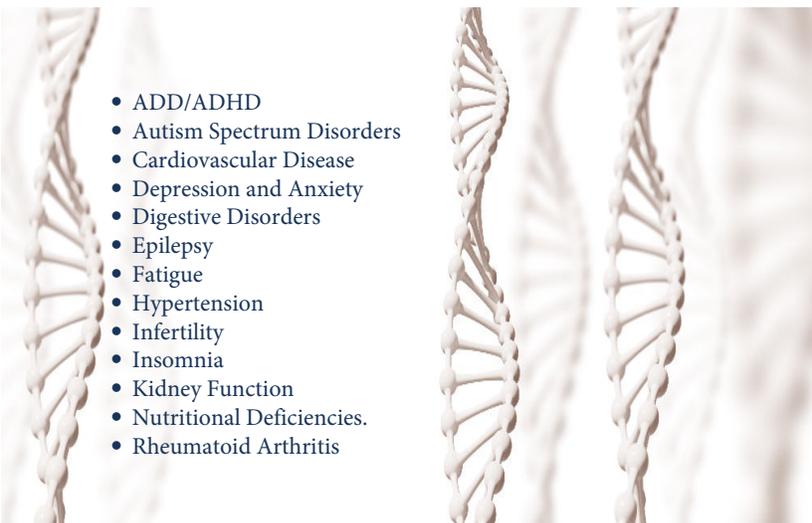


Urine Amino Acids

Amino acid (AA) nutritional testing aids in the identification of dietary protein adequacy and amino acid balance, gastrointestinal dysfunctions, forms of protein intolerance, vitamin and mineral deficiencies, renal and hepatic dysfunction, psychiatric abnormalities, susceptibility to inflammatory response and oxidative stress, reduced detoxification capacity and many other inherent and acquired disorders in AA metabolism. Plasma is traditionally used to assess the status of essential AA while urine analysis provides more information regarding AA wasting and aberrant metabolism associated with co-factor insufficiencies.

This test is useful for



- ADD/ADHD
- Autism Spectrum Disorders
- Cardiovascular Disease
- Depression and Anxiety
- Digestive Disorders
- Epilepsy
- Fatigue
- Hypertension
- Infertility
- Insomnia
- Kidney Function
- Nutritional Deficiencies.
- Rheumatoid Arthritis

Detailed Information

Many individuals have "hidden" impairments in amino acid metabolism that are problematic and often go undiagnosed. These impairments may or may not be expressed as specific symptoms. They may silently increase susceptibility to a degenerative disease or they may be associated with, but not causative for, a disease. Because of the wealth of information provided, it is suggested that a complete amino acid analysis be performed whenever thorough nutritional testing and a metabolic workup is called for.

Amino acid analysis provides fundamental information about nutrient adequacy, including the quality and quantity of dietary protein, digestive disorders, and vitamin and mineral deficiencies—particularly folic acid, B12, B6 metabolism, zinc and magnesium. In addition, amino acid analysis provides important diagnostic information about hepatic and renal function, availability of precursors of neurotransmitters, detoxification capacity, susceptibility to occlusive arterial disease (homocystine), and many inherent disorders in amino acid metabolism.

The patient's results are presented in a functional format that permits ease of interpretation. A comprehensive summary of "presumptive needs" (such as B6, B12/folate, Mg) and "implied conditions" (such as maldigestion/malabsorption, abnormal gastrointestinal flora, impaired detoxification, oxidative stress) are presented based upon each patient's results. Patient-specific amino acid supplement schedules and user-friendly commentary are provided to simplify nutritional intervention.

Plasma vs. Urine Analysis

Plasma is traditionally used to assess the status of essential AA while urine analysis provides more information regarding AA wasting and aberrant metabolism associated with co-factor insufficiencies.

Plasma amino acid nutritional testing measures what is being transported at the time of sampling. The specimen should be collected after an overnight fast to reduce the influence of dietary protein. Abnormalities are deduced by comparison of measured levels with an established reference range.

The 24-hour urine amino acid analysis has the highest probability of detecting abnormalities if renal function is normal. The 24-hour test indicates what is high and low over the course of a day, reflects blood and tissue amino acid pools, and is not affected by circadian rhythm. Healthy kidneys efficiently conserve essential amino acids. Therefore, urine levels of amino acids decrease first and tend to give an earlier indication of inadequacy than do plasma levels.

A first morning void urine (FMV) amino acid analysis, with results normalized per gram creatinine, provides an alternative when a complete 24-hour collection is not a viable option. The FMV analysis is excellent for identification of marked abnormalities, particularly with respect to gastrointestinal health, inherited disorders in amino acid metabolism and renal function, and can be used for protein challenge testing.

