

Pediatric Multi+[®]

With Certified Organic Elderberry



Support Healthy Development and Immune Function

Key Features:

- Great Taste. No Sugar Added.
- Contains **Active Forms of B-Vitamins** (ie. 5-MTHF, methyl-B12, P5P, R5P) for support healthy development.
- Inclusion of **certified organic elderberry extract & juice concentrate, zinc, and vitamin D3, vitamin A** to support the immune functions.
- Utilizes **amino-acid-chelate forms for key minerals in healthy childhood development** to ensure optimal absorption.

Description:

Pediatric Multi+ is a multi-vitamin formula with a focus on **immune support** and **healthy development** in early childhood when young children are more prone to infections as they are still developing immunity to various infections.

Elderberry - An Immune Support Medicine & Functional Food

Sambucus nigra (Elderberry) is traditionally used to help relieve cold/flu symptoms, sinus congestion, as well as an “alterative” (i.e. cleansing) in inflammatory conditions such as psoriasis and rheumatism. [1]

It has been shown to possess both anti-bacterial and antiviral properties, especially against various strains of influenza virus, Streptococci, and Herpes simplex.[2],[3]

Quantity: 60 Servings (285g) / 30 Servings(143g)

Ingredients (per serving):

Vitamin A (from vitamin A palmitate).....	300 mcg
Vitamin B1 (from thiamine hydrochloride).....	2 mg
Vitamin B2 (from riboflavin 5'-phosphate, sodium).....	1.5 mg
Niacinamide.....	5 mg
Vitamin B5 (from calcium d-pantothenate).....	5 mg
Vitamin B6 (from pyridoxal 5'-phosphate, calcium).....	3 mg
Folate (from L-5-MTHF, calcium).....	100 mcg
Vitamin B12 (methylcobalamin).....	10 mcg
Biotin.....	50 mcg
Vitamin C (ascorbic acid).....	300 mg
Vitamin D3 (cholecalciferol) (12.5 mcg).....	500 IU
Vitamin E (d-a-tocopheryl acetate) (13.4 mg ATE).....	20 IU
Vitamin K2 (menaquinone-7).....	220 mcg
Inositol.....	10 mg
Choline (from choline bitartrate).....	10 mg
Calcium (from calcium bisglycinate).....	30 mg
Copper (from copper (II) bisglycinate).....	300 mcg
Iron (from iron (II) bisglycinate).....	6 mg
Magnesium (from magnesium bisglycinate).....	20 mg
Zinc (from zinc gluconate).....	5 mg
Iodine (from Laminariaceae (whole)).....	30 mcg
Elderberry Extract (<i>Sambucus nigra</i>) (64:1).....	29.3 mg (13% anthocyanidins) (equivalent to 1,875 mg dried herb)

Non-medicinal Ingredients: Citric acid, natural mixed berry flavour, erythritol (certified organic), *Stevia rebaudiana* extract, elderberry juice concentrate (certified organic)

Suggested Use: Children (<4 years old): take 1 scoop per day with food. Children (5-9 years old): take 2 scoops per day with food. Or as directed by the health care practitioner. For children under 2 years old, mix 1 scoop with 1 oz (30 mL) of water before use.



Elderberry is also rich in vitamins, minerals, and antioxidants, such as proanthocyanidins, caffeic acid, rutin, and quercetin.[4] It has been shown to carry out anti-inflammatory effects via its inhibitory actions on cyclooxygenase enzymes and nitric oxide production by macrophage and dendritic cells, making it an excellent immune-modulating herb for autoimmune conditions. [5],[6]

In an RCT involving 312 intercontinental air travelers,[7] the volunteers were randomized to receive either elderberry extract or placebo before and after travels. The subjects were assessed by filling out questionnaires that look at the total number of cold episode days, perceived stress, general well-being, quality of life related to respiratory symptoms at baseline (-10 days), before travel (-2 days), and after travel (+4/5 days). The results showed that the elderberry group had a significantly shorter duration of cold episode days (57 vs.117; p=0.02), as well as significantly lower average symptom score (247 vs. 583; p=0.05).

Early Childhood Development:

Active Forms of B-Vitamins & Vitamin D3

5-MTHF & methylcobalamin – support methylation reactions in the body. Proper methylation is essential in DNA synthesis, DNA methylation (genome regulation), and the development of neurological and immune functions in early childhood. [8],[9]

Pyridoxal-5'-Phosphate (Vitamin B6) – helps with metabolism, production of blood cells, and neurological development.

Riboflavin-5'-Phosphate (Vitamin B2) - helps with energy production, promotes growth, good vision and nerve development, and healthy skin and bone.

Adequate vitamin D3 intake in childhood is critical in not only bone and muscle development, but also help reduce

the risk of autoimmune conditions, infection, and type II diabetes.[10]

Amino-Acid Chelated Minerals - Optimal Bioavailability

Absorption of mineral salts is highly dependent on the solubility and pH of the stomach acid, because they need to first dissociate into their ionic forms before they can be absorbed via facilitated diffusion.

Amino-acid-chelate minerals, on the other hand, are recognized by our body as dipeptides and absorbed directly via a different pathway from that of the ionic forms.

For instance, the absorption rate of magnesium bisglycinate chelate is about 228% of that of magnesium citrate.[11] Another example is that the absorption rate of ferrous bisglycinate chelate is ~91% while that of ferrous sulfate is 27%. [12]

Reference:

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4. Mlynarczyk K., Walkowiak-Tomczak D., Łysiak G.P. Bioactive properties of *Sambucus nigra* L. As a functional ingredient for food and pharmaceutical industry. *J. Funct. Foods.* 2018;40:377–390
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6. Ho GTH, Wangensteen H, Barsett H. Elderberry and Elderflower Extracts, Phenolic Compounds, and Metabolites and Their Effect on Complement, RAW 264.7 Macrophages and Dendritic Cells. *Int J Mol Sci.* 2017; 18(3): 584.
7. Tiralongo E, Wee SS, Lea RA. Elderberry supplementation reduces cold duration and symptoms in air-travelers: a randomized, double-blind placebo-controlled clinical trial. *Nutrients.* 2016; 8(4): 182.
8. Venkatraman et al. Vitamin B-12 and cognition in children. *Adv Nutr* 2016; 7:879-888.
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10. Casey CF, Slawson DC, Neal LR. Vitamin D supplementation in infants, children, and adolescents. *Am Fam Physician.* 2010; 81(6):745-748.
11. Supakatisant C, Phupong V. Oral magnesium for relief in pregnancy-induced leg cramps: a RCT. *Maternal & Child Nutrition* (2012).
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