# Prenatal Essentials<sup>™</sup>

### **Prenatal Support Packets\***



Available in 30 packets

## **Clinical Applications**

- » Supports Maternal Nutrition Before and During Pregnancy\*
- » Supports a Healthy Pregnancy Outcome\*
- » Provides Key Ingredients to Promote Healthy Fetal Neurodevelopment\*

Prenatal Essentials™ is designed to meet the higher nutritional needs of women who are preparing for pregnancy or are pregnant. Not only does Prenatal Essentials address these needs in a comprehensive way, but it also reflects recent research with its inclusion of generous levels and active forms of key nutrients, such as OmegaPure DHA™, 5-methyltetrahydrofolate as Quatrefolic®, 2000 IU of Vitamin D3, Ferrochel® iron, and TRAACS® chelated minerals. This formula is designed to assure optimal utilization while being gentle to the digestive tract.\*

#### Discussion

Each component of Prenatal Essentials has an important role in maternal nutrition and a healthy pregnancy outcome.\* For ease of use, all are provided together in one convenient packet:

Omega-3s, Vitamin D, and Choline The importance of these nutrients in maternal health and healthy fetal neurodevelopment cannot be overstated. Adequate intakes of omega-3 fatty acids are critically important during pregnancy because they are building blocks of fetal brain and retina.[1] Furthermore, it is believed that during mid-to-late gestation, docosahexaenoic acid (DHA) plays an important role in the development of neurocognitive and neuromotor functions.[1] Within the last several years, research on vitamin D and the prevalence of its insufficiency has exploded. Vitamin D is important for neuronal growth and development. Maternal vitamin D metabolism and vitamin D insufficiency are important considerations given the association made between maternal vitamin D status during pregnancy and brain function in the child.[2-4] Maternal reserves of choline are depleted during pregnancy, yet its availability is critical because it is the starting material for important metabolites that play key roles in fetal development, particularly brain development. Current data show that most pregnant women are not achieving target intake levels and, in addition, certain common genetic variants may increase requirements.\*[5,6]

Folate Prenatal Essentials provides calcium folinate as well as 5-methyltetrahydrofolate (5-MTHF)—the most bioavailable, active form of folate. 5-MTHF is provided as Quatrefolic<sup>®</sup>, which is proven to have greater stability, solubility, and bioavailability than calcium salt forms of 5-MTHF. Adequate folate nutrition before and during pregnancy supports normal fetal neurological development and a healthy pregnancy outcome. [7] Supplementing with bioactive 5-MTHF allows for the bypassing of steps in folate metabolism. This may be especially beneficial in those with digestive concerns and those with genetic variations in folate metabolism.\*[8,9]

**B Vitamins** Prenatal Essentials provides generous levels of these critical vitamins because sufficient levels are needed for energy production; cell growth and division, including that of red blood cells; and neurologic, cardiovascular, immune, dermatological, and emotional health.<sup>[10]</sup> In addition, B6 (pyridoxal 5'-phosphate) has been studied for its ability to soothe the stomach during pregnancy.\*[11,12]

**Bioavailable, yet Gentle Iron** Approximately 20% of pregnant women have iron deficiency anemia<sup>[13]</sup>, and it's likely that a greater number have insufficient levels of iron. Ferrochel iron has been shown to help increase and maintain blood levels of iron while being gentle to the stomach and colon. This form of iron performs the stomach's work in advance by binding minerals to amino acids, an action which allows the iron molecules to pass easily through the intestinal wall thereby avoiding stomach upset (as seen with other forms of iron) while maximizing absorption.\*[14,15]

Other Important Nutrients Prenatal Essentials provides supportive nutrients, including vitamins A, C, D, and E; mixed carotenoids; and selenium to address the increased physiological stress of pregnancy and promote healthy tissue maintenance and growth. Research suggests that good maternal antioxidant status may positively influence birth weight. Zinc, copper, manganese, chromium, and molybdenum are provided as TRAACS amino acid chelates for improved absorption in the gut and optimal assimilation. Calcium is provided as DimaCal, a patented complex of calcium and malic acid that not only supports optimal calcium utilization and gastric tolerance but also supports the body's energy-producing cycles. Calcium is provided in a 2:1 ratio with magnesium, which may help support normal muscular contraction in legs and arteries. Tr. Juliamin K and iodine are added to help ensure maternal sufficiency.

