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(775) 851-3337
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www.carbonbased.com

Anna

Test date: 12/6/2004
(accession: A0412090069)

Next Test Due: 6/19/2005

CellMate™ Foundational Wellness Profile Report

Practitioner

Printed on Wednesday, January 5, 2005 for:

Anna

If there is a problem with this report, please contact us as soon as possible at: (775) 851-3337 or Fax (775) 851-3363

Basic Status High/Low - Plasma Amino Acid on 12/6/2004

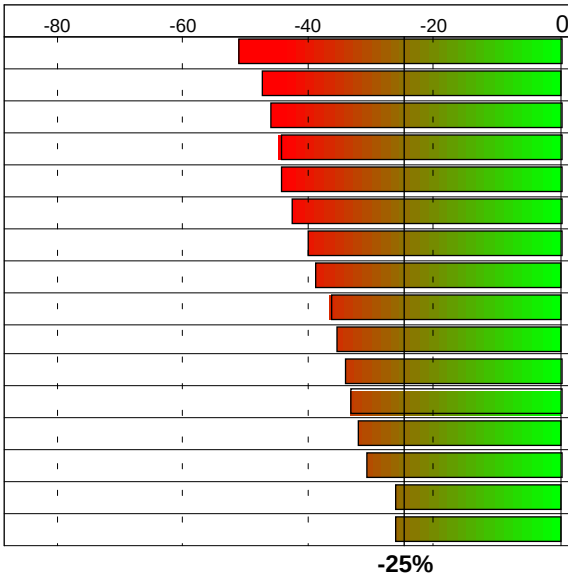
Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

Client ID:555986644 (8322) 503-977-2660

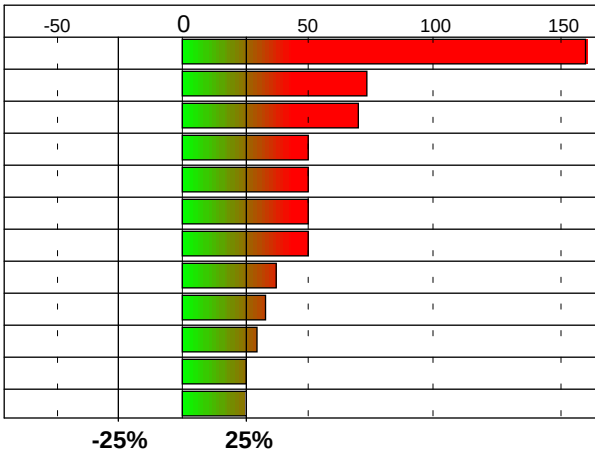
The % Status is the weighted deviation of the laboratory result.

Low Results



	% Status		Result	Low	High
Valine - P	-51.20	L	**167.00**	170.00	420.00
Isoleucine - P	-47.27	L	**53.00**	50.00	160.00
Serine - P	-45.83	L	**95.00**	90.00	210.00
Taurine - P	-44.50	L	**61.00**	50.00	250.00
Asparagine - P	-44.12	L	**50.00**	45.00	130.00
Leucine - P	-42.73	L	**98.00**	90.00	200.00
Cystine - P	-40.00	L	**18.00**	10.00	90.00
Glycine - P	-38.89	L	**250.00**	225.00	450.00
Glutamine - P	-36.44	L	**661.00**	600.00	1050.00
Citrulline - P	-35.45	L	**23.00**	15.00	70.00
Phenylalanine - P	-34.21	L	**60.00**	45.00	140.00
Aspartic Acid - P	-33.33	L	**10.00**	6.00	30.00
Phenylalanine/Tyrosine	-32.14	L	**0.71**	0.50	1.70
Ornithine - P	-30.67	L	**79.00**	50.00	200.00
Glutamic Acid - P	-26.19	L	**70.00**	45.00	150.00
Proline - P	-25.93	L	**195.00**	130.00	400.00

High Results



	% Status		Result	Low	High
Tryptophan - P	256.67	H	**127.00**	35.00	65.00
Collagen Related AA	73.33	H	**195.00**	10.00	160.00
Sarcosine - P	70.00	H	**6.00**	0.00	5.00
Anserine - P	50.00	H	**1.00**	0.00	1.00
Carnosine - P	50.00	H	**1.00**	0.00	1.00
Homocystine - P	50.00	H	**1.00**	0.00	1.00
Hydroxylysine - P	50.00	H	**1.00**	0.00	1.00
Ethanolamine - P	37.50	H	**7.00**	0.00	8.00
Alanine - P	32.57	H	**539.00**	250.00	600.00
3-Methylhistidine - P	30.00	H	**4.00**	0.00	5.00
Glycine/Serine Ratio	25.44	H	**2.63**	1.50	3.00
a-Aminoadipic Acid - P	25.00	H	**3.00**	0.00	4.00

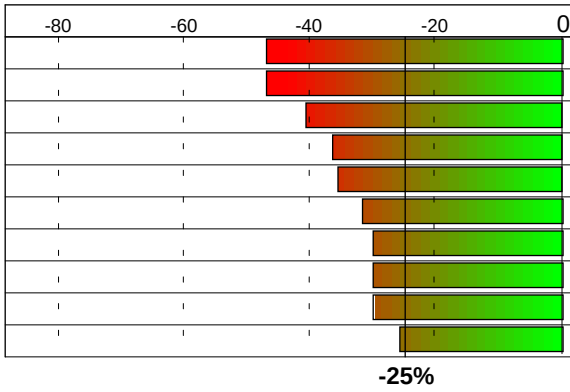
Basic Status High/Low - Blood Test on 12/19/2004

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

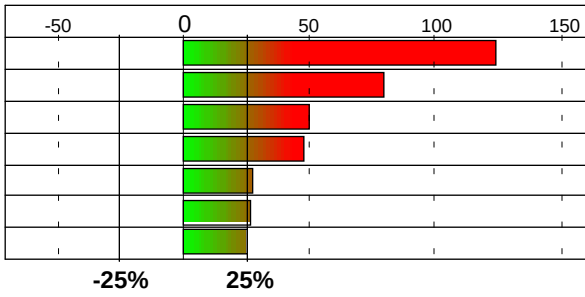
The % Status is the weighted deviation of the laboratory result.

Low Results



	% Status		Result	*Low*	*High*
Lymphocyte Count	-46.72	**L**	**931.00**	800.00	4800.00
Lymphocytes	-46.67	**L**	**19.00**	18.00	48.00
Calcium/Phosphorus Ratio	-40.53	**L**	**2.39**	2.30	3.30
W.B.C.	-36.15	**L**	**4.90**	4.00	10.50
A/G Ratio	-35.50	**L**	**1.30**	1.10	2.50
Anion Gap	-31.67	**L**	**10.20**	8.00	20.00
Neutrophil Count	-30.03	**L**	**3038.00**	1800.00	8000.00
Creatinine	-30.00	**L**	**0.70**	0.50	1.50
Protein/Globulin Ratio	-29.70	**L**	**2.30**	2.10	3.10
Basophil Count	-25.50	**L**	**49.00**	0.00	200.00

High Results



	% Status		Result	*Low*	*High*
LDL	123.53	**H**	**180.00**	62.00	130.00
Cholesterol	79.00	**H**	**269.00**	140.00	240.00
Eosinophils	50.00	**H**	**7.00**	0.00	7.00
Triglycerides	47.99	**H**	**146.00**	0.00	149.00
Monocytes	27.78	**H**	**11.00**	4.00	13.00
MCH	26.77	**H**	**32.37**	27.00	34.00
CO2	25.00	**H**	**29.00**	20.00	32.00

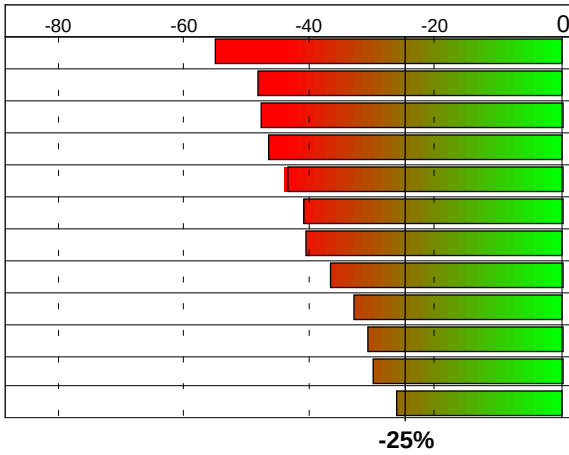
Basic Status High/Low - Urine Organic Acid on 12/9/2004

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

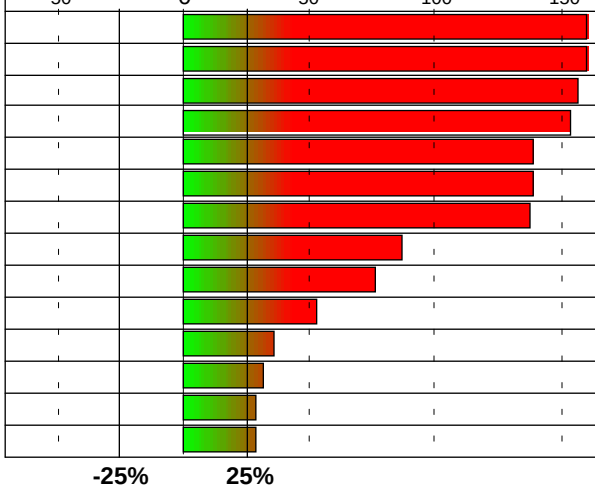
The % Status is the weighted deviation of the laboratory result.

Low Results



	% Status		Result	*Low*	*High*
Sulfate	-55.00	**L**	**171.00**	180.00	360.00
D-Arabinitol	-47.95	**L**	**1.50**	0.00	73.00
Glucarate	-47.72	**L**	**3.40**	0.00	149.00
8-Hydroxy-2-deoxyguan	-46.36	**L**	**0.00**	0.00	0.11
a-Hydroxybutyrate	-43.64	**L**	**0.70**	0.00	11.00
p-Hydroxybenzoate	-40.91	**L**	**0.10**	0.00	1.10
Adipate	-40.48	**L**	**0.80**	0.00	8.40
b-Hydroxybutyrate	-36.67	**L**	**0.60**	0.00	4.50
Fumarate	-33.00	**L**	**0.17**	0.00	1.00
cis-Aconitate	-30.88	**L**	**63.00**	50.00	118.00
P-Hydroxyphenylacetate	-30.00	**L**	**9.00**	0.00	45.00
Vanilylmandelate	-26.00	**L**	**2.00**	0.80	5.80

High Results



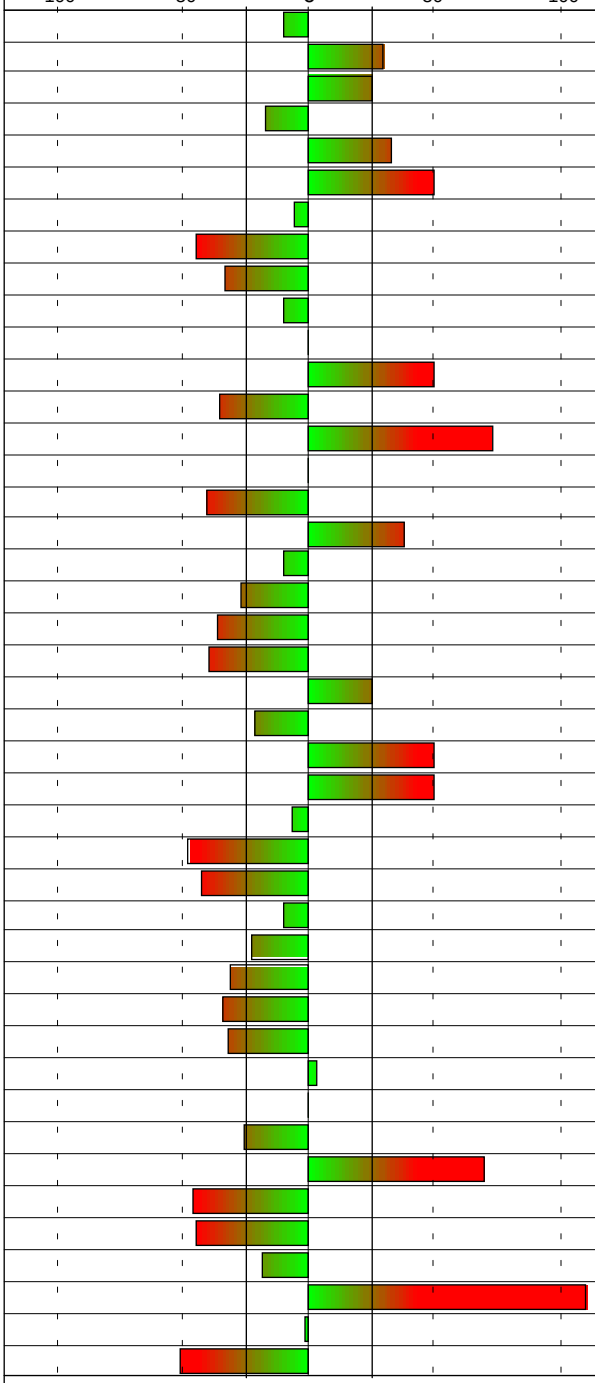
	% Status		Result	*Low*	*High*
Phenylpropionate	950.00	**H**	**0.70**	0.00	0.07
5-Hydroxyindoleacetate	720.49	**H**	**48.50**	1.50	7.60
Pyroglutamate	156.25	**H**	**33.00**	0.00	16.00
CA Cycle Entry	153.47	**H**	**244.17**	0.00	120.00
2-Methylhippurate	139.19	**H**	**0.14**	0.00	0.07
Quinolinate	138.57	**H**	**6.60**	0.00	3.50
Formiminoglutamic Acid	137.50	**H**	**0.30**	0.00	0.16
p-Hydroxyphenyllactate	86.99	**H**	**1.00**	0.00	0.73
Hippurate	76.43	**H**	**354.00**	0.00	280.00
Lactate	53.33	**H**	**11.30**	2.00	11.00
Pyruvate	35.71	**H**	**2.40**	0.00	2.80
Orotate	31.82	**H**	**0.90**	0.00	1.10
Malate	28.57	**H**	**1.10**	0.00	1.40
Succinate	28.42	**H**	**16.90**	2.00	21.00

Basic Status Alphabetic - Plasma Amino Acid on 12/6/2004

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

The % Status is the weighted deviation of the laboratory result relative to the range.



