

B Boost

working with folic acid to create building blocks for RNA and DNA synthesis and the synthesis of molecules that help maintain the proper functioning of the genome. This vitamin also helps the nervous system function properly and aids in energy production and in fatty acid biosynthesis. The body uses only small amounts of vitamin B12 to carry out these tasks. Consuming less B vitamins could possibly lead to shrinkage of brain size causing numbness or tingling. Vitamins B6 and B12 helps recycle the antioxidant Glutathione.

Vitamin B is a water-soluble vitamin. Its role in the operations of our bodies is diverse — from maintaining the nervous system, red blood cells, and energy metabolism to the proper functioning of our brains, hearts, livers, and kidneys. It is in fact, essential for optimal health, performance, and well being.

Homocysteine is chemically transformed into methionine and cysteine (similar amino acids) with the help of folic acid, Vitamins B6 & B12. Note, very low Vitamin B levels especially, B6 & B12 could result in elevated levels of homocysteine which is associated in heart disease and stroke: <http://labtestsonline.org/understanding/analytes/homocysteine/tab/test/> and <http://www.medicinenet.com/homocysteine/article.htm> .

The Homocysteine test may be used a few different ways:

- A health practitioner may order a homocysteine test to determine if a person has a vitamin B12 or folate deficiency, costs around \$75.
- Homocysteine may be ordered as part of a screen for people at high risk for heart attack or stroke.
- Homocysteine levels are measured in the blood by taking a blood sample. Normal levels are in the range between **5 to 15 micromoles (measurement unit of small amount of a molecule) per liter**. Elevated levels are classified as follows:
 - 15-30 micromoles per liter as moderate
 - 30-100 micromoles per liter as intermediate
 - Greater than 100 micromoles per liter as severe

It is required for normal cellular activity, working with folic acid to create building blocks for RNA and DNA synthesis and the synthesis of molecules that help maintain the proper functioning of the genome. This vitamin also helps the nervous system function properly and aids in energy production and in fatty acid biosynthesis. The body uses only small amounts of vitamin B12 to carry out these tasks.

Vitamin B3 (Niacin) is very effective at correcting high cholesterol and preventing or reversing heart disease. It can be used to treat insulin-dependent diabetes and might also be effective in treating arthritis also migraine headaches. This vitamin is necessary to produce both bile and stomach acid, circulatory system, healthy skin, helpful for schizophrenia and other mental illnesses plus serves as a memory enhancer. However, taking niacin supplements in high doses can be dangerous to your health therefore it is highly recommended to read and follow the instruction on the label of supplement before taking it.

Vitamin B6 (Pyridoxine) is effective against more than 100 health conditions. It's used against maladies as serious as heart disease (arteriosclerosis) and everyday aggravations such as premenstrual syndrome and sensitivity to MSG. This vitamin is essential to red blood cell, antibody and immune system formation. Pyridoxine inhibits the formation of homocysteine. It can even help prevent the formation of kidney stones and maintain sodium and potassium balance against water retention plus aids in the absorption of Vitamin B12.

Vitamin B12 (Cyanocobalamin) it is needed to prevent anemia along with Folic acid in regulating the formation of erythrocytes (Red Blood Cells) and helps in the utilization of iron. Vitamin B12 is

required for proper digestion and absorption of foods, protein synthesis, the metabolism of carbohydrates and fats. Furthermore, it aids in cell formation and longevity, prevents nerve damage, maintains fertility while promote normal growth and development of the fatty sheaths (myelin) which cover to protect nerve endings. This vitamin is linked to production of acetylcholine which assists memory and learning. Although, it occurs naturally in animal proteins (it is found in plants), and serious deficiencies are rare in healthy individuals who consume a balanced diet. However, vegans, vegetarians, the elderly or those who have had any kind of gastric surgery, may suffer lower than healthy levels of Vitamin B12.

Signs of Vitamin B deficiency: Mental illness---Schizophrenia, Depression, Dementia, Attention Deficit Disorder (A.D.D./A.D.H.D.), anxiety, Autism Spectrum Disorder (ASD), Parkinson's, Alzheimer's, Multiple Sclerosis (MS), cerebrovascular senility, headaches, numbness or tingling, bowed limbs, Knock-Kneed appearance, irritability, memory loss, slow learning; Chronic bone, joint and muscle pain, shingles, loss of libido, dental caries, allergies, insomnia, weight loss, poor appetite, fatigue, hair loss, baldness, pellagra, canker sores, tooth decay, shingles, skin problems, anemia, heart problems, immune system issues, inflammation, infections, eye floaters, glaucoma, Lou Gehrig's, HIV, hepatitis, neuritis, bursitis, restless leg syndrome, Sickle Cell anemia, Thalassemia, improves low red and white blood cell count while keeping Homocysteine levels in check.

NOTE: PER World Anti-Doping Agency (WADA) Vitamin B12 is not part of the Prohibited List for 2015 :

<https://wada-main-prod.s3.amazonaws.com/resources/files/wada-2015-prohibited-list-summary-of-modifications-en.pdf>