

#4300 DFH Comprehensive Metabolic Profile (CMP)  
 #4310 DFH Metabolic Profile (MP)  
 #4320 DFH Metabolic Profile plus FA (MP+FA)

**Specimen Requirements:**

12 ml of overnight urine, frozen  
 Method: LC/MS-MS, Colorimetric

Fasting blood spot\*  
 Method: GC/MS

Non-fasting blood spot\*\*  
 Method: ELISA

\*CMP & MP+FA only  
 \*\*CMP only



B-vitamin Status

Energy Production

Neurotransmitters

Detoxification

Dysbiosis

| PROFILES                      | CMP | MP | MP+FA | PROFILES   | CMP | MP | MP+FA |
|-------------------------------|-----|----|-------|--|-----|----|-------|
| ORGANIX™ PROFILE              |     |    |       | BLOODSPOT FATTY ACID PROFILE                     |     |    |       |
| Analyte                       |     |    |       | Analyte  |     |    |       |
| Pyruvate                      | ✓   | ✓  | ✓     | Arachidonic (20:4n6)                             | ✓   |    | ✓     |
| α-Ketoglutarate               | ✓   | ✓  | ✓     | Dihomogamma Linolenic (20:3n6)                   | ✓   |    | ✓     |
| α-Ketoisovalerate             | ✓   | ✓  | ✓     | Docosahexaenoic (22:6n3)                         | ✓   |    | ✓     |
| α-Ketoisocaproate             | ✓   | ✓  | ✓     | Eicosapentaenoic (20:5n3)                        | ✓   |    | ✓     |
| α-Keto-β-Methylvalerate       | ✓   | ✓  | ✓     | Gamma Linolenic (18:3n6)                         | ✓   |    | ✓     |
| Xanthurenate                  | ✓   | ✓  | ✓     | Linoleic (18:2n6)                                | ✓   |    | ✓     |
| β-Hydroxyisovalerate          | ✓   | ✓  | ✓     | Total C:18 Trans                                 | ✓   |    | ✓     |
| Methylmalonate                | ✓   | ✓  | ✓     | LA/GLA Ratio                                     | ✓   |    | ✓     |
| Formiminoglutamate            | ✓   | ✓  | ✓     | AA/EPA Ratio                                     | ✓   |    | ✓     |
| Adipate                       | ✓   | ✓  | ✓     | EPA/DGLA Ratio                                   | ✓   |    | ✓     |
| Suberate                      | ✓   | ✓  | ✓     | Index of Omega-3 Fatty Acids                     | ✓   |    | ✓     |
| Ethylmalonate                 | ✓   | ✓  | ✓     | BLOODSPOT IgG <sub>4</sub> FOOD ANTIBODY PROFILE |     |    |       |
| Lactate                       | ✓   | ✓  | ✓     | Almond   | ✓   |    |       |
| β-Hydroxybutyrate             | ✓   | ✓  | ✓     | Aspergillus                                      | ✓   |    |       |
| Succinate                     | ✓   | ✓  | ✓     | Beef   | ✓   |    |       |
| Fumarate                      | ✓   | ✓  | ✓     | Cantaloupe                                       | ✓   |    |       |
| Malate                        | ✓   | ✓  | ✓     | Cashew   | ✓   |    |       |
| Hydroxymethylglutarate        | ✓   | ✓  | ✓     | Chicken  | ✓   |    |       |
| Vanilmandelate                | ✓   | ✓  | ✓     | Corn   | ✓   |    |       |
| Homovanillate                 | ✓   | ✓  | ✓     | Crab   | ✓   |    |       |
| 5-Hydroxyindoleacetate        | ✓   | ✓  | ✓     | Egg, Whole                                       | ✓   |    |       |
| Kynurenate                    | ✓   | ✓  | ✓     | Garlic   | ✓   |    |       |
| Quinolate                     | ✓   | ✓  | ✓     | Lobster  | ✓   |    |       |
| Citrate                       | ✓   | ✓  | ✓     | Milk   | ✓   |    |       |
| Cis-Aconitate                 | ✓   | ✓  | ✓     | Mustard Greens                                   | ✓   |    |       |
| Isocitrate                    | ✓   | ✓  | ✓     | Oat  | ✓   |    |       |
| 2-Methylhippurate             | ✓   | ✓  | ✓     | Orange   | ✓   |    |       |
| Orotate                       | ✓   | ✓  | ✓     | Pea, Green                                       | ✓   |    |       |
| Glucarate                     | ✓   | ✓  | ✓     | Peanut   | ✓   |    |       |
| α-Hydroxybutyrate             | ✓   | ✓  | ✓     | Pinto Bean                                       | ✓   |    |       |
| Pyroglutamate                 | ✓   | ✓  | ✓     | Pork   | ✓   |    |       |
| Sulfate                       | ✓   | ✓  | ✓     | Rice   | ✓   |    |       |
| Benzoate                      | ✓   | ✓  | ✓     | Salmon   | ✓   |    |       |
| Phenylacetate                 | ✓   | ✓  | ✓     | Shrimp   | ✓   |    |       |
| Phenylpropionate              | ✓   | ✓  | ✓     | Soybean  | ✓   |    |       |
| p-Hydroxybenzoate             | ✓   | ✓  | ✓     | Strawberry                                       | ✓   |    |       |
| p-Hydroxyphenylacetate        | ✓   | ✓  | ✓     | Sunflower  | ✓   |    |       |
| Indican                       | ✓   | ✓  | ✓     | Tomato   | ✓   |    |       |
| Tricarballic acid             | ✓   | ✓  | ✓     | Tuna   | ✓   |    |       |
| 3,4 Dihydroxyphenylpropionate | ✓   | ✓  | ✓     | Turkey   | ✓   |    |       |
| Creatinine                    | ✓   | ✓  | ✓     | Walnut   | ✓   |    |       |
| Urine Lipid Peroxide          | ✓   | ✓  | ✓     | Wheat  | ✓   |    |       |