#### Prenatal Essentials™ Supplement Facts

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Serving Size: 1 Packet				
	5 Prenatal Multivitamin/Mineral Capsules		1 OmegaPure DHA™ Softgel	
	Amount Per of Serving	%DV‡ for Pregnant Lactating Women	Amount Per Serving	%DV‡ for Pregnant or Lactating Women
Calories			9	
Calories from Fat			9	
Total Fat			1 g	2%
Vitamin A (60% as natural beta-carotene and 40% as retinyl palmitate) $$	5000 IU	63%		
Vitamin C (ascorbic acid)	100 mg	167%		
Vitamin D3 (cholecalciferol)	2000 IU	500%		
Vitamin E (as d-alpha tocopheryl succinate and mixed tocopherols)	200 IU	667%		
Thiamin (as thiamine HCI)	5 mg	294%		
Riboflavin (as riboflavin 5'-phosphate sodium)	5 mg	250%		
Niacin (as niacinamide)	25 mg	125%		
Vitamin B6 (as pyridoxal 5'-phosphate)	20 mg	800%		
Folate (400 mcg as Quatrefolic® (6S)-5- methyltetrahydrofolic acid, glucosamine salt and 400 mcg as calcium folinate)	800 mcg	100%		
Vitamin B12 (as methylcobalamin)	50 mcg	625%		
Biotin	300 mcg	100%		
Pantothenic Acid (as d-calcium pantothenate)	25 mg	250%		
Calcium (as DimaCal® di-calcium malate)	400 mg	31%		
Iron (as Ferrochel® ferrous bisglycinate chelate)	30 mg	167%		
lodine (as potassium iodide)	225 mcg	150%		
Magnesium (as Albion® di-magnesium malate)	200 mg	44%		
Zinc (as TRAACS® zinc bisglycinate chelate)	20 mg	133%		
Copper (as TRAACS® copper bisglycinate chelate)	2 mg	100%		
Malic Acid (as di-calcium malate and Albion® di-magnesium malate)	1.6 g	**		
Choline (as choline dihydrogen citrate)	200 mg	**		
Vitamin K2 (as menaquinone-7)	100 mcg	**		
Manganese (as TRAACS® manganese bisglycinate chelate)	5 mg	**		
Selenium (as L-selenomethionine)	100 mcg	**		
Chromium (as TRAACS® chromium nicotinate glycinate chelate)	100 mcg	**		
Molybdenum (as TRAACS® molybdenum glycinate chelate)	100 mcg	**		
Fish Oil Concentrate			1 g	**
DHA (docosahexaenoic acid)			580 mg	**
EPA (eicosapentaenoic acid)			60 mg	**
<ul> <li>Percent Daily Values are based on a 2,000 calorie diet.</li> <li>** Daily Value (DV) not established.</li> </ul>				

Other Ingredients for Prenatal Multivitamin/Mineral Capsule: HPMC (capsule), microcrystalline cellulose, ascorbyl palmitate, silica, and medium-chain triglyceride oil.

Other Ingredients for OmegaPure DHA: Gelatin, glycerin, purified water, and mixed natural tocopherols.

Contains: Fish (tuna, sardine, anchovy).

**DIRECTIONS:** Take contents of one packet daily as directed by your healthcare

DOES NOT CONTAIN: Wheat, gluten, yeast, soy protein, dairy products, shellfish, peanuts, tree nuts, egg, artificial colors, artificial sweeteners, or artificial preservatives.

CAUTIONS: Consult your healthcare practitioner before use. Individuals taking medication should discuss potential interactions with their healthcare practitioner. Do not use if tamper seal is damaged. The labeling on this product does not comply with California's Proposition 65. Therefore, this product may not be sold in

Vitamin A: Excess vitamin A intake may be toxic and may increase the risk of birth defects. Pregnant women and women who may become pregnant should not exceed 5,000 IU of preformed vitamin A (retinyl acetate or retinyl palmitate)

Vitamin K: Consider total vitamin K intake (food and supplements) if you are taking blood-thinning medication.

