DOUBLE B12 VITAMIN COMPLEX

NUTRICODE
Dr Tomasz Jeżewski MD, PhD Signature Series

Your trusted companion for maintaining peak energy levels, mental clarity, and overall well-being.

NUTRICODE DOUBLE B12 Vitamin COMPLEX

- Information Guide for Business Partners

Welcome to a new era of vitality and wellness with the Nutricode Double B12 vitamin Complex, a product in the Nutricode by Dr Tomasz Jeżewski MD, PhD Signature Series. This is your trusted companion for maintaining peak energy levels, mental clarity, and overall well-being. Our unique formula combines two of the most potent forms of vitamin B12—Methylcobalamin and Cyanocobalamin—delivering a powerful, dual-action boost that your body needs to thrive.

Ingredients and Their Description

The Nutricode Double B12 vitamin Complex contains two potent forms of vitamin B12, each chosen for its specific benefits:

· **Methylcobalamin:** This naturally occurring form of vitamin B12 is known for its high bioavailability, allowing it to be easily absorbed and utilised by the body. Methylcobalamin supports nerve function, cognitive health, and DNA synthesis, making it a crucial component for overall neurological and cellular health.

· **Cyanocobalamin:** A stable form of vitamin B12, Cyanocobalamin is essential for the formation of red blood cells and energy production. It is particularly effective in supporting overall metabolic health and preventing vitamin B12 deficiency, which can lead to fatigue and other health issues.

Together, these two forms of vitamin B12 provide a comprehensive approach to maintaining optimal B12 levels and supporting a healthy, energetic lifestyle.

Why Choose Double B12?

· **Dual Benefits:** Each dose of Double B12 contains 250 µg of Methylcobalamin and 250 µg of Cyanocobalamin, ensuring that your body receives a balanced and comprehensive supply of vitamin B12.

· **Methylcobalamin:** Known for its high bioavailability, Methylcobalamin is the active form of B12 that your body can use immediately, supporting nerve function, cognitive health, and DNA synthesis.

· **Cyanocobalamin:** A stable and widely-used form of B12, Cyanocobalamin is essential for red blood cell formation, energy production, and overall metabolic health (Pawlak, Lester, and Babatunde, 2014).

Who Can Benefit from Nutricode Double B12 Vitamin Complex?

Nutricode Double B12 Vitamin Complex is designed for anyone looking to enhance their energy levels, support their nervous system, or ensure adequate nutrient intake. It is especially beneficial for:

· **Active Lifestyles:** Maintain your busy schedule and physical activities by supporting energy levels and reducing fatigue.

· **Vegetarians and Vegans:** Vitamin B12 is often lacking in plant-based diets. Nutricode Double B12 vitamin Complex ensures you receive adequate vitamin B12 to support overall health. Research has shown that vegetarians have a higher prevalence of vitamin B12 deficiency, which can negate the health benefits of a plant-based diet (Herrmann et al., 2001; Pawlak, Lester, and Babatunde, 2014).

· **Individuals Over 50:** As we age, our bodies may have difficulty absorbing vitamin B12, making supplementation essential for maintaining health and vitality. The Institute of Medicine recommends B12 supplementation for everyone over the age of fifty due to decreased absorption efficiency with age (Institute of Medicine, 1998).

· **People with Grey Hair:** B12 deficiency is one of the rare reversible causes of hair greying. Replenishing B12 can help repigment hair (Kumar, Shamim, and Nagaraju, 2018).

· **Those Supporting Heart Health:** vitamin B12 helps reduce homocysteine levels in the blood, which, if elevated, are associated with an increased risk of heart disease. Maintaining adequate B12 levels can help manage homocysteine levels and promote cardiovascular health (Obersby et al., 2013).

· **Anti-Ageing:** Maintaining balanced B12 levels can deactivate specific pro-ageing pathways (such as mTOR), contributing to healthy ageing (Khayati et al., 2017).

· **Dementia Prevention:** Certain types of dementia are reversible with adequate vitamin B12 intake. B12 deficiency leads to elevated homocysteine levels, which have been linked to cognitive decline (de Jager et al., 2012).

· **Collagen Production and Wound Healing:** B12 is essential for collagen synthesis and maintaining the mechanical integrity of connective tissues. It also plays a role in wound healing by supporting new cell formation (Karlic et al., 2008; Kang and Trelstad, 1973).

· **Prevents Anaemia:** Vitamin B12 is vital for producing healthy red blood cells. A deficiency can lead to megaloblastic anaemia, characterised by large, dysfunctional red blood cells (Costa et al., 2024).

· **Supports Bone Health:** Adequate B12 levels can support bone health by aiding in bone mineral density maintenance, potentially reducing osteoporosis risk, particularly in older adults (Zhao, Lu, and Zhang, 2024; Luo et al., 2024).

