

# AMINO ACIDS

## The Body's Fundamental Building Blocks



### **What are amino acids and why are they important?**

Known as the “building blocks” of proteins, amino acids have many important functions in the body including the regulation of muscle and hormone activity and the formation and maintenance of every tissue in the body (i.e., bone, ligaments, tendons, muscle). They play a major role in nearly every chemical process that affects both physical and mental function. Eleven amino acids are considered essential. Our bodies cannot make them, therefore we must receive them from our diet. When amino acid supply is inadequate to meet tissue demand, important body functions suffer. This results in the appearance of signs and symptoms ranging from immune system effects to cardiovascular disease to emotional disorders and more.

### **What can impact amino acid levels?**

- Aging
- Chronic stress
- Depression
- Improper use of medications such as antacids or acid blockers
- Low protein diets
- Poor digestive function
- Toxic chemical exposure

### **Customized Amino Acid Formula**

A formula for a customized amino acid blend, based on your specific test results, is provided with every plasma and blood spot amino acid test result. The customized amino acid formulation provides appropriate amounts of essential and conditionally essential amino acids, delivered in a balanced ratio to offset the risk of imbalance sometimes seen with the use of single amino acid supplements. This blend can be made by many compounding pharmacies.

### **Amino Acids Profiles: Plasma, Urine, and Blood Spot**

#### **Plasma:**

Fasting plasma levels represent a stable balance between supply and utilization of amino acids. The plasma amino acid profile illuminates problems in absorption by determining essential amino acid derivatives showing neuroendocrine metabolic disorders as well as functional vitamin and mineral disorders. Also assessed are amino acid derivatives focusing on energy, sulfation, muscle wasting and bone loss.

#### **Urine:**

The 40 urine amino acid analysis is best used for discriminating the metabolic effects of short-term (24-48 hour) dietary changes. Urine analysis requires more rigorous dietary control than plasma analysis in order to give an accurate picture of the patient's steady state amino acid sufficiency and metabolism.

#### **Blood spot:**

The Bloodspot Amino Acids Profile is measured from a simple finger stick—no blood draw required! This profile is an option easy enough to use at home, a great alternative and provides similar information as the plasma profile.

### **Metametrix Amino Acid Profiles:**

Amino Acids – Plasma – 40 Analytes

Amino Acids – Urine – 40 Analytes

Bloodspot<sup>SM</sup> Amino Acids – Blood spot - 11 analytes or 20 analytes

## PATIENT INFORMATION SHEET



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