WARNING: Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under 6. Keep this product out of reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

**STORAGE:** Keep tightly closed in a cool, dry place out of reach of children.

Albion, DimaCal, FerroChel, and TRAACS are registered trademarks of Albion Laboratories, Inc. Malates covered by U.S. Patent 6,706,904 and patents pending



#### **References**

- Coletta JM, Bell SJ, Roman AS. Omega-3 fatty acids and pregnancy. Rev Obstet Gynecol. 2010;3(4):163-71. [PMID: 21364848]
- Currenti SA. Understanding and determining the etiology of autism. Cell Mol Neurobiol. 2010 Mar;30(2):161-71. [PMID: 19774457]
- Cannell JJ. On the aetiology of autism. Acta Paediatr. 2010 Aug:99(8):1128-30. [PMID: 20491697]
- Grant WB, Soles CM. Epidemiologic evidence supporting the role of maternal vitamin D deficiency as a risk factor for the development of infantile autism. Dermatoendocrinol. 2009 Jul;1(4):223-28. [PMID: 20592795]
- Caudill MA. Pre- and postnatal health: evidence of increased choline needs. J Am Diet Assoc. 2010 Aug;110(8):1198-206. [PMID: 20656095]
- Zeisel SH. Importance of methyl donors during reproduction. Am J Clin Nutr. 2009 Feb;89(2):673S-77S. [PMID: 19116320]
- Folic Acid Fact Sheet. U.S. Department of Health and Human Services, Office on Women's Health. http://www.womenshealth.gov/publications/our-publications/ fact-sheet/folic-acid.cfm. Updated May 18, 2010. Accessed June 19, 2012.
- Prinz-Langenohl R, Brämswig S, Tobolski O, et al. [6S]-5methyltetrahydrofolate 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]
- Lamers Y, Prinz-Langenohl R, Brämswig S, et al. Red blood cell folate concentrations increase more after supplementation with [6S]-5methyltetrahydrofolate than with folic acid in women of childbearing age. Am J Clin Nutr. 2006 Jul;84(1):156-61. [PMID: 16825690]
- 10. B Vitamins. Medline PLUS. http://www.nlm.nih.gov/medlineplus/bvitamins.html. Accessed March 28, 2011.
- 11. Ebrahimi N, Maltepe C, Einarson A. Optimal management of nausea and vomiting of pregnancy. Int J Womens Health. 2010 Aug;2:241-48. [PMID: 211517291
- 12. Jewell D, Young G. Interventions for nausea and vomiting in early pregnancy. Cochrane Database Syst Rev. 2003;(4):CD000145. [PMID: 14583914]
- 13. Anemia During Pregnancy. Utah Department of Health: Maternal and Infant Health Program. http://health.utah.gov/mihp/pregnancy/preged/duringpreg/ Anemia\_during\_pregnancy.htm. Accessed March 29, 2011.
- 14. Szarfarc SC, de Cassana LM, Fujimori E, et al. Relative effectiveness of iron bisglycinate chelate (Ferrochel) and ferrous sulfate in the control of iron deficiency in pregnant women. Arch Latinoam Nutr. 2001 Mar;51(1 Suppl 1):42-47. [PMID: 11688081]
- 15. Ferrochel Effectiveness. Albion Human Nutrition. http://www.albionferrochel. com/effectiveness. Accessed March 28, 2011.
- 16. Osorio JC, Cruz E, Milanés M, et al. Influence of maternal redox status on birth weight. Reprod Toxicol. 2011 Jan;31(1):35-40. [PMID: 20934506]
- 17. Roffe C, Sills S, Crome P, et al. Randomised, cross-over, placebo controlled trial of magnesium citrate in the treatment of chronic persistent leg cramps. Med Sci Monit. 2002 May;8(5):CR326-30. [PMID: 12011773]
- 18. Jain S, Sharma P, Kulshreshtha S, et al. The role of calcium, magnesium, and zinc in pre-eclampsia. Biol Trace Elem Res. 2010 Feb;133(2):162-70. [PMID: 195479321

Additional references available upon request