· **Improves Mood and Brain Health:** B12 is crucial in serotonin synthesis, which helps regulate mood. Supplementation can help improve mood and reduce depressive symptoms, especially in those with a deficiency (Moore and Hughes, 2012; Bjelland, Tell, and Vollset, 2002).

· **Enhances Nerve Function:** Vitamin B12 is vital for myelin production, which protects and insulates nerve cells. Adequate B12 levels not only support the maintenance of the nervous system but also ensure the proper conduction of nerve impulses. This is essential for efficient communication between the brain and the rest of the body, helping to regulate motor function, sensation, and reflexes. Proper nerve conduction is crucial for maintaining muscle control, preventing nerve damage, and ensuring overall neurological health (Bilal et al., 2023; Prakash, Jain, and Marwaha, 2024).

· **Boosts Energy:** While B12 itself doesn't provide energy, it aids in converting food into glucose, which the body uses for energy. Thus, supplementing with B12 can help improve energy levels in deficient individuals (Obeid and Herrmann, 2011).

· **Supports Eye Health:** B12 may help prevent macular degeneration, a serious eye condition that can lead to significant vision loss (Jadhav et al., 2024).

· **Aids in Digestion: B12** is necessary for protein and fat metabolism and plays a role in maintaining a healthy digestive system (Jiang, Wang, and Lin, 2024).

Why Choose Nutricode Double B12 Vitamin Complex Over Other Sources of B12?

· **Superior Formulation:** Unlike many supplements that only contain one form of cobalamin, Nutricode Double

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B12 Vitamin Complex combines both Methylcobalamin is immediately active, while Cyanocobalamin is ready for conversion based on the body's needs, ensuring comprehensive B12 support.

· **Effective Dosage:** Many B12 supplements on the market have low doses and rely solely on active absorption, which is not very effective, volume-limited, and less efficient with age or in individuals with gastric or intestinal issues. Nutricode Double B12 Vitamin Complex's higher dose also supports passive absorption, ensuring adequate delivery to the bloodstream.

· **Modern Deficiency Risk:** Modern lifestyles have increased the risk of B12 deficiency. Unlike in the past, when natural water sources provided B12, modern water sanitation practices have reduced B12 availability. Moreover, reliance on animal products for B12 poses environmental, ethical, and health concerns. Nutricode Double B12 Vitamin Complex offers a sustainable and effective alternative (Mariotti, 2017; Armstrong, 1968).

· **Avoid Processed Foods:** While B12-fortified foods are available, they are often heavily processed and may contain unhealthy additives. Nutricode Double B12 Vitamin Complex provides a cleaner, more efficient way to meet your B12 needs without unwanted extras (Wolk, 2017; Tilman and Clark, 2014).

Active Ingredients

Ingredient	Daily Portion	%NRV*
Vitamin B12	500 µg	20,000%
- Methylcobalamin	250 µg	
- Cyanocobalamin	250 µg	

*NRV – Nutrient Reference Values for daily intake

Full List of Ingredients

Vitamin B12 (methylcobalamin, cyanocobalamin), hydroxypropyl methylcellulose (capsule shell), anti-caking agent: magnesium stearate.

Directions

Dosage Instructions for Nutricode Double B12 Vitamin Complex

Label Instructions:

Take 1 capsule daily with a glass of water and a meal. Do not exceed the recommended daily intake as stated on the product label.

Additional Dosage Recommendations by Dr Tomasz Jeżewski MD, PhD:

While the general recommendation on the label is to take 1 capsule daily, Dr Jeżewski has provided additional guidance to ensure optimal vitamin B12 intake based on age, dietary habits, and specific health needs:

· **Children under 4 years:** Not recommended, as the capsule size may be too large.

· **Children aged 4-8 years:** 2 capsules per week.

· **Children aged 9-13 years:** 4 capsules per week.

· **Adults and adolescents over 14 years:** 1 capsule per day.

· **Pregnant or breastfeeding women, vegans, and individuals over 50 years:** 2 capsules per day.

Why a Higher Dosage May Be Necessary:

Most B12 supplements rely solely on active absorption, which can be less effective due to volume limitations, reduced efficiency with age, digestive issues, or interactions with medications like antacids and metformin. Nutricode Double B12 Vitamin Complex, with its dual-action absorption mechanism, provides a higher dose to also allow for passive absorption. This approach ensures that even if active absorption is impaired, sufficient vitamin B12 reaches the bloodstream to meet your body's needs.

Contraindications

This product is not recommended for pregnant or lactating women, or individuals under 18 years of age *(based on the general daily portion)*. If you are allergic to any of the ingredients, do not use this product.

