# Spectrum-Mate

New Beginnings Nutritionals announces a new multiple vitamin and mineral supplement called Spectrum-Mate. Spectrum-Mate is a multiple that contains 28 highly bioavailable essential nutrients designed specifically to address the nutritional deficiencies commonly seen in individuals with Autism Spectrum Disorders (ASD). This specialized supplement only includes the highest quality ingredients including biologically active forms of folate, vitamin B12 and vitamin B6 along with naturally-sourced carotenes, vitamin E tocopherols, and vitamin D3 are included for optimal nutrient utilization. In addition, ingredients that are sometimes contraindicated for autism (such as copper and iron) are not included in the formula. All of the ingredients in this formulation have been chosen carefully to be well tolerated and easily absorbed and utilized by individuals with ASD.

Spectrum-Mate is available in both powder form and vegetarian capsules. The powdered formula has a natural berry-pomegranate flavor which dissolves easily in liquids or can be mixed into cool foods. Spectrum-Mate powder and capsule formulations are identical except the capsules contain a reduced amount of calcium and magnesium to ensure it will fit in six smaller sized capsules. As with most of the supplements from New Beginnings, Spectrum-Mate is hypoallergenic and free of milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat/gluten, yeast, and soy. There are also no artificial sweeteners, additives, colorings, flavoring, preservatives, or salicylates.

# Impaired Intestinal Function and Autism:

We know that many children with Autism suffer from gastrointestinal issues. In fact, one study found that 84.1% of subjects reported GI symptoms like persistent diarrhea or constipation, foul smelling stools, food regurgitation, etc. Gastrointestinal dysfunction reported in children on the autism spectrum can include altered intestinal permeability (leaky gut), deficient enzyme activity, and hyperacidity of the intestines. As a result we often see issues with inadequate food digestion and inadequate absorption and transportation of nutrients. This in turn contributes to the common vitamin and mineral deficiencies documented in children with autism. Dietary restrictions, special diets and pickiness, which is also seen with ASD, can contribute as well to an overall nutritional deficiency. With the gastrointestinal issues and the dietary issues, it is not surprising that this population suffers from many behavioral and physical symptoms.

#### **Nutritional Supplementation and Autism:**

Research has long supported the fact that nutritional deficiencies can play a large role in many of the behavioral, neurological and physical symptoms we associate with autism. Starting twenty years ago, research by Dr. Rimland and his associates found that high dose vitamin B6 and magnesium provided significant improvement in many of the symptoms of autism. Since then, additional research has proven the reality of nutritional deficiencies in individuals with autism and benefits result with supplementation of nutrients such as folate, vitamin C, vitamin B-12, and calcium among others. The science certainly confirms this idea because now there are numerous clinical trials showing great benefit in the use of dietary supplements to correct nutrient deficiencies. Low calcium can be another commonly seen issue in children with Autism and when calcium is supplemented many times there are improvements in language, eye contact, and coordination. And for issues like hyperactivity and low attention, high dose folic acid has been helpful. Vitamin C has also been found to reduce many of the symptoms related to Autism. What has been seen in the decades of work on this subject is that another critical deficiency is often in vitamin B12 or folate. And the gold standard in studies, a randomized, double-blind, placebocontrolled study, was done on the effectiveness in aiding sleep and GI problems in children with Autism. The study confirmed that over a 3-month period, supplementing with a moderate-dose vitamin and mineral supplement significantly improved those problems and thereby suggested that many children benefit from a high-dose, comprehensive, multiple vitamin and mineral supplement. So, a well-balanced multiple vitamin and mineral supplement is a critical step in addressing those deficits and aids dramatically in their biomedical treatment.

