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Anna Salanti

Date: 7/16/2014

Next Test Due: 1/14/2015

LabAssist™ Amino Acid & Organic Acid Report
Practitioner

Printed on Tuesday, August 5, 2014 for:

Anna Salanti
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Basic Status High/Low - Plasma Amino Acids on 7/16/2014

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

Client ID:555986644 (8322)

503-977-2660

The % Status is the weighted deviation of the laboratory result.

Low Results

-80	-60	-40	-20	0		% Status	Result	Low	High
					Glutamine	-72.22 L	30.00	36.00	63.00
					Phosphoserine	-66.67 L	0.01	0.01	0.03
					Asparagine/Aspartate	-55.73 L	2.20	7.50	100.00
					Asparagine	-55.00 L	3.30	3.50	7.50
					Glutamine/Glutamate	-51.97 L	6.70	8.50	100.00
					Anserine	-50.00 L	0.00	0.00	0.20
					Threonine	-46.43 L	8.50	8.00	22.00
					Phosphoethanolamine	-41.30 L	0.16	0.08	1.00
					3-Methylhistidine	-32.00 L	0.81	0.00	4.50
					Serine	-31.00 L	7.90	6.00	16.00
					Glutamic Acid	-30.77 L	4.50	2.00	15.00
					Tryptophan	-25.00 L	4.00	3.00	7.00
					Tyrosine	-25.00 L	5.50	4.00	10.00

-25%

High Results

-50	0	50	100	150		% Status	Result	Low	High
					Hydroxyproline	187.04 H	6.40	0.00	2.70
					Ammonia	113.33 H	49.00	0.00	30.00
					Cystine	50.00 H	6.50	2.00	6.50
					Aspartic Acid	43.10 H	1.50	0.15	1.60
					Valine	33.33 H	28.00	13.00	31.00
					b-Aminoisobutyric Acid	30.00 H	0.40	0.00	0.50
					Methionine	27.27 H	2.50	0.80	3.00

-25%

25%

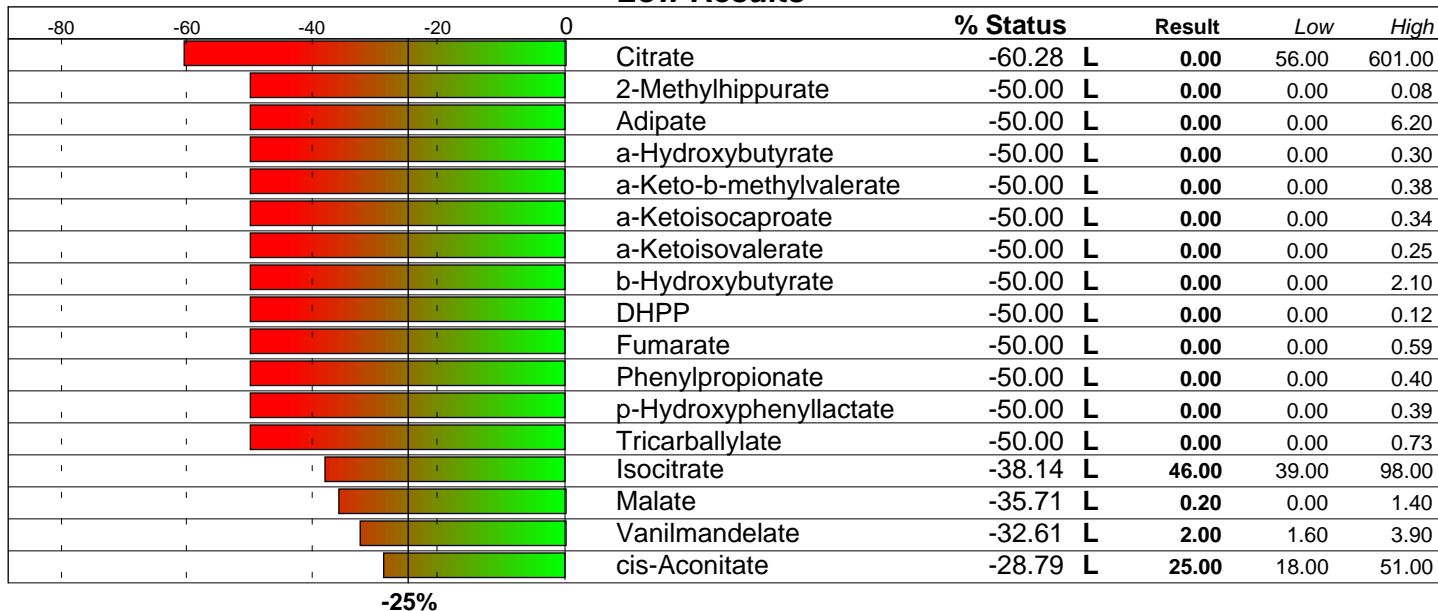
Basic Status High/Low - Urine Organic Acids on 7/16/2014

Anna Salanti
Female / Age: 62

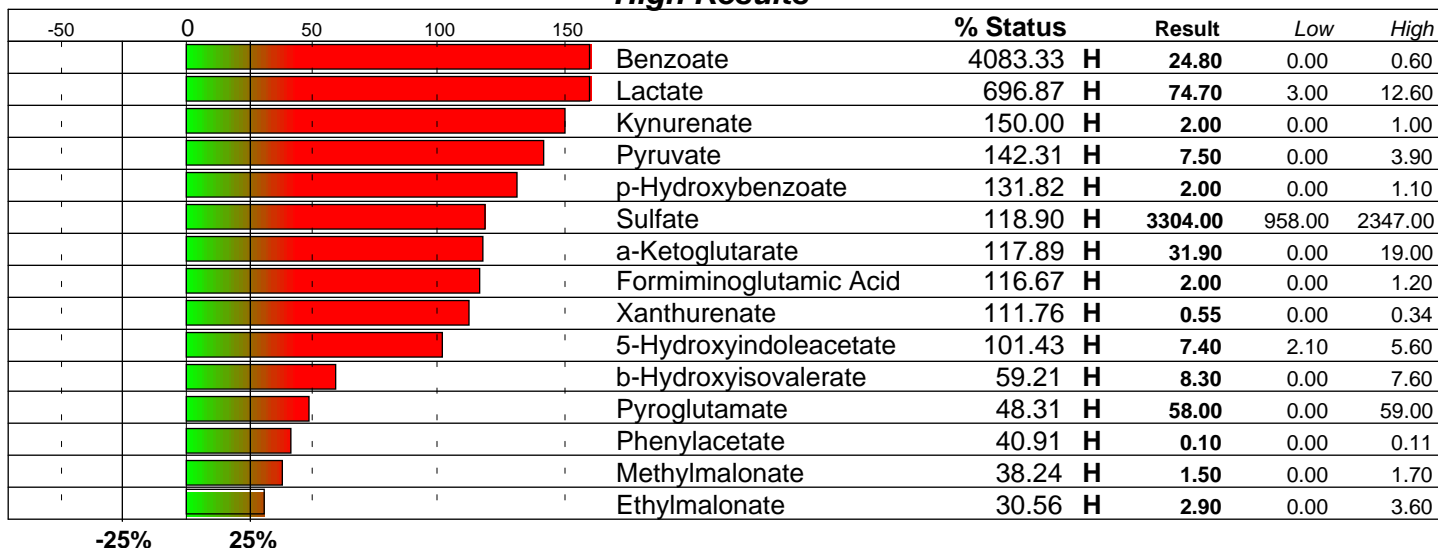
Amino Acid & Organic Acid Date: 7/16/2014
Anna Salanti (2718)

The % Status is the weighted deviation of the laboratory result.

Low Results



High Results



Client Summary Review

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014
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Nutritional Support

The following supplements may help to balance your biochemistry. Consult your practitioner.

