# Brain and spinal cord development continue throughout pregnancy and depend upon a steady supply of B vitamins.

#### References

- Goyal, P., et al. "Role of magnesium sulphate for brachial plexus analgesia." The Internet Journal of Anesthesiology Vol. 21, No. 1 (2009).
- Kontic-Vucinic, O., M. Terzic, and M. Radunovic. "The role of antioxidant vitamins in hypertensive disorders of pregnancy." *Journal of Perinatal Medicine* Vol. 36, No. 4 (2008): 282–290.
- Molloy, A.M., et al. "Maternal vitamin B<sub>12</sub> status and risk of neural tube defects in a population with high neural tube defect prevalence and no folic acid fortification." *Pediatrics* Vol. 123, No. 3 (2009): 917–923.
- Goh, Y.I., et al. "Prenatal multivitamin supplementation and rates of pediatric cancers: A meta-analysis." Clinical Pharmacology and Therapeutics Vol. 81, No. 5 (2007): 685– 691.
- Ronnenberg, A.G., et al. "Preconception B-vitamin and homocysteine status, conception, and early pregnancy loss." American Journal of Epidemiology Vol. 166, No. 3 (2007): 304–312.
- Yajnik, C.S., et al. "Vitamin B<sub>12</sub> and folate concentrations during pregnancy and insulin resistance in the offspring: the Pune Maternal Nutrition Study." *Diabetologia* Vol. 51, No. 1 (2008): 29–38.
- Green, R. "Is it time for vitamin B<sub>12</sub> fortification? What are the questions?" The American Journal of Clinical Nutrition Vol. 89, No. 2 (2009): 7125–716S.
- Chavarro, J.E., et al. "Use of multivitamins, intake of B vitamins, and risk of ovulatory infertility." Fertility and Sterility Vol. 89, No. 3 (2008): 668–676.
- Holick, M.F. "Resurrection of vitamin D deficiency and rickets." The Journal of Clinical Investigation Vol. 116, No. 8 (2006): 2062–2072.
- Bodnar, L.M., et al. "High prevalence of vitamin D insufficiency in black and white pregnant women residing in the northern United States and their neonates." The Journal of Nutrition Vol. 137, No. 2 (2007): 447–452.
- Bodnar, L.M., et al. "Maternal vitamin D deficiency increases the risk of preeclampsia." The Journal of Clinical Endocrinology and Metabolism Vol. 92, No. 9 (2007): 3517–3522.



## Ingredients Each vegetable capsule contains:

Vitamin C (calcium ascorbate) 58.33 mg
Vitamin D (vitamin D <sub>3</sub> ) (133.33 IU) 3.33 mcg
Vitamin E (D-alpha-tocopheryl acetate)
(16.7 IU)
Vitamin K <sub>1</sub> 33.33 mcg
Thiamine (vitamin B1) (thiamine hydrochloride) 25 mg
Riboflavin (riboflavin-5'-phosphate sodium salt) 11.67 mg
Niacinamide (vitamin B <sub>3</sub> ) 16.67 mg
Vitamin B <sub>6</sub> (pyridoxal-5'-phosphate) 11.67 mg
Folate (calcium L-5-methyltetrahydrofolate) 333.33 mcg
Vitamin B <sub>12</sub> (methylcobalamin)
Biotin
Pantothenic acid (vitamin B <sub>5</sub> )
(calcium D-pantothenate)
Calcium (from calcium citrate) 66.67 mg
Iron (from iron (II) bisglycinate)
lodine (from potassium iodide) 50 mcg
Magnesium (from magnesium bisglycinate) 33.33 mg
Zinc (from zinc citrate) 8.33 mg
Selenium (from selenomethionine) 16.667 mcg
Copper (from cupric citrate) 500 mcg
Manganese (from manganese (II) citrate) 1.67 mg
Chromium (from chromium (III) polynicotinate) . 33.33 mcg
Molybdenum (from molybdenum citrate) 16.667 mcg
Potassium (from potassium citrate) 23.33 mg
Other ingredients: Microcrystalline cellulose, dicalcium
phosphate, vegetable magnesium stearate, and silicon dioxide
in a non-GMO vegetable capsule composed of vegetable
carbohydrate gum and purified water.

