is a registered trademark of Gnosis S.p.A. Patents pending.

Directions

Blend, shake, or briskly stir two scoops (43 g) into 8-12 oz chilled water and consume once or twice daily (two servings maximum per day), or as directed by your healthcare practitioner. Adjust amount of water to desired sweetness and thickness.

Cautions

Consult your healthcare practitioner before use. If receiving cancer treatment, check with your treating physician. Keep out of reach of children. Avoid if allergic to any ingredient.

Typical Amino Acid Profile Per Serving:

Glycine	788mg	Tyrosine	722mg
Lysine	1,368mg	Aspartic Acid	2,185mg
Valine	1,062mg	Phenylalanine	1,045mg
Leucine	1,596mg	Tryptophan	78mg
Isoleucine	855mg	Proline	855mg
Cysteine	190mg	Methionine	209mg
Threonine	741mg	Histidine	475mg
Alanine	817mg	Arginine	1,663mg
Serine	1,007mg	Glutamine	3,220mg
		Taurine	500mg

References

1. Sansone RA, Sansone LA. Getting a knack for NAC: N-acetyl-cysteine. *Innov Clin Neurosci*. 2011 Jan;8(1):10-4. [PMID: 21311702]
2. Kato-Kataoka A, Sakai M, Ebina R, et al. Soybean-derived phosphatidylserine improves memory function of the elderly Japanese subjects with memory complaints. *J Clin Biochem Nutr*. 2010 Nov;47(3):246-55. [PMID: 21103034]
3. Richter Y, Herzog Y, Cohen T, et al. The effect of phosphatidylserine-containing omega-3 fatty acids on memory abilities in subjects with subjective memory complaints: a pilot study. *Clin Interv Aging*. 2010 Nov 2;5:313-6. [PMID: 21103402]
4. Vakhapova V, Cohen T, Richter Y, et al. Phosphatidylserine containing omega-3 fatty acids may improve memory abilities in non-demented elderly with memory complaints: a double-blind placebo-controlled trial. *Dement Geriatr Cogn Disord*. 2010;29(5):467-74. [PMID: 20523044]
5. Suchy J, Chan A, Shea TB. Dietary supplementation with a combination of alpha-lipoic acid, acetyl-L-carnitine, glycerophosphocoline, docosahexaenoic acid, and phosphatidylserine reduces oxidative damage to murine brain and improves cognitive performance. *Nutr Res*. 2009 Jan;29(1):70-4. [PMID: 19185780]
6. Picconi B, Barone I, Pisani A, et al. Acetyl-L-carnitine protects striatal neurons against in vitro ischemia: the role of endogenous acetylcholine. *Neuropharmacology*. 2006 Jun;50(8):917-23. [PMID: 16500685]
7. Steffen V, Santiago M, de la Cruz CP, et al. Effect of intraventricular injection of 1-methyl-4-phenylpyridinium: protection by acetyl-L-carnitine. *Hum Exp Toxicol*. 1995 Nov;14(11):865-71. [PMID: 8588946]
8. Sorbi S, Forleo P, Fani C, et al. Double-blind, crossover, placebo-controlled clinical trial with L-acetylcarnitine in patients with degenerative cerebellar ataxia. *Clin Neuropharmacol*. 2000 Mar-Apr;23(2):114-8. [PMID: 10803803]
9. Jones LL, McDonald DA, Borum PR. Acylcarnitines: role in brain. *Prog Lipid Res*. 2010 Jan;49(1):61-75. Review. [PMID: 19720082]
10. Kobayashi S, Iwamoto M, Kon K, et al. Acetyl-L-carnitine improves aged brain function. *Geriatr Gerontol Int*. 2010 Jul;10 Suppl 1:S99-106. [PMID: 20590847]
11. Packer L, Tritschler HJ, Wessel K. Neuroprotection by the metabolic antioxidant alpha-lipoic acid. *Free Radic Biol Med*. 1997;22(1-2):359-78. Review. [PMID: 8958163]
12. Liu J. The effects and mechanisms of mitochondrial nutrient alpha-lipoic acid on improving age-associated mitochondrial and cognitive dysfunction: an overview. *Neurochem Res*. 2008 Jan;33(1):194-203. Review. [PMID: 17605107]
13. Mancuso M, Orsucci D, Volpi L, et al. Coenzyme Q10 in neuromuscular and neurodegenerative disorders. *Curr Drug Targets*. 2010 Jan;11(1):111-21. Review. [PMID: 20017723]
14. Ping Z, Liu W, Kang Z, et al. Sulforaphane protects brains against hypoxic-ischemic injury through induction of Nrf2-dependent phase 2 enzyme. *Brain Res*. 2010 Jul 9;1343:178-85. [PMID: 20417626]
15. Vauzour D, Buonfiglio M, Corona G, et al. Sulforaphane protects cortical neurons against 5-S-cysteinyl-dopamine-induced toxicity through the activation of ERK1/2, Nrf-2 and the upregulation of detoxification enzymes. *Mol Nutr Food Res*. 2010 Apr;54(4):532-42. [PMID: 20166144]
16. Chang CY, Ke DS, Chen JY. Essential fatty acids and human brain. *Acta Neurol Taiwan*. 2009 Dec;18(4):231-41. Review. [PMID: 20329590]
17. Guo M, Stockert L, Akbar M, et al. Neuronal specific increase of phosphatidylserine by docosahexaenoic acid. *J Mol Neurosci*. 2007 Sep;33(1):67-73. [PMID: 17901548]
18. Prinz-Langenohl R, Brämswig S, Tobolski O, et al. [6S]-5-methyltetrahydrofolate increases plasma folate more effectively than folic acid in women with the homozygous or wild-type 677C-->T polymorphism of methylenetetrahydrofolate reductase. *Br J Pharmacol*. 2009 Dec;158(8):2014-21. [PMID: 19917061]
19. Quatrefolic®. http://quatrefolic.com. Accessed Accessed April 30, 2012.

***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.**

360° Medicine

DRS-230
REV. 08/02/12

360 Brain Food

*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.