- | | |
|---|--|
| <input type="checkbox"/> 1-5-HTP
3x daily 100 mg | <input type="checkbox"/> 1-B-Complex + Lipoic Acid
See Nutrition Detail |
| <input type="checkbox"/> 1-Carbohydrate Metabolism Profile
See Nutrition Detail | <input type="checkbox"/> 1-Folic Acid
2x daily 800 mcg |
| <input type="checkbox"/> 1-Pantothenic Acid (B5)
2x daily 500 mg | <input type="checkbox"/> 1-Pyridoxal-5-Phosphate
2x daily 50 mg |
| <input type="checkbox"/> 1-Vitamin B12
2x daily 1000 mcg | <input type="checkbox"/> 1-Whey Protein
See Nutrition Detail |
| <input type="checkbox"/> 2-Glycine
2x daily 1000 mg | <input type="checkbox"/> 2-Magnesium and Pyridoxine (B6)
2x daily see detail |
| <input type="checkbox"/> 2-Magnesium and Zinc
2x daily see details | <input type="checkbox"/> 3-5-Hydroxy-Tryptophan (5-HTP)
2x daily 50 mg |
| <input type="checkbox"/> 3-Magnesium Citrate
2x daily one-quarter tsp (After meals) | |

Food Recommendations

The following foods may help to balance or strengthen your biochemistry.

Turkey

Foods to AVOID

The following foods may aggravate already out-of-balance biochemistry.

Green Tea

Out-Of-Balance Panel Values

The following panels have a PSD of greater than 25% indicating need for further review. PSD is the Panel Status Deviation, or the average imbalance of that subset of results. The PSS is the Panel Status Skew, or the direction, negative (deficiency) or positive (excess), of that subset of results.

Panel Name	PSD	PSS
Carbohydrate Metabolism	234.80%	184.80%
B-Complex Markers	67.98%	25.13%
Neurotransmitters	63.41%	50.37%
Connective Tissue	50.49%	34.55%
BCAA Catabolism	50.00%	-50.00%
Liver Detox Indicators	49.72%	16.39%
Energy Production	44.66%	-13.10%
Intestinal Dysbiosis	42.94%	-1.50%
CAC Cycle Ratios	40.56%	-40.56%
Immune Metabolites	39.38%	-39.38%
Detoxification Markers	34.56%	8.90%
Urea Cycle Metabolites	32.30%	-15.15%
Fatty Acid Metabolism	30.82%	-2.51%
Magnesium Dependents	30.68%	-15.65%
CNS Metabolism	30.14%	-16.35%
Ammonia/Energy	26.40%	-16.72%
Hepatic Metabolism	25.83%	-3.75%

Lab Reported out-of-range Values

The following results are out-of-range (as reported by the lab), and should be carefully reviewed.

Benzoate (4083.33%)

An elevated reading of this organic acid may mean an overgrowth of certain intestinal microbiota, ingestions of excessive benzoic acid in the diet (preserved foods, pickles, lunch meats, cranberries), or poor Phase II detoxification capabilities as the conjugation of benzoate with glycine is very efficient. The presence of this compound may be due to the action of the bacteria on phenylalanine. Assessment of amino acid competency may be helpful especially plasma glycine.

Lactate (696.87%)

This metabolic precursor to the citric acid cycle, high lactate (lactic acid) may indicate a block in the production of energy, a Coenzyme Q10, biotin, thiamine or lipoic acid deficiency, an on-going infectious state, use of some recreational and/or pharmaceutical drugs, alcohol over consumption, poor blood sugar control (especially with diabetics), and a number of inborn errors of metabolism.

Hydroxyproline (187.04%)

May be indicative of bone resorption problems due to increased osteocalcin secretion. Hydroxyproline is a component of collagen. Vitamin C and iron are necessary cofactors.

Kynurenate (150.00%)

A high reading of this by-product of the breakdown of the amino acid tryptophan is consistent with a vitamin B6 deficiency, possible inflammatory processes, interferon-gamma stimulated macrophages or excessive tryptophan supplementation (not 5-HTP). Abnormally high levels can cause an increase in pain sensations and may, in multiple sclerosis patients, be a marker for an exacerbation period.

Pyruvate (142.31%)

Pyruvate is the end product of glucose metabolism. An elevated level may be indicative of a fundamental deficiency of B-complex vitamins and lipoic acid. High results are also seen in anorexia and other undereating disorders.

p-Hydroxybenzoate (131.82%)

Elevated levels may be indicative of exposure to paraben's found in many cosmetics and to a lesser degree of overgrowth of intestinal bacterial or protozoa. This organic acid when high may be indicative of a tyrosine deficiency. A comprehensive amino acid test may be helpful.

Sulfate (118.90%)

High levels of sulfate in the urine may be indicative of a number of problems related to glutathione use and depletion. If urinary pyroglutamate and a-hydroxybutyrate are also elevated, this indicates an early stage of glutathione depletion as it suggests that the system is increasing the flow of sulfur compounds into the liver to meet a growing need for the antioxidant tri-peptide. If those two markers are not elevated, suspect a high intake of sulfur bearing foods or amino acids such as NAC (N-Acetyl-Cysteine), methionine or taurine.

a-Ketoglutarate (117.89%)

High levels of this organic acid may be indicative of poor amino acid metabolism or a need for both B-complex and lipoic acid.

Formiminoglutamic Acid (116.67%)

A high reading of this organic acid is suggestive of a folic acid deficiency. FIGLU is a compound derived from histidine and an insufficiency of folic acid leads to a high result.

Drugs which may have an adverse affect:

Ampicillin, Aspirin, Colchicine

Foods which may have an adverse affect:

Green Tea

Ammonia (113.33%)

A high ammonia result may indicate decay of the specimen due to improper handling and/or preservation. It may also indicate a bacterial infection of the G.I. tract or urinary tracts or metabolic hyperammonemia.

Xanthurenate (111.76%)

A high reading of this by-product of the breakdown of the amino acid tryptophan is consistent with a vitamin B6 deficiency.

5-Hydroxyindoleacetate (101.43%)

An elevation of this metabolite of the breakdown of serotonin may be due to the use of serotonin-specific re-uptake inhibitor (SSRI) drugs or the release of serotonin from the central nervous system, intestinal argentaffin cells or platelets.

Drugs which may have an adverse affect:

Acetaminophen, Prozac, Reserpine

Glutamine (-72.22%)

Glutamine is abundant in both blood and cerebrospinal fluid and easily passes the blood-brain barrier. This amino acid also acts as a detoxifier of ammonia from the brain and may be a protector against certain bacteria and alcohol poisoning. A low level may be indicative of poor absorption of proteins, protein malnutrition, incomplete digestion (requiring protease enzymes) or chronic alcoholism.

Phosphoserine (-66.67%)

No information available.

CA Cycle Return (-60.29%)

As the citric acid returns to the beginning through the conversion of Malate to Citrate through Oxalacetate, a low result may indicate an ammonia buildup due to an arginine deficiency.

Citrate (-60.28%)

A low reading of this organic acid may be indicative of an amino acid deficiency or a problem with metabolism. Also, a low level is linked to a increased risk of kidney stones, both the calcium and cysteine related stones. Potassium citrate supplementation may be helpful.

b-Hydroxyisovalerate (59.21%)

An increased reading of this organic acid may be indicative of a functional biotin deficiency. Overuse of antibiotics, dysbiosis, the use of anticonvulsant drugs, and/or pregnancy may also be a cause of these high results.

Asparagine/Aspartate (-55.73%)

If depressed along with a low glutamine/glutamate ratio, then it is possible that the specimen has decayed or gastrointestinal integrity is compromised.

Asparagine (-55.00%)

Asparagine is a non-essential amino acid synthesized from aspartic acid and ATP. A low result may be indicative of a functional magnesium deficiency.

Glutamine/Glutamate (-51.97%)

This may indicate specimen decay due to poor handling, heating or improperly preserved or gastrointestinal integrity is compromised.

2-Methylhippurate (-50.00%)

Low levels of 2-Methylhippurate are desirable as high levels would be an indication of exposure to toluene and/or xylene although low levels may indicate an inability to excrete this toxic metabolite.

Adipate (-50.00%)

No known health issues are related to low levels of adipate.

α -Hydroxybutyrate (-50.00%)

This organic acid is the last step of glutathione synthesis from methionine through cysteine. Low levels are desirable but not indicative of any positive or negative health issues.

α -Keto- β -methylvalerate (-50.00%)

No known health issues are related to low levels of α -keto- β -methylvalerate.

α -Ketoisocaproate (-50.00%)

No known health issues are related to low levels of α -ketoisocaproate.

α -Ketoisovalerate (-50.00%)

No known health issues are related to low levels of α -ketoisovalerate.

Anserine (-50.00%)

No information available.

β -Hydroxybutyrate (-50.00%)

No known health issues are related to low levels of β -hydroxybutyrate.