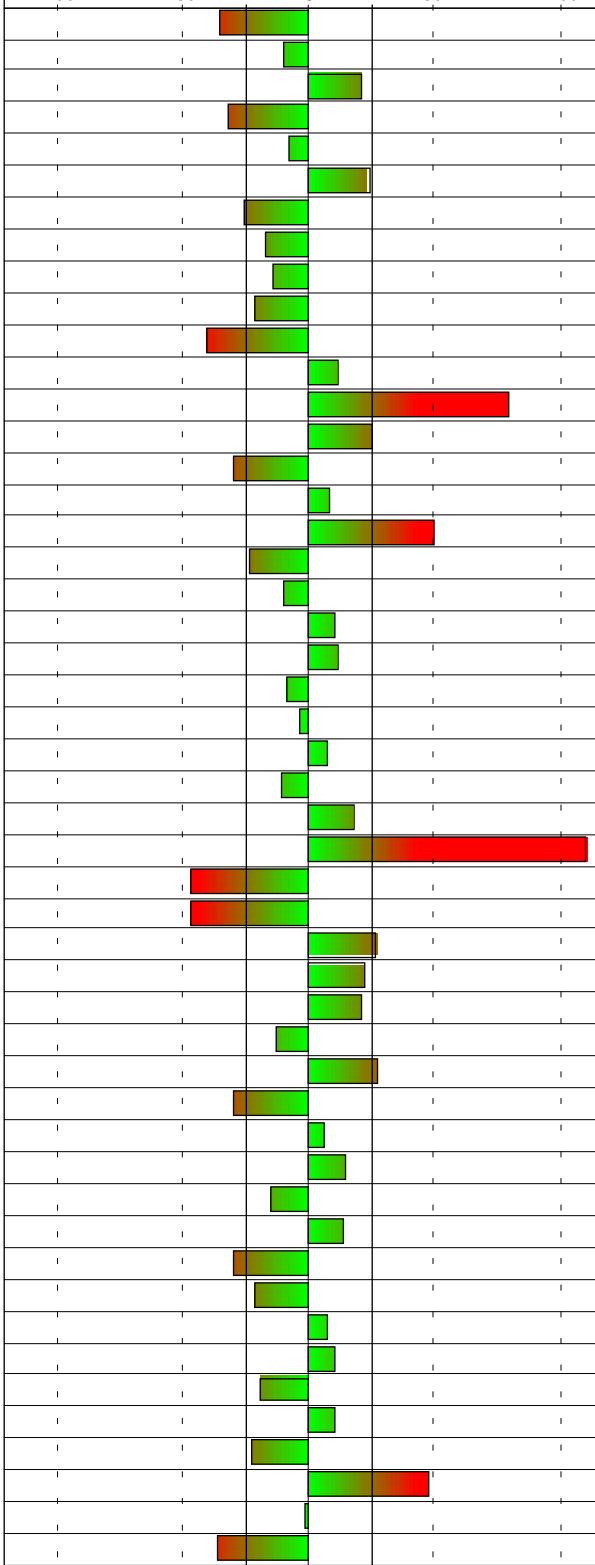
	% Status		Result	Low	High
1-Methylhistidine - P	-10.00		8.00	0.00	20.00
3-Methylhistidine - P	**30.00**	**H**	**4.00**	0.00	5.00
a-Aminoadipic Acid - P	**25.00**	**H**	**3.00**	0.00	4.00
a-Amino-N-Butyric Acid - P	-16.67		20.00	10.00	40.00
Alanine - P	**32.57**	**H**	**539.00**	250.00	600.00
Anserine - P	**50.00**	**H**	**1.00**	0.00	1.00
Arginine - P	-5.45		99.00	50.00	160.00
Asparagine - P	**-44.12**	**L**	**50.00**	45.00	130.00
Aspartic Acid - P	**-33.33**	**L**	**10.00**	6.00	30.00
b-Alanine - P	-10.00		2.00	0.00	5.00
b-Aminoisobutyric Acid - P	0.00		1.00	0.00	2.00
Carnosine - P	**50.00**	**H**	**1.00**	0.00	1.00
Citrulline - P	**-35.45**	**L**	**23.00**	15.00	70.00
Collagen Related AA	**73.33**	**H**	**195.00**	10.00	160.00
Cystathionine - P	0.00		2.00	0.00	4.00
Cystine - P	**-40.00**	**L**	**18.00**	10.00	90.00
Ethanolamine - P	**37.50**	**H**	**7.00**	0.00	8.00
GABA - P	-10.00		2.00	0.00	5.00
Glutamic Acid - P	**-26.19**	**L**	**70.00**	45.00	150.00
Glutamine - P	**-36.44**	**L**	**661.00**	600.00	1050.00
Glycine - P	**-38.89**	**L**	**250.00**	225.00	450.00
Glycine/Serine Ratio	**25.44**	**H**	**2.63**	1.50	3.00
Histidine - P	-21.43		90.00	70.00	140.00
Homocystine - P	**50.00**	**H**	**1.00**	0.00	1.00
Hydroxylysine - P	**50.00**	**H**	**1.00**	0.00	1.00
Hydroxyproline - P	-6.67		13.00	0.00	30.00
Isoleucine - P	**-47.27**	**L**	**53.00**	50.00	160.00
Leucine - P	**-42.73**	**L**	**98.00**	90.00	200.00
Lysine - P	-10.00		210.00	150.00	300.00
Methionine - P	-22.00		32.00	25.00	50.00
Ornithine - P	**-30.67**	**L**	**79.00**	50.00	200.00
Phenylalanine - P	**-34.21**	**L**	**60.00**	45.00	140.00
Phenylalanine/Tyrosine	**-32.14**	**L**	**0.71**	0.50	1.70
Phosphoethanolamine - P	3.33		16.00	0.00	30.00
Phosphoserine - P	0.00		6.00	0.00	12.00
Proline - P	**-25.93**	**L**	**195.00**	130.00	400.00
Sarcosine - P	**70.00**	**H**	**6.00**	0.00	5.00
Serine - P	**-45.83**	**L**	**95.00**	90.00	210.00
Taurine - P	**-44.50**	**L**	**61.00**	50.00	250.00
Threonine - P	-18.00		148.00	100.00	250.00
Tryptophan - P	**256.67**	**H**	**127.00**	35.00	65.00
Tyrosine - P	-1.43		84.00	50.00	120.00
Valine - P	**-51.20**	**L**	**167.00**	170.00	420.00
Total Status Deviation	**34.45**				
Total Status Skew	**-1.68**				

Basic Status Alphabetic - Blood Test on 12/19/2004

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

The % Status is the weighted deviation of the laboratory result relative to the range.



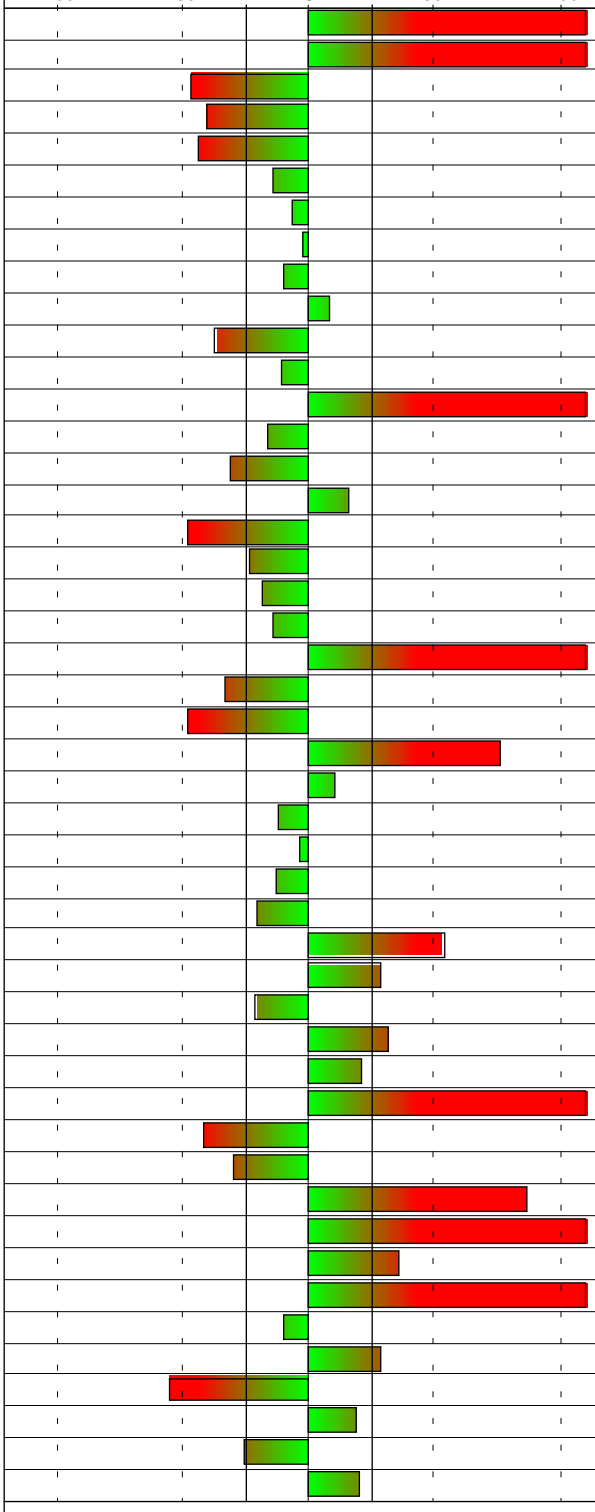
	% Status		Result	Low	High
A/G Ratio	**-35.50**	**L**	**1.30**	1.10	2.50
Albumin	-10.00		4.30	3.50	5.50
Alkaline Phosphatase	21.20		114.00	25.00	150.00
Anion Gap	**-31.67**	**L**	**10.20**	8.00	20.00
B.U.N.	-7.14		14.00	5.00	26.00
B.U.N./Creatinine Ratio	23.68		20.00	6.00	25.00
Basophil Count	**-25.50**	**L**	**49.00**	0.00	200.00
Basophils	-16.67		1.00	0.00	3.00
Bilirubin, Total	-13.64		0.50	0.10	1.20
Calcium	-21.43		9.10	8.50	10.60
Calcium/Phosphorus Ratio	**-40.53**	**L**	**2.39**	2.30	3.30
Chloride	11.54		104.00	96.00	109.00
Cholesterol	**79.00**	**H**	**269.00**	140.00	240.00
CO2	**25.00**	**H**	**29.00**	20.00	32.00
Creatinine	**-30.00**	**L**	**0.70**	0.50	1.50
Eosinophil Count	8.60		343.00	50.00	550.00
Eosinophils	**50.00**	**H**	**7.00**	0.00	7.00
Free T4 Index (T7)	-22.97		2.20	1.20	4.90
GGT	-10.00		24.00	0.00	60.00
Globulin	10.00		3.30	1.50	4.50
Glucose	11.76		86.00	65.00	99.00
HDL-Cholesterol	-8.18		60.00	37.00	92.00
Hematocrit	-3.00		38.70	34.00	44.00
Hemoglobin	7.14		13.50	11.50	15.00
Iron, Total	-10.83		82.00	35.00	155.00
LDH	17.33		201.00	100.00	250.00
LDL	**123.53**	**H**	**180.00**	62.00	130.00
Lymphocyte Count	**-46.72**	**L**	**931.00**	800.00	4800.00
Lymphocytes	**-46.67**	**L**	**19.00**	18.00	48.00
MCH	**26.77**	**H**	**32.37**	27.00	34.00
MCHC	22.09		34.88	32.00	36.00
MCV	21.14		92.81	80.00	98.00
Monocyte Count	-12.33		539.00	200.00	1100.00
Monocytes	**27.78**	**H**	**11.00**	4.00	13.00
Neutrophil Count	**-30.03**	**L**	**3038.00**	1800.00	8000.00
Neutrophils	6.00		62.00	48.00	73.00
Phosphorus	15.00		3.80	2.50	4.50
Potassium	-15.00		4.20	3.50	5.50
Protein, Total	14.00		7.60	6.00	8.50
Protein/Globulin Ratio	**-29.70**	**L**	**2.30**	2.10	3.10
R.B.C.	-21.54		4.17	3.80	5.10
sGOT	7.50		23.00	0.00	40.00
sGPT	10.00		24.00	0.00	40.00
Sodium	-19.23		139.00	135.00	148.00
T-3 Uptake	10.00		33.00	24.00	39.00
Thyroxine (T4)	-22.00		6.60	4.50	12.00
Triglycerides	**47.99**	**H**	**146.00**	0.00	149.00
Uric Acid	-1.72		5.20	2.40	8.20
W.B.C.	**-36.15**	**L**	**4.90**	4.00	10.50
Total Status Deviation	**23.49**				
Total Status Skew	**0.76**				

Basic Status Alphabetic - Urine Organic Acid on 12/9/2004

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

The % Status is the weighted deviation of the laboratory result relative to the range.



	% Status		Result	Low	High
2-Methylhippurate	**139.19**	**H**	**0.14**	0.00	0.07
5-Hydroxyindoleacetate	**720.49**	**H**	**48.50**	1.50	7.60
8-Hydroxy-2-deoxyguan	**-46.36**	**L**	**0.00**	0.00	0.11
Adipate	**-40.48**	**L**	**0.80**	0.00	8.40
a-Hydroxybutyrate	**-43.64**	**L**	**0.70**	0.00	11.00
a-Keto-b-methylvalerate	-14.29		0.50	0.00	1.40
a-Ketoglutarate	-6.43		14.20	2.00	30.00
a-Ketoisocaproate	-2.00		0.24	0.00	0.50
a-Ketoisovalerate	-10.00		0.32	0.00	0.80
Benzoate	8.82		3.00	0.00	5.10
b-Hydroxybutyrate	**-36.67**	**L**	**0.60**	0.00	4.50
b-Hydroxyisovalerate	-10.91		4.30	0.00	11.00
CA Cycle Entry	**153.47**	**H**	**244.17**	0.00	120.00
CA Cycle Return	-16.44		532.73	125.00	1340.00
cis-Aconitate	**-30.88**	**L**	**63.00**	50.00	118.00
Citrate	15.76		586.00	175.00	800.00
D-Arabinitol	**-47.95**	**L**	**1.50**	0.00	73.00
DHPP	-23.75		0.21	0.00	0.80
D-Lactate	-18.42		0.60	0.00	1.90
Ethylmalonate	-14.17		4.30	0.00	12.00
Formiminoglutamic Acid	**137.50**	**H**	**0.30**	0.00	0.16
Fumarate	**-33.00**	**L**	**0.17**	0.00	1.00
Glucarate	**-47.72**	**L**	**3.40**	0.00	149.00
Hippurate	**76.43**	**H**	**354.00**	0.00	280.00
Homovanillate	10.00		4.30	1.00	6.50
Hydroxymethylglutarate	-11.29		4.40	2.00	8.20
Indican	-3.49		40.00	0.00	86.00
Isocitrate	-13.33		62.00	40.00	100.00
Kynurenate	-20.00		1.20	0.00	4.00
Lactate	**53.33**	**H**	**11.30**	2.00	11.00
Malate	**28.57**	**H**	**1.10**	0.00	1.40
Methylmalonate	-20.83		1.40	0.00	4.80
Orotate	**31.82**	**H**	**0.90**	0.00	1.10
Phenylacetate	21.43		0.10	0.00	0.14
Phenylpropionate	**950.00**	**H**	**0.70**	0.00	0.07
p-Hydroxybenzoate	**-40.91**	**L**	**0.10**	0.00	1.10
P-Hydroxyphenylacetate	**-30.00**	**L**	**9.00**	0.00	45.00
p-Hydroxyphenyllactate	**86.99**	**H**	**1.00**	0.00	0.73
Pyroglutamate	**156.25**	**H**	**33.00**	0.00	16.00
Pyruvate	**35.71**	**H**	**2.40**	0.00	2.80
Quinolinate	**138.57**	**H**	**6.60**	0.00	3.50
Suberate	-9.26		1.10	0.00	2.70
Succinate	**28.42**	**H**	**16.90**	2.00	21.00
Sulfate	**-55.00**	**L**	**171.00**	180.00	360.00
Tricarballylate	19.23		0.90	0.00	1.30
Vanilylmandelate	**-26.00**	**L**	**2.00**	0.80	5.80
Xanthurenate	20.00		0.70	0.00	1.00
Total Status Deviation	**76.15**				
Total Status Skew	**43.93**				

