

Patient: **SAMPLE
PATIENT**

DOB:

Sex:

MRN:

3540 Essential & Metabolic Fatty Acids - Bloodspot

Methodology: GCMS

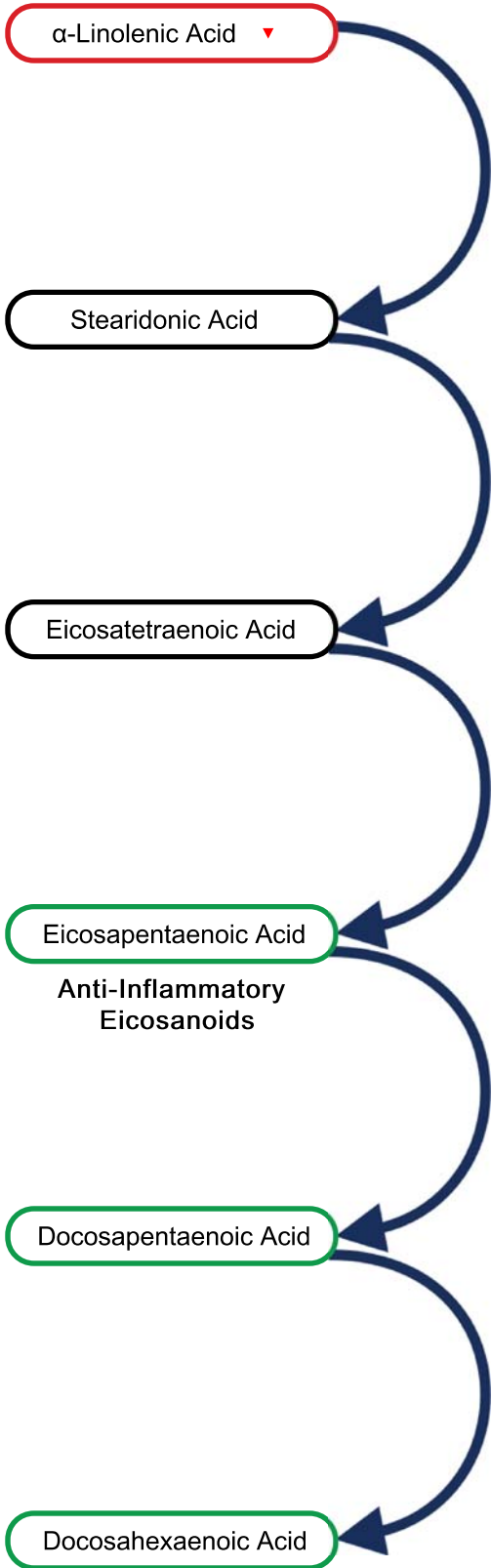
Omega-3 Fatty Acids			Omega-6 Fatty Acids		
Analyte		Reference Range	Analyte		Reference Range
(cold water fish, flax, walnut)			(vegetable oil, grains, most meats, dairy)		
α-Linolenic (ALA) 18:3 n3	0.11	>= 0.28 wt %	Linoleic (LA) 18:2 n6	15.0	18.8-28.3 wt %
Eicosapentaenoic (EPA) 20:5 n3	0.14	>= 0.12 wt %	γ-Linolenic (GLA) 18:3 n6	0.14	0.15-0.54 wt %
Docosapentaenoic (DPA) 22:5 n3	1.09	>= 0.34 wt %	Dihomo-γ-linolenic (DGLA) 20:3 n6	1.17	>= 1.02 wt %
Docosahexaenoic (DHA) 22:6 n3	1.7	>= 0.8 wt %	Arachidonic (AA) 20:4 n6	17	7-12 wt %
% Omega-3s	3.0	>= 1.6	Docosatetraenoic (DTA) 22:4 n6	2.74	0.45-1.25 wt %
Omega-9 Fatty Acids			Eicosadienoic 20:2 n6	0.39	<= 0.26 wt %
Analyte		Reference Range	% Omega-6s	36.4	30.5-39.7
(olive oil)			Monounsaturated Fatty Acids		
Oleic 18:1 n9	13	14-21 wt %	Omega-7 Fatty Acids		
Nervonic 24:1 n9	3.0	1.1-1.8 wt %	Palmitoleic 16:1 n7	0.29	<= 2.58 wt %
% Omega-9s	16.6	17.3-22.5	Vaccenic 18:1 n7	1.23	<= 1.65 wt %
Saturated Fatty Acids			Trans Fats		
Analyte		Reference Range	Reference Range		
(meat, dairy, coconuts, palm oils)			Elaidic 18:1 n9t	0.15	<= 0.59 wt %
Palmitic C16:0	21	19-27 wt %	Delta-6-Desaturase Activity		
Stearic C18:0	17	9-12 wt %	Upregulated Functional Impaired		
Arachidic C20:0	0.23	0.24-0.40 wt %	Linoleic / DGLA 18:2 n6 / 20:3 n6	12.8	12.6-31.5
Behenic C22:0	0.95	0.88-1.61 wt %	Cardiovascular Risk		
Tricosanoic C23:0	0.14	0.19-0.26 wt %	Reference Range		
Lignoceric C24:0	2.8	1.1-1.9 wt %	Analyte		Reference Range
Pentadecanoic C15:0	0.04	0.14-0.30 wt %	Omega-6s / Omega-3s	11.9	8.5-27.4
Margaric C17:0	0.23	0.24-0.45 wt %	AA / EPA 20:4 n6 / 20:5 n3	118	10-86
% Saturated Fats	42.3	39.8-43.6	Omega-3 Index *	4.6	>= 4.0