CA Cycle Entry (-50.00%)

A low result for the marker representing the entry into the citric acid cycle may indicate carbohydrate metabolism impairment especially if pyruvate and/or lactate are elevated. Possibilities causing this particular blockade include mercury, arsenic or petrochemical exposure.

CA Cycle Phase 1 (-50.00%)

This is the first phase of the citric acid cycle moving from Citrate to cis-Aconitate. A low reading may indicate a disruption in the efficiency of energy production.

Cystine (50.00%)

Cystine is the combination of two cysteine molecules combine. A sulfur amino acid, it is critical in the ability to detoxify the body. A high reading may indicate excessive supplementation with methionine, cystine, or N-acetylcysteine. Decreased renal clearance may also cause a high result. Excessive levels can be neurotoxic and adversely affect mental function.

DHPP (-50.00%)

No known health issues are related to low levels of DHPP.

Fumarate (-50.00%)

Indicative of poor functioning or overstress on the citric acid cycle, a low reading of this organic acid may be suggestive of low levels of tyrosine and phenylalanine.

Phenylpropionate (-50.00%)

No known health issues are related to low levels of phenylpropionate.

p-Hydroxyphenyllactate (-50.00%)

No known health issues are related to low levels of p-hydroxyphenyllactate.

Tricarballylate (-50.00%)

No known health issues are related to low levels of tricarballylate.

Panel/Subset Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

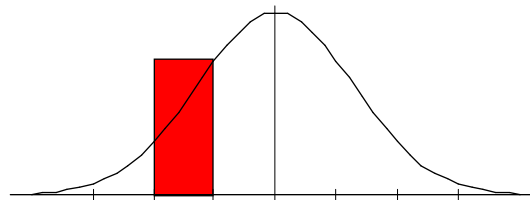
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Ammonia/Energy

Arginine, Threonine[L], Glycine, Serine[L], a-Amino adipic Acid, Asparagine[L], Aspartic Acid[H], Citrulline, Glutamic Acid[L], Glutamine[L].

PSD: 26.40
PSS: -16.72

Ammonia influences a cell's ability to create energy. This panel shows your body's ability to rid excess ammonia buildup and maintain a healthy energy cycle. A profile like this may show you're not eating enough protein, you're unable to digest properly, or you're eating a poor quality of proteins.

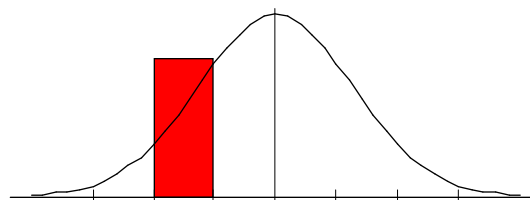


CNS Metabolism

Arginine, Tryptophan[L], GABA, Glycine, Serine[L], Taurine, Aspartic Acid[H], Glutamine[L], Ethanolamine, Phosphoethanolamine[L], Phosphoser.

PSD: 30.14
PSS: -16.35

Amino acids are the basic building blocks of all the cells in our body. Amino acid metabolism is important for proper functioning of the nervous system. This profile may indicate poor central nervous system functioning. Symptoms include: memory loss, fatigue and poor concentration.

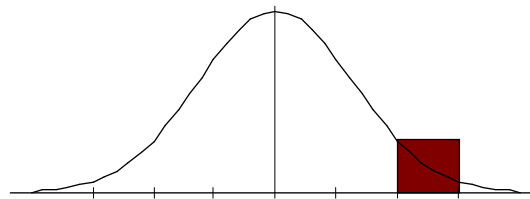


Connective Tissue

Leucine, Methionine[H], Valine[H], Cystine[H], Hydroxyproline[H], 3-Methylhistidine[L], Proline.

PSD: 50.49
PSS: 34.55

This panel shows whether there's an adequate supply and metabolism of amino acids necessary to produce healthy connective tissue and collagen. Necessary for healthy bone, joints, hair, skin, and cartilage. This profile may indicate missing enzymes and co-factors necessary in the production of healthy connective tissue and collagen. Symptoms include: brittle hair, dry skin, increased joint aches and pain. Review protein intake and quality of proteins.

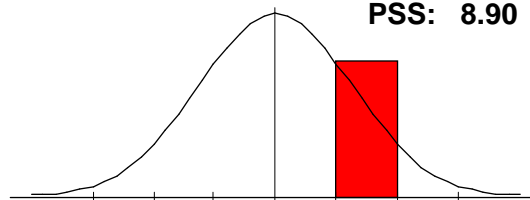


Detoxification Markers

Methionine[H], Cystine[H], Taurine, Glutamine[L], Glycine, Aspartic Acid[H].

PSD: 34.56
PSS: 8.90

This panel reviews amino acids critical for proper detoxification. This includes detoxing medications, environmental toxins, and natural metabolic toxins. This profile may indicate missing enzymes and co-factors necessary for proper detoxification. Review your Supplement List Explanation.

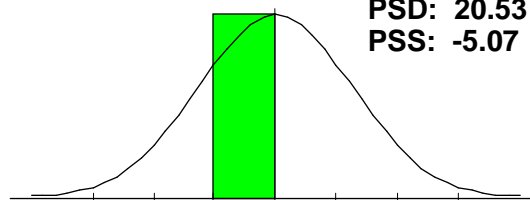


Essential Amino Acid

Arginine, Histidine, Isoleucine, Leucine, Lysine, Methionine[H], Phenylalanine, Threonine[L], Tryptophan[L], Valine[H].

PSD: 20.53
PSS: -5.07

This panel reviews the essential amino acids the body can't produce and must get from the diet. These amino acids are necessary for all body functions. This profile shows a percent imbalance below 25%, so no abnormalities were found.



Panel/Subset Report

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Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

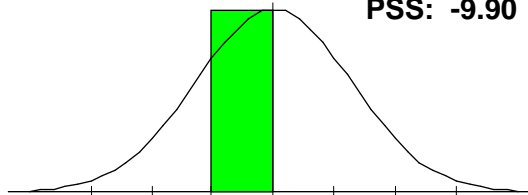
Anna Salanti (2718)

Fat Metabolism

Arginine, Isoleucine, Leucine, Valine[H], Taurine, Glutamine[L], Sarcosine.

This panel shows your balance of amino acids critical to proper fat metabolism. Fat metabolism is important in many body functions. Improper metabolism can cause problems like hormonal issues and nerve disorders. This profile shows a percent imbalance below 25%, so no abnormalities were found.

PSD: 21.92
PSS: -9.90

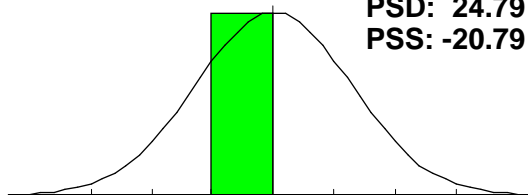


Gluconeogen

Threonine[L], Tryptophan[L], Glycine, Serine[L], Alanine.

This panel shows whether you have the proper amino acids in balance to control blood sugar levels. This profile shows a percent imbalance below 25%, so no abnormalities were found.

PSD: 24.79
PSS: -20.79

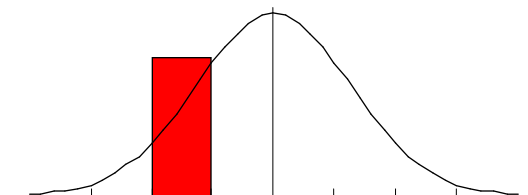


Hepatic Metabolism

Methionine[H], Taurine, Glutamine[L], Cystine[H], Cystathionine, Homocystine, Alanine.

This panel shows whether you have adequate stores of the listed amino acids to optimize liver function. This is important because your liver is responsible for cleaning your blood of toxins. This profile may indicate you may not be consuming enough protein. Or that your liver is working so hard, it's using up these amino acids so quickly, it's outstripping your supply.

PSD: 25.83
PSS: -3.75

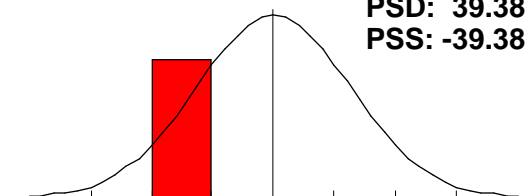


Immune Metabolites

Arginine, Threonine[L], Glutamine[L], Ornithine.

This panel shows whether you have adequate amounts of the listed amino acids to properly fight off viral or bacterial infections. This profile may indicate a weak immune function - making it difficult for you to fight off infections. This may be caused by a low dietary protein intake.