Nutritional Support

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

- ☐ **1-CAC Entry Protocol**
  See Nutrition Detail
- ☐ **1-Carbohydrate Metabolism Profile**
  See Nutrition Detail
- ☐ **1-Detoxification Protocol**
  See Nutrition Detail
- ☐ **1-Folic Acid**
  2x daily 800 mcg
- ☐ **1-L-Carnitine**
  2x daily 500 mg
- ☐ **1-Oral Electrolyte - Standard Formula**
  2x daily
- ☐ **1-Riboflavin (B2), B12, Folate**
  See nutrition detail
- ☐ **1-Taurine**
  2x daily 500 mg
- ☐ **1-Yeast Reduction Protocol2**
  See Nutrition Detail
- ☐ **2-Betaine HCL**
  2 tablets at mealtime
- ☐ **2-Glutathione (reduced)**
  2x daily 250 mg
- ☐ **2-Glycine**
  2x daily 500 mg
- ☐ **2-Magnesium Citrate or Glycinate**
  2x daily 150 mg
- ☐ **2-Magnesium, B6 & Manganese**
  2x daily see details
- ☐ **2-Probiotics**
  1x daily 3 caps
- ☐ **2-Vitamin C**
  1x daily 1000 mg
- ☐ **2-Zinc Citrate**
  2x daily 50 mg
- ☐ **H - Black Cohosh**
  1 - 3 times daily (Females only)
- ☐ **H - Garlic**
  1 - 3 times daily

Nutritional Supplements to AVOID

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

MCT Oil

Food Recommendations

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

Apricots, Dried	Artichoke	Banana	Beef
Black Pepper	Blueberries	Bok Choy Cabbage	Boysenberries
Brown Rice	Buckwheat	Butter Beans	Cantaloupe
Cheddar Cheese	Clams	Cucumber	Currant, Black
Eggplant	Elderberries	Fava Beans	Feta Cheese
Flounder	Goose	Grapefruit	Green Beans
Gruyere Cheese	Guava	Haddock	Halibut
Honeydew Melon	Kale	Kidney Beans	Lamb
Lentils	Macadamia Nuts	Mackerel	Mozarella Cheese
Mushrooms	Mussels	Navy Beans	Onions
Oysters	Papaya	Peanuts	Pecans
Plaintains	Potatoes	Prawns	Pumpkin
Rabbit	Red Peppers	Rye Flour, Dark	Salmon
Shad	Snapper	Sole	Strawberries
Sturgeon	Trout	Tuna	Veal
Venison	Walnuts	Watermelon	Wild Rice
Yams			

Foods to AVOID

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

Bacon	Carbonated Beverages	Cholesterol Rich Foods	Chuck Roast
Coconut Cream	Coconut Milk	Coffee	Dairy Cream
Egg Yolk	Hydrogenated Fats	Liver Pate	Margarine

Sweetbreads	Turkey

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
Neurotransmitters	183.01%	164.61%
CAC Cycle Ratios	99.17%	83.65%
Intestinal Dysbiosis	94.70%	84.21%
Gluconeogen	78.39%	37.30%
Liver Detox Indicators	76.66%	32.42%
Essential Amino Acid	50.90%	0.44%
CNS Metabolism	46.54%	7.55%
Lipid	43.12%	40.39%
Fat Metabolism	42.51%	-22.51%
Carbohydrate Metabolism	42.34%	2.19%
Gastrointest. Function	42.30%	27.66%
Muscle Metabolites	35.00%	30.00%
Adrenal Function	34.37%	20.67%
Allergy	34.12%	0.99%
Connective Tissue	33.56%	-13.56%
Hepatic Metabolism	32.22%	-8.62%
Differential	29.42%	4.09%
Inflammatory Process	28.91%	25.56%
Ammonia/Energy	28.47%	-20.25%
Neuroendocrine Met.	28.13%	-28.13%
Athletic Potential	25.71%	9.62%
Cardiac Marker	25.51%	20.38%

Lab Reported out-of-range Values

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

Phenylpropionate (950.00%)

A high reading of this organic acid may be indicative of an overgrowth of intestinal microbiota or protozoa. The presence of this acid may be due to the action of bacteria on phenylalanine and should not appear in anything more than background amounts.

5-Hydroxyindoleacetate (720.49%)

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:

Prozac, Reserpine

CA Cycle Phase 6 (381.37%)

The last phase of the citric acid cycle, this stage marks the conversion of Fumarate into Malate. When the ratio is low, this may signify that the body is not refilling its losses along the entire cycle. Supplementing with a broad spectrum amino acid along with niacin may help restore balance.

Tryptophan - P (256.67%)

Tryptophan metabolism requires B6, folic acid, and magnesium. Also, niacin and glutamine are important requirements for normal metabolism. Niacin can be made from tryptophan. A high result may be due to improper metabolism of tryptophan.

Foods which may have an adverse affect:

Turkey

Bacteria2 (235.71%)

A high reading is consistant with bacteria in the gut acting upon the amino acid phenylalanine. Probiotics and/or careful administration of antibiotics may be helpful in bringing down this ratio.

Pyroglutamate (156.25%)
A high level may be due to glutathione depletion as this organic acid is formed in the kidney from the amino acid glutathione.

CA Cycle Entry (153.47%)
A high result for the marker respresenting the entry into the citric acid 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 5 (148.82%)
This phase of the citric acid cycle is the reaction caused by removing electrons from Succinate to form Fumarate. Co-Q10 deficiency may be responsible for an elevated ratio.

2-Methylhippurate (139.19%)
This organic acid is an indication of exposure to or xylene or toluene. A comprehensive detoxification program should be undertaken to help the body excrete these petrochemicals. The use of antioxidants and glycine are recommended.

Quinolinate (138.57%)
A high reading of quinolinate is indicative of oxidative stress that may be favorably resolved by the use of vitamin E.

Formiminoglutamic Acid (137.50%)
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

LDL (123.53%)
LDL is the cholesterol rich remnants of the lipid transport vehicle VLDL (very-low density lipoproteins). There have been many studies showing correlations between high levels of LDL and arterial artherosclerosis. Due to the expense of direct LDL measurement, a calculation known as the Friedewald formula is used (Total Cholesterol - HDL Cholesterol - Triglycerides/5). When Triglyceride levels are greater than 400, this method is not accurate. Increased levels are seen in high cholesterol diets, nephrotic syndromes, multiple myeloma, hepatic obstruction or disease, anorexia nervosa, diabetes, chronic renal failure, and premature coronary heart disease.

Foods which may have an adverse affect:
Coconut Milk

p-Hydroxyphenyllactate (86.99%)
Elevated levels are indicative of the need for antioxidants as this reading suggests an ongoing pro-oxidant process.

Cholesterol (79.00%)
Cholesterol is a fat, found in the blood which has been reported to be linked, when elevated, to an increased risk of cardiovascular disease. It is not a good independent risk factor but can be helpful in conjunction with HDL (good cholesterol), LDL (bad cholesterol) and the Cholesterol/HDL Ratio in assessing risk for heart disease. High levels may be caused by familial (hereditary) hypercholesterolemia, biliary obstruction, nephrotic syndrome, hypothyroidism, and pregnancy.

Drugs which may have an adverse affect:
Aspirin, Carbamazepine, Chlorpromazine, Clofibrate, Cortisone, Epinephrine, Furosemide, Ibuprofen, Imipramine, Lithium, Methimazole, Miconazole, Paramethadione, Penicillamine, Phenobarbital, Phenylbutazone, Phenytoin, Prednisone, Propranolol, Tamoxifen, Trimethadione, Viomycin

Foods which may have an adverse affect:
Bacon, Cholesterol Rich Foods, Chuck Roast, Coconut Cream, Coconut Milk, Dairy Cream, Egg Yolk, Hydrogenated Fats, Liver Pate, Margarine, Sweetbreads

Hippurate (76.43%)
A high reading of this organic acid may be indicative of an overgrowth of intestinal microbiota. The use of glycine may help lower the results. The presence of this acid may be due to the action of bacteria on phenylalanine.

Drugs which may have an adverse affect:
Aspirin

Collagen Related AA (73.33%)

A high reading of this combination of Proline, Hydroxyproline and Hydroxylysine may be indicative of connective tissue breakdown. Use of vitamin C may be helpful in balancing this ratio as well as vitamins B6, B12 and folate.

Sarcosine - P (70.00%)

Elevated sarcosine may be indicative of a functional deficiency of riboflavin (B2) this in turn may impair vitamin B6 metabolism and the conversion of tryptophan to niacin.

Sulfate (-55.00%)

Phase II liver detoxification may be impaired. Consider adding taurine and glutathione to aid the system in detoxification.

Lactate (53.33%)

A high level of this organic acid may be indicative of poor metabolism and/or a problem in the citric acid cycle.

Valine - P (-51.20%)

Valine is one of the branched chain amino acids (BCAA) a group of essential amino acids (with leucine and isoleucine) involved in handling of stress, energy production, and muscle metabolism. Balanced supplementation of BCAA's has been reported to be effective in chronic liver disease, anorexia, recovery from surgery, and endocrine functioning. A low plasma level of valine may be due to muscle loss or inadequate stomach acid if other essential amino acids are also low.

Anserine - P (50.00%)

May be due to high dietary intake of poultry or zinc deficiency.

Bacteria Markers (-50.00%)

A low reading is consistant with health gut flora.

Carnosine - P (50.00%)

May be indicative of zinc deficiency. Genetic deficiency may lead to neurological development problems and sensory polyneuropathy.

Eosinophils (50.00%)

Eosinophils protect the body from parasites and allergic reactions, therefore, elevated levels may indicate an allergic response.

Drugs which may have an adverse affect:

Allopurinol, Ampicillin, Carbamazepine, Chlorpromazine, Clindamycin, Desipramine, Erythromycin, Fluorides, Fluphenazine, Haloperidol, Imipramine, Indomethacin, Kanamycin, Methyldopa, Naproxen, Nitrofurantoin, Penicillamine, Penicillin, Phenylbutazone, Phenytoin, Procainamide, Protriptyline, Rifampin, Streptomycin, Sulfamethoxazole, Sulfasalazine, Sulfisoxazole, Tetracycline, Triameterene, Viomycin

Homocystine - P (50.00%)

This may be indicative of a higher risk of coronary heart disease (atherosclerosis), neurological, ocular, or musclo-skeletal disorders.

Drugs which may have an adverse affect:

Methotrexate

Hydroxylysine - P (50.00%)

A high plasma level of hydroxylysine may be indicative of connective and bone tissue breakdown or the use of a blood thinner such as Coumadin. A high level may also be found in a number of degenerative diseases.

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1-CAC Entry Protocol See Nutrition Detail

Rationale

CAC ENTRY PROTOCOL

Decreased | **Normal** | **Increased**
CA Cycle Entry

When the entry point to the citric acid cycle is blocked, the ability to utilize carbohydrates to produce energy is impaired. The following protocol may be helpful in bringing down this ratio.
B-Complex - 2x daily
Amino Acid Complex - 5 grams 2x daily
CoEnzyme Q10 - 50 mg 2x daily
Alpha Lipoic Acid - 200 mg 2x daily
Vitamin C - 1000 mg 2x daily
For children between 6-18
B-Complex - 1x daily
CoEnzyme Q10 - 25 mg daily
Vitamin C - 500 mg daily
Amino Acid Complex - 5 grams daily
For children under the age of 6:
Amino Acid Complex with co-factors - 1/8 tsp 2x daily
Vitamin C - 125 mg 2x daily
CoEnzyme Q10 - 12.5 mg daily
For children between the ages of 6 and 18 use 1/2 the adult dose.

1-Carbohydrate Metabolism Profile See Nutrition Detail

CARBOHYDRATE METABOLISM PROFILE

Decreased | **Normal** | **Increased**
Lactate
Pyruvate

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 cellualr 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)

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 artherosclerotic heart disease. Mutat Res, 275:169-180 (1992).

1-Detoxification Protocol See Nutrition Detail

DETOXIFICATION PROTOCOL

Decreased | **Normal** | **Increased**
2-Methylhippurate
Hippurate

Due to the elevated level of 2-Methylhippurate, is is important that you avoid xylene, a compound found in fossil fuels and as a solvent as well as toluene and styrene. A comprehensive detoxification protocol should include at least 250 mg of glycine daily along with a balanced amino acid complex and a broad spectrum antioxidant formula with Vitamin C and CoEnzyme Q10.
Adults:
Glycine - 500 mg 2x daily
Amino Acid Complex - 5 grams 2x daily
Broad Spectrum Antioxidant - 2x daily
Children:
Glycine - 250 mg 2x daily
Amino Acid Complex 2.5 grams 2x daily
Broad Spectrum Antioxidant - 1x daily

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1-Folic Acid 2x daily 800 mcg

FOLIC ACID
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.

Rationale

Decreased	Normal	Increased
		Formiminoglutamic Acid

1-L-Carnitine 2x daily 500 mg

L-CARNITINE
Carnitine is sometimes considered a non-essential amino acid which is synthesized in the liver and kidneys from lysine. methionine and other nutrients. It is critical in the metabolism of fat and transport of long-chain essential fatty acids as well as being cardiac protective.

Decreased	Normal	Increased
Fatty Acid Metabolism		

1-Oral Electrolyte - Standard Formula 2x daily

ORAL ELECTROLYTE
The main electrolytes in the human body are sodium, potassium, phosphorus, calcium, chloride, magnesium and bicarbonate. During illness, the equilibrium present in healthy individuals, is disturbed. A well balanced formula is helpful in restoring a state of equilibrium. A sports formula will have greater levels of bicarbonate yet still keeping the proportion of the other salts in line.