Storage Instructions

Keep the product in a tightly closed container, stored in a dry place away from direct sunlight, and below 25°C. Ensure it is kept out of the reach of young children.

Tolerance and Side Effects of B12 Supplementation

While vitamin B12 supplementation is generally safe and well-tolerated by most people, a few individuals may experience mild side effects, such as skin rashes, itching, headaches, or digestive discomfort. In rare cases, symptoms like dizziness, insomnia (if taken later in the day), or an increased heart rate may occur. These reactions are uncommon and usually mild. If you experience any of these symptoms, it is advisable to consult your healthcare provider to determine if any adjustments are needed to your dosage or if an alternative approach is more suitable for you. Remember, vitamin B12 is a crucial nutrient for overall health, and these potential side effects are typically manageable and do not affect the majority of users.

Frequently Asked Questions

1. Why can't I get enough vitamin B12 from eating meat?

While meat and other animal foods are sources of vitamin B12, relying solely on them for B12 intake may not be the most optimal or health-promoting solution. High consumption of animal-based diets, particularly those rich in red and processed meats, has been linked to an increased risk of chronic diseases, such as heart disease, cancer, and type 2 diabetes (Wolk, 2017). Additionally, consuming large amounts of animal products can contribute to significant environmental degradation, including greenhouse gas emissions and deforestation, which negatively impact global health and sustainability (Tilman and Clark, 2014).

There are also ethical concerns regarding the treatment of animals in industrial farming and the environmental footprint of animal agriculture, which further diminish the appeal of obtaining B12 solely from animal foods (Godfray et al., 2018). Given these health, environmental, and ethical considerations, many experts recommend obtaining vitamin B12 through supplements. Supplements can provide the necessary B12 without the associated health risks and environmental impacts of an animal-based diet, ensuring an effective and sustainable approach to maintaining adequate B12 levels.

2. How can I easily monitor my vitamin B12 levels?

To monitor your vitamin B12 levels effectively, it's important to „Test, not Guess!" You can use several simple lab tests to assess your B12 status:

· **MCV (Mean Corpuscular Volume)**: High MCV levels can indicate a B12 deficiency, leading to larger than normal red blood cells.

· **RDW (Red Cell Distribution Width):** Increased RDW levels suggest variability in red blood cell size, which may signal a B12 deficiency.

· **Homocysteine Levels:** Elevated homocysteine levels can indicate low B12, as vitamin B12 is needed to convert homocysteine into other substances.

· **Direct B12 Blood Test:** Checking your blood directly for B12 levels can confirm a deficiency and indicate the need for supplementation or dietary changes.

These tests are straightforward and should be discussed with your healthcare provider to ensure accurate monitoring and appropriate action.

3. Does taking vitamin B12 increase the risk of cancer?

No, taking vitamin B12 does not increase the risk of cancer. The misconception that B12 causes cancer is based on a misunderstanding. High levels of vitamin B12 in the blood can be observed in individuals with certain types of cancer, but this is because elevated B12 is a marker rather than a cause. It often reflects the body's altered ability to process or store B12 due to the disease, not because B12 intake leads to cancer. Research has shown no direct link between B12 supplementation and cancer development. The scientific consensus is that B12 supplementation is safe and necessary for individuals with B12 deficiency without increasing the risk of cancer.

4. Is Nutricode Double B12 Vitamin Complex suitable for vegetarians and vegans?

Yes, Nutricode Double B12 vitamin Complex is suitable for both vegetarians and vegans. The supplement is formulated with plant-based ingredients, including a capsule shell made from hydroxypropyl methylcellulose, which is ideal for those following a vegetarian or vegan diet. Additionally, the two forms of vitamin B12—Methylcobalamin and Cyanocobalamin—are not derived from animal sources, ensuring the product is entirely compatible with a plant-based lifestyle.

5. Why is the dosage on the label different from the recommendations by Dr Jeżewski?

The dosage on the label of Nutricode Double B12 Vitamin Complex provides a general guideline suitable for most individuals: 1 capsule daily with a meal.

This standard dosage is designed to be simple and safe for everyday use by the general population.

Dr Tomasz Jeżewski, MD, PhD, offers additional recommendations to account for specific needs based on age, lifestyle, and health conditions. His guidance suggests varying dosages to optimise vitamin B12 intake for different groups, such as children, pregnant or breastfeeding women, vegans, and individuals over 50. These tailored recommendations are meant to provide more precise support, especially for those with unique dietary needs, absorption issues, or increased B12 requirements.

By following either the standard label dosage or Dr Jeżewski's more specific recommendations, users can ensure they meet their individual vitamin B12 needs effectively.

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