PSD: 39.38
PSS: -39.38

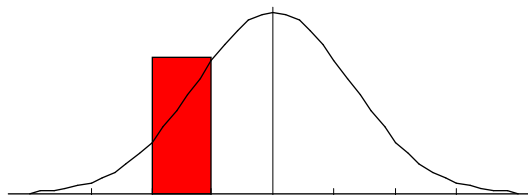


Magnesium Dependents

Citrulline, Ethanolamine, Phosphoethanolamine[L], Phosphoserine[L], Serine[L], Methionine sulfoxide.

This panel shows whether you have adequate amounts of magnesium for proper amino acid function. Amino acids are extremely dependent on magnesium to function properly. This profile indicates a possible magnesium deficiency. Highly consider further laboratory testing to assess your magnesium levels.

PSD: 30.68
PSS: -15.65



Panel/Subset Report

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Amino Acid & Organic Acid Date: 7/16/2014

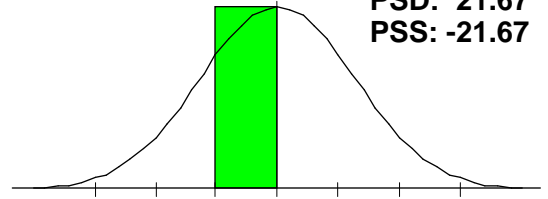
Anna Salanti (2718)

Muscle Metabolites

Anserine[L], Carnosine, 1-Methylhistidine, 3-Methylhistidine[L].

Amino acids are the basic building blocks critical in building muscle tissue. This profile shows a percent imbalance below 25%, so no abnormalities were found.

PSD: 21.67
PSS: -21.67

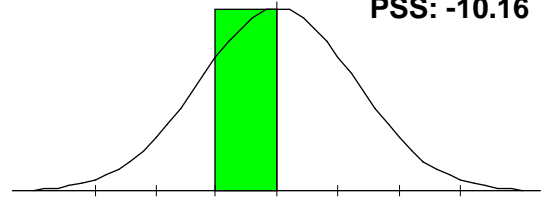


Neuroendocrine Metab

GABA, Glycine, Serine[L], Taurine, Tyrosine[L].

This panel shows whether you have enough of the listed amino acids necessary for the proper functioning of your endocrine system. The endocrine system comprises the control organs of the body such as: thymus, pancreas, and thyroid. This profile shows a percent imbalance below 25%, so no abnormalities were found.

PSD: 14.16
PSS: -10.16

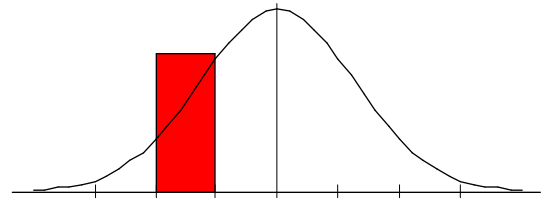


Urea Cycle Metabolites

Arginine, Aspartic Acid[H], Citrulline, Ornithine, Glutamine[L], Asparagine[L], Urea.

This panel shows your supply of the amino acids related to the urea cycle. This metabolic process helps you remove excess ammonia from your system. This profile indicates you don't have an adequate supply of the listed amino acids necessary to flush out excess ammonia. Excess ammonia can cause neurological issues. Review your Supplement List Explanation.

PSD: 32.30
PSS: -15.15

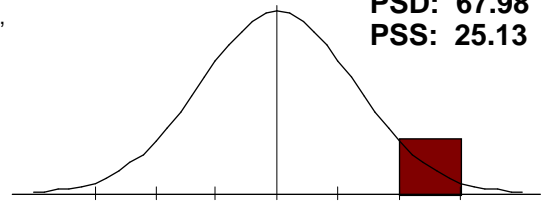


B-Complex Markers

b-Hydroxyisovalerate[H], a-Ketoisovalerate[L], a-Ketoisocaproate[L], a-Keto-b-methylvalerate[L], Methylmalonate[H], Formiminoglutamic Acid[H].

This panel assesses adequate intake of B-complex vitamins. This profile may indicate a need for certain B-complex vitamins. Review your Supplement List Explanation.

PSD: 67.98
PSS: 25.13

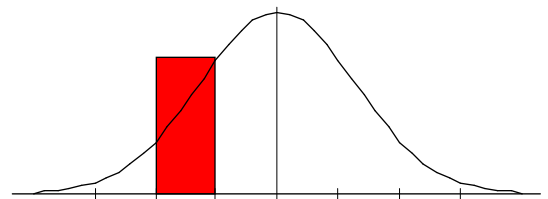


BCAA Catabolism

a-Ketoisovalerate[L], a-Ketoisocaproate[L], a-Keto-b-methylvalerate[L].

BCAA's are essential in building muscle and you can only get them from your diet or supplements. This panel assess your BCAA levels and how they're being used. This profile may indicate an inadequate supply of BCAAs. Consider supplementation. Note: supplementing with single branch chain amino acids is highly not recommended. All 3 branch chain amino acids (Isoleucine, Leucine and Valine) must be taken together.

PSD: 50.00
PSS: -50.00



Panel/Subset Report

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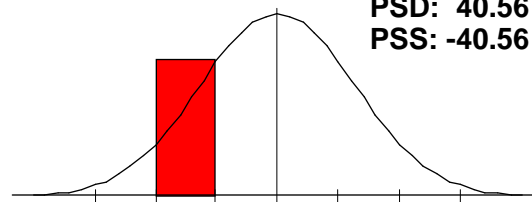
Amino Acid & Organic Acid Date: 7/16/2014

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CAC Cycle Ratios

CA Cycle Entry[L], CA Cycle Phase 1[L], CA Cycle Phase 2, CA Cycle Phase 3[L], CA Cycle Phase 4[L], CA Cycle Return[L].

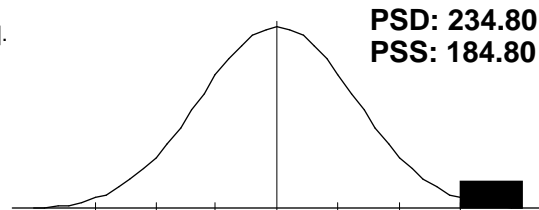
This panel reviews cellular energy producing cycles to maintain health and weight. This profile may indicate poor energy production and/or vitamin, mineral and amino acid deficiencies.



Carbohydrate Metabolism

Lactate[H], Pyruvate[H], a-Hydroxybutyrate[L], b-Hydroxybutyrate[L].

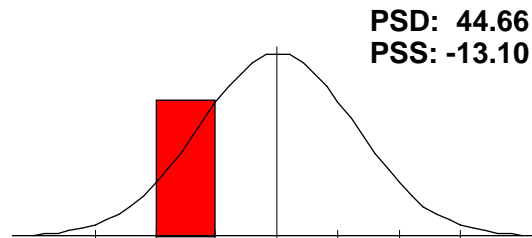
This panel assesses your body's ability to metabolize dietary carbohydrates. This profile suggests impaired carbohydrate metabolism. Symptoms include: brain function disorders, fatigue, weight gain, and chronic diseases. Review your Supplement List Explanation.



Energy Production

Citrate[L], cis-Aconitate[L], Isocitrate[L], a-Ketoglutarate[H], Succinate, Fumarate[L], Malate[L], Hydroxymethylglutarate.

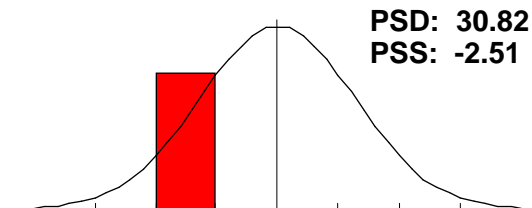
This panel reviews cellular energy producing cycles to maintain health and weight. This profile may indicate an amino acid deficiency. Low readings are typically desirable, but if the CAC Cycle Ratios are abnormal, consider adding a broad spectrum amino acid supplement.



Fatty Acid Metabolism

Adipate[L], Suberate, Ethylmalonate[H].

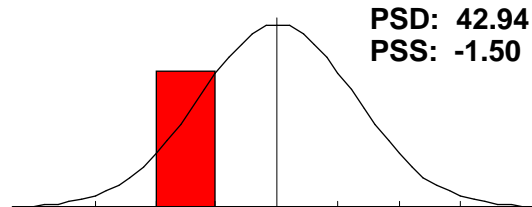
This panel assesses how fats are being broken down and utilized by the body. This profile may indicate you're metabolizing fats efficiently.



