Liposomal Vitamin B12 – Charitable Contributor Vital To Wellness

Vitamin B12 is a multi-purpose, water-soluble vitamin that greatly affects energy, temperament, recollection, thought, circulatory, digestive and neurological function, and hormonal equilibrium. B12 is critical when it comes to healthfulness and ability of the body to function. It serves as an essential component in the matters of DNA synthesis and regulation, and the creation of red blood cells. According to Richard Deth, who is a Professor of Pharmacology at Northeastern University, B12 is so valuable in the body that it is discharged from the proteins, constrained within the gastrointestinal tract, and carefully handed off for transmission into the cells, after which the B12 will be processed into its 2 active forms.Nevertheless, B12 deficiency has become a concern all over the world. The Office of Dietary Supplements within the NIH has estimated that as much as 15% of Americans may have a B12 deficiency.

Other studies have estimated an even greater number – up to 39% of Americans have a B12 deficiency. Adding on to that, some of the researchers conducting these studies believe that the current threshold of normal B12 levels is set too low. Those who have adopted a vegetarian or vegan diet regimen have a great risk of being deficient in B12 since animal proteins including, but not limited to, meat, organ meats, poultry, fish, eggs, and dairy, provide the most readily absorbable formulation of B12. Only those plants that have been artificially fortified have VITAMIN B12. Plants, naturally, have no B12 to give. Elderly citizens also run the risk of becoming deficient in B12.

With age comes an increasing inability to properly absorb and process B12 and other nutrients. This is a consequence of hypochlorhydria (deficiency of hydrochloric acid in the stomach) and the reduced secretion of pancreatic enzymes. Other people at risk of being deficient in B12 are smokers, because of the nicotine, alcoholics, and people suffering from digestive disorders, such as celiac disease, or Crohn’s disease. Furthermore, there can be a deficiency of VITAMIN B12 in those people who have genetic transmutations that hinder the ability of their bodies to convert B12 into its more active form, methylcobalamin, or methyl B12.

Methyl B12 aids in the performance of methylation, an indispensable biological process within the body. The process of methylation appears to be a straightforward one. In essence, methylation refers to the addition of a methyl group to a substance. A methyl group is composed of one carbon atom and three hydrogen atoms. Methyl B12 is but one substance that is able to offer these critical methyl groups. However, in actuality, what appears to be simple is actually sophisticated, since many of the biochemical pathways in the body are contingent on the recycling and activation of substances via methylation. The seemingly simple process of methylation controls the expression of genes, function of proteins, and even the metabolism of RNA. Additionally, methylation has a great bearing on the detoxification of the body. The methylation of a fat-soluble toxin aids in its conversion into a water-soluble form that is more readily processed and expelled from the body as waste.

As many as 150 to 200 enzymes in the body are embroiled in the performance of methylation, with each enzyme possessing the capability to methylate multiple targets. The process of methylation in the body is akin to the presence of an intricate spider web in each cell, which

connects in every direction, and possesses a plethora of integral junctions and attachments that enable the whole web to hold itself together. Similarly, our cellular biochemistry is interconnected via many points along the pathway, with the methylation being the process by which the entire web of pathways can continue to function. Should there be a disruption along one of the pathways, or at one of the joints, then there are alternative, but less efficient, routes to take to enable the entire process of methylationMethyl B12 serves the all-important role of contributing a methyl group to homocysteine. Subsequently, homocysteine is turned into methionine, an essential amino acid.

VITAMIN B12 deficiency can lead to the stockpiling of homocysteine. In high amounts, homocysteine may heighten the likelihood of the contraction of Alzheimer's and cardiovascular disease. Additionally, deficient levels of B12 are linked to the incidence of a plethora of disorders, ranging from autism to mercury toxicity to peripheral neuropathy (weakness, numbness, and pain occurring due to nerve damage, usually felt in the hands and feet).The use of liposomes as a delivery system can help bolster the levels of B12 in the human body. They also serve as a way of increasing the vitamin's bioavailability, which is presented in the form of methylcobalamin. These nano-sized liposomal sacs are absorbed into the body via the mouth, which bypasses any issues in the digestive system that would otherwise impede absorption.

Studies have revealed that liposomal B12 is more swiftly absorbed and may lead to greater plasma levels than would traditional oral B12 supplements. Liposomes are comprised of phospholipids, which help to nurture the cell membranes, guarantee proper functioning so as to efficiently absorb nutrients, the expulsion of contaminants and waste from the cells, and intracellular communication.