

Vitamin B12 Liquid

Cod. FE2275 – 15 ml



New Roots Herbal's **Vitamin B12 Liquid** consists of **methylcobalamin**, the **active form of vitamin B12**, in a liquid dosage matrix for fast action and easy absorption. Meat, fish and dairy products are excellent sources of vitamin B12, so people who choose vegetarian or vegan lifestyles, or those with intestinal malabsorption, may need other sources of this vitamin.

HEALTH CLAIMS (EU Regulation 432/2012): *Vitamin B12 contributes to normal energy metabolism, proper functioning of the **immune system**, the **nervous system** and proper psychological function. It promotes the normal formation of red blood cells, helps to reduce **tiredness** and **fatigue** and is involved in the process of cell division. Contributes to the normal metabolism of **homocysteine**, an amino acid related to **cardiovascular** well-being.*

Ingredients: Purified water, ethanol (from sugar cane), vegetable glycerol and methylcobalamin (vitamin B12).

Nutritional information

6 drops (0,17 ml)

Vitamin B12 (methylcobalamin)

1 000 µg (40 000%*)

*NRV: Nutrient Reference Value in %

Size and format:

15 ml

Recommended daily dose:

6 drops daily. Shake well before use.

Do not exceed the stated recommended daily dose.

Indications and uses:

- Vegetarian or vegan diets.
- Prevention or treatment of anaemia, for good digestion, nutrient absorption, protein synthesis and carbohydrate and fat metabolism.
- It increases energy and keeps nerve cells in good condition.
- It helps to relieve symptoms of fatigue, nervous irritability, inability to concentrate, slight memory loss, depression, insomnia, lack of balance and coordination.
- It is important in periods of reproduction and lactation.

DETAILS:

Vitamin B12 is a water-soluble vitamin. It is essential for normal growth and development, and it is very important in the process of red blood cell formation. It helps the body to use folic acid and supports the function of the nervous system.

Its deficiency may be caused by malabsorption. The presence of hydrochloric acid and a well-functioning thyroid gland facilitate the absorption of vitamin B12.

Vitamin B12 absorption appears to decrease with age and also due to calcium, iron and vitamin B6 deficiencies.

INGREDIENTS:

VITAMIN B12: Vitamin B12 is the largest and most complex of the vitamins. Vitamin B12 comprises the only cobalt-containing molecules (called cobalamins) with biological activity in humans ⁽¹⁾. Clear health benefits of dietary vitamin B12 intake have been confirmed, as it contributes to normal red blood cell formation, cell division, energy metabolism and immune system function ^(2,3).

Humans are not capable of producing vitamin B12. It is found exclusively in animal products such as meat (offal) and to a lesser extent in fish, poultry and dairy products, which is why vegetarians and vegans are at a higher risk of developing a deficiency of this vitamin ⁽⁴⁾.

Vitamin B12 Liquid

Cod. FE2275 – 15 ml



The absorption of this vitamin may be partly through the oral epithelium, but the most important phase of absorption takes place in the stomach. There, stomach acids unbind vitamin B12 from the proteins in the food. Vitamin B12 then binds to intrinsic factor (IF) in the small intestine. IF protects the stomach wall from degradation and facilitates transport through the wall of the small intestine. The stomach wall of older people produces less IF and they are therefore at greater risk of vitamin B12 deficiency^(5,6).

A sufficient intake of vitamin B12 is important as it helps the body convert food into glucose, which is used to produce energy, maintain healthy nerve cells, produce nucleic acids (e.g. DNA), regulate the formation of red blood cells together with vitamin B9 (folate) and control, together with vitamin B6 and vitamin B9, the level of homocysteine in blood, a potential risk indicator for heart disease⁽⁷⁻¹¹⁾

Mild vitamin B12 deficiency is not unusual in older people (10-15% of those over 60), either because of a poor diet or because they have less gastric acid, which is necessary for the body to absorb vitamin B12⁽¹²⁾. Low B12 levels can cause a range of symptoms including fatigue, breathing difficulties, diarrhoea, nervousness, numbness or tingling sensation in the fingers and toes. A serious B12 deficiency causes neurological damage⁽¹²⁻¹⁶⁾.

References:

- 1) Brody, T. "Nutritional biochemistry. 1999." San Diego, California: Academic.
- 2) Shane, B. "Folic acid, vitamin B12, and vitamin B6." Biochemical and Physiological Aspects of Human Nutrition. Philadelphia: WB Saunders Co (2000): 483-518.
- 3) Gerhard, Glenn T., and Paul Barton Duell. "Homocysteine and atherosclerosis." Current opinion in lipidology 10.5 (1999): 417-428.
- 4) Elmadfa, Ibrahim, and Ingrid Singer. "Vitamin B-12 and homocysteine status among vegetarians: a global perspective." The American journal of clinical nutrition 89.5 (2009): 1693S-1698S.
- 5) Baik, H. W., and R. M. Russell. "Vitamin B12 deficiency in the elderly." Annual review of nutrition 19.1 (1999): 357-377.
- 6) Eussen, Simone JPM, et al. "Oral cyanocobalamin supplementation in older people with vitamin B12 deficiency: a dose-finding trial." Archives of Internal Medicine 165.10 (2005): 1167-1172.
- 7) McMahon, Jennifer A., et al. "A controlled trial of homocysteine lowering and cognitive performance." New England Journal of Medicine 354.26 (2006): 2764-2772.
- 8) Lederle, Frank A. "Oral cobalamin for pernicious anemia: medicine's best kept secret?." Jama 265.1 (1991): 94-95.
- 9) Hathcock, John N., and Gloria J. Troendle. "Oral cobalamin for treatment of pernicious anemia?." JAMA 265.1 (1991): 96-97.
- 10) Elia, M. "Oral or parenteral therapy for B12 deficiency." The Lancet 352.9142 (1998): 1721-1722.
- 11) Carmel R. Cobalamin (Vitamin B-12). In: Shils, Maurice Edward, and Moshe Shike, eds. Modern nutrition in health and disease. Lippincott Williams & Wilkins, 2006: 482-497.
- 12) Stabler, Sally P., John Lindenbaum, and Robert H. Allen. "Vitamin B-12 deficiency in the elderly: current dilemmas." The American journal of clinical nutrition 66.4 (1997): 741-749.
- 13) Seshadri, Sudha, et al. "Plasma homocysteine as a risk factor for dementia and Alzheimer's disease." New England Journal of Medicine 346.7 (2002): 476-483.
- 14) Ravaglia, Giovanni, et al. "Homocysteine and folate as risk factors for dementia and Alzheimer disease-." The American journal of clinical nutrition 82.3 (2005): 636-643.
- 15) Eussen, Simone J., et al. "Effect of oral vitamin B-12 with or without folic acid on cognitive function in older people with mild vitamin B-12 deficiency: a randomized, placebo-controlled trial-." The American journal of clinical nutrition 84.2 (2006): 361-370.
- 16) Kuzminski, Antoinette M., et al. "Effective treatment of cobalamin deficiency with oral cobalamin." Blood, The Journal of the American Society of Hematology 92.4 (1998): 1191-1198.