METAMETRICS LABORATORY

AMINO ACID TEST

Discover amino acid deficiencies that affect body protein synthesis.

Why You Need Amino Acid Test

The Importance of Amino Acids in Biological Processes

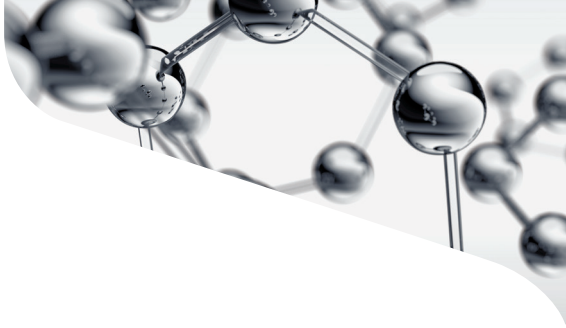
Amino Acids (AA) are the building blocks of protein found in every tissue of the body. They are involved in cell structure, transport and storage of nutrients, energy production, and the creation of neurotransmitters, hormones, enzymes, muscles, and antibodies. Poor dietary practices, air pollution exposure, and habits such as smoking and drinking may lead to deficiency and other amino acid metabolism disorders.[1]

The Impact of Amino Acid Test

The Amino Acid Test reveals essential amino acid imbalances that may result in decreased immunity, digestive problems, and other health issues. This test provides physicians with actionable information to optimize amino acid levels and minimize the risks of imbalances.

- Measures the level of 24 amino acids (essential, non-essential, and conditional amino acids)
- Identifies amino acid imbalances, forms of protein intolerance, gastrointestinal dysfunctions, renal and hepatic dysfunction, psychiatric abnormalities, susceptibility to inflammatory response, and reduced detoxification capacity
- Detects or diagnoses inborn errors of amino acid metabolism (IEM) and transport
- Provides clinically actionable information that enables clinicians to develop targeted and comprehensive plans to address amino acid imbalances

Amino acid deficiency can result in weaker immunity, depression, slowed growth in children, digestive issues, fertility problems, and other health issues.[6]



AMINO ACID TEST

Amino Acids Tested:

Isoleucine is a branched amino acid (BCAA) that aids wound healing, blood sugar regulation, and hormone production. It is also known to regulate energy levels. Deficiency may cause muscle atrophy and tremor.[6]

Leucine is one of the three BCAAs that is fundamental for blood sugar regulation and muscle growth. It also plays a role in wound healing and the production of growth hormone. Signs of deficiency include skin rashes, hair loss, and fatigue.[6]

Valine increases mental focus, muscle coordination, and emotional calmness. This branched amino acid is also crucial for muscle growth and energy production.[6]

Glutamine is a non-essential amino acid that is crucial for proper immune, digestion, and brain function.[11] It improves muscle glycogen resynthesis and helps in removing excess ammonia. This non-essential amino acid is also vital in maintaining skin health, for it aids skin cell regeneration and slows down the aging process.

Histidine is involved in the formation of blood cells and tissue repair. It is vital in histamine production, a neurotransmitter needed for immune response, digestion, sexual function, and sleep-wake.[6]

Arginine helps in cell division, wound healing, immune function, and the detoxification of hormones and ammonia.[11]

Tryptophan plays an integral part in maintaining a proper nitrogen balance and is important in serotonin formation, a neurotransmitter that regulates sleep, appetite, and mood.[7] Deficiency may cause pellagra, which can lead to diarrhea, dementia, and dermatitis.[6]

Lysine is essential to bone health and muscle development. It also assists the body in recovering from an injury or surgery. Lack of lysine may lead to fatigue, slow growth, and nausea.[11]

Threonine is a component in tooth enamel, collagen, and elastin. It improves skin and teeth health and aids fat metabolism, which can help people with indigestion and mild depression.[11]

Taurine plays an important role in the cardiovascular and central nervous systems. It is also involved in the development and function of skeletal muscle and retina.[6]

Methionine is fundamental in maintaining strong nails and flexible skin and hair. It helps in the proper absorption of selenium and zinc, as well as the removal of toxic metals such as mercury and lead.[6]

Alanine is a non-essential amino acid that helps convert glucose into energy and protects cells from damage. It improves immunity, the central nervous system, and muscle tissues.[11]

This test also examines for **phenylalanine**, **asparagine**, **aspartic acid**, **cysteine**, **glycine**, **glutamic acid**, **proline**, **serine**, **tyrosine**, **beta alanine**, **gamma-amino butyric acid (GABA)**, and **phosphoserine**.

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TEST INFORMATION

For Urine Analysis	: 20 ml. first morning urine, collected midstream
For Plasma Analysis	: 5 ml. whole blood, yielding at least 2 ml. plasma
Result TAT	: 7 working days
Method	: HPLC

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