



Accession Number: **A0508180188**

Reference Number:

Patient: Sample Report

Age: 35 Sex: M

Date Collected: Not Specified

Date Received: 8/18/05

Report Date: 8/25/05

Telephone: 7704465483

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Reprinted: 10/20/05

Comment:

Ordering Physician:

131838 - 143760

Metamatrix Research

4855 Peachtree Industrial Blvd.

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Norcross, GA 30092

4300 Designs for Health Comprehensive Metabolic Profile

Summary of abnormal results:

	<u>Findings</u>	<u>Intervention Options</u>	<u>Metabolic Association</u>
B-Vitamin Insufficiency			
a-Ketoglutarate	High	CoQ10, Lipoic Acid, B1, B2, B3, B5	Citric acid cycle
a-Ketoisovalerate	High	Lipoic Acid, B1, B2, B3, B5	Impaired Valine metabolism
a-Ketoisocaproate	High	Lipoic Acid, B1, B2, B3, B5	Impaired Leucine metabolism
a-Keto-B-Methylvalerate	Very High	Lipoic Acid, B1, B2, B3, B5	Impaired Isoleucine metabolism
Cellular Energy			
b-Hydroxybutyrate	Very High	Cr, V, Lipoic Acid, Mg, Mn	Ketosis
a-Ketoglutarate	High	CoQ10, Lipoic Acid, B1, B2, B3, B5	Citric acid cycle
Neural Function			
Vanilmandelate	Low	Tyrosine, Phenylalanine	Epi- & Norepinephrine turnover inhibition
Homovanillate	Very Low	Tyrosine	Dopamine turnover inhibition
Detoxification			
a-Hydroxybutyrate	Very High	N-acetylcysteine, Glutathione, other sulfur containing a. a.	Glutathione demand
Dysbiosis			
No Abnormality Found			
Oxidative Stress			
No Abnormality Found			
Essential Fatty Acids			
Docosahexaenoic	Low	Fish oil or extracts	Nervous system membranes
AA/EPA Ratio	High	Fish oil	Pro-inflammatory
Food Antibody Reactions (No. of foods)			
Mild (+1)	4	Use Elimination Diet	Intestinal hyperpermeability
Moderate (+2)	17	Use Elimination Diet	Intestinal hyperpermeability

Severe (+3)
Total Number >= +1

2
23

Use Elimination Diet
Glutamine

Intestinal hyperpermeability
Intestinal hyperpermeability

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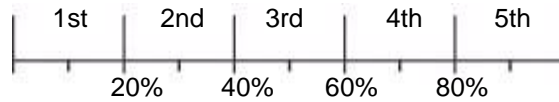
This report is not intended for the diagnosis of neonatal inborn errors of metabolism.

Designs for Health 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**

B-Vitamin Insufficiency

Results

Order	Metabolite	Value	Flag	Percentile	Reference Interval
1	Pyruvate	3.6		4.1	<= 7.1
2	a-Ketoglutarate	31.3	H	27.8	2.6 - 60.0
3	a-Ketoisovalerate	0.69	H	0.60	<= 0.94
4	a-Ketoisocaproate	0.50	H	0.39	<= 0.58
5	a-Keto-β-Methylvalerate	3.0	H	1.6	<= 2.7
6	Xanthurenate	0.26		0.70	<= 1.10
7	β-Hydroxyisovalerate	5.6		9.0	<= 15.3
8	Methylmalonate	1.6		2.3	<= 3.4
9	Formiminoglutamate	0.08		0.41	<= 0.75

Cellular Energy

10	Adipate	1.6		1.8	<= 4.5
11	Suberate	1.6		3.4	<= 5.8
12	Ethylmalonate	3.3		5.5	<= 8.5
13	Lactate	5.0		10.7	1.4 - 41.4
14	β-Hydroxybutyrate	20.4	H	2.8	<= 12.8
15	Succinate	5.3		12.3	1.1 - 34.0
16	Fumarate	0.43		0.71	<= 1.40
17	Malate	2.2		2.3	<= 4.3
18	Hydroxymethylglutarate	5.8		6.8	<= 9.7



