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Understanding A Low Sodium/Potassium Ratio

An increasingly common and very important hair mineral pattern is the low sodium/potassium ratio, also called a *sodium/potassium inversion*. An inversion is indicated whenever the sodium/potassium ratio is less than 2.5:l in an un-washed hair sample. As the ratio becomes even lower, the inversion is considered more extreme. A lower ratio increases the likelihood of experiencing symptoms related to this critical mineral imbalance.

THE MEANING OF AN INVERSION

Research at the Eck Institute indicates that an inversion can be understood in a number of ways. The different ways of understanding an inversion overlap and relate to one another. Let us discuss them one by one.

Adrenal Burnout. The sodium/potassium ratio is called 'the Vitality Ratio'. A low ratio is indicative of an exhaustion stage of stress. A *high* sodium/potassium ratio is an alarm or early stage of stress. As the ratio declines, the body moves into an exhaustion stage of stress.

The sodium level is controlled by aldosterone. As adrenal activity declines, sodium falls in relation to potassium. Potassium is more closely tied to the level of the glucocorticoid hormones (cortisone and cortisol). Hans Selye, M.D. noted that cortisol levels rise in the exhaustion stage of stress.

A Diabetic Trend. An inversion is a clear indicator of glucose intolerance. The body is unable to adequately burn glucose in the Krebs and glycolysis cycles adequately. This contributes to fatigue, cravings for sweets and many other symptoms. A ratio less than 1.5:1 that persists is associated with the development of diabetes.

Protein Catabolism. When the body cannot burn sugars properly, it begins to break down tissue proteins to use for energy. Excessive tissue breakdown can contribute to many health conditions. For example, if tissue breakdown occurs in the joints, arthritis may result. If tissue breakdown occurs in the stomach lining, an ulcer may result.

Frustration. An inversion is closely associated with a personality that is deep in frustration, and often resentful and hostile. The person is still in a fighting phase, but is not successful - like beating one's head against the wall. This is sometimes called a 'double-bind' situation.

Chronic Stress. We differentiate between acute and chronic stress. *Acute* stress is often indicated by a *high* sodium/potassium ratio, whereas *chronic* stress is indicated by a *low* sodium/potassium ratio. Chronic means the stress, whether from an internal or external source, has been going on for some time and the body is not successfully overcoming the stress.

Whereas acute stress is related to inflammation and acute conditions, chronic stress is associated with breakdown of tissue proteins and with chronic illness.

Potassium Loss From The Cells. Chart-wise, the potassium level is high relative to sodium in an inversion, in part, because potassium is being lost from the cells and is released as cells die. For this reason, at times, individuals with inversions have symptoms of potassium deficiency. Certain nutritional products, such as the aspartates, may be recommended to supply potassium in a readily absorbable form to these individuals.

Hidden Copper Toxicity. Hidden copper imbalance is indicated by an inversion because proper copper balance requires strong adrenal gland activity. As the adrenal glands weaken, the body is unable to bind copper properly. Copper then begins to accumulate in various body tissues.

An Impaired Immune System. A sodium/potassium inversion is the prime indicator of impaired immune system activity. Commonly, a chronic sinus infection or other chronic infections are present. Tissue catabolism and hidden copper imbalance may contribute to the impairment of the immune system when the sodium/potassium ratio is low.

SYMPTOMS ASSOCIATED WITH SODIUM/POTASSIUM INVERSIONS

Mild inversions (when the Na/K ratio is 2-2.5:l) may not be associated with any obvious symptoms. As the ratio drops lower than 2:1, however, feelings of fatigue and frustration are much more common. Sweet cravings and other glucose tolerance abnormalities are also common. The immune system may be impaired so that one is prone to colds or other infections.

As the sodium/potassium ratio becomes chronically less than 1.5:1, the likelihood increases for more serious conditions. Ulcers, digestive difficulties, cardiovascular conditions, diabetes, cardiomyopathy, arthritis, allergies, asthma and malignancies become more common. A ratio less than 1:1 in an adult is a definite danger indicator for cardiovascular disease.

It is rare for an adult to have a sodium/potassium ratio less than 0.5:1. Children, on the other hand, often reveal sodium/potassium ratios less than 1:1, with no apparent harm. These children are, however, under chronic stress and are prone to infections, allergies and behavior and learning problems.

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