

WHY USE HAIR ANALYSIS TO DESIGN NUTRITIONAL BALANCING PROGRAMS?

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Hair tissue mineral analysis is screening test to measure the levels of 21 or more minerals in the hair tissue. Hair is used for testing because it is a rapidly-growing soft tissue of the body that can be sampled easily and safely.

Hair is also a storage tissue and a tissue that the body uses for excreting excessive amounts of toxic metals and other substances such as illegal drugs to help rid them from the body. Therefore it is an excellent place to measure these items. Hair provides a unique, biopsy type of reading of metabolic activity.

The test is performed by burning the sample of hair at a high temperature in a mass spectrometer. The technique has been used in laboratories for about 80 years. Computer-controlled instruments have improved the accuracy and reduced the cost of mineral analysis.

Minerals tested include the electrolytes - calcium, magnesium, sodium, potassium and phosphorus. Trace minerals tested include copper, manganese, chromium, selenium, iron, molybdenum, lithium, cobalt, zinc and others. Toxic metals tested include lead, mercury, cadmium, arsenic, nickel, aluminum and others.

NUTRITIONAL BALANCING

Nutritional balancing science employs hair mineral analysis along with other material submitted by the client to inform the practitioner of their situation. By interpreting the hair mineral test properly, one can construct a biochemical picture of the way the body is responding to stress.

Based upon this picture, deep correction can be initiated. Progress can be monitored with repeat hair mineral tests. The science incorporates and integrates many disciplines including physiological chemistry, biochemistry, natural healing theory and the theory of the oxidation types. It is a method of healing that also utilizes the most modern stress theory of disease, general systems theory and cybernetics. The latter is the study of self-regulating systems.

Many physicians offer mineral analysis, but use the test symptomatically, supplementing only those minerals that read low. This is called replacement therapy and is not effective. Others use the test just to detect toxic metals. This is not the best use of the test, as often the heavy metals are not revealed on the first test. Proper test interpretation takes several years to learn, and this is work that I love to teach to practitioners.

WHAT CAN A HAIR ANALYSIS REVEAL?

A Window Into The Cells. Hair analysis provides information directly about metabolism at the level of the *cells* - the main site of many nutritional processes.

Glucose Tolerance. Many minerals are involved in the metabolism of carbohydrates including manganese, zinc, chromium and vanadium. Ratios of sodium to potassium and calcium to magnesium also provide information about glucose tolerance. Toxic metals interfere with glucose metabolism. Inefficient carbohydrate metabolism drastically reduces cellular energy production, leading to many serious health conditions.

Detecting Toxic Metals. Hair mineral analysis is one of the few accepted methods to detect chronic toxic metal poisoning in the body. Toxic metals may contribute to heart disease, cancer, diabetes, fatigue, depression, anxiety, infections and many other conditions. Metals that are deeply buried may require a year or more before they are revealed on repeated mineral analyses.

Assessing Organ and Gland Activity. Mineral levels and ratios reflect the activity of glands such as the thyroid and adrenal glands. By calculating these ratios on a tissue mineral test, organ and glandular activity can be assessed.

Measuring The Energy Level. Energy is a common denominator of health. Many minerals are required for the production of energy within the cells. Hair analysis can help assess and guide the enhancement of the energy level.

When energy efficiency is low, many body systems break down. When cellular energy production improves, many symptoms and conditions resolve by themselves. This is a basic principle of many natural healing methods.

Determining The Oxidation Type. Some people metabolize carbohydrates and fats at a more rapid rate than others. The rate at which food is burned has been designated the oxidation rate. Each chemical reaction in the body has an ideal rate of reaction. Hair analysis can help determine this rate, and identify which foods and supplements would be most helpful to optimize the oxidation rate.

Identifying Disease Trends. Prediction and prevention are important concepts in health care. Over thirty disease trends can be identified from a properly interpreted tissue mineral analysis. Tendencies are often revealed long before they show up on x-rays and blood tests.

Reducing the Guesswork In Nutritional Therapy. The precision nature of hair mineral analysis offers a method of reducing the guesswork in recommending diets and supplement dosages. For instance, very low hair calcium and magnesium levels indicate an alarm stage of stress in which the body excretes these minerals as part of the fight-or-flight response.

In this stage of stress, one needs more calcium, magnesium, copper, zinc, choline, inositol and vitamin A. These will help balance the body chemistry. Other vitamins may be detrimental in this stage of stress. Excessive vitamin C, for example, can lower copper and worsen this stage. Amino acids, herbs and other nutrients may also be recommended based on the mineral ratios.

Monitoring Progress. Comparing the results of repeated tissue mineral tests over a period of months is an excellent way to monitor subtle changes in body chemistry, regardless of which type of therapy is used.

Understanding Behavior. Tissue mineral analysis is a powerful tool to identify and correct biochemical causes of mental and behavioral conditions. Minerals control neurotransmitters and other neuroactive chemicals. All the toxic metals are neurotoxic. Conditions that often respond include depression, anxiety, epilepsy, phobias, insomnia, fatigue, mood swings, attention-deficit disorder and learning disorders.

Replacing Less-preferred Minerals. When mineral deficiencies occur, toxic metals replace the missing vital minerals in enzyme binding sites. This

allows the body to survive in the face of nutrient deficiencies. Nutritional balancing science involves reversing this process, replacing the toxic metals with the preferred vital minerals.

Improving Energy Efficiency. When the metabolic rate is too slow or too fast, energy efficiency declines. This is analogous to pedaling a bicycle too fast or too slow. Restoring health to the biochemical system allows thousands of chemical reactions to proceed at their optimum rate.

Hair tests versus blood tests. Blood tests do not provide the same information as a properly performed hair analysis. Hair analysis measures a different body compartment. Minerals are shifted from the tissues to maintain blood levels. This means that deficiencies or excesses often show up earlier in the hair than the blood.

Toxic metals rarely remain in the blood for long, but often deposit in the hair where they can be measured. Blood levels of minerals vary very little, while hair values may vary 10-fold, providing information not available from the blood.

Blood tests give an instantaneous reading that may be affected by many factors. Hair analysis gives a long-term reading that is unaffected by recent meals, activities such as exercise, or emotional states. These and other differences make blood and tissue testing very different, with each providing valuable information.

SUMMARY

Tissue mineral analysis is an inexpensive, accurate screening method that can be of great help to understand body chemistry and design individualized diet and supplement programs. These can relieve biochemical stress to help restore and maintain optimum health.

By correcting tissue mineral levels and ratios with proper diet, supplementary nutrients and lifestyle modifications, many physical and behavioral health conditions, including those of long standing, will improve. For in-depth information on hair analysis, see *The Explore Hair Analysis* article, and *Nutritional Balancing and Hair Mineral Analysis*.