

From: <http://b12oils.com/b12info2.htm>

Potential Uses of vitamin B12

Traditionally vitamin B12 has been used to treat pernicious anemia, however, more recently vitamin B12 supplementation has been used in the treatment of various conditions related to sub-clinical deficiency of vitamin such as treatment to prevent memory loss, dementia, Alzheimer's disease, depression, fatigue, poor concentration, reducing the signs of ageing, incontinence, asthma, allergies (such as in atopic allergy and eczema), amyotrophic lateral sclerosis (Lou Gehring's disease), vitiligo, ringing in the ears (tinitis), boosting energy, incontinence, lack of libido, male and female infertility, poor balance, hearing loss, and psoriasis. More recently low B12 has been associated with lack of synthesis of creatine and CoQ10. In addition, low B12 is associated with poorer recovery from heart failure.

High dose of hydroxocobalamin injected intravenously has been used for treatment of heavy metal poisoning and cyanide intoxication. High dose methyl cobalamin (injected) has been used to successfully treat the sign and symptoms of Alzheimer's disease. Similar success has not been achieved with oral preparations of vitamin B12.

Vitamin B12, either alone, or in combination with folate and vitamin B6, has also been used to reduce serum homocysteine levels, which have been associated with cardiovascular disease, vascular dementia and mild cognitive decline.

Vitamin B12 and the Brain

Vitamin B12 "loading" of the brain occurs during fetal life, with very little vitamin B12 entering the brain after birth. There is a general decline in B12 levels over time, and it has not been possible to restock the brain with any oral form of B12. Overcoming deficiency in the brain requires prolonged high dose parenteral administration of vitamin B12, and cannot be achieved by any oral dosing system.

Vitamin B12 and Peripheral Neuropathy

Continued deficiency of vitamin B12 eventually can lead to the demyelination of nerves and to then cause peripheral neuropathy and conditions such as poor balance, incontinence, frequent falls, lack of sensation in arms, legs and feet. The process to reverse this is quite long but reports of reversal within two years are quite common.

Vitamin B12 and Treatment of Cognitive Decline

Deficiency of folate and particularly vitamin B12 can lead to an inability to properly process homocysteine, with the result that in many individuals who are deficient in these vitamins can have elevated levels of Hcy in both the serum and the brain. Elevated Hcy has been found to occur in 9-14% of people over 60 and has been correlated with an increased incidence/severity of cardiovascular disease and the development of mild cognitive impairment. High dose vitamin B12 supplementation in with folate and vitamin B6 has been shown to reduce the level of brain shrinkage in subjects with elevated serum homocysteine levels (Douaud et al, 2013, Smith et al, 2010). High dose intravenous methylcobalamin has been shown to reverse the symptoms of Alzheimer's disease (Ikeda et al, 1992).

Vitamin B12 and CFS/ME Treatment

It has been found that CFS/ME may be related to defects in either folate metabolism and/or the methylation cycle, as a high incidence of sufferers have genetic mutations in the MTHFR, MTR, MTRR, MTS and/or SHMT genes. In addition many CFS/ME individuals have genetically similar vitamin D receptor genes. It is possible that CFS/ME sufferers have had these "inborn errors of metabolism" for

much of their life, without experiencing any significant problem until some precipitating event such as stress or a chronic infection has triggered chemical changes inside the body thereby resulting in CFS/ME. Many, many different treatments have been tried in an attempt to cure CFS/ME, with little success. Recently, however, it has been found that many people have obtained significant benefit from repeated dose treatment with high levels of vitamin D3, adenosylcobalamin and methylcobalamin. It is believed that this repeated high dose supplementation is required to stock both the body's methylcobalamin levels but also the adenosylcobalamin. Over time, and with the addition of high dose vitamin D supplementation the subjects appear to return to their pre-CFS status.

Vitamin B12 and Vitamin B2

The active forms of vitamin B2, FMN and FAD have a critical role in the maintenance of functional methylcobalamin and adenosylcobalamin. Persons who are functionally deficient in vitamin B2 rapidly become deficient in active vitamin B12. In this case no amount of added methyl or adenosyl B12 can overcome deficiency. It is therefore essential that functional vitamin B2 deficiency be addressed before vitamin B12 deficiency. Vitamin B2 deficiency can be due to lack of dietary intake of vitamin B2 (riboflavin) or Iodine, Selenium and/or Molybdenum, as each metal is essential for enzymes involved in converting riboflavin to FMN and FAD.

Vitamin B12 and Autism Treatment

Examination of the metabolism of autistic individuals has shown that they are highly deficient in vitamin B2 and both adenosyl and methyl B12. Evidence is accumulating that similar deficiencies may be present in children with Down Syndrome. The brains of autistic individuals have been shown to have less one third the levels of normal children, presumably due to lack of loading of the brains of the children during fetal life.

Vitamin B12, Sciatica and Neuropathic Pain

High dose treatment with methyl and adenosylcobalamin has been found to help reduce the pain in many people suffering sciatica and other types of neuropathic pain.

Vitamin B12 and Food Intolerance

Many foods contain histamine and lack of vitamin B12 can result in a reduced ability to inactivate histamine.

Vitamin B12 and IBS

Proper maturation and functioning of the gut is dependent upon the production of melatonin. Production of melatonin is reduced in vitamin B12 deficiency. Melatonin has regulatory effects on gastrointestinal mobility and helps to alleviate abdominal pain and abdominal distention common in IBS.

Vitamin B12 and Sleep

Poor sleep is a common side-effect of vitamin B12 deficiency. Production of melatonin in the brain is required for regular sleep, and since production of melatonin is reduced in vitamin B12 deficiency, poor sleep (insomnia) is common in people with vitamin B12 deficiency.

Vitamin B12 and Hypothyroidism

Hypothyroidism can lead to vitamin B12 deficiency. Persons with hypothyroidism should check their serum vitamin B12 levels..

Information on Vitamin B12 Deficiency

Information on vitamin B12 deficiency can be found at the following sites

<http://vitaminb12deficiency.info/> www.vitaminb12deficiency.net.au <http://b12awareness.org/> <http://preventingdementia.org> www.B12D.org : www.B12.com :

Pacholok, S.M. and Stuart, J. J. Could it be B12? An epidemic of misdiagnosis.

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