



Ordering Physician:

Metametrix

3425 Corporate Way
Duluth, GA 30096

Accession Number: **A0909030002**

Reference Number:

Patient: Sample Report

Age: 47 Sex: Female

Date of Birth: 02/05/1962

Date Collected: 9/2/09

Date Received: 9/3/09

Report Date: 9/3/09

Telephone: (770) 446-4583

Fax: (770) 441-2237

Reprinted: 9/17/09

Comment:

4300 Designs for Health Comprehensive Metabolic Profile

Urine lipid peroxides have been replaced with 8-OH-2-deoxyguanosine in this report.

Clinical Symptom - Test Result Correlation Summary

Inefficient Fat Metabolism

Your test results show a potential inability to efficiently metabolize and burn fats. This may result in:

- Inability to lose weight
- Low energy
- Cognitive decline

Inefficient Cellular Energy Production

Your test results reveal inefficiency in your cellular energy production. This is a critical process that occurs within all cells and sub-optimal energy production may result in:

- Fatigue and lack of vitality
- Exercise intolerance
- Generalized muscle aches
- Lack of concentration and memory

Overactive Stress Response

Your test results suggest a high level of stress and an overactive stress response, which can result in:

- Anxiety or panic attacks
- Palpitations (sense of rapid pounding heart beat)
- Insomnia and sleep disturbance
- Diminished capacity to deal with stress
- Mood imbalances
- Lack of concentration and memory

Sub-optimal Serotonin Response

Your test results show a potentially sub-optimal serotonin response, which may result in:

- Mood imbalances and mild depression
- Behavioral disorders
- Insomnia and sleep disturbance
- Increased perception of pain and chronic pain
- Constipation
- Irritable bowel syndrome

Oxidative Stress

Your test results show an increase in oxidative stress. Increases in oxidative stress suggest the need for more dietary antioxidants (i.e., fresh vegetables and fruits) and antioxidant nutritional supplements. Oxidative stress is a biochemical process which may result in:

- Increased risk for many chronic diseases (i.e., heart disease, stroke, and cancer)
- Premature aging

Summary of Abnormal Results

	<u>Findings</u>	<u>Intervention Options</u>	<u>Metabolic Association</u>
B-Vitamin Insufficiency Xanthurenate	Very High	B6	Impaired Tryptophan metabolism
Cellular Energy Adipate	High	Carnitine, B2	Fatty acid oxidation
Suberate	Very High	Carnitine, B2	Fatty acid oxidation
Succinate	High	CoQ10, B-Complex, Calcium, Antioxidants	ATP production
Fumarate	High	CoQ10	ATP production
Hydroxymethylglutarate	High	CoQ10	HMG-CoA reductase inhibition
Neural Function Vanilmandelate	Very High	Evaluate stress issues	Epi- & norepinephrine turnover stimulation
Homovanillate	High	Evaluate stress issues	Dopamine turnover stimulation
5-Hydroxyindoleacetate	Low	5-HTP	Serotonin turnover inhibition
Detoxification 2-Methylhippurate	High	Glycine	Xylene exposure
Dysbiosis p-Hydroxyphenylacetate	Very High	Probiotics or antibiotics	Bacterial product
Oxidative Stress 8-Hydroxy-2-deoxyguanosine	High	Antioxidants	Free radical damage
Polyunsaturated Omega 3 No Abnormality Found			
Polyunsaturated Omega 6 Linoleic (18:2n6)	Very Low	Sunflower or organic canola oil	Essential fatty acid; Low membrane fluidity
Gamma Linolenic (18:3n6)	Low	Evening primrose or borage oils	Neuropathology and behavioral disorders
Trans No Abnormality Found			
Ratios No Abnormality Found			
Food Antibody Reactions (No. of foods) Severe (+5)	1	Use Elimination Diet	Intestinal hyperpermeability

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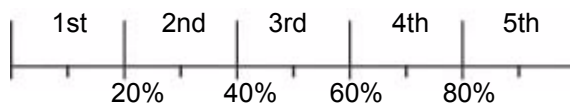
This report is not intended for the diagnosis of neonatal inborn errors of metabolism.

