

TO BE OR NOT TO BE: THE COMPLEX OF B VITAMINS

The B vitamins are critical for the efficient liver detoxification of unwanted chemicals such as heavy metals, histamines, and bacterial toxins that could be at the root of your immune or neurological challenges. In addition, the B-complex vitamins have dramatic mood-elevating effects—more so than almost any other nutrient. This complex of vitamins is crucial for nerve function and nerve cell metabolism, which produce optimal neurotransmitter levels.

Below is a simple outline of some of the crucial B vitamins to include in your daily protocol and where you can get them.

THIAMINE (B1)

Thiamine is needed to produce energy. Like all the other B vitamins it activates Phase I detoxification where foreign substances are initially broken down into intermediates for excretion. Balanced levels of thiamine also allow for feelings of composure, clear-headedness, and energy. Thiamine also helps to metabolize glucose. Women addicted to carbohydrates are often thiamine deficient.

food sources: *vegetables, whole grains, nuts, seeds, legumes, seaweed*

optimal daily dose: *25 to 50mg*

RIBOFLAVIN (B2)

Deficiency in vitamin B2 inhibits the liver detox pathway that eliminates bacterial toxins. B2 is also necessary for essential fatty acid metabolism, which improves energy production in certain nerve cells. Riboflavin is involved in proper thyroid function.

food sources: *whole grains, legumes, green leafy vegetables, poultry, fish, seaweed*

optimal daily dose: *25 to 50mg*

NIACIN (B3)

Like B1, B3 induces Phase I detoxification. Niacin also helps to regulate blood sugar levels. It has indirect effect on serotonin levels, because the body uses tryptophan (the amino acid that is the precursor to serotonin production), to produce niacin. It has an effect on the adrenal hormones. For all these reasons it's said to have prominent anti-depressant effects. Niacin also promotes the release of growth hormone.

food sources: *liver, peanuts, sesame seeds, sunflower seeds, brown rice, whole grains, barley, almonds, seaweed*

optimal daily dose: *25 to 50mg*

PANTOTHENIC ACID (B5)

Pantothenic acid provides foundational support for both Phase I and Phase II detoxification, and more specifically the elimination of inflammatory substances. It plays an important role in production of adrenal



hormones and is vital for coping with extreme stress. All the steroid hormones, such as estrogen and progesterone, will be produced only with ample B5 in the system.

food sources: *avocado, mushrooms, liver, soybeans, banana, collard greens, sunflower seeds, lentils, broccoli, brown rice, eggs*

optimal daily dose: *25 to 50mg*

PYRIDOXINE (B6)

Sufficient levels of B6 keep the liver functioning optimally by promoting the proper flow of fat and bile to and from the liver. Also of note is that Pyridoxine has one of the most dramatic mood-elevating effects of all the B vitamins. It can help to correct brain metabolism dysfunctions that cause depression. It heightens serotonin production. It binds to estrogen, progesterone, and testosterone, helping to detoxify excess amounts of these steroid hormones, helping to reduce the risk of hormone-related cancers.

food sources: *spinach, walnuts, eggs, fish, poultry, beans, seaweed:*

optimal daily dose: *25 to 50mg, not to exceed 100mg/day*

COBALAMIN (B12)

B12 is an important factor for the activation of the liver detox pathway that detoxes the heavy metals and histamines. Cobalamin has important effects on mood and allows for a free flow of neurotransmitters. It also helps the body to secrete melatonin.

food sources: *animal protein (especially liver), seafood, eggs, some cheeses, tempeh, sea vegetables, brewer's yeast, blue and green algae, chlorella, seaweed, bee pollen*

optimal daily dose: *50 to 100mcg*

FOLIC ACID OR FOLATE (B9)

Folic acid is a needed inducer of several of the detoxification pathways. It breaks down homocysteine, a toxic and inflammatory agent produced by the liver if not properly converted. Folic Acid has direct mood elevating properties and is synergistic with serotonin production. There have been studies that show that folic acid helps lower ACTH, which is an adrenal hormone that leads to increased blood pressure. For childbearing women, folic acid in the system will help to prevent neural tube defects and their resulting brain and nervous system damage to the baby.

food sources: *dark leafy greens, asparagus, bananas, cantaloupes, beans*

optimal daily dose: *400 to 800 mcg*

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SOURCES: *Depression-Free for Life*, Gabriel Cousens, M.D.; *The UltraMind Solution*, Mark Hyman, M.D.; *Encyclopedia of Healing Foods*, Michael Murray, N.D.; Ed Bauman, Bauman College; *The Complete Natural Medicine Guide to Women's Health*, Sat Dharam Kaur, N.D.