

Ordering Physician:

Wellness Rx, Inc.
Jay Nielsen MD
27121 Oakmede Dr.
Perrysburg, OH 43551

Accession Number: **A1106170354**
Reference Number:
Patient: Jason Richardson
Age: 43 Sex: Male
Date of Birth: 11/23/1967
Date Collected: 6/14/11
Date Received: 6/17/11
Report Date: 6/24/11
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Reprinted:
Comment: **FAX Results**

091 Organix™ Comprehensive Profile

Methodology: LC/Tandem Mass Spectroscopy, Colorimetric

Summary of abnormal results:

	<u>Findings</u>	<u>Intervention Options</u>	<u>Common Metabolic Association</u>
<u>Fatty Acid Metabolism</u>			
No Abnormality Found			
<u>Carbohydrate Metabolism</u>			
No Abnormality Found			
<u>Energy Production Markers</u>			
No Abnormality Found			
<u>B-Complex Vitamin Markers</u>			
No Abnormality Found			
<u>Methylation Cofactor Markers</u>			
No Abnormality Found			
<u>Neurotransmitter Metabolism Markers</u>			
No Abnormality Found			
<u>Oxidative Damage and Antioxidant Markers</u>			
No Abnormality Found			
<u>Detoxification Indicators</u>			
2-Methylhippurate	High	Glycine	Xylene exposure
<u>Bacterial - General</u>			
No Abnormality Found			
<u>L. acidophilus / general bacteria</u>			
No Abnormality Found			
<u>Clostridial Species</u>			
3,4-Dihydroxyphenylpropion	Very High	Probiotics (S. Boulardii)	Intestinal bacterial overgrowth, Clostridial species
<u>Yeast/Fungal</u>			
No Abnormality Found			

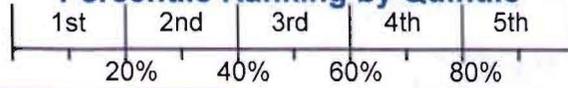
A1106170354
Jason Richardson

0091 Organix™ Comprehensive Profile

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

Percentile Ranking by Quintile



**95%
Reference
Interval**

Ranges are for ages 13 and over

NUTRIENT MARKERS

**Fatty Acid Metabolism
(Carnitine & B2)**

Results
 ug/mg creatinine

Item	Result	Percentile	Reference Interval
1 Adipate	0.7	~10%	<= 8.3
2 Suberate	1.4	~75%	<= 3.2
3 Ethylmalonate	2.3	~55%	<= 6.3

**Carbohydrate Metabolism
(B1, B3, Cr, Lipoic Acid, CoQ10)**

Item	Result	Percentile	Reference Interval
4 Pyruvate	<DL*	~90%	<= 6.4
5 L-Lactate	8	~50%	3 - 46
6 β-Hydroxybutyrate	<DL*	~90%	<= 9.9

**Energy Production (Citric Acid Cycle)
(B comp., CoQ10, Amino acids, Mg)**

Item	Result	Percentile	Reference Interval
7 Citrate	379	~50%	56 - 987
8 Cis-Aconitate	27	~15%	18 - 78
9 Isocitrate	65	~45%	39 - 143
10 α-Ketoglutarate	<DL*	~90%	<= 35.0
11 Succinate	5.6	~65%	<= 20.9
12 Fumarate	<DL*	~90%	<= 1.35
13 Malate	0.2	~15%	<= 3.1
14 Hydroxymethylglutarate	2.3	~45%	<= 5.1

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95% Reference Interval

B-Complex Vitamin Markers
 (B1, B2, B3, B5, B6, Biotin)

Results
 ug/mg creatinine

Item	Result	Percentile	95% Reference Interval
15 a-Ketoisovalerate	<DL*	0.25	<= 0.49
16 a-Ketoisocaproate	0.07	0.34	<= 0.52
17 a-Keto-β-Methylvalerate	<DL*	0.38	<= 1.10
18 Xanthurenate	0.31	0.47	<= 0.74
19 β-Hydroxyisovalerate	3.2	7.6	<= 11.5

Methylation Cofactor Markers
 (B12, Folate)

20 Methylmalonate	1.5	1.7	<= 2.3
21 Formiminoglutamate	1.0	1.2	<= 2.2

CELL REGULATION MARKERS

Neurotransmitter Metabolism Markers
 (Tyrosine, Tryptophan, B6, antioxidants)