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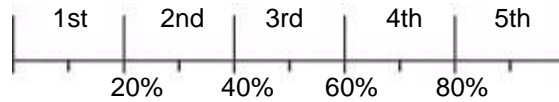
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**95%
Reference
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Neural Function

19	Vanilmandelate	1.6	L	1.9	4.8	1.5 - 6.1
20	Homovanillate	1.1	L	2.2	8.3	1.3 - 15.2
21	5-Hydroxyindoleacetate	2.8		1.3	5.2	0.9 - 13.0
22	Kynurenate	0.9			1.5	<= 2.5
23	Quinolinate	4.5			10.2	<= 16.5

Detoxification

24	Citrate	661			948	127 - 1,550
25	Cis-Aconitate	66			76	29 - 122
26	Isocitrate	71			92	36 - 130
27	2-Methylhippurate	< 0.1			0.23	<= 0.46
28	Orotate	0.8			1.0	<= 1.6
29	Glucarate	1.6			7.0	<= 11.9
30	a-Hydroxybutyrate	2.9	H		1.2	<= 2.2
31	Pyroglutamate	21			30	< 38
32	Sulfate	241		166	390	111 - 477



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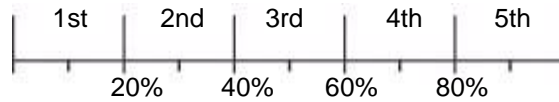
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Percentile Ranking by Quintile



**95%
Reference
Interval**

Compounds of Bacterial Origin

Compound ID	Compound Name	Value	Percentile Ranking	Reference Interval
33	Benzoate	< 1	~10th	<= 8.2
34	Phenylacetate	< 0.1	~10th	<= 0.33
35	Phenylpropionate	0.2	~25th	<= 9.7
36	p-Hydroxybenzoate	0.1	~10th	<= 2.4
37	p-Hydroxyphenylacetate	8	~55th	<= 30
38	Indican	42	~40th	<= 115
39	Tricarballoylate	1.1	~75th	<= 3.6
40	Dihydroxyphenylpropionate	0.12	~45th	<= 1.24

Creatinine =80 mg/dl



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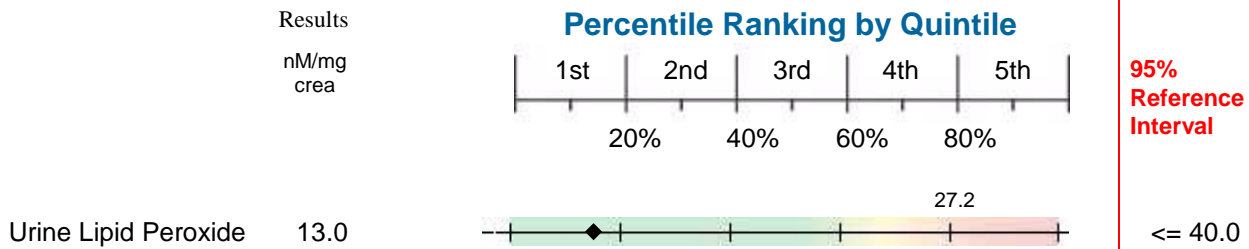
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Designs for Health Lipid Peroxides - Urine

Methodology: HPLC-TBARS

What are Lipid Peroxides?

In its efforts to produce the chemical energy to power your cells and fight infection, your body makes harmful chemicals called free radicals. Breakdown of your body's cell membranes by free radicals leads to the formation of lipid peroxides. Antioxidants protect you against this process, and the lipid peroxide test tells you if you have enough of these antioxidants in your system. High levels of lipid peroxides are associated with cancer, heart disease, stroke, and aging.



What does my lipid peroxide result mean?

If your lipid peroxides are 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.

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.