Organix™ Profile



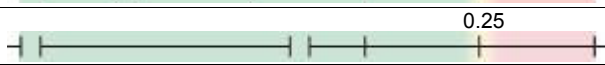
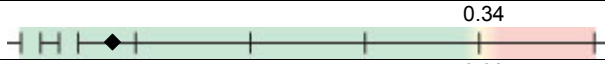



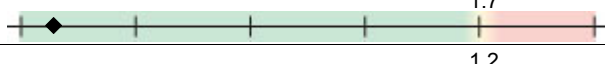





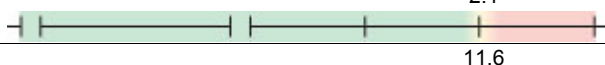




Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Results are expressed as mcg/mg creatinine.
 Ranges are for ages 13 and over

Percentile Ranking by Quintile



95%
Reference
Interval

		Results			
B-Vitamin Insufficiency					
1	Pyruvate	<DL*		3.9	<= 6.4
2	a-Ketoglutarate	<DL*		19.0	<= 35.0
3	a-Ketoisovalerate	<DL*		0.25	<= 0.49
4	a-Ketoisocaproate	0.06		0.34	<= 0.52
5	a-Keto-β-Methylvalerate	<DL*		0.38	<= 1.10
6	Xanthurenate	0.92 H		0.47	<= 0.74
7	β-Hydroxyisovalerate	2.5		7.6	<= 11.5
8	Methylmalonate	0.5		1.7	<= 2.3
9	Formiminoglutamate	0.1		1.2	<= 2.2
Cellular Energy					
10	Adipate	5.8 H		5.2	<= 8.3
11	Suberate	9.7 H		1.7	<= 3.2
12	Ethylmalonate	1.5		3.6	<= 6.3
13	L-Lactate	5		14	3 - 46
14	β-Hydroxybutyrate	<DL*		2.1	<= 9.9
15	Succinate	16.4 H		11.6	<= 20.9
16	Fumarate	0.65 H		0.59	<= 1.35
17	Malate	0.4		1.4	<= 3.1
18	Hydroxymethylglutarate	4.5 H		3.6	<= 5.1

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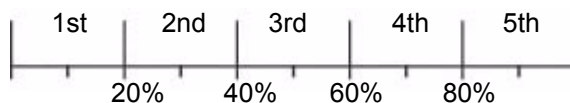
Organix™ Profile

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

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**95%
Reference
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Neural Function

Item	Value	Status	Percentile Range	Reference Interval
19 Vanilmandelate	6.0	H	1.8 - 3.9	1.3 - 4.9
20 Homovanillate	8.0	H	2.1 - 6.3	1.6 - 10.9
21 5-Hydroxyindoleacetate	1.7	L	2.1 - 5.6	1.6 - 9.8
22 Kynurenate	1.9		1.9 - 4.0	<= 2.7
23 Quinolinate	1.4		1.4 - 8.0	<= 5.8
24 Picolinate	2.8		2.8 - 8.0	2.8 - 13.5

Detoxification

25 Citrate	280		280 - 601	56 - 987
26 Cis-Aconitate	50		50 - 51	18 - 78
27 Isocitrate	51		51 - 98	39 - 143
28 2-Methylhippurate	0.086	H	0.086 - 0.084	<= 0.192
29 Orotate	0.09		0.09 - 0.69	<= 1.01
30 Glucarate	2.9		2.9 - 6.3	<= 10.7
31 a-Hydroxybutyrate	0.3		0.3 - 0.3	<= 0.9
32 Pyroglutamate	42		42 - 59	28 - 88
33 Sulfate	1,629		958 - 2,347	690 - 2,988

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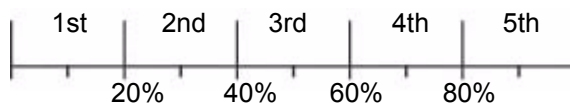
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**95%
Reference
Interval**

Compounds of Bacterial Origin

Compound ID	Compound Name	Result	Percentile	Reference Interval
34	Benzoate	<DL*	0.6	<= 9.3
35	Phenylacetate	<DL*	0.04	<= 0.15
36	Phenylpropionate	<DL*	0.4	<= 0.4
37	p-Hydroxybenzoate	0.11	0.99	<= 2.08
38	p-Hydroxyphenylacetate	>200 H	19	<= 34
39	Indican	23	40	<= 74
40	Tricarballic acid	0.48	0.73	<= 1.41
41	3,4-Dihydroxyphenylpropionate	<DL*	0.12	<= 0.12
42	D-Lactate	<DL*	2.3	<= 7.0

Creatinine = 200 mg/dl

* <DL = less than detection limit

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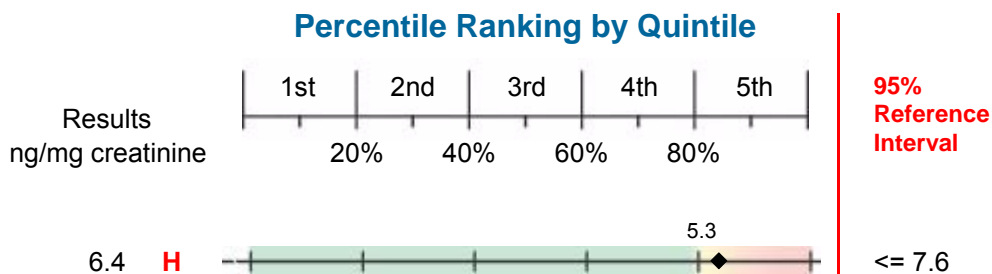
8-Hydroxy-2 deoxyguanosine - Urine

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

What is 8-Hydroxy-2'-deoxyguanosine (8-OHdG)?