NPN 80062372 · V0378-R8

Ingredients in this formula have been validated for potency and identity, and certified free of heavy metals and solvent residues using:

- Inductively Coupled Plasma Optical Emission Spectrometer (ICP-OES)
- HPLCs with Diode Arrays UV-VIS Detectors / Refractive Index Detectors
- Near-Infrared Spectroscope (FT-NIR Spectrometer)
- Headspace Gas Chromatography (organic solvent residues)
- Disintegration

## Prenatal Sold exclusively to finer health food stores www.newrootsherbal.com/store



### **Prenatal**

Complete Multivitamin

For all stages, from conception to nursing



 Comprehensive nutritional support to meet the needs of





# Ensure proper fetal development

**Prenatal** by New Roots Herbal is formulated with the following 23 active ingredients:

#### Vitamin C (as Calcium Ascorbate)

This buffered form of vitamin C doesn't cause stomach upset associated with other forms of vitamin C. Vitamin C is a cofactor in the production of collagen, the pivotal protein for all connective tissue. Vitamin C is also essential for immune system function.

#### Vitamin D (as Vitamin D<sub>3</sub>)

This form of vitamin D, also known as cholecalciferol, is produced by exposure to sunlight. Vitamin D is necessary for calcium absorption; with sunlight at a premium during the winter months, supplementation is critical.

#### Vitamin E (as D-alpha-Tocopheryl Acetate)

Vitamin E supports immunological function with its antioxidant action in neutralizing free radicals.

#### Vitamin K (as Vitamin K<sub>1</sub>)

This fat-soluble vitamin is active in the blood-clotting process. Vitamin K is also essential for the conversion of glucose to glycogen (a readily available form of energy) for storage in the liver.

#### Vitamin B<sub>1</sub> (Thiamine)

This was the first vitamin discovered (1912). It's a cofactor in the conversion of complex carbohydrates to glucose, to fuel fetal nervous system development.

#### Vitamin B<sub>2</sub> (Riboflavin-5'-Phosphate)

This biomolecule is the principal form of B<sub>2</sub> found in cells and tissues. It is easily assimilated and more soluble than simple riboflavin. It improves bioavailability of nutrients for the rapidly developing fetus.

#### Vitamin B<sub>3</sub> (Niacinamide)

Also known as niacin; supporting nervous system development in the fetus and regulating adrenal function in the mother are among its most important functions.

#### Vitamin B<sub>5</sub> (Calcium Pantothenate)

Although deficiency of this vitamin is rare, it forms part of the coenzyme CoA, which is essential to numerous chemical reactions at the cellular level.

#### Vitamin B<sub>6</sub> (Pyridoxal-5'-Phosphate)

This is the only form of  $B_6$  that can be used by enzymes for protein metabolism and the production of red blood cells to meet the oxygen demands for the developing foetus.

#### Folic Acid (Calcium L-5-Methyltetrahydrofolate)

Also known as vitamin B<sub>9</sub>; folic acid deficiency has been connected to neural-tube birth defects such as spina bifida and anencephaly. Formation of the brain and spinal cord begin at conception; folic

acid triggers the closure of the neural tube and fetal brain within the first four weeks of pregnancy. Folic acid supplementation prior to conception can reduce the incidence of spina bifida alone by 70%.

#### Vitamin B<sub>12</sub> (Methylcobalamin)

The most neurologically active form of  $B_{12}$ , it doesn't require conversion prior to use: the body readily absorbs it. The role it plays in DNA synthesis is of critical importance at the embryonic stage.

#### Biotin

Biotin (sometimes called vitamin  $B_7$ ) is essential for fetal cell growth, along with the metabolism of amino acids and fats. The "citric acid cycle" (aerobic cellular respiration) occurs in the mitochondria of every cell and relies upon biotin to occur.

#### Calcium Citrate

Calcium is the foundation of bone formation; calcium citrate is a highly bioavailable form of calcium for the mother and developing fetus.