Decreased	Normal	Increased
	Potassium Sodium	CO2

1-Riboflavin (B2), B12, Folate See nutrition detail

RIBOFLAVIN (B2), B12, FOLATE
Since sarcosine is formed from the conversion of methionine to glycine in the pathway to choline, the following supplementation regime may be beneficial in bring the sarcosine level down as well as helping to metabolize glycine properly
RIBOFLAVIN
Adult: 1x daily 50 mg Children 1x daily 25 mg
VITAMIN B12
Adult: 1000 mcg 2x daily Children: 1000mcg 1x daily
FOLATE
Adult: 800 mcg 2x daily Children 400 mcg 1x daily

Decreased	Normal	Increased
Glycine - P		Sarcosine - P

1-Taurine 2x daily 500 mg

TAURINE
An amino-sulfonic acid and modulator of cation flux, especially for Ca. A neuromodulator indirectly depressing neuroexcitation through control over glutamate. It also mediates contractility in the cardiac muscle.

Decreased	Normal	Increased
Taurine - P		a-Aminoadipic Acid - P

1-Yeast Reduction Protocol2 See Nutrition Detail

YEAST REDUCTION PROTOCOL2
Because of the relative increase in the markers for yeast and fungi (Benzoate, Hippurate, Phenylacetate and Phenylpropionate) it may be helpful to begin a yeast reduction protocol. Avoiding refined carbohydrates such as sugar, alcohol and other yeast-containing products is recommended. The introduction of probiotics as well as glycine and pantothenic acid may be helpful balancing this ratio.
Probiotics - 2-3 times daily if D-Lactate is normal or low
Pantothenic acid - 100 mg 3 times daily
Glycine - 500 mg 3 times daily
For children between the ages of 6 and 18 take 1/2 the adult dose.

Decreased	Normal	Increased
		Bacteria2

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2-Betaine HCL 2 tablets at mealtime

BETAIN HCl

When this pattern of imbalances show up, it may be due to a BCl/betaine deficiency and suggests muscle/collagen catabolism and inadequate synthesis due to inadequate quality and/or quantity of protein.

Rationale

Decreased	Normal	Increased
Proline - P	Hydroxyproline - P	3-Methylhistidine - P

2-Glutathione (reduced) 2x daily 250 mg

GLUTATHIONE

Glutathione is a tripeptide made in the body from cysteine, glutamic acid and glycine. An accumulation of Pyroglutamate is indicative of glutathione depletion.

Decreased	Normal	Increased
		Pyroglutamate

2-Glycine 2x daily 500 mg

GLYCINE

Glycine is an important amino acid and it is helpful in lowering the levels of Benzoate and Hippurate.

Decreased	Normal	Increased
	Benzoate	Hippurate

2-Magnesium Citrate or Glycinate 2x daily 150 mg

MAGNESIUM (Mg)

Second most abundant 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
		Ethanolamine - P

2-Magnesium, B6 & Manganese 2x daily see details

MAGNESIUM (Mg)
250 mg
Second most abundant cation 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.

PYRIDOXINE (B6)
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.

MANGANESE (Mn)
15 mg
Concentrated in mitochondria, it stimulates the synthesis of cholesterol and fatty acids. Associated with a large number of enzymes in numerous areas of metabolism. Improves glucose tolerance, neurotransmission, vestibular and neuromuscular function.

Decreased	Normal	Increased
Serine - P	Threonine - P Phosphoserine - P	

2-Probiotics 1x daily 3 caps

PROBIOTICS

Probiotic strains address dysbiosis in the gastrointestinal tract.

Decreased	Normal	Increased
W.B.C.		Monocytes

2-Vitamin C 1x daily 1000 mg

VITAMIN C

Water-soluble vitamin essential for the synthesis and maintenance of collagen as well as body tissue cells, cartilage, bones, teeth, skin and tendons. Increases protection mechanism of the immune system. Also improves iron and calcium absorption as well as trace mineral utilization.

Decreased	Normal	Increased
W.B.C.	LDH Alkaline Phosphatase	LDL Triglycerides

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2-Zinc Citrate 2x daily 50 mg

ZINC (Zn)

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.

Rationale

Decreased	Normal	Increased
	b-Alanine - P	Anserine - P
	1-Methylhistidine - P	

H - Black Cohosh 1 - 3 times daily Females only

BLACK COHOSH

The herb black cohosh (Cimicifuga racemosa) has been used primarily in the treatment of menstrual cramps and menopause. It must be absolutely avoided during pregnancy. As with any herb, caution should be taken with its use. Do not use if you are allergic to aspirin.

Decreased	Normal	Increased
		Cholesterol
		LDL

H - Garlic 1 - 3 times daily

GARLIC

Garlic's use has been reported to be beneficial in lowering blood lipid (fat) levels. May cause unwanted bodily odors. As with any herb, caution should be taken with its use.

Decreased	Normal	Increased
		LDL
		Cholesterol

AVOID THE FOLLOWING SUPPLEMENTS

AVOID MCT Oil Prescription only

MCT OILS (MEDIUM CHAIN TRIGLYCERIDES)

Saturated fatty acids that are 6 to 12 carbons long. They are absorbed easily because of the greater solubility due to their smaller molecular size.

Decreased	Normal	Increased
		Triglycerides

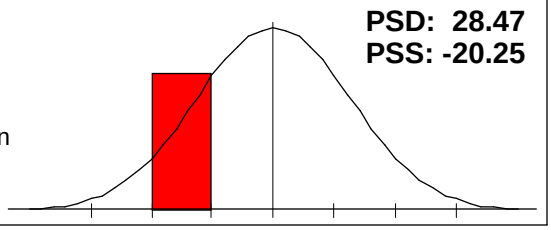
Drugs listed below tend to further aggravate elements of blood chemistry that are out of range (H or L). The (#) after each drug denotes the number of times that drug is flagged as being potentially harmful.

Acetaminophen	Allopurinol(2)	Amantadine	Amitriptyline
Amoxicillin	Ampicillin(3)	Aspirin	Aspirin(3)
Busulfan	Carbamazepine(3)	Chlorpromazine(4)	Clindamycin(2)
Clofibrate(2)	Cortisol	Cortisone	Desipramine(2)
Diazepam	Epinephrine	Erythromycin(2)	Fluorides(2)
Fluphenazine(2)	Furosemide(2)	Gentamicin	Griseofulvin(2)
Haloperidol(3)	Hydrocortisone(2)	Hydroxyurea	Ibuprofen(4)
Imipramine(4)	Indomethacin(2)	Itraconazole	Kanamycin(2)
Levodopa	Levothyroxine	Lincomycin	Lithium(3)
MAO Inhibitors(2)	Mercaptopurine	Methimazole(2)	Methotrexate(2)
Methyldopa(4)	Miconazole(3)	Naproxen	Neomycin
Nitrofurantoin(2)	Paramethadione(2)	Penicillamine(3)	Penicillin(2)
Phenelzine	Phenobarbital(2)	Phenylbutazone(3)	Phenytoin(3)
Piroxicam	Polythiazide(3)	Prednisone(4)	Procainamide(2)
Procarbazine	Propranolol(2)	Protriptyline(2)	Prozac
Reserpine(2)	Rifampin(2)	Streptomycin(2)	Sulfamethizole
Sulfamethoxazole(2)	Sulfasalazine(2)	Sulfisoxazole(2)	Tamoxifen(3)
Tetracycline(2)	Triameterene	Trimethadione(2)	Tromethamine
Valproic Acid	Vancomycin	Viomycin(4)	

Ammonia/Energy

Arginine - P, Threonine - P, Glycine - P[L], Serine - P[L], a-Aminoadipic Acid - P[H], Asparagine - P[L], Aspartic Acid - P[L], Citrulline -.

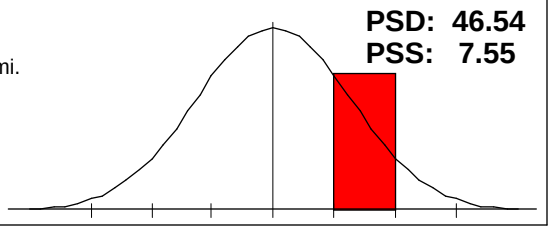
A panel profile such as this may be indicative of inadequate protein intake, poor absorption or poor quality protein intake.



CNS Metabolism

Arginine - P, Tryptophan - P[H], GABA - P, Glycine - P[L], Serine - P[L], Taurine - P[L], Aspartic Acid - P[L], Glutamine - P[L], Ethanolami.

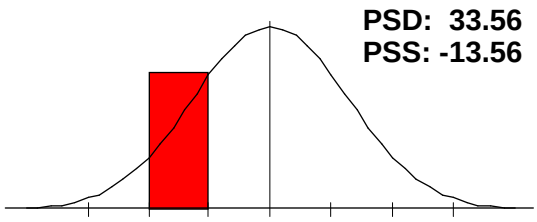
A profile such as this may be indicative of an overexcited central nervous system. Hyperactivity, inability to relax may be additional clinical signs



Connective Tissue

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

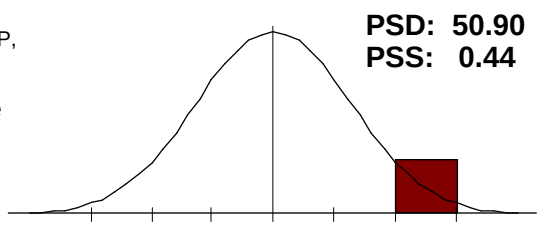
A profile such as this may be indicative of poor collagen and other tissue formation.



Essential Amino Acid

Arginine - P, Histidine - P, Isoleucine - P[L], Leucine - P[L], Lysine - P, Methionine - P, Phenylalanine - P[L], Threonine - P, Tryptophan.

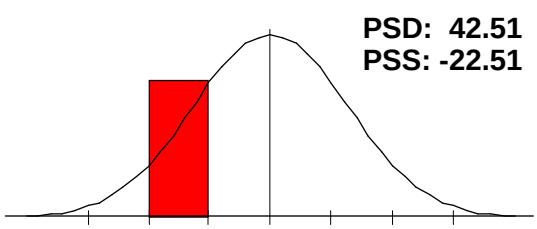
A profile such as this may be indicative of excessive protein intake or poor elimination and metabolism.



Fat Metabolism

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

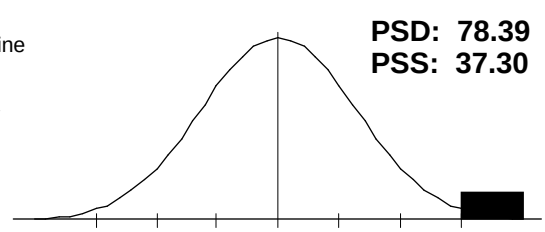
A panel profile such as this may indicate an inability of the body to properly metabolize dietary fats. Check for dysbiosis, or try supplementation with lipase digestive enzymes as well as broad spectrum amino acids.



Gluconeogen

Threonine - P, Tryptophan - P[H], Glycine - P[L], Serine - P[L], Alanine - P[H].

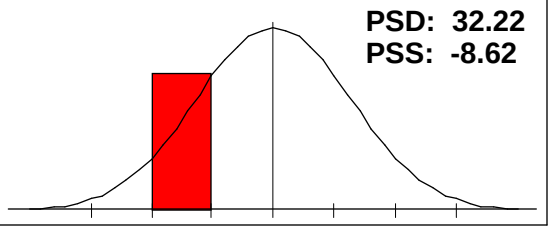
A panel profile such as this may be indicative of excessive dietary intake of proteins.



Hepatic Metabolism

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

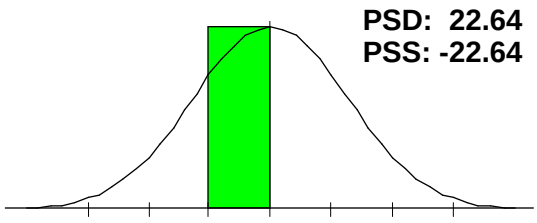
A panel profile such as this may be indicative of an underfunctioning liver or poor dietary protein intake.



Immune Metabolites

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

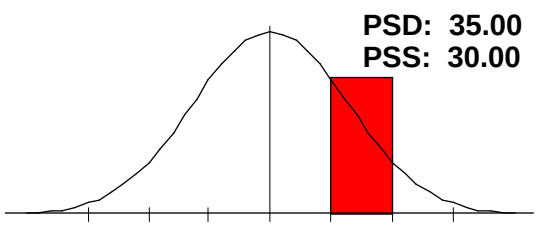
The panel profile seen here is indicative of having adequate amounts of the listed amino acids needed for proper immune system responses.



Muscle Metabolites

Anserine - P[H], Carnosine - P[H], 1-Methylhistidine - P, 3-Methylhistidine - P[H].

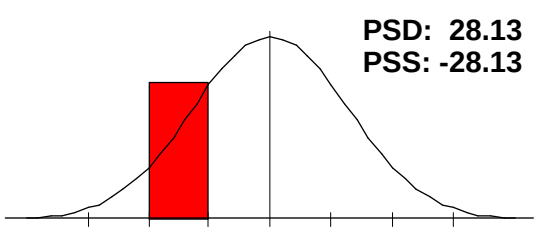
This panel profile may be indicative of abnormal protein metabolism especially if 1-methylhistidine is elevated.



Neuroendocrine Met.

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

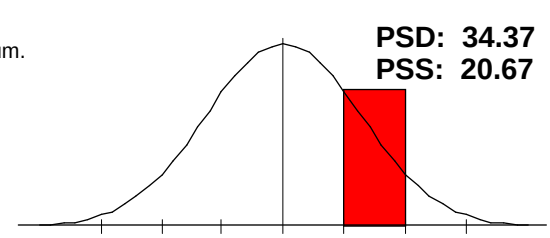
This panel profile may be indicative of an underfunctioning endocrine system or poor dietary intake of protein.



Adrenal Function

Cholesterol[H], Eosinophils[H], Eosinophil Count, Potassium, Sodium.

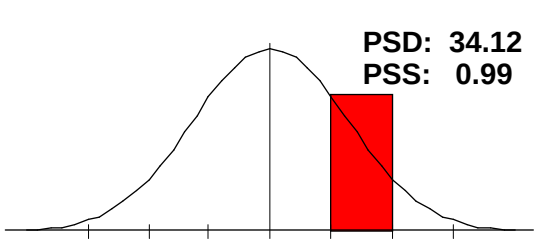
This profile may be in part due to poor nutritional habits, allergies and inadequate fluid intake. Clinical signs may include inability to handle stress, poor circulation, and fatigue.



Allergy

Eosinophils[H], Globulin, Lymphocytes[L], Monocytes[H], W.B.C.[L].