Individualized Solutions for Integrative Clinicians™  
 call 800.221.4640 or visit our website at www.metamatrix.com

# A Customized Nutrition Program Can Benefit Both Your Practice and Your Patients!



**Benefits to your practice:**

|  |  |
|--|--|
| Customized nutrition differentiates your clinical practice                 | → <b>Makes you more competitive</b> in your practice area          |
| Objective assessments pinpoint areas on which to focus                     | → <b>Improves clinical outcomes</b>                                |
| Patients see their needs and can chart their progress                      | → Creates the need and motivation for a <b>maintenance program</b> |
| Patients buy into a program when you show them objective evidence of need  | → Results in better <b>long-term compliance</b>                    |
| Computerized analysis of test results determines precise nutritional needs | → <b>No more guessing</b> at products and dosages                  |
| Convenient blood spot and urine specimens                                  | → <b>No blood draw required!</b>                                   |
| Residual income contributes to the health of your practice                 | → Positive impact on <b>practice revenues</b>                      |
| Support from Metamatrix, the leader in functional medicine testing         | → <b>Evidence-based</b> nutritional therapies                      |

**Benefits for your patients:**

|  |  |
|--|--|
| Testing yields recommendations for only the supplements they need        | → <b>Cost-effective</b>  |
| Identifies areas of imbalances not typically found in standard lab tests | → They no longer need to hear <b>“there’s nothing wrong”</b> with them |
| Identifies metabolic imbalances before they become chronic diseases      | → Promotes <b>health care, not disease care!</b>                       |
| Supports and augments other therapies                                    | → Significantly <b>improves patient response</b> to other therapies    |



Designs for Health can implement a  
**Customized Nutrition Program in your practice!**

**The DFH Comprehensive Metabolic Profile:**

**Organix<sup>SM</sup> Profile**  
 Urine organic acids help establish the nutritional and metabolic basis of patient symptoms. A single urine specimen provides important information about:

- Carnitine and NAC
- Lipoic acid and CoQ10
- Neurotransmitter metabolism
- Methylation sufficiency status
- Functional B-vitamins status
- Mitochondrial energy production
- Detoxification adequacy
- Bacterial dysbiosis

**Urine Lipid Peroxides**  
 As the body produces harmful free radicals, antioxidant supplements can help protect cells from damage resulting in oxidation of cell membranes, forming lipid peroxides. High levels of lipid peroxides are associated with cancer, heart disease, stroke, and aging.