22 Vanilmandelate	2.5	1.8 - 3.9	1.3 - 4.9
23 Homovanillate	5.2	2.1 - 6.3	1.6 - 10.9
24 5-Hydroxyindoleacetate	3.2	2.1 - 5.6	1.6 - 9.8
25 Kynurenate	1.2	1.9	<= 2.7
26 Quinolinate	1.3	4.0	<= 5.8
27 Picolinate	3.3	8.0	2.8 - 13.5

Oxidative Damage and Antioxidant Markers
 (Vitamin C and other antioxidants)

28 p-Hydroxyphenyllactate	0.20	0.79	<= 1.45
29 8-Hydroxy-2-deoxyguanosine **	2.9	5.3	<= 7.6

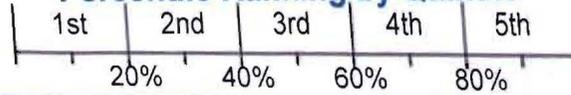
** Units for 8-Hydroxy-2-deoxyguanosine are ng/mg creatinine

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TOXICANTS AND DETOXIFICATION

Detoxification Indicators

(Arg, NAC, Met, Mg, antioxidants)

Results
 ug/mg creatinine

Item	Result	Percentile	Reference Interval
30 2-Methylhippurate	0.091 H	0.084	<= 0.192
31 Orotate	0.31	0.69	<= 1.01
32 Glucarate	3.9	6.3	<= 10.7
33 a-Hydroxybutyrate	<DL*	0.3	<= 0.9
34 Pyroglutamate	39	59	28 - 88
35 Sulfate	1,944	958 - 2,347	690 - 2,988

Repeated and Verified

COMPOUNDS OF BACTERIAL OR YEAST/FUNGAL ORIGIN

Bacterial - general

Item	Result	Percentile	Reference Interval
36 Benzoate	<DL*	0.6	<= 9.3
37 Hippurate	288	594	<= 1,150
38 Phenylacetate	<DL*	0.04	<= 0.15
39 Phenylpropionate	<DL*	0.4	<= 0.4
40 p-Hydroxybenzoate	0.45	0.99	<= 2.08
41 p-Hydroxyphenylacetate	12	19	<= 34
42 Indican	<DL*	40	<= 74
43 Tricarballic acid	0.21	0.73	<= 1.41

L. acidophilus / general bacterial

44 D-Lactate	<DL*	2.3	<= 7.0
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Clostridial species

45 3,4-Dihydroxyphenylpropionate	0.40 H	0.12	<= 0.12
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Yeast / Fungal

46 D-Arabinitol	3	36	<= 73
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Creatinine = 236 mg/dL

* <DL = less than detection limit

Supplement Recommendation Summary

With knowledge of a patient's full medical history and concerns, the Organix Comprehensive Profile laboratory results may be used to help healthcare professionals create an individually optimized nutritional support program. Based strictly on the results from this test, the summary table below 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.

Customized Vitamin and Mineral Formulation

Nutrients listed in this section are normally contained in a multi-vitamin preparation. "Base" amounts may be used for insurance of health even when no abnormalities are found.

Customized preparations of the multi-vitamin/mineral formula shown below may be produced by compounding pharmacies.

Nutrient	Daily Amounts	
	Base	Units Added
Vitamin A*	2500 IU	
B-Carotene*	5500 IU	
Vitamin C	250 mg	
Vitamin D*	400 IU	
Vitamin E	100 IU	
Vitamin K*	100 mcg	
Thiamin (B1)	5 mg	
Riboflavin (B2)	5 mg	
Niacin (B3)	25 mg	
Pyridoxine (B6)	15 mg	
Folic Acid (or 5-Methyl-THF)	400 mcg	
Vitamin B12	50 mcg	
Biotin	100 mcg	
Pantothenic Acid (B5)	25 mg	
Calcium citrate	500 mg	
Iodine*	75 mcg	
Magnesium	250 mg	
Zinc*	15 mg	
Selenium	100 mcg	
Copper	1 mg	
Manganese*	5 mg	
Chromium	200 mcg	
Molybdenum*	25 mcg	
Boron*	1 mg	

* Nutrients with an asterisk are not modified based on the Organix test results.