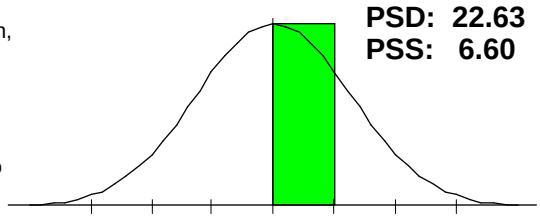
This panel profile may be due to allergies or a compromised immune system. Review the Differential and the Differential Count Panels for additional information. If Eosinophils are up and the CO2 is normal or depressed the likelihood of allergies is higher. If the Eosinophils and the CO2 are elevated than suspect parasites.



Anti Oxidant Status

Anion Gap[L], Bilirubin, Total, Chloride, Cholesterol[H], Glucose, Iron, Total.

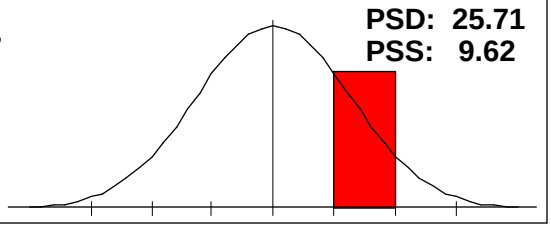
The elements in this panel help represent the antioxidant status of the individual. Excesses of deficiencies in this panel may indicate the need for additional antioxidants. The deviation was below 25% so no abnormalities were found.



Athletic Potential

B.U.N./Creatinine Ratio, Cholesterol[H], CO2[H], Creatinine[L], LDH, Potassium, Protein, Total, Sodium, HDL-Cholesterol.

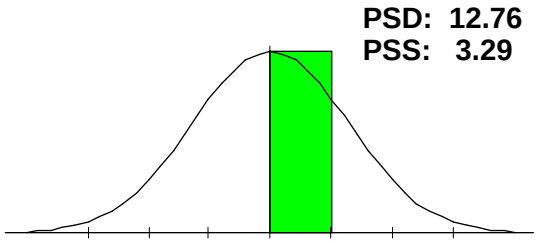
This profile indicates that the patient should have a complete physical before embarking on any exercise routine.



Bone/Joint

Albumin, Alkaline Phosphatase, Calcium, Neutrophils, Phosphorus, Protein, Total, Uric Acid.

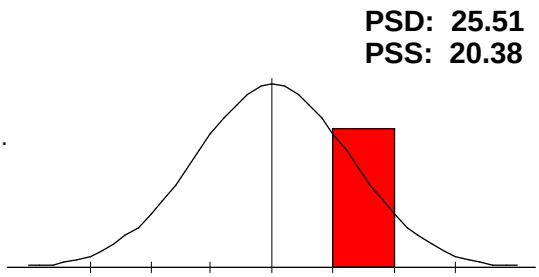
This panel may be helpful in assessing bone and joint health. Keeping the elements of this panel in a normal range may be helpful in reducing the risk of osteoporosis and other bone and joint disorders. The deviation was below 25% so no abnormalities were found.



Cardiac Marker

Cholesterol[H], GGT, Iron, Total, LDH, sGOT, Triglycerides[H], Uric Acid, HDL-Cholesterol, LDL[H].

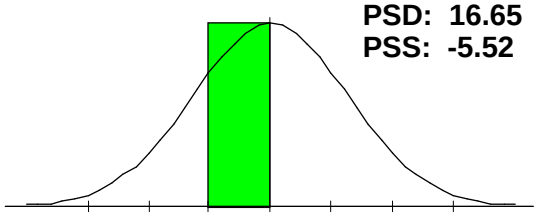
The profile shown here indicates that this individual may be at a greater risk for coronary heart disease than the general population. A review of dietary, environmental and personal habits should be done and appropriate lifestyle changes made. If both triglycerides and cholesterol are elevated, a regime of exercise and dietary changes are more likely to exhibit benefits.



Cellular Distortions

Alkaline Phosphatase, Anion Gap[L], GGT, Iron, Total, LDH, Neutrophils, W.B.C.[L].

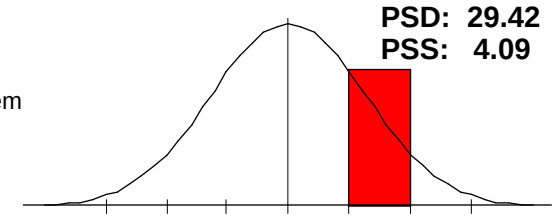
This panel may be helpful in determining the ability of the body to properly produce healthy cells. The deviation was below 25% so no abnormalities were found.



Differential

Basophils, Eosinophils[H], Lymphocytes[L], Monocytes[H], Neutrophils.

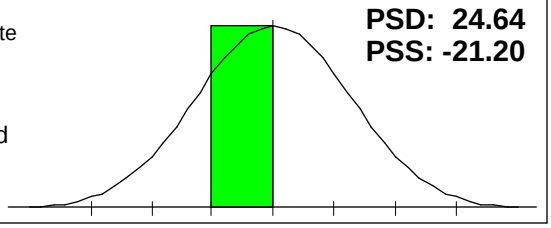
This panel profile may be indicative of a hightened immune system response. A careful review of the individual components of this panel is recommended.



Differential Count

Basophil Count[L], Eosinophil Count, Lymphocyte Count[L], Monocyte Count, Neutrophil Count[L].

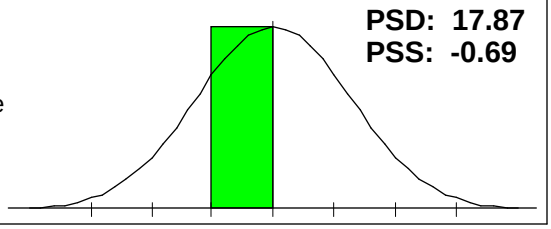
This panel may be helpful in assessing immune system health. Excesses or deficiencies in this panel may indicate a compromised immune system. The deviation was below 25% so no abnormalities were found.



Electrolyte

Calcium, Chloride, CO2[H], Phosphorus, Potassium, Sodium.

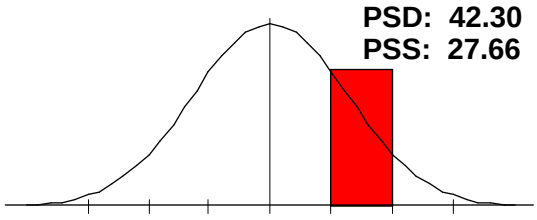
This panel is a representation of electrolyte balance in blood. Balance is critical in maintaining and achieving optimal health. The deviation was below 25% so no abnormalities were found.



Gastrointest. Function

Anion Gap[L], Chloride, Cholesterol[H], CO2[H], Monocytes[H], Potassium, Sodium, Triglycerides[H], LDL[H].

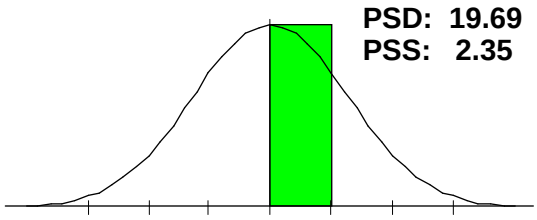
This panel profile indicates the need for further evaluation of gastrointestinal integrity, digestion and absorption. Check for dysbiosis, food allergies or "leaky gut" syndrome.



Hematology

Hematocrit, Hemoglobin, MCH[H], MCHC, MCV, R.B.C., W.B.C.[L].

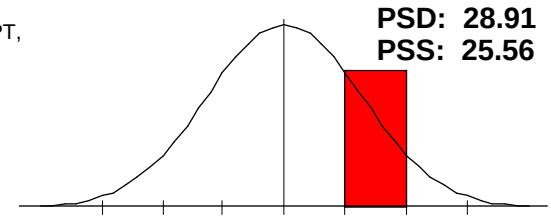
The hematology panel assesses the production of red blood cells and their function. The deviation was below 25% so no abnormalities were found.



Inflammatory Process

Eosinophils[H], Globulin, LDH, Neutrophils, Potassium, sGOT, sGPT, Triglycerides[H], Uric Acid, LDL[H].

This panel profile may indicate the presence of an ongoing inflammatory process. Consider increasing B-complex vitamins and having the patient avoid saturated and trans fats as well.

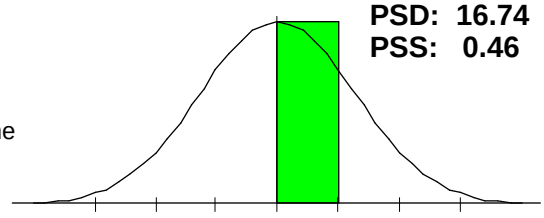


Kidney Function

Albumin, B.U.N., B.U.N./Creatinine Ratio, Chloride, CO2[H], Creatinine[L], Glucose, Potassium, Protein, Total, Sodium.

This panel may be helpful in assessing kidney function. It is important to keep the elements of this subset in balance to help the body eliminate waste material. The deviation was below 25% so no abnormalities were found.

PSD: 16.74
PSS: 0.46

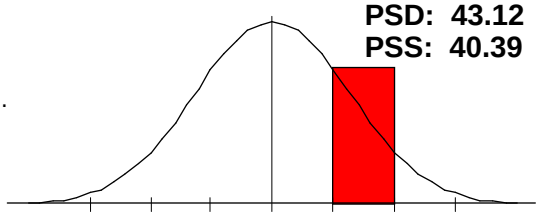


Lipid

Cholesterol[H], Triglycerides[H], HDL-Cholesterol, LDL[H].

The panel profile seen here suggests that the patient may be at a greater risk for coronary heart disease than the general population. A dietary evaluation should be undertaken as well to educate the patient about saturated and trans fats.

PSD: 43.12
PSS: 40.39

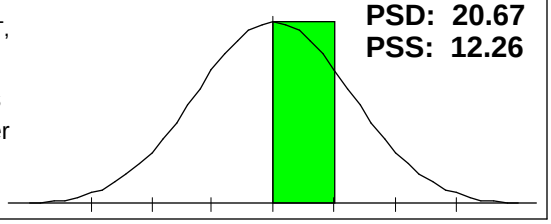


Liver Function

Albumin, Alkaline Phosphatase, Bilirubin, Total, Cholesterol[H], GGT, Protein, Total, sGOT, sGPT.

Assessing liver function is important in determining the individual's ability to detoxify itself as well as processing amino acids and other important biological processes. The deviation was below 25% so no abnormalities were found.

PSD: 20.67
PSS: 12.26

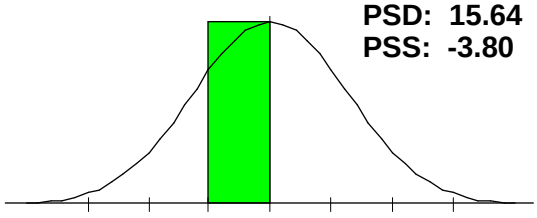


Nitrogen

B.U.N., B.U.N./Creatinine Ratio, Creatinine[L], Uric Acid.

Nitrogen is an important element in achieving optimal wellness. The elements in this panel are important in determining nitrogen competency. The deviation was below 25% so no abnormalities were found.

PSD: 15.64
PSS: -3.80

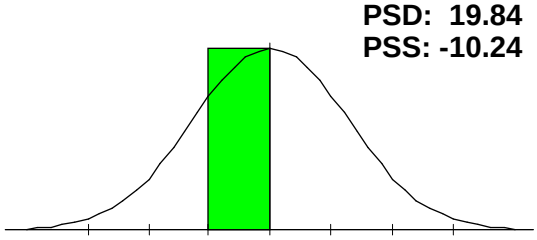


Protein

A/G Ratio[L], Albumin, Globulin, Protein, Total, Protein/Globulin Ratio[L].

Proteins are the basic building blocks of hormones, muscle, neurotransmitters, immune systems responses and more. Assessing their competency is crucial in achieving optimal wellness. The deviation was below 25% so no abnormalities were found.

PSD: 19.84
PSS: -10.24

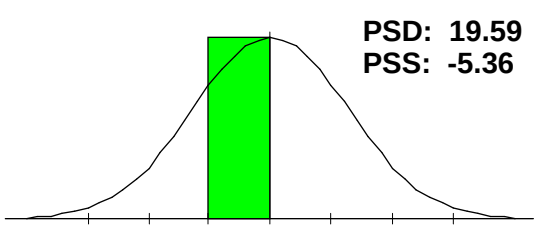


Pulmonary Function

Anion Gap[L], Calcium, CO2[H], LDH, Potassium, sGOT, Sodium.

This panel may be helpful in assessing lung and respiratory function. The deviation was below 25% so no abnormalities were found.

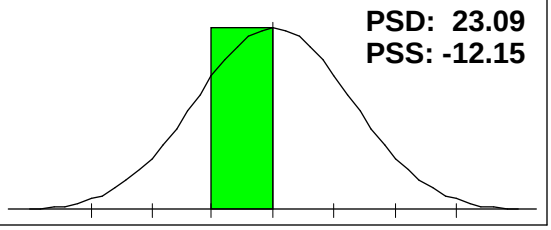
PSD: 19.59
PSS: -5.36



Ratios

A/G Ratio[L], B.U.N./Creatinine Ratio, Calcium/Phosphorus Ratio[L], Sodium/Potassium Ratio, Protein/Globulin Ratio[L].

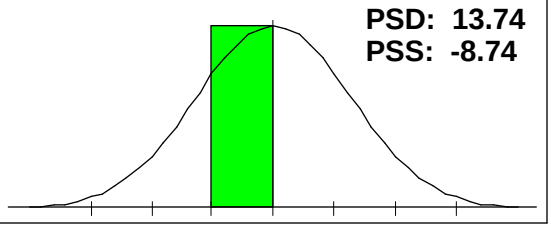
This panel may be helpful in determining the general balance of the overall chemistry of the individual. The deviation was below 25% so no abnormalities were found.



Thyroid

Thyroxine (T4), T-3 Uptake, Free T4 Index (T7).

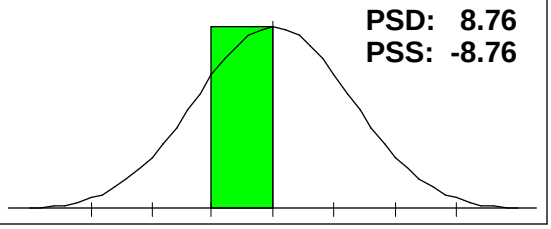
This panel may be helpful in determining the overal health of the thyroid gland. The deviation was below 25% so no abnormalities were found.



Amino Acid Catabolism

a-Ketoisovalerate, a-Ketoisocaproate, a-Keto-b-methylvalerate.

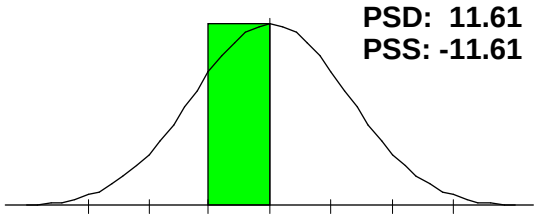
A normal reading in this panel suggest proper amino acid stores.