Intestinal Dysbiosis

p-Hydroxyphenyllactate[L], Phenylacetate[H], Phenylpropionate[L], Tricarballylate[L], DHPP[L], Indican, p-Hydroxybenzoate[H], D-Lactate, D-A.

Disbiosis is an overgrowth of bad bacteria in the gut. It is indicative of gut health. This profile suggests you have good gut health

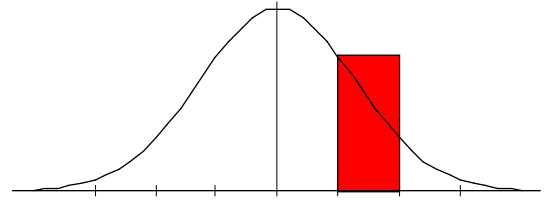


Liver Detox Indicators

2-Methylhippurate[L], Glucarate, Orotate, Pyroglutamate[H], Sulfate[H], a-Hydroxybutyrate[L].

PSD: 49.72
PSS: 16.39

This panel assesses how well your liver removes toxins from your system. This profile may indicate: high environmental toxins, improper regulation of cell growth, hereditary deficiencies, and a depressed ability of the liver to detoxify itself. Consider a detoxification protocol. Review your Supplement List Explanation..

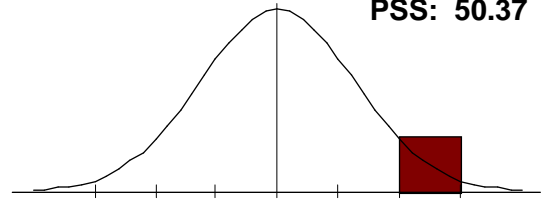


Neurotransmitters

Vanilmandelate[L], Homovanillate, 5-Hydroxyindoleacetate[H], Kynurenate[H], Quinolinate.

PSD: 63.41
PSS: 50.37

Neurotransmitters are chemicals the brain uses to make the entire neurological system function - including all body functions. This panel assesses neurotransmitter production. This profile may be caused by the use of SSRIs. This may lead to fatigue, depression, or anxiety.



Drug Interactions

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

Drugs listed below tend to further aggravate elements of blood chemistry that are out of range (H or L). The (#) after each drug denotes the number of times that drug is flagged as being potentially harmful.

Acetaminophen(2)

Colchicine(2)

Prozac

Ampicillin

Imipramine

Reserpine(2)

Aspirin(2)

MAO Inhibitors

Clonidine

Methyldopa

Nutrition - Detail

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014
Anna Salanti (2718)

Nutritional and herbal information contained in this report is based upon research related to imbalances in your chemistry. The recommendations are based upon the information provided, without interpretation. This must be done with the help of your qualified health care professional.

1-5-HTP 3x daily 100 mg

5-Hydroxytryptophan is indicated due to the high level of 5-HIAA in urine which suggests serotonin catabolism and a possible loss of tryptophan reserves.

Decreased

Rationale

Normal

Increased

5-Hydroxyindoleacetate

1-B-Complex + Lipoic Acid See Nutrition Detail

B complex vitamins are involved in a broad spectrum of cell metabolic deficiencies as well as fatty acid utilization.

ALPHA LIPOIC ACID

Lipoic acid helps recycle antioxidants and extends their antioxidant life. Important co-enzyme for energy metabolism.

Adults

1- B-complex twice daily

50 mgs daily

Children

1 - B-complex daily

25 mgs daily

Decreased

Normal

Increased

Pyruvate
a-Ketoglutarate

1-Carbohydrate Metabolism Profile See Nutrition Detail

When Lactate and Pyruvate are elevated it indicates a potential for impaired carbohydrate metabolism. This pattern indicates suboptimal operation of carbohydrate metabolism, interfering with efficient cellular energy production. Various pathways being over- or under- utilized can be nutritionally supported with digestive enzymes, B-Complex, Lipoic acid, and CoEnzyme Q10 supplementation. Recommended nutrients include:

B-Complex (2x daily)

Lipoic Acid (2x daily)

CoEnzyme Q10 (1x daily)

Digestive Enzymes (1-2 with each meal)

Decreased

Normal

Increased

Lactate
Pyruvate

Wallace, DC, Mitochondrial genetics: a paradigm for aging and degenerative diseases?, Science, 256:628-632 (1992).

Corral-Debrinski, Shffner JM, Lott MY, Wallace DC, Association of mitochondrial DNA damage with aging and coronary arteriosclerotic heart disease. Mutat Res, 275:169-180 (1992).

1-Folic Acid 2x daily 800 mcg

Adult: 800 mcg 2x daily Children 800 mcg 1x daily

A folic acid deficiency may lead to a buildup of this organic acid which is created through the metabolism of histidine.

Decreased

Normal

Increased

Formiminoglutamic Acid

1-Pantothenic Acid (B5) 2x daily 500 mg

Vital in enzymatic reactions in fatty acid and carbohydrate metabolism, as well as gluconeogenesis, synthesis of sterols, steroid hormones and porphyrins. As CoA, it functions as a carrier of acyl groups. It also plays a central role in cellular proteins, impacting their activity and structure.

Pantothenic acid may be helpful in lowering pyruvate.

Decreased

Normal

Increased

Pyruvate

1-Pyridoxal-5-Phosphate 2x daily 50 mg

B6 function involves many complex interrelated functions around amino acid metabolism. Cell processes involve PLP in immune modulation, fatty acids, steroid hormone, receptors, neurotransmitters, gluconeogenesis, and heme synthesis. of fat and transport of long-chain essential fatty acids as well as being cardiac protective. Kynurenate is a strong marker for Vitamin B6 deficiency.

Decreased

Normal

Increased

Kynurenate
Xanthurenate

Nutrition - Detail

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

Nutritional and herbal information contained in this report is based upon research related to imbalances in your chemistry. The recommendations are based upon the information provided, without interpretation. This must be done with the help of your qualified health care professional.

1-Vitamin B12 2x daily 1000 mcg

The only vitamin containing essential mineral elements, B12 is important in metabolism of nerve tissue, protein, fat and carbohydrate metabolism and the actions of a number of amino acids. It also is involved in the production of DNA and RNA. The organic acid Methylmalonate when high, is a good indicator of a B12 deficiency.

Decreased

Rationale

Normal

Increased

Methylmalonate

1-Whey Protein See Nutrition Detail

High quality whey protein is one of the most effective means of boosting glutathione levels which seem to be deficient in this case. The whey should also contain an array of vitamins (especially vitamin C) and minerals along with immunoglobulins, glycine and N-acetyl cysteine. For adults, at least one serving full serving and for children one-half a serving per day is recommended.

Decreased

Normal

Increased

a-Hydroxybutyrate

Pyroglutamate

2-Glycine 2x daily 1000 mg

Glycine is an important amino acid and is necessary in phase II detoxification as it is a component of hippurate through its binding with benzoate.

Decreased

Normal

Increased

Hippurate

Benzoate

2-Magnesium and Pyridoxine (B6) 2x daily see detail

Magnesium 360 mg, Pyridoxal-5-Phosphate (B6) 50 mg, Second most abundant cation (positively charged mineral) in intracellular fluid. Magnesium helps facilitate Na - K transport and influences Ca levels. It is involved in vasodilation, contraction, as well as cardiac and skeletal muscle cells. Required in over 300 enzymes, temperature control, neuronal homeostasis and has a profound effect on cardiac physiology.

B6 function involves many complex interrelated functions around amino acid metabolism. Cell processes involve PLP in immune modulation, fatty acids, steroid hormone, receptors, neurotransmitters, gluconeogenesis, and heme synthesis.

Decreased

Normal

Increased

Cystathionine
Homocystine

Methionine
Cystine

2-Magnesium and Zinc 2x daily see details

Magnesium (Mg) 240 mg, Zinc 25 mg

Magnesium is the second most abundant cation (positively charged mineral) in intracellular fluid. It helps facilitate Na - K transport and influences Ca levels. It is involved in vasodilation, contraction, as well as cardiac and skeletal muscle cells. Required in over 300 enzymes, temperature control, neuronal homeostasis and has a profound effect on cardiac physiology.