**Bloodspot<sup>SM</sup> Fatty Acid Profile\***  
 From a simple finger stick, this unique test measures levels of the principle omega-3, omega-6, and trans fatty acids. Ratios of these important eicosanoid precursors provide a sensitive, early indicator of inflammatory risk and cardiovascular disease.

**Bloodspot<sup>SM</sup> IgG Food Antibody Profile\***  
 Researchers estimate that at least 60% of the U.S. population suffers from unsuspected food reactions. This finger-stick method tests for 30 of the most commonly positive hidden food sensitivities.

\*not available in NY  
 Organix, Bloodspot, Metamatrix, and the Metamatrix logo are servicemarks or registered servicemarks of Metamatrix, Inc.  
 Designs for Health and the Designs for Health logo are registered trademarks of Designs for Health, Inc.

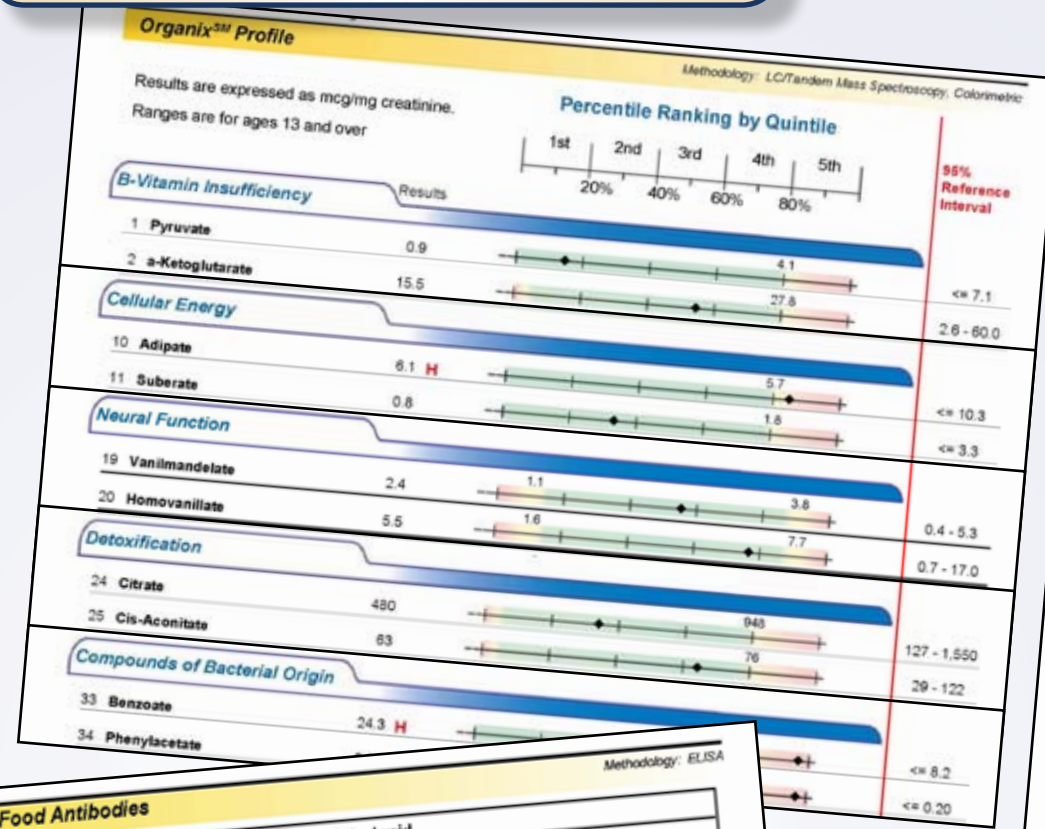
At-a-glance summary of abnormal results

4300 Designs for Health Comprehensive Metabolic Profile

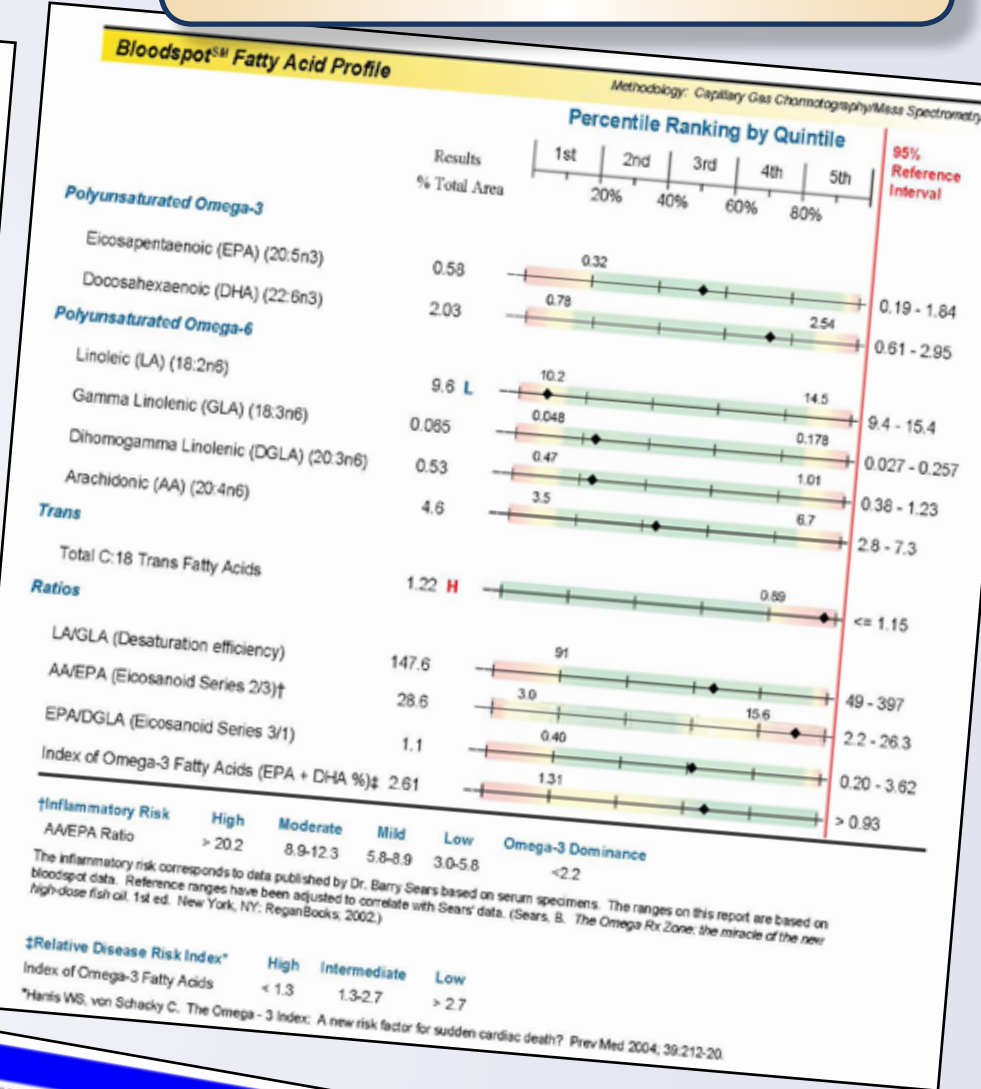
Summary of abnormal results:

| Findings   | Intervention Options   | Metabolic Association   |
|--|--|---|
| <b>B-Vitamin Insufficiency</b><br>Lactate<br>Methylmalonate  | High<br>High<br>CoQ10, Lipolic Acid, B1, B2, B3, B5<br>B12   | Glucose oxidation<br>Adenosylcobalamin insufficiency  |
| <b>Cellular Energy</b><br>Adipate<br>Ethylmalonate<br>Lactate                                      | High<br>High<br>High<br>Carnitine, B2<br>Carnitine, B2<br>CoQ10, Lipolic Acid, B1, B2, B3, B5  | Fatty acid oxidation<br>Fatty acid oxidation<br>Glucose oxidation                                     |
| <b>General Amino Acid Deficiency</b><br>Succinate  | Very Low<br>Isoleucine, Valine, B12  | Mitochondrial ATP production  |
| <b>Neural Function</b><br>Kynurenate<br>Quinolinate  | High<br>High<br>B6<br>Magnesium, Anti-inflammatories,<br>Antioxidants  | Receptor antagonist<br>Receptor agonist   |
| <b>Detoxification</b><br>Orotate   | High<br>Arginine, Magnesium, Calcium   | Urea cycle overload (ammonia toxicity)  |
| <b>Dysbiosis</b><br>Benzoate<br>Phenylacetate<br>p-Hydroxybenzoate<br>Indican<br>Tricarballic acid | High<br>High<br>High<br>High<br>High<br>Probiotics or antibiotics<br>Probiotics or antibiotics<br>Probiotics or antibiotics<br>Probiotics or antibiotics | Bacterial product<br>Bacterial product<br>Bacterial product<br>Bacterial product<br>Bacterial product |
| <b>Oxidative Stress</b><br>No Abnormality Found  |  |   |
| <b>Polyunsaturated Omega 3</b><br>No Abnormality Found   |  |   |
| <b>Polyunsaturated Omega 6</b><br>Linoleic (18:2n6)  | Low<br>Peanut oil  | Essential fatty acid; Low men fluidity  |
| <b>Trans</b><br>Total C:18 Trans   | High<br>Avoid hydrogenated oils  | Hypertlipidemia and degenera diseases   |
| <b>Ratios</b><br>No Abnormality Found  |  |   |

Comprehensive evaluation of nutrient insufficiencies



Measurement of Omega-3 and Omega-6 eicosanoid precursors provide a sensitive, early indicator of inflammatory risk



Bloodspot<sup>SM</sup> IgG<sub>4</sub> Food Antibodies

|          | Foods to Avoid    |                       |              |
|----------|-------------------|-----------------------|--------------|
|          | Mild<br>+1 and +2 | Moderate<br>+3 and +4 | Severe<br>+5 |
| Negative |                   |                       |              |

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

Food Sensitivities

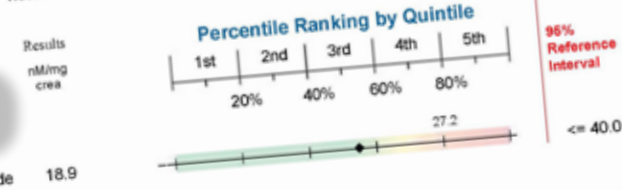
Supplement Recommendation Summary

- The Designs for Health Metabolic Profile results may be used, along with full knowledge of this patient's medical history and concerns, to help healthcare professionals create an individually optimized nutritional support program. The summary table below is based strictly on the results from this test. It shows estimates of nutrient doses that may help to normalize nutrient-dependent metabolic functions. All amounts are adult doses that should be adjusted for children according to body weight and indication of need. These supplement suggestions are based solely on the objective test markers and may serve as a foundational program to optimize metabolic function and address any observed deficiencies. These suggestions may be used in place of supplements the patient was taking at the time the testing was initiated. However, it should not preclude this patient from taking additional supplements as recommended by his/her healthcare provider for other health conditions or requirements unique to the individual. Recommendations may appear because of secondary associations that are not stated in the Summary section on the first page.
- Foundational Metabolic Support**
- PaleoGreens (unless specifically reactive to any of the ingredients) (or 6-9 servings of organic vegetables) 1 heaping tbsp daily
  - PaleoFiber 1 heaping tbsp daily
  - DFH Complete Multivitamin 1 tsp twice daily (or 50 g dietary fiber daily)
  - Paleomeal Dairy Free DFH Complete Multivitamin (with or without iron depending on practitioner recommendation) 1 scoop daily
- Vitamin and Mineral Recommendations**
- B-Supreme 1 twice daily
  - Ultra B12-Folate 1/day
  - C + BioFizz 1 tsp/day
  - Magnesium Malate Chelate 2/day
  - Q-Avail 30 1 cap/day

Specific supplement and dosage recommendations

Lipid Peroxides - Urine

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



Oxidative Stress Indicator

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

