

Amino Acids Analysis

sample type: **URINE or PLASMA**

The **Amino Acids Analysis** (Urine or Plasma) is an invaluable tool for evaluating dietary protein adequacy and assimilation, as well as metabolic imbalances underlying many chronic disorders. With the precise results and comprehensive commentary provided, nutritional deficits, metabolic impairments, and amino acid transport disorders can be accurately identified and corrected.

The Importance of Amino Acids:

Amino acids are essential to life. In free form or linked as peptides they assume important roles in such activities as:

- Neurotransmitter function
- pH regulation
- Cholesterol metabolism
- Pain control
- Detoxification
- Control of inflammation

Amino acids comprise the building blocks of all of the body's structural tissues and hormones. All of these compounds utilize, or derive from, the "essential" amino acids provided by the diet. Determination of the adequacy of amino acids, proper balance between them, and conversion capability are of paramount importance in preventing illness and getting to the root of many chronic disorders.

Genova Diagnostics' Amino Acids Analysis:

- Employs state-of-the-art high performance liquid chromatography (HPLC) to perform the most comprehensive and sensitive assay available
- Utilizes 24-hour urine, first morning void (FMV) or fasting plasma
- Measures more than 40 analytes, providing information related to a wide spectrum of metabolic and nutritional disorders such as:
 - Protein inadequacy
 - Gastrointestinal imbalances
 - Inflammatory responses
 - Detoxification impairments
 - Chronic fatigue
 - Cardiovascular disease
 - Ammonia toxicity
 - Food and chemical sensitivities
 - Depression or behavioral disorders, including autism and ADHD
 - Neurological dysfunction
 - Inborn errors of metabolism

Clinical Utility of the Report:

Measured analytes are grouped on the report into functional categories. These include:

- Nutritionally essential and semi-essential amino acids
- Dietary peptide-related markers
- Non-essential protein amino acids
- Intermediary metabolites and diagnostic markers.

A **Supplementation Schedule** is provided with the report, along with suggested replacement amounts. This schedule can then be used by a compounding pharmacist to formulate a customized blend of amino acids for the patient.

In addition, An **Interpretation At A Glance** is provided with each report. Although extensive commentary accompanies the report, this practical guide allows the practitioner to quickly spot problem areas in the patient. Scores for the likelihood of vitamin and mineral insufficiencies as well as defects in particular organ systems are listed.

•Analytes:

40+ analytes for urine or plasma representativeness
Nutritionally essential and semi-essential amino acids
Dietary peptide-related markers
Non-essential protein amino acids
Intermediary metabolites and diagnostic markers

•Specimen requirements:

urine—15ml aliquot (preserved with sulfo-salicylic acid)

plasma—2ml plasma (preserved with sulfosalicylic acid)

•Before Patient Takes this Test:

- Avoid all non-essential medications and supplements (for 4 days)
- Arrange urine test for Sunday-Wednesday only
- Arrange blood test for Monday-Thursday only
- Avoid foods and drinks containing aspartame
- Do not collect during a menstrual period
- Do not collect during acute infectious illness or antibiotic treatment
- See instructions inside test kit for details

Amino Acid Analysis (Plasma)



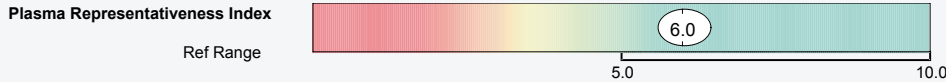
Innovative Testing for Optimal Health

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Patient: **SAMPLE PATIENT** Order Number:
Age: 48 Completed:
Sex: M Received:
MRN: Collected:

SAMPLE REPORT

Plasma Representativeness Index



Nutritionally Essential and Semi-Essential Amino Acids

Amino Acid	Analytes reported in micromoles per deciliter unless stated otherwise	Reference
1 Arginine	9.5	7.5-13.0
2 Histidine	7.7	7.9-12.1
3 Isoleucine	7.70	5.40-10.50
4 Leucine	15.0	10.5-18.0
5 Lysine	19.9	15.5-27.5
6 Methionine	2.4	2.5-4.9
7 Phenylalanine	6.28	4.60-7.90
8 Taurine	4.42	5.25-9.00
9 Threonine	6.36	6.40-14.00
10 Tryptophan	3.66	3.30-6.50
11 Valine	27.6	19.0-36.0

Dietary Peptide Related markers

12 Anserine (dipeptide)	<dl	<= 0.07
13 Carnosine (dipeptide)	<dl	<= 0.09
14 1-Methylhistidine	0.60	<= 1.65
15 Beta-alanine	<dl	<= 0.4

This test was developed and its performance characteristics determined by GSDL, Inc. It has not been cleared or approved by the U.S. Food and Drug Administration.

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This test reveals important clinical information about:

- **Imbalances of essential and semi-essential amino acids** that may be underlying depression, insomnia, maldigestion, dysbiosis, impaired detoxification function, cardiovascular disease, and many other conditions
- **Possible insufficiencies of important vitamins and minerals** used in amino acid metabolism
- **Physiological and pathological implications of abnormal results**
- **Amino acid supplements that may be needed** (if indicated)
- **Relationship of abnormal results to functional indications for nutrients** and to consistency with or susceptibility to disease

For test kits, clinical support, or more information contact:

Client Services
Genova Diagnostics
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More detailed publications with references are also available: www.GDX.net