Zinc is active in the structure and function of biomembranes. Involved in more than 200 key enzymes including carbohydrate metabolism, connective tissue metabolism, T-cell function and prostaglandin secretion.

Decreased

Normal

Increased

Aspartic Acid

3-5-Hydroxy-Tryptophan (5-HTP) 2x daily 50 mg

A carbon skeleton indispensable amino acid, tryptophan is the precursor to the neurotransmitter serotonin. The only form available presently is 5-HTP.

Decreased

Normal

Increased

Tryptophan

3-Magnesium Citrate 2x daily one-quarter tsp After meals

Second most abundant cation (positively charged mineral) in intracellular fluid. It helps facilitate Na - K transport and influences Ca levels. It is involved in vasodilation, contraction, as well as cardiac and skeletal muscle cells. Required in over 300 enzymes, temperature control, neuronal homeostasis and has a profound effect on cardiac physiology.

Decreased

Normal

Increased

Asparagine

Aspartic Acid

Clinical Correlation

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

This report "MATCHES" clinical observations with the lab test. Elements shown, normal and abnormal, tend to characterize the observation. Highlighted elements are those reported to "MATCH" the characteristics of the clinical observation. Others are NOT matches but are elements in the observation.

Hypervalinemia (270.3)

100.00% (1 of 1)

Decreased

Normal

Increased

33.33 Valine

Catecholamine Dysfunction ()

66.67% (2 of 3)

Decreased

Normal

Increased

10.53 Homovanillate

-32.61 Vanilmandelate

-50.00 Fumarate

Comparison Progress Report

Anna Salanti

Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

A "+" change is toward optimal % Status of zero. A "-" change is away from optimal % Status of zero.

	Status % on:	12/31/2013		7/16/2014	+/- change	
Histidine		-78.57	L	8.00	+ 70.57	
a-Aminoadipic Acid		50.00	H	3.33	+ 46.67	
GABA		46.67	H	0.00	+ 46.67	
1-Methylhistidine		45.83	H	-4.67	+ 41.17	
a-Amino-N-Butyric Acid		42.86	H	-2.00	+ 40.86	
Cystathionine		33.33	H	0.00	+ 33.33	
Glycine		-42.92	L	10.00	+ 32.92	
Citrulline		41.30	H	11.36	+ 29.94	
Homocystine		41.67	H	-15.00	+ 26.67	
Hydroxyproline		31.25	H	187.04	H	- 155.79
Glutamine		-6.55		-72.22	L	- 65.67
Asparagine		-15.63		-55.00	L	- 39.38
Valine		7.05		33.33	H	- 26.29

Comparison Report

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

The arrow's length is proportional to change. Left to right is increase. Right to left is decrease.
Green is improvement. Red is decline.

	+/-		Status	% on:	12/31/2013	7/16/2014
-4.67 45.83	+	1-Methylhistidine			45.83 H	-4.67
		3-Methylhistidine			39.19 H	-32.00 L
3.33 50.00	+	a-Amino adipic Acid			50.00 H	3.33
-2.00 42.86	+	a-Amino-N-Butyric Acid			42.86 H	-2.00
-11.54 33.27	+	Alanine			33.27 H	-11.54
-50.00 38.89	-	Anserine			38.89 H	-50.00 L
		Arginine			-9.38	-14.71
-55.00 -15.63	-	Asparagine			-15.63	-55.00 L
		Aspartic Acid			-50.00 L	43.10 H
-14.00 -3.57	-	b-Alanine			-3.57	-14.00
-22.92 0.00	+	Carnosine			-22.92	0.00
11.36 41.30	+	Citrulline			41.30 H	11.36
0.00 33.33	+	Cystathionine			33.33 H	0.00
		Cystine			43.88 H	50.00 H
		Ethanolamine			28.49 H	22.73
0.00 46.67	+	GABA			46.67 H	0.00
-30.77 -13.11	-	Glutamic Acid			-13.11	-30.77 L
-72.22 -6.55	-	Glutamine			-6.55	-72.22 L
-42.92 10.00	+	Glycine			-42.92 L	10.00
-78.57 8.00	+	Histidine			-78.57 L	8.00
-15.00 41.67	+	Homocystine			41.67 H	-15.00
31.25 187.04	-	Hydroxyproline			31.25 H	187.04 H
-26.19 8.73	+	Isoleucine			-26.19 L	8.73
		Leucine			-12.34	-7.14
-22.73 14.66	-	Lysine			14.66	-22.73
		Methionine			-20.59	27.27 H
-42.00 -24.17	+	Ornithine			-42.00 L	-24.17
		Phenylalanine			-12.07	-12.00
		Phosphoethanolamine			-41.30 L	-41.30 L
-66.67 46.00	-	Phosphoserine			46.00 H	-66.67 L
		Proline			-20.00	-16.67
-25.21 -12.50	+	Sarcosine			-25.21 L	-12.50
-43.85 -31.00	+	Serine			-43.85 L	-31.00 L
-4.78 15.08	+	Taurine			15.08	-4.78
		Threonine			-41.67 L	-46.43 L
-25.00 36.67	+	Tryptophan			36.67 H	-25.00 L
-25.00 14.29	-	Tyrosine			14.29	-25.00 L
7.05 33.33	-	Valine			7.05	33.33 H
		Total Status Deviation			31.32	29.77
		Total Status Skew			4.92	-4.10

Comparison Progress Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

A "+" change is toward optimal % Status of zero. A "-" change is away from optimal % Status of zero.

	Status % on: 12/31/2013		7/16/2014		+/- change
CA Cycle Phase 3	176.97	H	-31.97	L	+ 145.00
Orotate	145.65	H	6.52		+ 139.13
Hippurate	120.37	H	13.14		+ 107.23
Phenylacetate	125.00	H	40.91	H	+ 84.09
Succinate	81.90	H	-18.10		+ 63.79
Indican	60.00	H	0.00		+ 60.00
Malate	71.43	H	-35.71	L	+ 35.71
CA Cycle Phase 1	78.81	H	-50.00	L	+ 28.81
Quinolate	50.00	H	22.50		+ 27.50
Benzoate	2466.67	H	4083.33	H	-1616.67
Lactate	34.55	H	696.87	H	- 662.33
Kynurenate	7.89		150.00	H	- 142.11
p-Hydroxybenzoate	20.71		131.82	H	- 111.11
Xanthurenate	-3.19		111.76	H	- 108.57
Sulfate	15.30		118.90	H	- 103.60
Pyruvate	-50.00	L	142.31	H	- 92.31
a-Ketoglutarate	-30.00	L	117.89	H	- 87.89
5-Hydroxyindoleacetate	35.71	H	101.43	H	- 65.71
b-Hydroxyisovalerate	2.63		59.21	H	- 56.58
Formiminoglutamic Acid	66.67	H	116.67	H	- 50.00
Fumarate	0.85		-50.00	L	- 49.15
p-Hydroxyphenyllactate	-4.43		-50.00	L	- 45.57
2-Methylhippurate	7.14		-50.00	L	- 42.86
Isocitrate	0.85		-38.14	L	- 37.29
Methylmalonate	8.82		38.24	H	- 29.41
Adipate	-21.15		-50.00	L	- 28.85
CA Cycle Return	-34.10	L	-60.29	L	- 26.19

Comparison Report

Anna Salanti

Amino Acid & Organic Acid Date: 7/16/2014

Female / Age: 62

Anna Salanti (2718)

The arrow's length is proportional to change. Left to right is increase. Right to left is decrease.
Green is improvement. Red is decline.