#### Iron Glycinate

Iron is the backbone for hemoglobin — during pregnancy, blood volume expands by 50%. Keeping the placenta oxygenated with adequate red blood cells facilitates proper fetal development. We use a chelated form of iron in **Prenatal** for its high degree of bioavailability.

#### Potassium Iodide

Thyroid function is often negatively affected during pregnancy. Iodine is irreplaceable for the production of the hormones triiodothyronine  $(T_3)$  and thyroxine  $(T_4)$ . Thyroid hormones control the metabolism of every cell in the human body; insuring proper thyroid function is a key component of a healthy pregnancy.

#### Magnesium Bisglycinate

Magnesium bound to amino acids provides the most bioavailable form of this critical trace element, essential for over 300 enzymatic reactions and the creation of bone mass.

#### Zinc Citrate

Zinc is often referred to as the fertility mineral: the health and vigor of both sperm and ovum (female egg) rely on an adequate supply of this critical mineral. Zinc citrate is a safe and bioavailable combination of zinc and citrate, which is a derivative of citric acid. Zinc also supports DNA production and is essential for establishing a healthy immune system.

#### Selenomethionine

Selenomethionine is a highly bioavailable form of selenium in the form of an amino acid chelate. Selenium contributes to effective thyroid function, that is often compromised during and after pregnancy.

#### Copper Citrate

Copper works as a cofactor in several processes that are important to both mother and child. Copper facilitates the inclusion of iron into red blood cells to respond to the need for increased hemoglobin to nourish the placenta. Copper is also a major component of the myelin sheath that insulates nerve fibres.

#### Manganese Citrate

Manganese is one of the trace elements that facilitates the production of bone and cartilage; the fetal demands for bone and cartilage formation intensify in the second and third trimesters. Manganese also promotes enzymatic action pivotal to the body's use of several ingredients in **Prenatal**, including biotin, thiamin, and vitamin C.

#### Chromium Polynicotinate

Chromium enhances the production of insulin. Its potential chromium deficiency can contribute to pregnancy-related diabetes.

#### Molybdenum Citrate

Molybdenum is a cofactor that works with sulfite oxidase to change potentially toxic sulfites to harmless sulfates. Sulfite allergies are particularly dangerous for those suffering from asthma, as any interruption of oxygen to the placenta is potentially harmful.

#### **Potassium Citrate**

This form of potassium is readily absorbed and helps regulate electrolyte levels, along with the delicate balance between sodium and potassium that are responsible for cellular respiration.

#### Laying A Strong Foundation

The cliché that a woman is eating for two during pregnancy does not mean doubling daily caloric intake. Estimates vary concerning the additional calories that a healthy pregnancy demands. The initial trimester relies more upon adequate vitamin and mineral requirements. Unlike caloric requirements, the increased need for vitamins and minerals is immediate. The vitamins and minerals you consume are your baby's only source of these micronutrients. An increase of between 25 and 50% of most vitamins and minerals is recommended during pregnancy.

More important requirements are the vitamin C and minerals necessary for the development and growth of the skeletal, nervous, and organ systems of the fetus. The nutritional value of supermarket food can not be taken for granted. Prenatal by New Roots Herbal will ensure that the critical nutritional requirements of both mother and child will be met before, during and after childbirth (including while breast-feeding).

B vitamins were once thought to be a single vitamin; however, these eight water-soluble vitamins are collectively referred to as the vitamin B complex. All eight B vitamins are included in Prenatal to promote the exponential cell growth and division that occurs during early pregnancy, along with the metabolic demands of the fetus and mother. These water-soluble vitamins are not stored by the body and are therefore in constant demand.

Planning a pregnancy involves many considerations; vitamin and mineral supplementation are among them. A healthy woman is more likely to conceive a healthy child. **Prenatal** gives you the peace of mind that you have met the critical embryonic and fetal demands for additional vitamins and minerals. All the major body and organ systems are formed in the initial 10 weeks of pregnancy. Consider **Prenatal** by New Roots Herbal as a policy to ensure your body meets the nutritional demands of your child for the full term.

#### Suggested Use

**Adults:** Take 3 capsules daily with food or as directed by your health-care practitioner. If you are taking other medications, take this product a few hours before or after them.