# Ingredients:

The amounts as well as forms of each nutrient in Spectrum-Mate have been selected to help ensure a high degree of nutrient bioavailability, excellent tolerance, and documented safety during long-term, daily use. A broad-spectrum of essential vitamins, minerals, and trace elements is included to take best advantage of the combined synergies and related metabolic functions of these nutrients. Herbal ingredients are not included, thus making this foundational product suitable for most patients without concern over taking inappropriate ingredients. Some of the distinguishing characteristics of Spectrum-Mate include:

#### Vitamin A/Carotenoids

Both preformed vitamin A and its carotene precursor are included to help ensure more complete vitamin A nutrition. Mixed, naturally-sourced carotenes are used instead of synthetic beta-carotene for more complete and well-documented antioxidant benefit.

# Vitamin C/Bioflavonoids

Vitamin C has a number of important functions, including as a cofactor in the production of neurotransmitters dopamine and serotonin, as an antioxidant, and in regulation of cellular immune function. Several studies have reported clinical improvements in children on the autism spectrum supplemented with high-dose vitamin C. Spectrum-Mate provides 500 mg L-ascorbic acid complemented by concentrated citrus bioflavonoids.

# Vitamin E Complex

100% natural vitamin E complex, including all the naturally occurring tocopherol isomers (d-alpha, d-beta, d-gamma, d-delta) is used for synergistic benefit and balanced actions. No synthetic vitamin E is used.

#### Vitamin D3

Natural source vitamin D3 (cholecalciferol) is included at 250% of the recommended daily intake.

# Vitamin B-Complex

All B-complex vitamins are included for synergism and balance. Significant amounts of folate in a bioactive form (Metafolin® L-5-methyltetrahydrofolate) and vitamin B12 in bioactive forms (methylcobalamin and 5-adenosylcobalamin) are included to assist proper methylation and help maintain normal homocysteine metabolism. Significant amounts of the bioactive form of vitamin B6, pyridoxal 5'-phosphate, are included to address specific needs in children on the autism spectrum who may have difficulties metabolizing the pyridoxine form of vitamin B6 to the active pyridoxal form.

# Mineral/Trace Elements

Fully reacted mineral and trace element amino acid chelates from Albion® Laboratories, documented to be highly bioavailable and well-tolerated, are used for zinc, magnesium, manganese, and several other minerals. Potassium and increased amounts of calcium and magnesium (powder formula) compared to standard multiple vitamin and mineral formulas are included to address the special needs of children with ASD. Organically bound forms of chromium and vanadium are included for high physiological activity of these trace elements. Iron and copper, often contraindicated in ASD, are excluded.

# Each 6 capsules contain:

Supplement Facts Daily servings per container: 22.5	Amount per 6 capsules	% Daily Value 4 years+ †
Vitamin A (64% (3,500 IU) as natural carotenes	сиронгез	1 yours
(alpha, beta, beta-cryptoxanthin, zeaxanthin, and	5500 HJ	
lutein) from D, salina and 36% (2000 IU) as Vitamin	5500 IU	
A palmitate		110
Vitamin C (as L-ascorbic acid USP)	500 mg	833
Vitamin D3 (as cholecalciferol)	1000 IU	250
Vitamin E (as d-alpha-tocopherol succinate plus mixed	150 IU	
tocopherols d-beta, d-delta, d-gamma) from soy		500
Vitamin K1 (as phytonadione)	60 mcg	75
Thiamine (as thiamine mononitrate)	25 mg	1667
Riboflavin	15 mg	882
Niacin (67% as niacinamide and 33% as niacin USP)	60 mg	300
Vitamin B6 (67% as pyridoxine hydrochloride and	15 mg	
33% as pyridoxal 5'-phosphate)		750
Folate (Metafolin L-5 methyltetrahydrofolate)	400 mcg	100
Vitamin B12 (50% as methylcobalamin and 50% as 5-adenosylcobalamin)	50 mcg	833
Biotin USP	300 mcg	100
Pantothenic Acid (as calcium d-pantothenate USP)	50 mg	500
Calcium (as calcium citrate-malate)	100 mg	10
Iodine (from kelp)	150 mcg	100
Magnesium (as magnesium glycinate chelate))	100 mg	25
Zinc (as zinc glycinate chelate)	15 mg	100
Selenium (as selenium amino acid complex)	200 mcg	286
Manganese (as manganese glycinate chelate)	2 mg	100
Chromium (as chromium nicotinate glycinate chelate)	150 mcg	125
Molybdenum (as molybdenum glycinate chelate)	100 mcg	133
Potassium (as potassium chloride)	99 mg	3
Boron (as boron amino acid complex)	2 mg	*
Vanadium (as bisglycinato oxovanadium)	50 mcg	*
Choline (as choline bitartrate)	75 mg	*
Inositol	25 mg	*
Citrus Bioflavonoids (85 mg as citrus bioflavonoid		*
complex, min. 50% bioflavonoids, and 15 mg as hesperdin methylchalcone)	100 mg	
	.1 1 11 1	

