

# Perinatal Multi+ Kit



Peri-Natal Multi-Vitamin/Mineral Complex with *L.rhamnosus* HN001

VA-127/VA-921

## Key Features:

- Provides essential vitamins & minerals for women before, during, and after pregnancy.
- Formulated with **Active Forms of B-Vitamins** (ie. 5-MTHF [800 mcg/day], methylcobalamin, P5P, R5P).
- Inclusion of *L. rhamnosus* HN001 – shown in a 6-year RCT to reduce the risk of baby developing atopy (ie. eczema) by 44-49%.
- All minerals included are **amino acid chelates to ensure optimal absorption** and avoid toxicity
- Natural Mixed Carotenoids as the only source of vitamin A

## Description:

**Perinatal Multi+** is a comprehensive multi-formula for women planning to get pregnant, during pregnancy, and breastfeeding. It provides essential vitamins and minerals, plus the fortification of *L. rhamnosus* HN001, to support the gut and immune health of both mother and child..

### *L. rhamnosus* HN001 – Early Life Protection

Infant gastrointestinal (GI) microflora develops quickly after birth and is linked to development of the immune system. The first exposure for an infant takes place via the mother, who becomes a primary source of bacterial species found in the developing gut microbiota of the infant. Infant nutrition (breast feeding or formula feeding) provides further support for an infant's microbiota growth which continues to develop until 3 years of age. During this period development of infant microbiota helps drive the maturation of the immune system.

**The disruption of the development of the microbiota and immunity during this critical period has been linked with the development of allergies and eczema.**

In a double-blind, randomized clinical trial <sup>1,2</sup> involving pregnant mothers and their later born-children with a 6-year follow-up, daily supplementation of 6 billion cfu of *L. rhamnosus* HN001 started from **35 weeks gestation until birth, continuing to 6 months after birth in mothers if breastfeeding, and from birth till 2 years in all infants.** Study outcomes were assessed at 2 and 4 years. The assessment include **eczema severity (SCORAD), atopic sensitivity (Skin Prick Test [SPT]), serum-specific IgE (ssIgE)**, standard questionnaire used for asthma, wheeze, and rhinoconjunctivitis.

The results demonstrated a significant reduction in the cumulative prevalence of eczema in the group supplemented with *L.*

## Quantity: 112 Servings

(1 capsule of Multi-Vitamin + 1 capsule of *Lr*HN001)

### Ingredients (per serving):

Mixed Natural Carotenoids.....	750 mcg
Vitamin B1 (from thiamine HCl).....	10 mg
Vitamin B2 (riboflavin-5-phosphate (sodium salt)).....	5 mg
Vitamin B3 (niacinamide).....	12.5 mg
Vitamin B5 (from calcium-d-pantothenate).....	15 mg
Vitamin B6 (pyridoxal-5-phosphate (calcium salt)).....	30 mg
Vitamin B12 (methylcobalamin).....	250 mcg
Biotin.....	50 mcg
5-MTHF (5-methyltetrahydrofolate).....	400 mcg
Vitamin C (ascorbic acid).....	50 mg
Vitamin D3 (12.5mcg) (cholecalciferol).....	500 IU
Mixed tocopherols.....	20 mg
Vitamin K2 (menaquinone-7).....	45 mcg
Calcium (from calcium bisglycinate).....	75 mg
Chromium (from chromium nicotinate glycinate).....	25 mcg
Copper (from copper bisglycinate).....	300 mcg
Iron (from iron bisglycinate) (Ferrochel®).....	15 mg
Magnesium (from magnesium bisglycinate).....	40 mg
Manganese (from manganese bisglycinate).....	0.5 mg
Molybdenum (from molybdenum bisglycinate).....	25 mcg
Selenium (from selenium glycinate).....	25 mcg
Zinc (from zinc bisglycinate).....	7.5 mg
Choline (from choline bitartrate).....	10 mg
Inositol.....	5 mg
Iodine (from potassium iodide).....	65 mcg
Lutein (free form) (from <i>Tagetes erecta</i> ).....	1 mg
<i>Lactobacillus rhamnosus</i> (HN001).....	3 billion cfu

**Non-medicinal Ingredients:** Silicon dioxide, L-Leucine, hypromellose (capsule)

**Suggested Use:** Adults - Take 1 capsule of Multi-Vitamin Complex with 1 capsule of Probiotic HN001, 1-2 times daily, with food, a few hours away from antibiotics and other medications, or as directed by a healthcare practitioner.