In its efforts to produce the chemical energy to power your cells and fight infection, your body makes harmful chemicals called free radicals. Sustained inflammatory responses cause increased production of these free radicals. When local antioxidant protection fails to keep free radicals in check, there is threat of damage to cell membranes, enzymes, proteins and DNA. 8-OHdG is a product of oxidative damage by free radicals to DNA, and the 8-OHdG test tells you if you have enough antioxidants in your system. High levels of 8-OHdG are sometimes associated with toxic exposure, cancer, heart disease, diabetes, aging, liver disease, Parkinson's disease, and smoking.

Ranges are for ages 13 and over.



What does my 8-Hydroxy-2'-deoxyguanosine (8-OHdG) result mean?

If your 8-OHdG is high, your body is failing to control the rate of formation of free radicals. You can increase your protection by taking vitamins E and C, selenium, beta-carotene, and bioflavonoids. Many products are available that offer combinations of these and other antioxidants that may be beneficial.



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These test results are not for the diagnosis of disease. They are intended to provide nutritional guidelines to qualified healthcare professionals with full knowledge of patient history and concerns to assist in their design of an appropriate healthcare program.

Georgia Lab Lic. Code #067-007
CLIA ID# 11D0255349

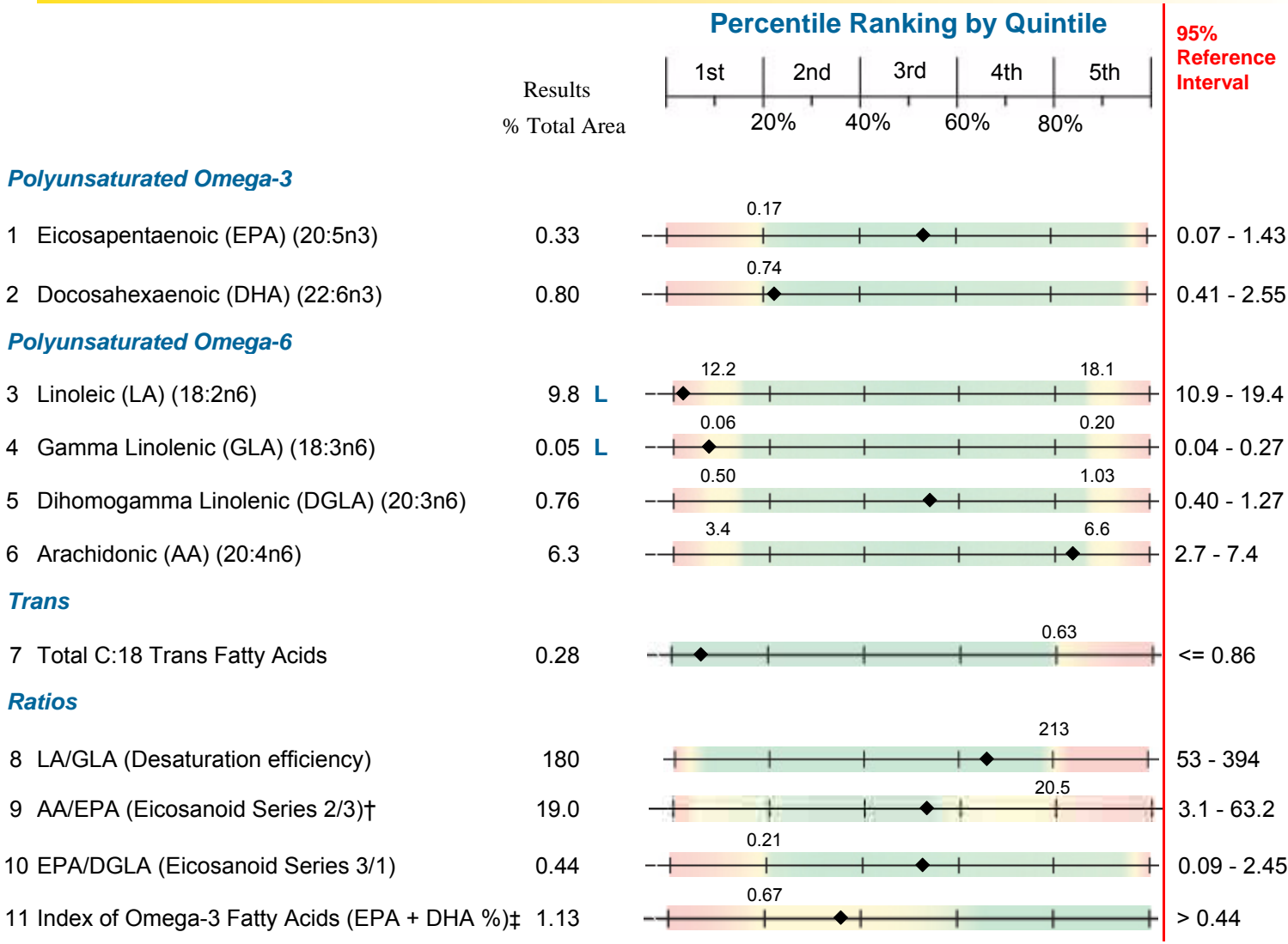
New York Clinical Lab PFI #4578
Florida Clinical Lab Lic. #800008124