B-Complex Markers

b-Hydroxyisovalerate, a-Ketoisovalerate, a-Ketoisocaproate, a-Keto-b-methylvalerate, Methylmalonate.

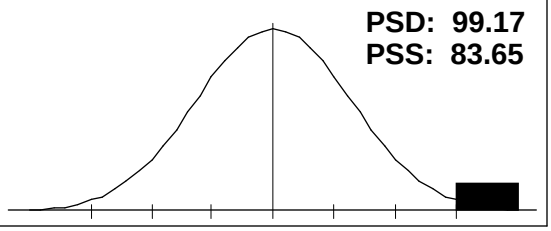
A normal panel profile such as this is an indicator of adequate intake of B-complex vitamins.



CAC Cycle Ratios

CA Cycle Entry[H], CA Cycle Phase 1[H], CA Cycle Phase 2[L], CA Cycle Phase 3, CA Cycle Phase 4, CA Cycle Phase 5[H], CA Cycle Phase 6[H], C.

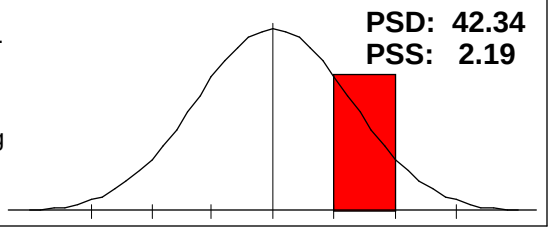
This panel reflects steps of the citric acid cycle. A high reading may be indicative of poor energy production and/or vitamin, mineral and amino acid deficiencies.



Carbohydrate Metabolism

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

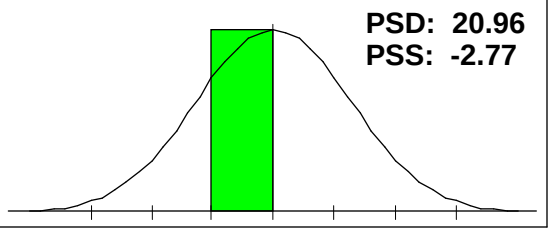
The panel profile seen here may be due to impaired carbohydrate metabolism, inefficient utilization or poor mobilization of carbohydrates. Often, B-complex vitamins are helpful in balancing these results. See Nutritional Support for further details.



Citric Acid Cycle

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

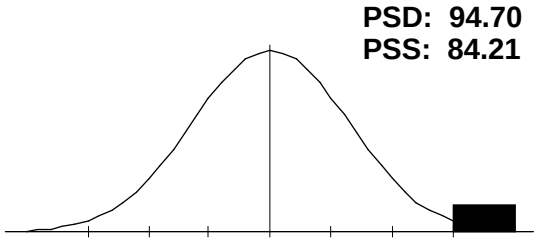
A normal reading such as this is consistant with a properly functioning citric acid cycle.



Intestinal Dysbiosis

Hippurate[H], Benzoate, p-Hydroxybenzoate[L], p-Hydroxyphenyllactate[H], Phenylacetate, Phenylpropionate[H], Tricarballylate, DHPP, Indican.

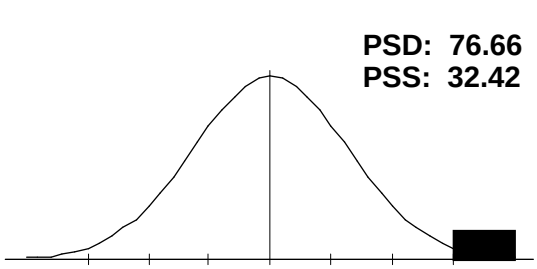
This panel profile may be indicative of intestinal dysbiosis. Poor absorption and metabolism of proteins, fats and carbohydrates may occur. A review of potential bacteria, protozoa, Clostridial spp., yeast or fungus may be necessary.



Liver Detox Indicators

2-Methylhippurate[H], Glucarate[L], P-Hydroxyphenylacetate[L], Orotate[H], Pyroglutamate[H], Sulfate[L].

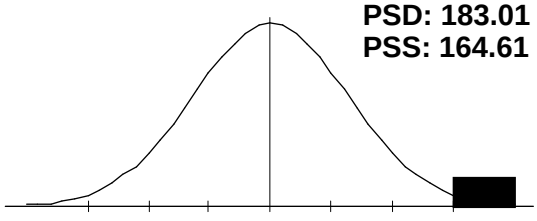
This panel profile may be due in part to environmental toxins, improper regulation of cell growth, hereditary deficiencies, and a depressed ability of the liver to detoxify itself. A program of detoxification may be helpful in this case. Review Nutritional Status for additional recommendations.



Neurotransmitters

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

The panel profile seen here may be due to the use of serotonin re-uptake inhibitors such as Prozac or poor catecholamine catabolism.



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.

Fatigue/Low Cellular Energy Production () 100.00% (1 of 1)

Decreased	Normal	Increased
-33.33 Aspartic Acid - P		

Mild Hyperammonemia () 100.00% (1 of 1)

Decreased	Normal	Increased
-26.19 Glutamic Acid - P		

Potential Excessive Oxidative Damage () 100.00% (1 of 1)

Decreased	Normal	Increased
-44.50 Taurine - P		

Potential Parasitic Involvement () 100.00% (2 of 2)

Decreased	Normal	Increased
		25.00 CO2
		50.00 Eosinophils

When eosinophils and CO2 are elevated, suspect possible parasitic involvement. Additional testing procedures which may be helpful include organic acids in urine.

Recuperative Capability Impaired () 100.00% (1 of 1)

Decreased	Normal	Increased
-29.70 Protein/Globulin Ratio		

Tryptophanemia () 100.00% (1 of 1)

Decreased	Normal	Increased
		256.67 Tryptophan - P

Tryptophanemia is a genetic trait when there are consistantly high levels of plasma tryptophan measured.

Muscle/Collagen Catabolism () 80.00% (4 of 5)

Decreased	Normal	Increased
-42.73 Leucine - P		**30.00 3-Methylhistidine - P**
-51.20 Valine - P		
50.00 Hydroxylysine - P		
-25.93 Proline - P		

This profile may be indicative of an individual who is either catabolising their muscle tissue or is unable to build proper muscle tissue due to amino acid deficiencies. Further investigation into amino acid competency may be helpful.

Ammonia Toxicity/Buildup () 75.00% (3 of 4)

Decreased	Normal	Increased
-47.27 Isoleucine - P		-36.44 Glutamine - P
-33.33 Aspartic Acid - P		
-26.19 Glutamic Acid - P		

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.

Review Cardiovascular Risk Factors () 66.67% (4 of 6)

Decreased	***Normal***	***Increased***
	-8.18 HDL-Cholesterol	**79.00 Cholesterol**
		11.76 Glucose
		47.99 Triglycerides
		-1.72 Uric Acid
		123.53 LDL

Review family history or personal history of cardiovascular risk factors such as smoking, excessive alcohol intake, high fat diet, and/or sedentary lifestyle.

Comparison Progress Report

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

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

Status % on:	5/25/2004		12/6/2004		+/- change
Tryptophan - P	**-26.67**	**L**	**256.67**	**H**	**- 230.00**
Sarcosine - P	-10.00		**70.00**	**H**	**- 60.00**
Cystine - P	-10.00		**-40.00**	**L**	**- 30.00**
Alanine - P	-3.43		**32.57**	**H**	**- 29.14**
Hydroxyproline - P	**270.00**	**H**	-6.67		+ 263.33
Glycine/Serine Ratio	**75.88**	**H**	**25.44**	**H**	**+ 50.44**
Collagen Related AA	**122.00**	**H**	**73.33**	**H**	**+ 48.67**
Lysine - P	**-36.00**	**L**	-10.00		+ 26.00
Tyrosine - P	**-27.14**	**L**	-1.43		+ 25.71
Cystathionine - P	**25.00**	**H**	0.00		+ 25.00

Comparison Report

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (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:	5/25/2004		12/6/2004	
		1-Methylhistidine - P	-5.00		-10.00	
		3-Methylhistidine - P	**30.00**	**H**	**30.00**	**H**
-12.50 **25.00**	-	a-Aminoadipic Acid - P	-12.50		**25.00**	**H**
		a-Amino-N-Butyric Acid - P	16.67		-16.67	
-3.43 **32.57**	-	Alanine - P	-3.43		**32.57**	**H**
		Anserine - P	**50.00**	**H**	**50.00**	**H**
-16.36 -5.45	+	Arginine - P	-16.36		-5.45	
		Asparagine - P	**-48.82**	**L**	**-44.12**	**L**
-45.00 **-33.33**	+	Aspartic Acid - P	**-45.00**	**L**	**-33.33**	**L**
		b-Alanine - P	-10.00		-10.00	
		b-Aminoisobutyric Acid - P	0.00		0.00	
		Carnosine - P	**50.00**	**H**	**50.00**	**H**
-35.45 -22.73	-	Citrulline - P	-22.73		**-35.45**	**L**
73.33 **122.00**	+	Collagen Related AA	**122.00**	**H**	**73.33**	**H**
0.00 **25.00**	+	Cystathionine - P	**25.00**	**H**	0.00	
-40.00 -10.00	-	Cystine - P	-10.00		**-40.00**	**L**
25.00 **37.50**	-	Ethanolamine - P	**25.00**	**H**	**37.50**	**H**
		GABA - P	-10.00		-10.00	
-49.05 **-26.19**	+	Glutamic Acid - P	**-49.05**	**L**	**-26.19**	**L**
-36.44 -24.44	-	Glutamine - P	-24.44		**-36.44**	**L**
-38.89 -22.00	-	Glycine - P	-22.00		**-38.89**	**L**
25.44 **75.88**	+	Glycine/Serine Ratio	**75.88**	**H**	**25.44**	**H**
-45.71 -21.43	+	Histidine - P	**-45.71**	**L**	-21.43	
		Homocystine - P	**50.00**	**H**	**50.00**	**H**
		Hydroxylysine - P	**50.00**	**H**	**50.00**	**H**
-6.67 **270.00**	+	Hydroxyproline - P	**270.00**	**H**	-6.67	
-57.27 **-47.27**	+	Isoleucine - P	**-57.27**	**L**	**-47.27**	**L**
-52.73 **-42.73**	+	Leucine - P	**-52.73**	**L**	**-42.73**	**L**
-36.00 -10.00	+	Lysine - P	**-36.00**	**L**	-10.00	
-30.00 -22.00	+	Methionine - P	**-30.00**	**L**	-22.00	
		Ornithine - P	**-26.67**	**L**	**-30.67**	**L**
-50.00 **-34.21**	+	Phenylalanine - P	**-50.00**	**L**	**-34.21**	**L**
		Phenylalanine/Tyrosine	**-34.85**	**L**	**-32.14**	**L**
		Phosphoethanolamine - P	10.00		3.33	
0.00 16.67	+	Phosphoserine - P	16.67		0.00	
-25.93 1.11	-	Proline - P	1.11		**-25.93**	**L**
-10.00 **70.00**	-	Sarcosine - P	-10.00		**70.00**	**H**
-54.17 **-45.83**	+	Serine - P	**-54.17**	**L**	**-45.83**	**L**
		Taurine - P	**-38.50**	**L**	**-44.50**	**L**
-34.67 -18.00	+	Threonine - P	**-34.67**	**L**	-18.00	
-26.67 **256.67**	-	Tryptophan - P	**-26.67**	**L**	**256.67**	**H**
-27.14 -1.43	+	Tyrosine - P	**-27.14**	**L**	-1.43	
		Valine - P	**-52.00**	**L**	**-51.20**	**L**
		Total Status Deviation	**39.07**		**34.45**	
		Total Status Skew	**-4.63**		**-1.68**	

Comparison Progress Report

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (2718)

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

Status % on:	5/25/2004		12/6/2004		+/- change
Triglycerides	-9.73		**47.99**	**H**	**- 38.26**
B.U.N./Creatinine Ratio	**63.16**	**H**	23.68		+ 39.47
Basophils	**-50.00**	**L**	-16.67		+ 33.33
sGPT	**42.50**	**H**	10.00		+ 32.50
HDL-Cholesterol	**39.09**	**H**	-8.18		+ 30.91
sGOT	**37.50**	**H**	7.50		+ 30.00

Comparison Report

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (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:	5/25/2004		12/6/2004	
		A/G Ratio	**-30.36**	**L**	**-35.50**	**L**
		Albumin	-5.00		-10.00	
21.20 **30.00**	+	Alkaline Phosphatase	**30.00**	**H**	21.20	
		Anion Gap	**38.33**	**H**	**-31.67**	**L**
-7.14 **30.95**	+	B.U.N.	**30.95**	**H**	-7.14	
23.68 **63.16**	+	B.U.N./Creatinine Ratio	**63.16**	**H**	23.68	
-50.00 **-25.50**	+	Basophil Count	**-50.00**	**L**	**-25.50**	**L**
-50.00 -16.67	+	Basophils	**-50.00**	**L**	-16.67	
		Bilirubin, Total	-13.64		-13.64	
-21.43 -11.90	-	Calcium	-11.90		-21.43	
		Calcium/Phosphorus Ratio	**-35.26**	**L**	**-40.53**	**L**
3.85 11.54	-	Chloride	3.85		11.54	
		Cholesterol	**72.00**	**H**	**79.00**	**H**
-16.67 **25.00**	-	CO2	-16.67		**25.00**	**H**
-30.00 -20.00	-	Creatinine	-20.00		**-30.00**	**L**
		Eosinophil Count	-14.40		8.60	
		Eosinophils	**50.00**	**H**	**50.00**	**H**
-31.08 -22.97	+	Free T4 Index (T7)	**-31.08**	**L**	-22.97	
		GGT	-13.33		-10.00	
		Globulin	6.67		10.00	
11.76 23.53	+	Glucose	23.53		11.76	
-8.18 **39.09**	+	HDL-Cholesterol	**39.09**	**H**	-8.18	
		Hematocrit	-7.14		-3.00	
-15.00 7.14	+	Hemoglobin	-15.00		7.14	
		Iron, Total	-12.50		-10.83	
17.33 **35.33**	+	LDH	**35.33**	**H**	17.33	
100.00 **123.53**	-	LDL	**100.00**	**H**	**123.53**	**H**
-54.80 **-46.72**	+	Lymphocyte Count	**-54.80**	**L**	**-46.72**	**L**
-56.67 **-46.67**	+	Lymphocytes	**-56.67**	**L**	**-46.67**	**L**
		MCH	**29.23**	**H**	**26.77**	**H**
-32.93 22.09	+	MCHC	**-32.93**	**L**	22.09	
21.14 **36.46**	+	MCV	**36.46**	**H**	21.14	
-30.00 -12.33	+	Monocyte Count	**-30.00**	**L**	-12.33	
		Monocytes	**26.92**	**H**	**27.78**	**H**
		Neutrophil Count	**-37.35**	**L**	**-30.03**	**L**
6.00 **30.00**	+	Neutrophils	**30.00**	**H**	6.00	
		Phosphorus	15.00		15.00	
-15.00 5.00	-	Potassium	5.00		-15.00	
		Protein, Total	14.00		14.00	
		Protein/Globulin Ratio	-22.50		**-29.70**	**L**
-30.00 -21.54	+	R.B.C.	**-30.00**	**L**	-21.54	
7.50 **37.50**	+	sGOT	**37.50**	**H**	7.50	
10.00 **42.50**	+	sGPT	**42.50**	**H**	10.00	
-19.23 -3.85	-	Sodium	-3.85		-19.23	
		T-3 Uptake	10.00		10.00	
-32.67 -22.00	+	Thyroxine (T4)	**-32.67**	**L**	-22.00	
-9.73 **47.99**	-	Triglycerides	-9.73		**47.99**	**H**
-10.34 -1.72	+	Uric Acid	-10.34		-1.72	
-53.08 **-36.15**	+	W.B.C.	**-53.08**	**L**	**-36.15**	**L**
		Total Status Deviation	**28.72**		**23.49**	
		Total Status Skew	**0.28**		**0.76**	