*rhamnosus* HN001. **The prevalence of eczema decreased by 49% (p=0.01) at 2 years of age,** and importantly the effect of *L. rhamnosus* HN001 on decreasing the prevalence of eczema persisted until six years of age when the cumulative prevalence was found to be **44% lower (p=0.01).** In addition, it was found that supplementation with *L. rhamnosus* HN001



decreased the cumulative prevalence of positive SPT by 31% (p=0.04) at 6-year followup.

Furthermore, at 4 years of age the relative risk of rhinoconjunctivitis (rhinitis and red eyes) was found to be 62 % less in the probiotic group (p=0.01).

### Active Forms of B-Vitamins

**5-MTHF & methylcobalamin** – support methylation reactions in the body. Proper methylation is important in DNA synthesis, DNA methylation (genome regulation), and nervous system development of infants [Figure 1].

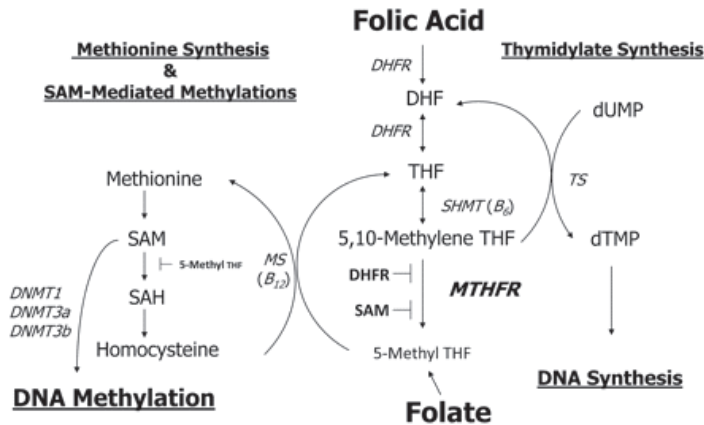


Figure 1. Folic acid metabolism. <sup>3</sup>

**Pyridoxal-5'-Phosphate** (Vitamin B6) – helps with metabolism, production of blood cells, nervous system development and alleviation of “morning sickness”.

**Riboflavin-5'-Phosphate** (Vitamin B2) - helps with energy production, promotes growth, good vision and nerve development, and healthy skin and bone. There’s also evidence that **inadequate riboflavin intake increases the risk of preeclampsia.** <sup>4</sup>

### Amino-Acid Chelated Minerals - Enhanced 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.<sup>5</sup> Another example is that the absorption rate of ferrous bisglycinate chelate is ~91% while that of ferrous sulfate is 27%. <sup>6</sup>

### Caution:

Keep out of reach of children. There is enough iron in this package to seriously harm a child. Consult a health care practitioner prior to use if you are taking blood thinners.

### Reference:

1. Wickens K, Black P, Stanley TV, Mitchell E, Barthow C, Fitzharris P, Purdie G, Crane J. A protective effect of Lactobacillus rhamnosus HN001 against eczema in the first 2 years of life persists to age 4 years. *Clinical & Experimental Allergy* (2012). 42:1071-1079.
2. Wickens K, Stanley TV, Mitchell EA, Barthow C, Fitzharris P, Purdie G, Siebers R, Black PN, Crane J. Early supplementation with Lactobacillus rhamnosus HN001 reduces eczema prevalence to 6 years: does it also reduce atopic sensitization? *Clinical & Experimental Allergy* (2013). 43: 1048-1057.
3. Crider KS, Yang TP, Berry RJ, Bailey LB. Folate and DNA methylation: a review of molecular mechanisms and the evidence for folate’s role. *Adv Nutr* (2012). 3: 21-38.
4. Wacker J, Fruhauf J, Schulz M, Chiwora FM, Volz J, Becker K. Riboflavin deficiency and preeclampsia. *Obstetrics & Gynecology* (2000). 96(1): 38-44.
5. Supakatisant C, Phupong V. Oral magnesium for relief in pregnancy-induced leg cramps: a RCT. *Maternal & Child Nutrition* (2012).
6. Pineda O, Ashmead HD. Effectiveness of treatment of iron-deficiency anemia in infants and young children with ferrous bis-glycinate chelate. *Nutrition* 2001;17:381-4.

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