	+/-	Status % on:	12/31/2013	7/16/2014
-50.00 7.14	-		7.14	-50.00 L
35.71 101.43	-		35.71 H	101.43 H
2.83 14.15	+		14.15	2.83
-50.00 -21.15	-		-21.15	-50.00 L
			a-Hydroxybutyrate	-50.00 L
			a-Keto-b-methylvalerate	-50.00 L
-30.00 117.89	-		-30.00 L	117.89 H
			a-Ketoisocaproate	-50.00 L
			a-Ketisovalerate	-50.00 L
2466.67 4083.33	-		2466.67 H	4083.33 H
			b-Hydroxybutyrate	-50.00 L
2.63 59.21	-		2.63	59.21 H
			b-Hydroxyisovalerate	2.63
			cis-Aconitate	22.73
-60.28 38.99	-		38.99 H	-60.28 L
			Citrate	38.99 H
			D-Arabinitol	8.33
			DHPP	-50.00 L
2.63 19.57	+		19.57	2.63
			D-Lactate	19.57
			Ethylmalonate	25.00 H
66.67 116.67	-		66.67 H	116.67 H
-50.00 0.85	-		0.85	-50.00 L
			Formiminoglutamic Acid	66.67 H
			Fumarate	0.85
			Glucarate	29.37 H
13.14 120.37	+		120.37 H	13.14
			Hippurate	120.37 H
10.53 23.81	+		23.81	10.53
			Homovanillate	23.81
8.33 22.22	+		22.22	8.33
			Hydroxymethylglutarate	22.22
0.00 60.00	+		60.00 H	0.00
			Indican	60.00 H
-38.14 0.85	-		0.85	-38.14 L
			Isocitrate	0.85
7.89 150.00	-		7.89	150.00 H
			Kynurenate	7.89
34.55 696.87	-		34.55 H	696.87 H
			Lactate	34.55 H
-35.71 71.43	+		71.43 H	-35.71 L
			Malate	71.43 H
8.82 38.24	-		8.82	38.24 H
			Methylmalonate	8.82
6.52 145.65	+		145.65 H	6.52
			Orotate	145.65 H
40.91 125.00	+		125.00 H	40.91 H
			Phenylacetate	125.00 H
			Phenylpropionate	-50.00 L
20.71 131.82	-		20.71	131.82 H
			p-Hydroxybenzoate	20.71
			P-Hydroxyphenylacetate	-18.42
-50.00 -4.43	-		-4.43	-50.00 L
			p-Hydroxyphenyllactate	-4.43
			Pyroglutamate	44.92 H
-50.00 142.31	-		-50.00 L	142.31 H
			Pyruvate	-50.00 L
22.50 50.00	+		50.00 H	22.50
			Quinolate	50.00 H
-2.94 11.90	-		-2.94	11.90
			Suberate	-2.94
-18.10 81.90	+		81.90 H	-18.10
			Succinate	81.90 H
15.30 118.90	-		15.30	118.90 H
			Sulfate	15.30
			Tricarballylate	-50.00 L
-54.76 -32.61	+		-54.76 L	-32.61 L
			Vanilmandelate	-54.76 L
-3.19 111.76	-		-3.19	111.76 H
			Xanthurenate	-3.19
			Total Status Deviation	92.12
			Total Status Skew	136.66
				65.56
				93.62

Panel/Subset Comparison Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

Ammonia/Energy	12/31/2013		7/16/2014		+/-	
Arginine	-9.38		-14.71			
Threonine	-41.67	L	-46.43	L		
Glycine	-42.92	L	10.00		+	
Serine	-43.85	L	-31.00	L	+	
a-Aminoadipic Acid	50.00	H	3.33		+	
Asparagine	-15.63		-55.00	L	-	
Aspartic Acid	-50.00	L	43.10	H		
Citrulline	41.30	H	11.36		+	
Glutamic Acid	-13.11		-30.77	L	-	
Glutamine	-6.55		-72.22	L	-	
Ornithine	-42.00	L	-24.17		+	
a-Amino-N-Butyric Acid	42.86	H	-2.00		+	
Alanine	33.27	H	-11.54		+	
b-Alanine	-3.57		-14.00		-	
PSS / PSD	-7.23 / 31.15		-16.72 / 26.40			

CNS Metabolism	12/31/2013		7/16/2014		+/-	
Arginine	-9.38		-14.71			
Tryptophan	36.67	H	-25.00	L	+	
GABA	46.67	H	0.00		+	
Glycine	-42.92	L	10.00		+	
Serine	-43.85	L	-31.00	L	+	
Taurine	15.08		-4.78		+	
Aspartic Acid	-50.00	L	43.10	H		
Glutamine	-6.55		-72.22	L	-	
Ethanolamine	28.49	H	22.73			
Phosphoethanolamine	-41.30	L	-41.30	L		
Phosphoserine	46.00	H	-66.67	L	-	
PSS / PSD	-1.92 / 33.35		-16.35 / 30.14			

Connective Tissue	12/31/2013		7/16/2014		+/-	
Leucine	-12.34		-7.14			
Methionine	-20.59		27.27	H		
Valine	7.05		33.33	H	-	
Cystine	43.88	H	50.00	H		
Hydroxyproline	31.25	H	187.04	H	-	
3-Methylhistidine	39.19	H	-32.00	L		
Proline	-20.00		-16.67			
PSS / PSD	14.39 / 27.62		34.55 / 50.49			

Detoxification Markers	12/31/2013		7/16/2014		+/-	
Methionine	-20.59		27.27	H		
Cystine	43.88	H	50.00	H		
Taurine	15.08		-4.78		+	
Glutamine	-6.55		-72.22	L	-	
Glycine	-42.92	L	10.00		+	
Aspartic Acid	-50.00	L	43.10	H		
PSS / PSD	-10.18 / 29.84		8.90 / 34.56			

Panel/Subset Comparison Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014
Anna Salanti (2718)

Essential Amino Acid	12/31/2013	7/16/2014	+/-	
Arginine	-9.38	-14.71		
Histidine	-78.57 L	8.00	+	-78.57 8.00
Isoleucine	-26.19 L	8.73	+	-26.19 8.73
Leucine	-12.34	-7.14		
Lysine	14.66	-22.73	-	14.66 -22.73
Methionine	-20.59	27.27 H		
Phenylalanine	-12.07	-12.00		
Threonine	-41.67 L	-46.43 L		
Tryptophan	36.67 H	-25.00 L	+	-25.00 36.67
Valine	7.05	33.33 H	-	7.05 33.33
PSS / PSD	-14.24 / 25.92	-5.07 / 20.53		

Fat Metabolism	12/31/2013	7/16/2014	+/-	
Arginine	-9.38	-14.71		
Isoleucine	-26.19 L	8.73	+	-26.19 8.73
Leucine	-12.34	-7.14		
Valine	7.05	33.33 H	-	7.05 33.33
Taurine	15.08	-4.78	+	15.08 -4.78
Glutamine	-6.55	-72.22 L	-	-72.22 -6.55
Sarcosine	-25.21 L	-12.50	+	-25.21 -12.50
PSS / PSD	-8.22 / 14.54	-9.90 / 21.92		

Gluconeogen	12/31/2013	7/16/2014	+/-	
Threonine	-41.67 L	-46.43 L		
Tryptophan	36.67 H	-25.00 L	+	-25.00 36.67
Glycine	-42.92 L	10.00	+	-42.92 10.00
Serine	-43.85 L	-31.00 L	+	-43.85 -31.00
Alanine	33.27 H	-11.54	+	33.27 -11.54
PSS / PSD	-11.70 / 39.67	-20.79 / 24.79		

Hepatic Metabolism	12/31/2013	7/16/2014	+/-	
Methionine	-20.59	27.27 H		
Taurine	15.08	-4.78	+	15.08 -4.78
Glutamine	-6.55	-72.22 L	-	-72.22 -6.55
Cystine	43.88 H	50.00 H		
Cystathionine	33.33 H	0.00	+	33.33 0.00
Homocystine	41.67 H	-15.00	+	41.67 -15.00
Alanine	33.27 H	-11.54	+	33.27 -11.54
PSS / PSD	20.01 / 27.77	-3.75 / 25.83		

Immune Metabolites	12/31/2013	7/16/2014	+/-	
Arginine	-9.38	-14.71		
Threonine	-41.67 L	-46.43 L		
Glutamine	-6.55	-72.22 L	-	-72.22 -6.55
Ornithine	-42.00 L	-24.17	+	-42.00 -24.17
PSS / PSD	-24.90 / 24.90	-39.38 / 39.38		

Panel/Subset Comparison Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

Magnesium Dependents	12/31/2013		7/16/2014	+/-	
Citrulline	41.30	H	11.36	+	11.36 ← 41.30
Ethanolamine	28.49	H	22.73		
Phosphoethanolamine	-41.30	L	-41.30	L	
Phosphoserine	46.00	H	-66.67	L -	-66.67 ← 46.00
Serine	-43.85	L	-31.00	L +	-43.85 → -31.00
PSS / PSD	6.13 / 40.19		-15.65 / 30.68		