Laboratory Directors: J. Alexander Bralley, PhD
Robert M. David, PhD

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Bloodspot™ Fatty Acid Profile

Methodology: Capillary Gas Chromatography/Mass Spectrometry



†Sears, B. *Toxic Fat: When Good Fat Turns Bad*. 1st ed. Nashville, TN: Thomas Nelson; 2008.

‡Harris, WS. Omega - 3 fatty acids and cardiovascular disease: A case for omega-3 index as a new risk factor. *Pharmacological Research* 2007; 55:217-223.

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Bloodspot™ IgG Food Antibodies

Methodology: ELISA

Negative	Foods to Avoid		
	Mild +1 and +2	Moderate +3 and +4	Severe +5

- Almond
- Aspergillus
- Beef
- Cantaloupe
- Cashew
- Chicken
- Corn
- Crab
- Garlic
- Lobster
- Milk
- Mustard
- Oat
- Orange
- Pea, Green
- Peanut
- Pinto Bean
- Pork
- Rice
- Salmon
- Shrimp
- Soybean
- Strawberry
- Sunflower
- Tomato
- Tuna
- Turkey
- Walnut
- Wheat

Egg, Whole

Responses reflect IgG levels measured by ELISA with standardized food extracts. The assay yields semi-quantitative antibody concentrations for each food. The concentration readings are categorized into four reaction levels (Negative, Mild, Moderate, or Severe) corresponding to semi quantitative responses (0/1, +1, +2, +3, +4, or +5), based on relative absorbance readings. The likelihood of adverse reactions to a given food increases as the response level for that food becomes more positive.



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Supplement Recommendation Summary

The Designs for Health Comprehensive Metabolic Profile results may be used, along with full knowledge of this patient's medical history and concerns, to help healthcare professionals create an individually optimized nutritional support program. The summary table below is based strictly on the results from this test. It shows estimates of nutrient doses that may help to normalize nutrient-dependent metabolic functions. All amounts are adult doses that should be adjusted for children according to body weight and indication of need.

These supplement suggestions are based solely on the objective test markers and may serve as a foundational program to optimize metabolic function and address any observed deficiencies. These suggestions may be used in place of supplements the patient was taking at the time the testing was initiated. However, it should not preclude this patient from taking additional supplements as recommended by his/her healthcare provider for other health conditions or requirements unique to the individual.

Recommendations may appear because of secondary associations that are not stated in the Summary section on the first page.

Foundational Metabolic Support

DFH Complete Multivitamin 3 caps daily

Vitamin and Mineral Recommendations

B-Supreme 1 twice daily

Q-Avail Nano 200 1 cap daily

Amino Acid Recommendations

5-HTP Synergy (use with caution with SSRI and MAOI medications) 1 three times daily

Either (1) Carnitine Tartarate Powder or (2) CarniClear If (1), then 1/2 tsp/day or if (2), then 1 tsp/day

Fatty Acid Recommendations

GLA 240 (Gamma-linolenic acid); avoid excessive omega-3 (fish oil) supplementation 1 soft gel twice daily

Combination Product Recommendations

Amino-D-Tox 3 caps twice daily

CatecholeCalm (consider stress-reduction techniques and eliminate caffeine) 3 caps/day

Ultimate Antioxidant-Full Spectrum 3 soft gels/day

(1) Probiotic Synergy and (2) GI Microb-X (1), 2 caps or 1/4 tsp twice daily with meals and (2), 2 caps three times daily for 20 days (on an empty stomach)

- If orotate is elevated, amino acid supplementation may be contraindicated, except for arginine.
- These guidelines are intended as a starting point for the clinician who requested the test and are based only on the laboratory results included in this report. Final recommendations should be implemented by the clinician with consideration of medical history and current clinical observations.
- These tests are not intended for the diagnosis or treatment of specific disorders.