

Complex Issue of B Vitamins

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As a naturopathic physician, I frequently prescribe supplements. While this is but one of many treatments that I have to offer, ensuring adequate nutrition through diet and supplementation is essential for good health. Additionally, some vitamins have been found to have a therapeutic benefit beyond basic nutrition. In this article, I'll be focusing on B vitamins, which are known to help with energy. While B vitamins are very commonly used and widely available, even appearing in fortified foods, there are reasons you may want to think a little more about your B vitamins.

The term B vitamin refers to the group of water soluble substances grouped together and numbered to reflect that they have a similarity of function and because they are often found together in food sources. Essential B vitamins include: B1-thiamine, B2-riboflavin, B3-niacin, B5-pantothenic acid or pantethine, B6-pyridoxine, B7-biotin, B12-cobalamin and B9-folate. Other substances, including choline and inositol are considered a part of the B vitamin family by some sources. B vitamins serve as cofactors in many metabolic processes. A cofactor, also called a "helper molecule," is a substance that helps the chemical reactions move forward. The types of chemical reactions that require B vitamins often produce energy, which is why we often feel more energetic when taking B vitamins.

I mentioned that B vitamins are water soluble. That's important, because it is also how those vitamins are eliminated by our body, through urine. You know when lots of B vitamins are present in urine, because it turns the urine a bright "sunshiny" yellow. This is expected and normal. It also confirms that you absorbed your supplements into the bloodstream, so if you are worried about absorption of your B vitamins, check the color of your urine. Because we excrete excess B vitamins through urine, it does mean that we don't build up a lot of excess stores in the body (from regular dietary intake) and need to replenish our B vitamins regularly through diet and supplementation when necessary. The essentials listed above are readily found in a variety of whole foods, with the exception of B12.

B12 is not typically found in plant based foods, but is predominantly found in meat, including chicken

and fish, eggs and dairy products. For this reason, B12 is an essential supplement for vegans. However, B12 levels have been measured low in non-vegans as well and B12 is not well absorbed after the age of 50, so supplementation may be important for other groups as well. I do not recommend taking B12 supplements without guidance, however, for a couple of reasons. B12 is readily absorbed from sublingual B12 lozenges and most people do not require daily supplementation. I have seen several people taking B12 to help their energy and upon testing, their B12 levels are actually high!

Sometimes high levels of a nutrient can cause similar symptoms to low levels of a nutrient, and taking more just exacerbates the problem! So, I recommend testing B12 if you are thinking about supplementing.

Another important factor is the form of your vitamin. For example, B12 supplements can come as cyano-cobalamin or methyl-cobalamin. The methyl form is typically the active form. For many people, there is no problem from taking either form. However, a subset of the population with an MTHFR mutation are unable to convert their cyanocobalamin to methylcobalamin. Despite supplementation, these people may continue to suffer from B12 deficiency symptoms. Folate has a similar issue in that many foods are fortified with folic acid, which must be converted to the active form of folate.

There are also other factors that may impair absorption or increase the demand for B vitamins above what diet may provide. These include pregnancy, being athletic, alcohol use, stress and the use of antacid medications. Because of the varied and important functions of B vitamins, it is important to monitor for deficiencies and correct them early. The naturopathic physicians at True Health Medicine are experts in nutrition and supplementation and are available to help you establish a healthy diet and supplement plan.



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