Muscle Metabolites	12/31/2013		7/16/2014	+/-	
Anserine	38.89	H	-50.00	L -	-50.00 ← 38.89
Carnosine	-22.92		0.00	+	-22.92 → 0.00
1-Methylhistidine	45.83	H	-4.67	+	-4.67 ← 45.83
3-Methylhistidine	39.19	H	-32.00	L	
PSS / PSD	25.25 / 36.71		-21.67 / 21.67		

Neuroendocrine Metab	12/31/2013		7/16/2014	+/-	
GABA	46.67	H	0.00	+	0.00 ← 46.67
Glycine	-42.92	L	10.00	+	-42.92 → 10.00
Serine	-43.85	L	-31.00	L +	-43.85 → -31.00
Taurine	15.08		-4.78	+	-4.78 ← 15.08
Tyrosine	14.29		-25.00	L -	-25.00 ← 14.29
PSS / PSD	-2.15 / 32.56		-10.16 / 14.16		

Urea Cycle Metabolites	12/31/2013		7/16/2014	+/-	
Arginine	-9.38		-14.71		
Aspartic Acid	-50.00	L	43.10	H	
Citrulline	41.30	H	11.36	+	11.36 ← 41.30
Ornithine	-42.00	L	-24.17	+	-42.00 → -24.17
Glutamine	-6.55		-72.22	L -	-72.22 ← -6.55
Asparagine	-15.63		-55.00	L -	-55.00 ← -15.63
PSS / PSD	-13.71 / 27.48		-15.15 / 32.30		

B-Complex Markers	12/31/2013		7/16/2014	+/-	
b-Hydroxyisovalerate	2.63		59.21	H -	2.63 → 59.21
a-Ketoisovalerate	-50.00	L	-50.00	L	
a-Ketoisocaproate	-50.00	L	-50.00	L	
a-Keto-b-methylvalerate	-50.00	L	-50.00	L	
Methylmalonate	8.82		38.24	H -	8.82 → 38.24
Formiminoglutamic Acid	66.67	H	116.67	H -	66.67 → 116.67
Xanthurenate	-3.19		111.76	H -	-3.19 → 111.76
PSS / PSD	-10.72 / 33.04		25.13 / 67.98		

BCAA Catabolism	12/31/2013		7/16/2014	+/-	
a-Ketoisovalerate	-50.00	L	-50.00	L	
a-Ketoisocaproate	-50.00	L	-50.00	L	
a-Keto-b-methylvalerate	-50.00	L	-50.00	L	
PSS / PSD	-50.00 / 50.00		-50.00 / 50.00		

Panel/Subset Comparison Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

CA Cycle Ratios	12/31/2013		7/16/2014		+/-	
CA Cycle Phase 1	78.81	H	-50.00	L	+	-50.00 ← 78.81
CA Cycle Phase 2	-8.93		-4.00			
CA Cycle Phase 3	176.97	H	-31.97	L	+	-31.97 ← 176.97
CA Cycle Phase 4	50.66	H	-47.10	L		
CA Cycle Return	-34.10	L	-60.29	L	-	-60.29 ← -34.10
PSS / PSD	91.88 / 104.18		-40.56 / 40.56			

Carbohydrate Metabolism	12/31/2013		7/16/2014		+/-	
Lactate	34.55	H	696.87	H	-	34.55 → 696.87
Pyruvate	-50.00	L	142.31	H	-	-50.00 → 142.31
a-Hydroxybutyrate	-50.00	L	-50.00	L		
b-Hydroxybutyrate	-50.00	L	-50.00	L		
PSS / PSD	-28.86 / 46.14		184.80 / 234.80			

Energy Production	12/31/2013		7/16/2014		+/-	
Citrate	38.99	H	-60.28	L	-	-60.28 ← 38.99
cis-Aconitate	22.73		-28.79	L		
Isocitrate	0.85		-38.14	L	-	-38.14 ← 0.85
a-Ketoglutarate	-30.00	L	117.89	H	-	-30.00 → 117.89
Succinate	81.90	H	-18.10		+	-18.10 ← 81.90
Fumarate	0.85		-50.00	L	-	-50.00 ← 0.85
Malate	71.43	H	-35.71	L	+	-35.71 ← 71.43
Hydroxymethylglutarate	22.22		8.33		+	8.33 ← 22.22
PSS / PSD	26.12 / 33.62		-13.10 / 44.66			

Fatty Acid Metabolism	12/31/2013		7/16/2014		+/-	
Adipate	-21.15		-50.00	L	-	-50.00 ← -21.15
Suberate	-2.94		11.90		-	-2.94 → 11.90
Ethylmalonate	25.00	H	30.56	H		
PSS / PSD	0.30 / 16.37		-2.51 / 30.82			

Intestinal Dysbiosis	12/31/2013		7/16/2014		+/-	
p-Hydroxyphenyllactate	-4.43		-50.00	L	-	-50.00 ← -4.43
Phenylacetate	125.00	H	40.91	H	+	40.91 ← 125.00
Phenylpropionate	-50.00	L	-50.00	L		
Tricarballoylate	-50.00	L	-50.00	L		
DHPP	-50.00	L	-50.00	L		
Indican	60.00	H	0.00		+	0.00 ← 60.00
p-Hydroxybenzoate	20.71		131.82	H	-	20.71 → 131.82
D-Lactate	19.57		2.63		+	2.63 ← 19.57
D-Arabinitol	8.33		11.11			
PSS / PSD	8.80 / 43.12		-1.50 / 42.94			

Panel/Subset Comparison Report

Anna Salanti
Female / Age: 62

Amino Acid & Organic Acid Date: 7/16/2014

Anna Salanti (2718)

Liver Detox Indicators	12/31/2013		7/16/2014	+/-		
2-Methylhippurate	7.14		-50.00	L -		-50.00 ← 7.14
Glucarate	29.37	H	24.60			
Orotate	145.65	H	6.52	+	6.52	← 145.65
Pyroglutamate	44.92	H	48.31	H		
Sulfate	15.30		118.90	H -	15.30	→ 118.90
a-Hydroxybutyrate	-50.00	L	-50.00	L		
PSS / PSD	32.06 / 48.73		16.39 / 49.72			

Neurotransmitters	12/31/2013		7/16/2014	+/-		
Vanilmandelate	-54.76	L	-32.61	L +		-54.76 → -32.61
Homovanillate	23.81		10.53	+	10.53	← 23.81
5-Hydroxyindoleacetate	35.71	H	101.43	H -	35.71	→ 101.43
Kynurenate	7.89		150.00	H -	7.89	→ 150.00
Quinolate	50.00	H	22.50	+	22.50	← 50.00
PSS / PSD	12.53 / 34.44		50.37 / 63.41			

Village Pharmacy

898 Tanager Street
Incline Village, NV 89451
Tel: (775) 831-1133
Fax: (775) 831-2228

Ordering Practitioner
Anna Salanti
503-977-2660

Custom Amino Acid Profile

Biochemically Individualized for your patient

Client
Anna Salanti

Visit date
7/16/2014

Order Payment and Delivery Information

To order, complete and FAX to (775) 831-2228.

Ship to: _____

Address: _____

City, State, Zip: _____

Phone: _____

Credit Card Number: _____

Expires: _____

Authorizing Signature: _____

Amino Acid Customization Details

	Container Base Grams	Test Result	% Status	Grams Added
L-Arginine	19.50	7.5	-14.71	0
L-Histidine	13.50	7.900000	8.00	0
L-Isoleucine	13.50	7.400000	8.73	0
L-Leucine	12.00	12	-7.14	0
L-Lysine	12.00	18	-22.73	0
L-Methionine	15.00	2.5	27.27	0
L-Phenylalanine	15.00	5.900000	-12.00	0
L-Taurine	8.10	9.699999	-4.78	0
L-Threonine	13.50	8.5	-46.43	0
L-Tryptophan (as 5-HTP)	0.90	4	-25.00	0
L-Valine	15.00	28	33.33	0
Total Base Grams: 138.00		Total Grams Added:		0

Other Ingredients *

Grams per Container	Grams per Container
Alanine 26.88	Tyrosine 0.36
Alpha-Ketoglutarate 12.00	Magnesium 2.01
Aspartic Acid 11.04	P5P (B6) 1.005
Glycine 67.92	Folic Acid 0.67
Glutamic Acid 16.98	Zinc 0.67
Glutamine 7.50	
Proline 30.96	
Serine 8.76	

* Flavored product may include additional ingredients not shown.

Customization exclusively from Lab Interpretation's LabAssist™ interpretive report, and KTS Products Synerplex Amino Acids.