

Manganese B₁₂™

Contains Manganese Lactate, Vitamin B₁₂, Carrot Powder, and Bovine Bone to Support Many Enzymatic Functions

Vitamin B₁₂ (cyanocobalamin) is necessary for normal metabolism of nerve tissue and is intimately related to the actions of four important amino acids, pantothenic acid, and vitamin C. It works along with folic acid to ensure that the red blood cells reach full maturity, thereby promoting healthy blood. Vitamin B₁₂ also helps in the utilization of iron. Manganese also plays an important role in protein and fat metabolism. Together, these nutrients protect, maintain, and support the blood. Manganese complements the B-complex vitamins to help achieve an overall feeling of well-being. Carrots and their derivatives hold a virtual storehouse of important vitamins and minerals that, among many other things, benefit a number of major organs and enhance digestive function by stimulating waste elimination.†

How Manganese B₁₂ Keeps You Healthy

Supports immune and nervous system function

Among other factors, the immune system relies on each type of blood cell to exist in the appropriate number and level of maturity to perform its respective task efficiently. When that delicate balance is interrupted, the immune system becomes vulnerable. Vitamin B₁₂ is essential to normal red blood cell growth and necessary in supporting healthy blood. Manganese contributes to a healthy immune system. Both manganese and vitamin B₁₂ are necessary to keep the nervous system operating efficiently. Manganese keeps nerve tissue healthy, while vitamin B₁₂ maintains the fatty sheaths covering and protecting nerve endings. Vitamin B₁₂ assists in the production of a neurotransmitter that enhances memory and learning.†

Improves digestion

Vitamin B₁₂ assists in food absorption to promote good digestion and optimal nutrient assimilation.†

Promotes healthy joint function

Manganese is necessary for normal bone growth and synthesis. It helps form cartilage and lubricating fluid within joints to keep them moving freely. Manganese is also involved in the health and maintenance of ligaments, intervertebral discs, and tendons.†

Benefits metabolic efficiency

Manganese plays an important role in regulating blood-sugar levels and metabolizing proteins and fats. Vitamin B₁₂ is needed to synthesize proteins and metabolize carbohydrates and fats.†

Please copy for your patients.

GF This product contains less than 10 parts per million of gluten per serving size or less than 20 parts per million per the suggested use listed on each product label.

†These statements have not been evaluated by the Food & Drug Administration. These products are not intended to diagnose, treat, cure, or prevent any disease.



Introduced in 1956

GF

Content:

90 tablets

Suggested Use: One tablet per day, or as directed.

Supplement Facts:

Serving Size: 1 tablet

Servings per Container: 90

| | Amount per Serving | %DV |
|-------------------------|--------------------|--------|
| Calories | 1 | |
| Vitamin C | 9.2 mg | 15% |
| Vitamin B ₁₂ | 5 mcg | 80% |
| Iron | 1 mg | 6% |
| Zinc | 1.9 mg | 15% |
| Copper | 0.2 mg | 10% |
| Manganese | 34 mg | 1,700% |

*Percent Daily Values (DV) are based on a 2,000-calorie diet.

Proprietary Blend: 75 mg

Carrot (root) and bovine bone.

Other Ingredients: Manganese lactate, honey, acerola (berry), camu camu (berry), zinc liver chelate, manioc (root), iron liver chelate, dicalcium phosphate, copper liver chelate, calcium stearate, and cyanocobalamin.

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.

Sold through health care professionals.



