Vitamins associated with Adrenal Support

Vitamin C in the adrenal glands

Adrenal dysfunction can take many forms, the most severe form being Adrenal Insufficiency, which if left untreated is life threatening. Adrenal fatigue, although less serious, effects millions every year, and usually goes undiagnosed. Diminished function or adrenal hypofunction results from a deficiency in the function of the adrenal glands, and may present as a broad spectrum of disorders. Cortisol has a broad reaching effect in the body, as it not only affects glucose but also has an influence on both protein and fat metabolism. As a consequence of adrenal dysfunction, changes in carbohydrate, protein and fat metabolism may manifest as obesity, weight gain, fatigue, weight loss, disturbances in carbohydrate metabolism, fat balance, heart and cardiovascular system problems or a reduced sexual drive.5,6

These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

References

Niacin (as niacinamide).

Additionally, riboflavin is required for red blood cell formation. Along with other B vitamins, riboflavin is utilized to participate in the synthesis of the peripheral nerves. Alleviation of the peripheral neuropathy is a hallmark symptom of nutritional deficiency in vitamin B12.11

Riboflavin (Vitamin B2).

Riboflavin is required for the conversion of tryptophan to niacin and serotonin, as well as the conversion of tyrosine to dopamine. In one study a deficiency in vitamin B12 was correlated to a slower conversion of tyrosine to dopamine, resulting in difficulty in dealing with stressful situations. This correlation is consistent with the role of dopamine as the "anti-stress" vitamin. A deficiency in pancreatic riboflavin has been shown to result in clinically prevalent symptoms of adrenal dysfunction.12

Minerals Associated with Adrenal Support

Iron (as ferrous gluconate). Iron is a major component of hemoglobin, the primary component of red blood cells, accounting for greater than 60% of iron's total body stores. In the context of adrenal function, iron is required to maintain iron-tyrosinase activity, which is a required enzyme for the synthesis of melanin.8

Riboflavin, which is required for the synthesis of the neurotransmitter dopamine, is also required for the synthesis of melatonin. Hence, a deficiency in ascorbic acid can decrease both the circadian rhythm and the conversion of melatonin to serotonin.31, 32 As such, vitamin B6 is required to provide the adrenal support.

Niacin (as niacinamide). Niacin is an essential component of the gluconeogenic pathway. It is essential to all living cells. Niacin metabolism has been associated with a vital role in energy production, including the overall human lifespan.13

Magnesium (as magnesium malate).

Magnesium (Mg) is the most abundant intracellular cation and is a critical element in many biochemical reactions. In addition to maintaining normal functioning of almost all cells, magnesium is required for cellular energy production, including the synthesis of the neurotransmitters dopamine, norepinephrine, and serotonin.33

Folate (as folic acid). Folate is a vitamin involved in the synthesis of nucleic acids. Vitamin B12 deficiency is required to maintain the synthesis of DNA, RNA, and proteins, as well as the maintenance of the genome. In one study, folate deficiency has been correlated to the induction of oxidative stress, as evidenced by a decrease in the formation of free radicals.14

Supplement Zinc has demonstrated to be beneficial for efficient precursor cell function. In addition to its presence in epidermal melanocytes, tyrosinase is also a component of the eye, as part of the pigment epithelium of the retina, iris, and ciliary body.15

Additional Components Providing Support for Adrenal Function

Copper (as copper gluconate). Copper is an essential trace element for both humans and animals, as it plays a role in the oxidative/reduction reactions of the cytochrome system and donate electrons. This capacity also makes it an important component of the mitochondrial electron transport chain, and thus is crucial to respiratory and energy metabolism. Significant iron deficiency has been correlated with increased levels of cytochromes and is correlated to limited capacity of the electron transport chain. Iron is also required as a cofactor in the synthesis of melatonin. In the context of adrenal function, iron is required to maintain iron-tyrosinase activity, which is a required enzyme for the synthesis of melanin.8

Glandular Support

Adrenal Gland Concentrate (porcine), Lamb Liver (Vitamin B12 Conjugate) and Magnesium (as magnesium malate).

In addition to a good diet, natural adrenal support utilizing vitamins, minerals, botanicals and glandular concentrates serves us in promoting the realization of healthy adrenal function.