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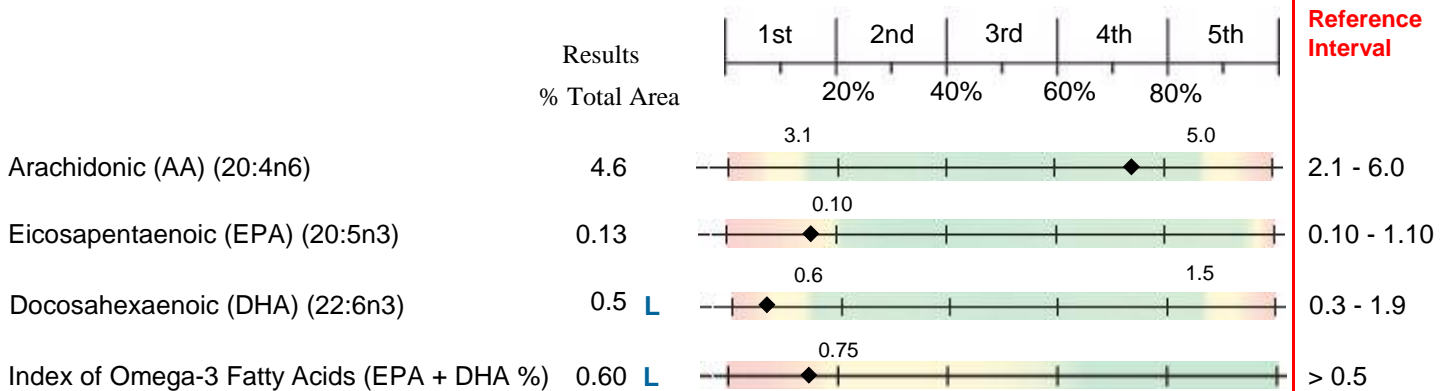
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Designs for Health Bloodspot™ Fatty Acid Profile

Methodology: Capillary Gas Chromatography/Mass Spectrometry

Percentile Ranking by Quintile



Relative Disease Risk	Index†
High	< 0.75
Intermediate	0.75 - 1.6
Low	> 1.6

† Harris WS, von Schacky C. The Omega - 3 Index: A new risk factor for sudden cardiac death? Prev Med 2004; 39:212-20.



Inflammatory Risk	AA/EPA Ratio‡
High	> 32
Moderate	16 - 32
Mild	5 - 16
Low	2.9 - 5
Omega - 3 Dominance	< 2.9

‡ The relative wellness states correspond to those published by Dr. Barry Sears* based on serum specimen data. The numerical values from blood spot specimens are somewhat shifted.

*Sears, Barry. The Omega Rx Zone. New York: Harper Collins Publishers Inc., 2002.

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Designs for Health Bloodspot™ IgG Food Antibodies Methodology: ELISA

Negative	Borderline 0/1	Foods to Avoid		
		Mild +1	Moderate +2	Severe +3

Almond
Aspergillus
Corn
Mustard Greens
Soybean
Strawberry
Tuna

Chicken
Pea, Green
Salmon
Walnut

Beef
Cantaloupe
Cashew
Crab
Garlic
Lobster
Oat
Orange
Peanut
Pinto Bean
Pork
Rice
Shrimp
Sunflower
Tomato
Turkey
Wheat

Egg, Whole
Milk

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, or +3), 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 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 are **in addition** to those supplements the patient was taking at the time the testing was initiated and 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.

Foundational Metabolic Support

Dosages

DFH Complete Multivitamin (with or without iron based on practitioner recommendation)	3 caps daily
PaleoGreens (or 6-9 servings of organic vegetables)	1 heaping tbsp daily
Paleomeal	2 scoops daily

Vitamin and Mineral Recommendations

B-Supreme	1/day
Magnesium Malate Chelate	2/day
Chromium Synergy	1/day

Amino Acid Recommendations

NAC	2 caps daily
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Fatty Acid Recommendations

Either (1) Omega Ultra Marine or (2) Omega Marine Liquid (avoid arachidonic acid rich foods)	If (1) then 2 soft gels twice daily or if (2) then 2 tsp twice daily
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Combination Product Recommendations

Lipoic Acid Supreme	1 cap/day
Q-Avail 30	1 cap /day
Both (1), GI Revive and (2), Betaine-HCl	Both (1), 1/2 tsp twice daily and (2), 1-2 with ea. meal
AdrenoTone Plus (consider stress-reduction techniques and eliminate caffeine)	2 caps twice daily



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- 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.