800-558-8740 | standardprocess.com

Manganese B₁₂TM

What Makes Manganese B₁₂ Unique

Product Attributes

Multiple nutrients from a variety of plant and animal sources

- › Combination of manganese with other minerals, such as iron, zinc, and copper, makes Manganese B₁₂ an effective product
- › Bovine bone tissues provide nutrients and support to the corresponding tissues in humans
- › Vitamins, minerals, and nutrients from plants and bovine bone work synergistically for maximum effect[†]

Manufacturing and Quality-Control Processes

Low-temperature, high-vacuum drying technique

- › Preserves the enzymatic vitality and nutritional potential of ingredients

Not disassociated into isolated components

- › The nutrients in Manganese B₁₂ are processed to remain intact, complete nutritional compounds
- › Degreed microbiologists and chemists in our on-site laboratories continually conduct bacterial and analytical tests on raw materials, product batches, and finished products
- › Ensures consistent quality and safety

Vitamin and mineral analyses validate product content and specifications

- › Assures high-quality essential nutrients are delivered

Whole Food Philosophy

Our founder, Dr. Royal Lee, challenged common scientific beliefs by choosing a holistic approach of providing nutrients through whole foods. His goal was to provide nutrients as they are found in nature—in a whole food state where he believed their natural potency and efficacy would be realized. Dr. Lee believed that when nutrients remain intact and are not split from their natural associated synergists—known and unknown—bioactivity is markedly enhanced over isolated nutrients. Following this philosophy, even a small amount of a whole food concentrate will offer enhanced nutritional support, compared to an isolated or fractionated vitamin. Therefore, one should examine the source of nutrients rather than looking at the quantities of individual nutrients on product labels.

Studies on nutrients generally use large doses and these studies, some of which are cited below, are the basis for much of the information we provide you in this publication about whole food ingredients. See the supplement facts for Manganese B₁₂TM.