Other ingredients: Vegetarian capsule (hydroxypropyl methylcellulose, water), cellulose, and L-leucine.

Does not contain: milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat/gluten, corn, yeast, soybeans, artificial flavors, colors, or preservatives.

\*Daily value not established. †Percent Daily Value based on a 2000 calorie diet.

# 1 Scoop (approx. 1 tsp or 5.5 g) contains:

Supplement Facts	1 teaspoon or 5.5 grams	% Daily Value
Daily servings per container: 30		4 years+ †
Vitamin A (64% (3,500 IU) as natural carotenes (alpha,		
beta, beta-cryptoxanthin, zeaxanthin, and lutein) from D,	5500 IU	
salina and 36% (2000 IU) as Vitamin A palmitate		110
Vitamin C (as L-ascorbic acid USP)	500 mg	833
Vitamin D3 (as cholecalciferol)	1000 IU	250
Vitamin E (as d-alpha-tocopherol succinate plus mixed	150 IU	
tocopherols d-beta, d-delta, d-gamma) from soy	13010	500
Vitamin K1 (as phytonadione)	60 mcg	75
Thiamine (as thiamine mononitrate)	25 mg	1667
Riboflavin	15 mg	882
Niacin (67% as niacinamide and 33% as niacin USP)	60 mg	300
Vitamin B6 (67% as pyridoxine hydrochloride and 33% as pyridoxal 5'-phosphate)	15 mg	750
Folate (Metafolin L-5 methyltetrahydrofolate)	400 mcg	100
Vitamin B12 (50% as methylcobalamin and 50% as 5-adenosylcobalamin)	50 mcg	833
Biotin USP	300 mcg	100
Pantothenic Acid (as calcium d-pantothenate USP)	50 mg	500
Calcium (as calcium citrate-malate)	300 mg	30
Iodine (from kelp)	150 mcg	100
Magnesium (as magnesium glycinate chelate)	300 mg	75
Zinc (as zinc glycinate chelate)	15 mg	100
Selenium (as selenium amino acid complex)	200 mcg	286
Manganese (as manganese glycinate chelate)	2 mg	100
Chromium (as chromium nicotinate glycinate chelate)	150 mcg	125
Molybdenum (as molybdenum glycinate chelate)	100 mcg	133
Potassium (as potassium chloride)	99 mg	3
Boron (as boron amino acid complex)	2 mg	*
Vanadium (as bisglycinato oxovanadium)	50 mcg	*
Choline (as choline bitartrate)	75 mg	*
Inositol	25 mg	*
Citrus Bioflavonoids (85 mg as citrus bioflavonoid	_	*
complex, min. 50% bioflavonoids, and 15 mg as hesperdin methylchalcone)	100 mg	

Other ingredients: Natural berry-pomegranate flavor

Does not contain: milk/casein, eggs, fish, shellfish, tree nuts, peanuts, wheat/gluten, corn, yeast, soybeans, artificial flavors, colors, or preservatives.

<sup>\*</sup>Daily value not established. †Percent Daily Value based on a 2000 calorie diet.