ANALYTES

Polysaturated Omega-3
- Alpha-Linolenic Acid (ALA)
- Eicosapentaenoic Acid (EPA)
- Docosapentaenoic Acid
- Docosahexaenoic Acid (DHA)

Polysaturated Omega-6
- Linoleic Acid
- Gamma Linolenic Acid (GLA)
- Arachidonic Acid
- Docosacleic Acid
- Docosatetraenoic Acid

Polyunsaturated Omega-9
- Myristoleic Acid
- Palmitoleic Acid
- vaccenic Acid
- Oleic Acid
- Trenicosanoic Acid
- Nenonic Acid

Saturated
- Capric Acid
- Lauric Acid
- Myristic Acid
- Palmitic Acid
- Stearic Acid
- Arachidic Acid
- Behenic Acid
- Lignoceric Acid
- Hexacosanoic Acid

Odd Chain
- Palmitoleic Acid
- Palmitoleic Acid
- Palmitoleic Acid
- Nonadecenoic Acid
- Heneicosanoic Acid
- Tricosanoic Acid

Trans
- Palmitostearic Acid
- Total C18 Trans

Ratios (calculated)
- LA/ALA
- LA/GLA
- EPA/DGLA
- AA/EPA
- Treni/Tetraene
- Omega 3 Index

RESEARCH IS REVEALING THE LONG-TERM HEALTH BENEFITS OF CONSUMPTION OF FISH OILS AND/OR GLA-RICH OILS ON...

Cardiovascular Health
- Endocrine influence
- Glucose maintenance
- Lipids and triglycerides
- Metabolic parameters
- Primary prevention
- Secondary prevention

Children's Health and Development
- Learning Disabilities
- ASD - Autism spectrum disorders
- Attention, learning, and behavior
- Disease prevention
- Neurological development
- Intelligence
- Vision

Female Health and Reproduction
- Peri- and post-menopause
- Pregnancy & breastfeeding
- Puberty and menstrual years

Immune Health
- Acute Infections
- Allergies
- Chronic immune deficiencies
- Joint and Tissue Inflammation
- Intestinal health
- Joint flexibility & mobility

Lifestyle and Healthy Living
- Body fat/weight
- Fitness
- Healthful living
- Stress

Mental/Neurological Health
- CNS development
- Cognitive function/aging
- Depression and mood

CPT codes, turnaround times, sample reports, and additional information is available online at www.metametrix.com/fattyacids

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THE SKINNY ON FATS

STRIKING THE RIGHT BALANCE

Anti-inflammatory and Pro-inflammatory Eicosanoids

The omega-3 fatty acids EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) are found in coldwater fish are precursors to the Series 3 eicosanoids, which have potent anti-inflammatory effects. The oil from certain plant seeds, particularly borage, evening primrose, and black currant, have high concentrations of the omega-6 fatty acid GLA (gamma linolenic acid), the precursor to the anti-inflammatory Series 1 eicosanoids. The omega-6 fatty acid AA (arachidonic acid) is found in high concentration in the fat of red meats and is precursor to Series 2 eicosanoids, increasing the risk for various disease and inflammatory processes in the body. The Bloodspot™ Fatty Acid Profile can guide patients to the right balance of fatty acids intake.

Evaluate Fatty Acid Supplementation

Evidence of the adverse effects of fatty acid deficiencies has led to sharply increased consumption of essential fatty acids supplements. The balance between the pro-inflammatory and anti-inflammatory eicosanoids is influenced in large part by the balance of fatty acids we consume. Since inflammation has now been shown to be integral to so many disease processes, nutrients which counteract inflammation can have profound health benefits. But your patients need an answer to a critical question about their fatty acid supplementation— are they taking too little to be effective or such an excess that they are causing other health problems?


"Polyunsaturated fatty acids possess extremely potent biologic activities and their homeostatic functions in regulating blood vessel leaking, lipid accumulation and immune cell behavior are relevant to the initiation and progress of heart and blood vessel disease."

STATINS NEGATIVELY IMPACT FATTY ACID STATUS
HMCoA reductase inhibitors ("statins") can increase the AA/EPA ratio. Routine monitoring of the AA/EPA ratio—an early marker of inflammation—would be particularly important for patients on these cholesterol-lowering drugs.

IMMUNOSUPPRESSIVE EFFECTS OF OMEGA-3 FATTY ACIDS
Supplementing with fish oil and/or GLA rich oils in the wrong balance can exacerbate inflammation or immune reactions. The anti-inflammatory effects of omega-3 fatty acids can actually suppress immune function at high doses, leading to increased infections, poor wound healing, and possible tumor growth.

EXCESSIVE INTAKE OF PUFAS INDUCES FREE RADICAL PRODUCTION
Researchers found that PUFA induced lipid peroxidation is common among patients who supplement with high doses of fatty acids without adequate antioxidant protection. Clinical management of fatty acid and antioxidant supplementation is aided by testing for fatty acid balance and measuring markers of oxidant damage.

BLOODSPOT™ FATTY ACID PROFILE
From a simple finger stick, this easy-to-use test measures key omega-3 and omega-6 fatty acids and calculates key indicators to establish your optimal balance. Trans fatty acids—the "bad" oils in processed foods—are also measured.