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

Status % on:	5/25/2004		12/6/2004		+/- change
Phenylpropionate	**35.71**	**H**	**950.00**	**H**	**- 914.29**
CA Cycle Phase 6	**136.67**	**H**	**381.37**	**H**	**- 244.71**
Bacteria2	-17.86		**235.71**	**H**	**- 217.86**
Quinolinate	1.43		**138.57**	**H**	**- 137.14**
CA Cycle Phase 5	**-31.80**	**L**	**148.82**	**H**	**- 117.02**
2-Methylhippurate	**27.03**	**H**	**139.19**	**H**	**- 112.16**
Pyroglutamate	**52.50**	**H**	**156.25**	**H**	**- 103.75**
Formiminoglutamic Acid	**56.25**	**H**	**137.50**	**H**	**- 81.25**
Hippurate	**25.00**	**H**	**76.43**	**H**	**- 51.43**
Lactate	-15.56		**53.33**	**H**	**- 37.78**
Glucarate	-13.76		**-47.72**	**L**	**- 33.96**
Pyruvate	-3.57		**35.71**	**H**	**- 32.14**
P-Hydroxyphenylacetate	-1.11		**-30.00**	**L**	**- 28.89**
Xanthurenate	**390.00**	**H**	20.00		+ 370.00
5-Hydroxyindoleacetate	**1033.61**	**H**	**720.49**	**H**	**+ 313.11**
Malate	**150.00**	**H**	**28.57**	**H**	**+ 121.43**
Sulfate	**163.33**	**H**	**-55.00**	**L**	**+ 108.33**
a-Ketoisovalerate	**87.50**	**H**	-10.00		+ 77.50
a-Hydroxybutyrate	**106.36**	**H**	**-43.64**	**L**	**+ 62.73**
a-Keto-b-methylvalerate	**64.29**	**H**	-14.29		+ 50.00
Indican	**53.49**	**H**	-3.49		+ 50.00
cis-Aconitate	**69.12**	**H**	**-30.88**	**L**	**+ 38.24**
CA Cycle Return	**-51.06**	**L**	-16.44		+ 34.62
a-Ketoglutarate	**36.43**	**H**	-6.43		+ 30.00
a-Ketoisocaproate	**30.00**	**H**	-2.00		+ 28.00
Hydroxymethylglutarate	**38.71**	**H**	-11.29		+ 27.42

Comparison Report

Anna **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 Anna (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:	5/25/2004		12/6/2004	
27.03 — **139.19**	-	2-Methylhippurate	**27.03**	**H**	**139.19**	**H**
720.49 — **1033.61**	+	5-Hydroxyindoleacetate	**1033.61**	**H**	**720.49**	**H**
		8-Hydroxy-2-deoxyguan	**50.00**	**H**	**-46.36**	**L**
-40.48 — **25.00**	-	Adipate	**25.00**	**H**	**-40.48**	**L**
-43.64 — **106.36**	+	a-Hydroxybutyrate	**106.36**	**H**	**-43.64**	**L**
-14.29 — **64.29**	+	a-Keto-b-methylvalerate	**64.29**	**H**	-14.29	
-6.43 — **36.43**	+	a-Ketoglutarate	**36.43**	**H**	-6.43	
-2.00 — **30.00**	+	a-Ketoisocaproate	**30.00**	**H**	-2.00	
-10.00 — **87.50**	+	a-Ketoisovalerate	**87.50**	**H**	-10.00	
8.82 — **30.39**	+	Benzoate	**30.39**	**H**	8.82	
-36.67 — **25.56**	-	b-Hydroxybutyrate	**25.56**	**H**	**-36.67**	**L**
-10.91 — **33.64**	+	b-Hydroxyisovalerate	**33.64**	**H**	-10.91	
		CA Cycle Entry	**151.28**	**H**	**153.47**	**H**
-51.06 — -16.44	+	CA Cycle Return	**-51.06**	**L**	-16.44	
-30.88 — **69.12**	+	cis-Aconitate	**69.12**	**H**	**-30.88**	**L**
-27.76 — 15.76	+	Citrate	**-27.76**	**L**	15.76	
-23.75 — 12.50	-	DHPP	12.50		-23.75	
-18.42 — **34.21**	+	D-Lactate	**34.21**	**H**	-18.42	
		Ethylmalonate	19.17		-14.17	
56.25 — **137.50**	-	Formiminoglutamic Acid	**56.25**	**H**	**137.50**	**H**
-33.00 — **50.00**	+	Fumarate	**50.00**	**H**	**-33.00**	**L**
-47.72 — -13.76	-	Glucarate	-13.76		**-47.72**	**L**
25.00 — **76.43**	-	Hippurate	**25.00**	**H**	**76.43**	**H**
		Homovanillate	-6.36		10.00	
-11.29 — **38.71**	+	Hydroxymethylglutarate	**38.71**	**H**	-11.29	
-3.49 — **53.49**	+	Indican	**53.49**	**H**	-3.49	
		Isocitrate	20.00		-13.33	
		Kynurenate	-12.50		-20.00	
-15.56 — **53.33**	-	Lactate	-15.56		**53.33**	**H**
28.57 — **150.00**	+	Malate	**150.00**	**H**	**28.57**	**H**
		Methylmalonate	-20.83		-20.83	
31.82 — **50.00**	+	Orotate	**50.00**	**H**	**31.82**	**H**
		Phenylacetate	**-28.57**	**L**	21.43	
35.71 — **950.00**	-	Phenylpropionate	**35.71**	**H**	**950.00**	**H**
-40.91 — -22.73	-	p-Hydroxybenzoate	-22.73		**-40.91**	**L**
-30.00 — -1.11	-	P-Hydroxyphenylacetate	-1.11		**-30.00**	**L**
65.07 — **86.99**	-	p-Hydroxyphenyllactate	**65.07**	**H**	**86.99**	**H**
52.50 — **156.25**	-	Pyroglutamate	**52.50**	**H**	**156.25**	**H**
-3.57 — **35.71**	-	Pyruvate	-3.57		**35.71**	**H**
1.43 — **138.57**	-	Quinolinate	1.43		**138.57**	**H**
		Suberate	12.96		-9.26	
-12.63 — **28.42**	-	Succinate	-12.63		**28.42**	**H**
-55.00 — **163.33**	+	Sulfate	**163.33**	**H**	**-55.00**	**L**
19.23 — **34.62**	+	Tricarballylate	**34.62**	**H**	19.23	
-46.00 — **-26.00**	+	Vanilylmandelate	**-46.00**	**L**	**-26.00**	**L**
20.00 — **390.00**	+	Xanthurenate	**390.00**	**H**	20.00	
		Total Status Deviation	**62.12**		**76.15**	
		Total Status Skew	**40.07**		**43.93**	

Ammonia/Energy	5/25/2004		12/6/2004		+/-
Arginine - P	-16.36		-5.45		+
Threonine - P	**-34.67**	L	-18.00		+
Glycine - P	-22.00		**-38.89**	L	-
Serine - P	**-54.17**	L	**-45.83**	L	+
a-Aminoadipic Acid - P	-12.50		**25.00**	H	-
Asparagine - P	**-48.82**	L	**-44.12**	L	
Aspartic Acid - P	**-45.00**	L	**-33.33**	L	+
Citrulline - P	-22.73		**-35.45**	L	-
Glutamic Acid - P	**-49.05**	L	**-26.19**	L	+
Glutamine - P	-24.44		**-36.44**	L	-
Ornithine - P	**-26.67**	L	**-30.67**	L	
a-Amino-N-Butyric Acid - P	16.67		-16.67		
Alanine - P	-3.43		**32.57**	H	-
b-Alanine - P	-10.00		-10.00		
PSS / PSD	-25.23 / 27.61		-20.25 / 28.47		

CNS Metabolism	5/25/2004		12/6/2004		+/-
Arginine - P	-16.36		-5.45		+
Tryptophan - P	**-26.67**	L	**256.67**	H	-
GABA - P	-10.00		-10.00		
Glycine - P	-22.00		**-38.89**	L	-
Serine - P	**-54.17**	L	**-45.83**	L	+
Taurine - P	**-38.50**	L	**-44.50**	L	
Aspartic Acid - P	**-45.00**	L	**-33.33**	L	+
Glutamine - P	-24.44		**-36.44**	L	-
Ethanolamine - P	**25.00**	H	**37.50**	H	-
Phosphoethanolamine - P	10.00		3.33		
Phosphoserine - P	16.67		0.00		+
PSS / PSD	-16.86 / 26.26		7.55 / 46.54		

Connective Tissue	5/25/2004		12/6/2004		+/-
Leucine - P	**-52.73**	L	**-42.73**	L	+
Methionine - P	**-30.00**	L	-22.00		+
Valine - P	**-52.00**	L	**-51.20**	L	
Cystine - P	-10.00		**-40.00**	L	-
Hydroxylysine - P	**50.00**	H	**50.00**	H	
Hydroxyproline - P	**270.00**	H	-6.67		+
3-Methylhistidine - P	**30.00**	H	**30.00**	H	
Proline - P	1.11		**-25.93**	L	-
PSS / PSD	25.80 / 61.98		-13.56 / 33.56		

Essential Amino Acid	5/25/2004		12/6/2004		+/-
Arginine - P	-16.36		-5.45		+
Histidine - P	**-45.71**	L	-21.43		+
Isoleucine - P	**-57.27**	L	**-47.27**	L	+
Leucine - P	**-52.73**	L	**-42.73**	L	+
Lysine - P	**-36.00**	L	-10.00		+
Methionine - P	**-30.00**	L	-22.00		+
Phenylalanine - P	**-50.00**	L	**-34.21**	L	+
Threonine - P	**-34.67**	L	-18.00		+
Tryptophan - P	**-26.67**	L	**256.67**	H	-
Valine - P	**-52.00**	L	**-51.20**	L	
PSS / PSD	-40.14 / 40.14		0.44 / 50.90		

Fat Metabolism	5/25/2004		12/6/2004		+/-
Arginine - P	-16.36		-5.45		+
Isoleucine - P	**-57.27**	L	**-47.27**	L	+
Leucine - P	**-52.73**	L	**-42.73**	L	+
Valine - P	**-52.00**	L	**-51.20**	L	
Taurine - P	**-38.50**	L	**-44.50**	L	
Glutamine - P	-24.44		**-36.44**	L	-
Sarcosine - P	-10.00		**70.00**	H	-
PSS / PSD	-35.90 / 35.90		-22.51 / 42.51		

Gluconeogen	5/25/2004		12/6/2004		+/-
Threonine - P	**-34.67**	L	-18.00		+
Tryptophan - P	**-26.67**	L	**256.67**	H	-
Glycine - P	-22.00		**-38.89**	L	-
Serine - P	**-54.17**	L	**-45.83**	L	+
Alanine - P	-3.43		**32.57**	H	-
PSS / PSD	-28.19 / 28.19		37.30 / 78.39		

Hepatic Metabolism	5/25/2004		12/6/2004		+/-
Methionine - P	**-30.00**	L	-22.00		+
Taurine - P	**-38.50**	L	**-44.50**	L	
Glutamine - P	-24.44		**-36.44**	L	-
Cystine - P	-10.00		**-40.00**	L	-
Cystathionine - P	**25.00**	H	0.00		+
Homocystine - P	**50.00**	H	**50.00**	H	
Alanine - P	-3.43		**32.57**	H	-
PSS / PSD	-4.48 / 25.91		-8.62 / 32.22		

Immune Metabolites	5/25/2004		12/6/2004		+/-
Arginine - P	-16.36		-5.45		+
Threonine - P	**-34.67**	L	-18.00		+
Glutamine - P	-24.44		**-36.44**	L	-
Ornithine - P	**-26.67**	L	**-30.67**	L	
PSS / PSD	-25.54 / 25.54		-22.64 / 22.64		

Panel/Subset Comparison Report

Anna — **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 — Anna (2718)

Muscle Metabolites	5/25/2004		12/6/2004		+/-
Anserine - P	**50.00**	**H**	**50.00**	**H**	
Carnosine - P	**50.00**	**H**	**50.00**	**H**	
1-Methylhistidine - P	-5.00		-10.00		
3-Methylhistidine - P	**30.00**	**H**	**30.00**	**H**	
PSS / PSD	31.25 / 33.75		30.00 / 35.00		

Neuroendocrine Met.	5/25/2004		12/6/2004		+/-	
GABA - P	-10.00		-10.00			
Glycine - P	-22.00		**-38.89**	**L**	-	**-38.89** ← -22.00
Serine - P	**-54.17**	**L**	**-45.83**	**L**	+	**-54.17** → **-45.83**
Taurine - P	**-38.50**	**L**	**-44.50**	**L**		
Tyrosine - P	**-27.14**	**L**	-1.43		+	**-27.14** → -1.43
PSS / PSD	-30.36 / 30.36		-28.13 / 28.13			

Adrenal Function	5/25/2004		12/6/2004		+/-	
Cholesterol	**72.00**	**H**	**79.00**	**H**		
Eosinophils	**50.00**	**H**	**50.00**	**H**		
Eosinophil Count	-14.40		8.60			
Potassium	5.00		-15.00		-	-15.00 ← 5.00
Sodium	-3.85		-19.23		-	-19.23 ← -3.85
PSS / PSD	21.75 / 29.05		20.67 / 34.37			

Allergy	5/25/2004		12/6/2004		+/-	
Eosinophils	**50.00**	**H**	**50.00**	**H**		
Globulin	6.67		10.00			
Lymphocytes	**-56.67**	**L**	**-46.67**	**L**	+	**-56.67** → **-46.67**
Monocytes	**26.92**	**H**	**27.78**	**H**		
W.B.C.	**-53.08**	**L**	**-36.15**	**L**	+	**-53.08** → **-36.15**
PSS / PSD	-5.23 / 38.67		0.99 / 34.12			