- Allay C., Celin M. Vitamin B₁₂ absorption test and oral treatment in 14 children with selective vitamin B₁₂ malabsorption. *Pediatric Hematology Oncology*. Mar-Apr 1999; 16(2): 159-163.
- Anderson L.E. 1998. *Mosby's Medical, Nursing, & Allied Health Dictionary*. 5th ed. Mosby; St. Louis. 431, 985.
- Balch J.F., Balch P.A. 1997. *Prescription for Nutritional Healing*. 2nd ed. Avery Publishing Group; Garden City Park. 6, 8, 16, 26, 27.
- Berndtner C.D. 1995. *Advanced Nutrition Micronutrients*. CRC Press; Boca Raton. 119-123, 212-214.
- Brolin R.E., et al. Are vitamin B₁₂ and folate deficiency clinically important after roux-en-Y gastric bypass? *Journal of Gastrointestinal Surgery*. Sep-Oct 1998; 2(5): 436-442.
- Cataldo C., et al. 1995. *Nutrition and Diet Therapy*. 4th ed. West Publishing Company; Minneapolis.
- Coffee C.J. 1998. *Metabolism*. 1st ed. Fence Creek Publishing; Madison. 73-74, 349, 369.
- Dobersauer C., et al. Multiple myeloma involving the stomach with vitamin B₁₂ deficiency. *European Journal of Gastroenterology and Hepatology*. Feb 1999; 11(2): 205-207.
- Dowling E.J., et al. Assessment of a human recombinant Manganese superoxide dismutase in models of inflammation. *Free Radic Res Commun*. 1993; 18(5): 291-298.
- Gerber J.M. 1993. *Handbook of Preventive and Therapeutic Nutrition*. Aspen Publishers Inc.; Gaithersburg.
- Ghosh K., et al. Amegakaryocytic thrombocytopenia of nutritional vitamin B₁₂ deficiency. *Trop Geogr Med*. Apr 1988; 40(2): 158-160.
- Guyton A.C., Hall E.E. 1997. *Human Physiology and Mechanisms of Disease*. 6th ed. W.B. Saunders Company; Philadelphia. 589.
- Hanley W.B., et al. Vitamin B₁₂ deficiency in adolescents and young adults with phenylketonuria. *European Journal of Pediatrics*. Jul 1996; 155 Suppl 1: S145-S147.
- HealthWorld Online; Staying healthy with nutrition. Copyright Elson M. Haas, M.D. Jacob S.W., Francone C.A., Lossow W.J. 1982. *Structure and Function in Man*. 5th ed. W.B. Saunders Company; Philadelphia. 509.
- Jubault V., et al. Hemolysis and schizocytosis, malabsorption and the "folate trap": unusual serological peculiarities associated with vitamin B₁₂ deficiency. *Rev Med Interne*. Dec 1998; 19(12): 921-923.
- Kirschmann J.D. 1979. *Nutrition Almanac*. Revised edition. McGraw-Hill Book Company; New York. 27-29, 75-76.
- Kiliris-Taxantzi D.J. 1994. *Manganese in Health and Disease*. CRC Press, Inc. 66-68.
- Lobo A., et al. Reduction of homocysteine levels in coronary artery disease by low-dose folic acid combined with vitamins B₆ and B₁₂. *American Journal of Cardiology*. Mar 15 1999; 83(6): 821-825.
- Okuda K. Discovery of vitamin B₁₂ in the liver and its absorption factor in the stomach: a historical review. *Journal of Gastroenterology and Hepatology*. Apr 1999; 14(4): 301-308.
- Pietrzak K., Bronstrup A. The role of homocysteine, folate and other B-vitamins in the development of atherosclerosis. *Arch Latinoam Nutr*. Jun 1997; 47(2 Suppl 1): 9-12.
- Pitchford P. 1993. *Healing With Whole Foods*. Revised edition. North Atlantic Books; Berkeley. 90, 96-103, 109, 111, 252, 322, 347, 356, 369, 402-3, 479, 482, 541.
- Pfeiffer C.C. 1978. *Zinc and Other Micronutrients*. 66.
- Scott K.J., Bishop D.R. Nutrient content of milk and milk products: water soluble vitamins in baby milk formulae. *Journal of Dairy Research*. Nov 1985; 52(4): 521-528.
- Shils M.E., Young V.R. 1988. *Modern Nutrition in Health and Disease*. 7th ed. Lea & Febiger; Philadelphia. 274-276, 388-404.
- Sozen A.B., et al. Autonomic dysfunction in vitamin B₁₂ deficiency: a heart rate variability study. *Journal of the Autonomic Nervous System*. Jun 30 1998; 71(1): 25-27.
- Tamura J., et al. Immunomodulation by vitamin B₁₂: augmentation of CD8+ T lymphocytes and natural killer (NK) cell activity in vitamin B₁₂-deficient patients by methyl-B₁₂ treatment. *Clinical Experimental Immunology*. Apr 1999; 116(1): 28-32.
- Tier D.F., Russell P. 1989. *The Nutrition and Health Encyclopedia*. 2nd ed. Van Nostrand Reinhold; New York. 123-125, 317-318.
- Van Wynsberghe D., Noback C.R., Carola R. 1995. *Human Anatomy and Physiology*. 3rd ed. McGraw-Hill, Inc.; New York. 606-607, 872.
- Westerterp-Platenga M.S., Fredrix E., Steffens A. 1994. *Food Intake and Energy Expenditure*. CRC Press; Boca Raton. 111.
- Wilson E.D., Fisher K.H., Fuqua M.E. 1965. *Principles of Nutrition*. 2nd ed. John Wiley & Sons, Inc.; New York. 187-189, 299-302.
- Wright J.D., et al. Blood folate and vitamin B₁₂ United States, 1988-94. *Vital Health Statistics*. Dec 1998; 243: 1-78.
- Wu K., et al. A prospective study on folate, B₁₂ and pyridoxal 5'-phosphate (B₆) and breast cancer. *Cancer Epidemiology Biomarkers Prevention*. Mar 1999; 8(3): 209-217.
- Zhangaylov A.K., et al. Effect of dietotherapy incorporating koumiss and shubat on vitamin B₁₂ absorption in the intestines and on its content in the blood of chronic enterocolitis patients. *Vopr Pitan*. Mar-Apr 1986; 2: 16-18.