Other Items Indicated for individual supplementation

Various conditionally essential nutrients and other potentially beneficial interventions appear in this section only if relevant abnormalities are present. These ingredients are not included in the customized vitamin formula on the previous page.

Glycine	1000 mg
S. Boulardii	As needed

· 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 of specific disorders.

Comments on Jason's OA (organic acids) test:
from Metametrix lab, June 2011

Fatty acids section:
OK

Carbohydrate markers section:
OK

Comment:
Decreased likelihood of mitochondrial dysfunction.

Energy production / citric acid cycle (CAC) section:

Citrate 3Q (quintile), 40%ile. OK

cis-aconitate 1Q, 15%ile. LOW

Comment:

Insufficient flow of carbon skeletons from aminos (eat more protein or better digest the protein you eat if already adequate). Fatigue from suppressed CAC. Increased risk of kidney stones. Tx: more protein in the diet, amino acid supplement mixtures, and or digestive enzymes with high protein meals.

Isocitrate 2Q, 33%ile. LOW

Comment: similar to cis-aconitate.

alpha-ketoglutarate DL (detection limit - below detection limit?)

Comment: a-ketoglutaric acid supp 500 mg 2x/day - 30 mins before and after exercise. (I have no experience with this.)

Succinate: 3Q, 55%ile. OK

Fumarate: DL.

Comment:

Need more protein or aminos mix, and/or digestive enzymes with high protein meals. Also, attend to gut lining integrity in regard to these protein-type comments, as poor gut lining integrity can lead to poor absorption.

Malate: 1Q, 12%ile. LOW

Comment:

Need more protein, etc as above.

Hydroxymethylglutarate: 2Q, 18%ile. LOW

Comment:

Need more prtein, etc as above.

Add COQ10 supp 60-300 mg. (try 100 mg)

B-vitamins section:

These are only a problem if high, and yours are FINE.

Methyl co-factors:

MMA (relates to vit B12). 75%ile.

Comment:

If MMA is high, then more B12 is needed.
This is higher than the year before. It's just a small amount high now, but you would need more B12 than in a B50 complex, maybe an extra 250 mcg B12.

FIGLU (relates to folate) 75%ile.

Comment:

If FIGLU is high, then more folates needed.
Genetics for you suggest need for somewhat higher folates 800-1000 mcg 5-methyl-folate, and leafy green vegetables ad lib as source of high folate in food.

Neurotransmitters (NTs) section:

NE (norpinephrine) metabolite: 3Q, 45%ile. NORMAL

DA (dopamine) metabolite: 5Q, 83%ile. HIGH END.

Comment:

May contribute to anxiety.
Check the COMT gene when you get your genetics.

5HT (serotonin) metabolite: 3Q, 55%ile. NORMAL.

Comment:

could be a tad higher,
try 25 mg 5HTP supp used like targeted amino.
Would help balance the DA better.

others items/results in this section not significant

Oxidative damage and antioxidant markers:

a problem only if they were high, but yours are FINE.

Toxics section:

2-methyl-hippurate: 5Q (quintile), 85%ile. HIGH.

From xylene exposure.

Comment:

We talked about new house, remodeling chemicals, your plan for this, and that you used glycine amino.
btw glycine amino is an aluminum chelator, and can move aluminum around. Would like to see UAA test to look at cysteine and probable glutathione status, as glutathione is the body's way to naturally work off excess metals if not totally overwhelmed by amount.

Sulfate: 4Q, 75%ile. HIGH.

Comment:

Formed from cysteine.
If high, increased flow of sulphur compounds into liver glutathione synthesis. Increased sulfate production for specific detox neededing sulfation.
High intake of dietary sulphate (e.g. brassicas).
Exposure to sulphate salts (e.g. epsom salts).

Toxin stimulated upregulation of detox (body trying to keep up with high toxin load).

Test glutathione, related cysteine, also phase I and II liver detox speeds.

(Ref: my AF Files > member tests folder for more on functional testing of phase I and II liver detox speeds, glutathione, and UAA. Genetics will also show more info on detox. The functional and genetics testing are very complementary on this. Many people are concerned their liver detox may be too slow, but can find out they have a much faster detox than they thought, which in turn can have its own set of related issues).

Other results in this section not significant.

Bacterial section:

Clostridia bacteria species HIGH.

S. Boulardii probiotic was used as an approach.

Comment:

I say the strain of clostridia needs to be identified and more targeted antibiotic + probiotics used.