Anti Oxidant Status	5/25/2004		12/6/2004		+/-	
Anion Gap	**38.33**	**H**	**-31.67**	**L**		
Bilirubin, Total	-13.64		-13.64			
Chloride	3.85		11.54		-	3.85 → 11.54
Cholesterol	**72.00**	**H**	**79.00**	**H**		
Glucose	23.53		11.76		+	11.76 ← 23.53
Iron, Total	-12.50		-10.83			
PSS / PSD	15.94 / 23.41		6.60 / 22.63			

Athletic Potential	5/25/2004		12/6/2004		+/-	
B.U.N./Creatinine Ratio	**63.16**	**H**	23.68		+	23.68 ← **63.16**
Cholesterol	**72.00**	**H**	**79.00**	**H**		
CO2	-16.67		**25.00**	**H**	-	-16.67 → **25.00**
Creatinine	-20.00		**-30.00**	**L**	-	**-30.00** ← -20.00
LDH	**35.33**	**H**	17.33		+	17.33 ← **35.33**
Potassium	5.00		-15.00		-	-15.00 ← 5.00
Protein, Total	14.00		14.00			
Sodium	-3.85		-19.23		-	-19.23 ← -3.85
HDL-Cholesterol	**39.09**	**H**	-8.18		+	-8.18 ← **39.09**
PSS / PSD	20.90 / 29.90		9.62 / 25.71			

Bone/Joint	5/25/2004		12/6/2004		+/-
Albumin	-5.00		-10.00		
Alkaline Phosphatase	**30.00**	**H**	21.20		+
Calcium	-11.90		-21.43		-
Neutrophils	**30.00**	**H**	6.00		+
Phosphorus	15.00		15.00		
Protein, Total	14.00		14.00		
Uric Acid	-10.34		-1.72		+
PSS / PSD	8.82 / 16.61		3.29 / 12.76		

Cardiac Marker	5/25/2004		12/6/2004		+/-
Cholesterol	**72.00**	**H**	**79.00**	**H**	
GGT	-13.33		-10.00		
Iron, Total	-12.50		-10.83		
LDH	**35.33**	**H**	17.33		+
sGOT	**37.50**	**H**	7.50		+
Triglycerides	-9.73		**47.99**	**H**	-
Uric Acid	-10.34		-1.72		+
HDL-Cholesterol	**39.09**	**H**	-8.18		+
LDL	**100.00**	**H**	**123.53**	**H**	-
PSS / PSD	19.83 / 27.49		20.38 / 25.51		

Cellular Distortions	5/25/2004		12/6/2004		+/-
Alkaline Phosphatase	**30.00**	**H**	21.20		+
Anion Gap	**38.33**	**H**	**-31.67**	**L**	
GGT	-13.33		-10.00		
Iron, Total	-12.50		-10.83		
LDH	**35.33**	**H**	17.33		+
Neutrophils	**30.00**	**H**	6.00		+
W.B.C.	**-53.08**	**L**	**-36.15**	**L**	+
PSS / PSD	6.84 / 26.57		-5.52 / 16.65		

Differential	5/25/2004		12/6/2004		+/-
Basophils	**-50.00**	**L**	-16.67		+
Eosinophils	**50.00**	**H**	**50.00**	**H**	
Lymphocytes	**-56.67**	**L**	**-46.67**	**L**	+
Monocytes	**26.92**	**H**	**27.78**	**H**	
Neutrophils	**30.00**	**H**	6.00		+
PSS / PSD	0.05 / 42.72		4.09 / 29.42		

Differential Count	5/25/2004		12/6/2004		+/-
Basophil Count	**-50.00**	**L**	**-25.50**	**L**	+
Eosinophil Count	-14.40		8.60		
Lymphocyte Count	**-54.80**	**L**	**-46.72**	**L**	+
Monocyte Count	**-30.00**	**L**	-12.33		+
Neutrophil Count	**-37.35**	**L**	**-30.03**	**L**	
PSS / PSD	-37.31 / 37.31		-21.20 / 24.64		

Panel/Subset Comparison Report

Anna — **Foundational Wellness Profile Date: 12/6/2004**

Female / Age: 52 — Anna (2718)

Electrolyte	5/25/2004		12/6/2004		+/-	
Calcium	-11.90		-21.43		-	-21.43 ← -11.90
Chloride	3.85		11.54		-	3.85 → 11.54
CO2	-16.67		**25.00**	**H**	-	-16.67 → **25.00**
Phosphorus	15.00		15.00			
Potassium	5.00		-15.00		-	-15.00 ← 5.00
Sodium	-3.85		-19.23		-	-19.23 ← -3.85
PSS / PSD	-1.43 / 9.38		-0.69 / 17.87			

Gastrointest. Function	5/25/2004		12/6/2004		+/-	
Anion Gap	**38.33**	**H**	**-31.67**	**L**		
Chloride	3.85		11.54		-	3.85 → 11.54
Cholesterol	**72.00**	**H**	**79.00**	**H**		
CO2	-16.67		**25.00**	**H**	-	-16.67 → **25.00**
Monocytes	**26.92**	**H**	**27.78**	**H**		
Potassium	5.00		-15.00		-	-15.00 ← 5.00
Sodium	-3.85		-19.23		-	-19.23 ← -3.85
Triglycerides	-9.73		**47.99**	**H**	-	-9.73 → **47.99**
LDL	**100.00**	**H**	**123.53**	**H**	-	**100.00** → **123.53**
PSS / PSD	23.98 / 30.71		27.66 / 42.30			

Hematology	5/25/2004		12/6/2004		+/-	
Hematocrit	-7.14		-3.00			
Hemoglobin	-15.00		7.14		+	-15.00 → 7.14
MCH	**29.23**	**H**	**26.77**	**H**		
MCHC	**-32.93**	**L**	22.09		+	**-32.93** → 22.09
MCV	**36.46**	**H**	21.14		+	21.14 ← **36.46**
R.B.C.	**-30.00**	**L**	-21.54		+	**-30.00** → -21.54
W.B.C.	**-53.08**	**L**	**-36.15**	**L**	+	**-53.08** → **-36.15**
PSS / PSD	-10.35 / 29.12		2.35 / 19.69			

Inflammatory Process	5/25/2004		12/6/2004		+/-	
Eosinophils	**50.00**	**H**	**50.00**	**H**		
Globulin	6.67		10.00			
LDH	**35.33**	**H**	17.33		+	17.33 ← **35.33**
Neutrophils	**30.00**	**H**	6.00		+	6.00 ← **30.00**
Potassium	5.00		-15.00		-	-15.00 ← 5.00
sGOT	**37.50**	**H**	7.50		+	7.50 ← **37.50**
sGPT	**42.50**	**H**	10.00		+	10.00 ← **42.50**
Triglycerides	-9.73		**47.99**	**H**	-	-9.73 → **47.99**
Uric Acid	-10.34		-1.72		+	-10.34 → -1.72
LDL	**100.00**	**H**	**123.53**	**H**	-	**100.00** → **123.53**
PSS / PSD	28.69 / 32.71		25.56 / 28.91			

Kidney Function	5/25/2004		12/6/2004		+/-
Albumin	-5.00		-10.00		
B.U.N.	**30.95**	**H**	-7.14		+
B.U.N./Creatinine Ratio	**63.16**	**H**	23.68		+
Chloride	3.85		11.54		-
CO2	-16.67		**25.00**	**H**	-
Creatinine	-20.00		**-30.00**	**L**	-
Glucose	23.53		11.76		+
Potassium	5.00		-15.00		-
Protein, Total	14.00		14.00		
Sodium	-3.85		-19.23		-
PSS / PSD	9.50 / 18.60		0.46 / 16.74		

Lipid	5/25/2004		12/6/2004		+/-
Cholesterol	**72.00**	**H**	**79.00**	**H**	
Triglycerides	-9.73		**47.99**	**H**	-
HDL-Cholesterol	**39.09**	**H**	-8.18		+
LDL	**100.00**	**H**	**123.53**	**H**	-
PSS / PSD	33.56 / 36.80		40.39 / 43.12		

Liver Function	5/25/2004		12/6/2004		+/-
Albumin	-5.00		-10.00		
Alkaline Phosphatase	**30.00**	**H**	21.20		+
Bilirubin, Total	-13.64		-13.64		
Cholesterol	**72.00**	**H**	**79.00**	**H**	
GGT	-13.33		-10.00		
Protein, Total	14.00		14.00		
sGOT	**37.50**	**H**	7.50		+
sGPT	**42.50**	**H**	10.00		+
PSS / PSD	20.50 / 28.50		12.26 / 20.67		

Nitrogen	5/25/2004		12/6/2004		+/-
B.U.N.	**30.95**	**H**	-7.14		+
B.U.N./Creatinine Ratio	**63.16**	**H**	23.68		+
Creatinine	-20.00		**-30.00**	**L**	-
Uric Acid	-10.34		-1.72		+
PSS / PSD	15.94 / 31.11		-3.80 / 15.64		

Protein	5/25/2004		12/6/2004		+/-
A/G Ratio	**-30.36**	**L**	**-35.50**	**L**	
Albumin	-5.00		-10.00		
Globulin	6.67		10.00		
Protein, Total	14.00		14.00		
Protein/Globulin Ratio	-22.50		**-29.70**	**L**	
PSS / PSD	-7.44 / 15.70		-10.24 / 19.84		

Pulmonary Function	5/25/2004		12/6/2004		+/-
Anion Gap	**38.33**	**H**	**-31.67**	**L**	
Calcium	-11.90		-21.43		-
CO2	-16.67		**25.00**	**H**	-
LDH	**35.33**	**H**	17.33		+
Potassium	5.00		-15.00		-
sGOT	**37.50**	**H**	7.50		+
Sodium	-3.85		-19.23		-
PSS / PSD	11.96 / 21.23		-5.36 / 19.59		

Ratios	5/25/2004		12/6/2004		+/-
A/G Ratio	**-30.36**	**L**	**-35.50**	**L**	
B.U.N./Creatinine Ratio	**63.16**	**H**	23.68		+
Calcium/Phosphorus Ratio	**-35.26**	**L**	**-40.53**	**L**	
Sodium/Potassium Ratio	-11.23		9.13		
Protein/Globulin Ratio	-22.50		**-29.70**	**L**	
PSS / PSD	-6.03 / 27.09		-12.15 / 23.09		

Thyroid	5/25/2004		12/6/2004		+/-
Thyroxine (T4)	**-32.67**	**L**	-22.00		+
T-3 Uptake	10.00		10.00		
Free T4 Index (T7)	**-31.08**	**L**	-22.97		+
PSS / PSD	-16.85 / 21.85		-8.74 / 13.74		

Amino Acid Catabolism	5/25/2004		12/6/2004		+/-
a-Ketoisovalerate	**87.50**	**H**	-10.00		+
a-Ketoisocaproate	**30.00**	**H**	-2.00		+
a-Keto-b-methylvalerate	**64.29**	**H**	-14.29		+
PSS / PSD	60.60 / 60.60		-8.76 / 8.76		

B-Complex Markers	5/25/2004		12/6/2004		+/-
b-Hydroxyisovalerate	**33.64**	**H**	-10.91		+
a-Ketoisovalerate	**87.50**	**H**	-10.00		+
a-Ketoisocaproate	**30.00**	**H**	-2.00		+
a-Keto-b-methylvalerate	**64.29**	**H**	-14.29		+
Methylmalonate	-20.83		-20.83		
PSS / PSD	38.92 / 47.25		-11.61 / 11.61		

CAC Cycle Ratios	5/25/2004		12/6/2004		+/-
CA Cycle Entry	**151.28**	**H**	**153.47**	**H**	
CA Cycle Phase 1	**-26.03**	**L**	**43.02**	**H**	-
CA Cycle Phase 2	**-34.35**	**L**	**-25.40**	**L**	+
CA Cycle Phase 3	-10.88		4.58		
CA Cycle Phase 4	**-41.32**	**L**	-20.25		+
CA Cycle Phase 5	**-31.80**	**L**	**148.82**	**H**	-
CA Cycle Phase 6	**136.67**	**H**	**381.37**	**H**	-
CA Cycle Return	**-51.06**	**L**	-16.44		+
PSS / PSD	11.56 / 60.42		83.65 / 99.17		

Carbohydrate Metabolism	5/25/2004		12/6/2004		+/-
Lactate	-15.56		**53.33**	H	-
Pyruvate	-3.57		**35.71**	H	-
a-Hydroxybutyrate	**106.36**	H	**-43.64**	L	+
b-Hydroxybutyrate	**25.56**	H	**-36.67**	L	-
PSS / PSD	28.20 / 37.76		2.19 / 42.34		

Citric Acid Cycle	5/25/2004		12/6/2004		+/-
Citrate	**-27.76**	L	15.76		+
cis-Aconitate	**69.12**	H	**-30.88**	L	+
Isocitrate	20.00		-13.33		
a-Ketoglutarate	**36.43**	H	-6.43		+
Succinate	-12.63		**28.42**	H	-
Fumarate	**50.00**	H	**-33.00**	L	+
Malate	**150.00**	H	**28.57**	H	+
Hydroxymethylglutarate	**38.71**	H	-11.29		+
PSS / PSD	40.48 / 50.58		-2.77 / 20.96		

Intestinal Dysbiosis	5/25/2004		12/6/2004		+/-
Hippurate	**25.00**	H	**76.43**	H	-
Benzoate	**30.39**	H	8.82		+
p-Hydroxybenzoate	-22.73		**-40.91**	L	-
p-Hydroxyphenyllactate	**65.07**	H	**86.99**	H	-
Phenylacetate	**-28.57**	L	21.43		
Phenylpropionate	**35.71**	H	**950.00**	H	-
Tricarballylate	**34.62**	H	19.23		+
DHPP	12.50		-23.75		-
Indican	**53.49**	H	-3.49		+
PSS / PSD	18.39 / 26.29		84.21 / 94.70		

Liver Detox Indicators	5/25/2004		12/6/2004		+/-
2-Methylhippurate	**27.03**	H	**139.19**	H	-
Glucarate	-13.76		**-47.72**	L	-
P-Hydroxyphenylacetate	-1.11		**-30.00**	L	-
Orotate	**50.00**	H	**31.82**	H	+
Pyroglutamate	**52.50**	H	**156.25**	H	-
Sulfate	**163.33**	H	**-55.00**	L	+
PSS / PSD	46.33 / 51.29		32.42 / 76.66		

Neurotransmitters	5/25/2004		12/6/2004		+/-
Vanilylmandelate	**-46.00**	L	**-26.00**	L	+
Homovanillate	-6.36		10.00		
5-Hydroxyindoleacetate	**1033.61**	H	**720.49**	H	+
Kynurenate	-12.50		-20.00		
Quinolinate	1.43		**138.57**	H	-
PSS / PSD	194.03 / 219.98		164.61 / 183.01		