The Essential Fatty Acid reference ranges are based on an adult population.

* The patient results for the Omega 3 Index have been converted to red blood cell equivalence in order to maintain applicability to the literature-based reference ranges for this marker.

Fatty Acid Metabolism

Omega-3 Metabolism



Enzyme

Delta-6-Desaturase
Important Regulators:
B2, B3, B6, Vitamin C,
Insulin, Zn, Mg

Elongase
Important Regulators:
B3, B5, B6, Biotin,
Vitamin C

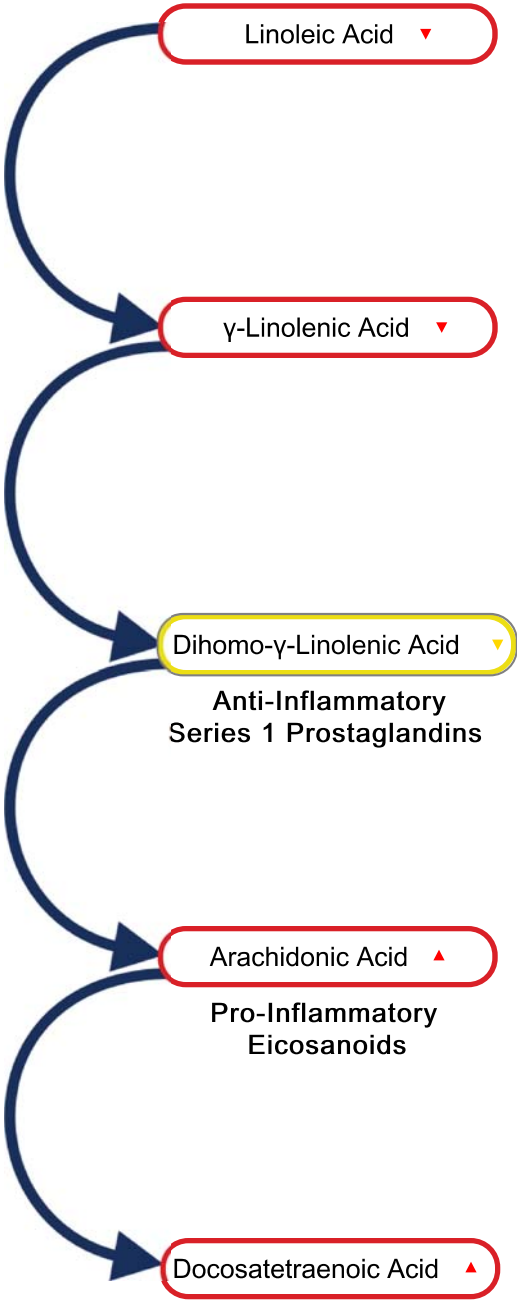
Delta-5-Desaturase
Important Regulators:
B2, B3, B6, Vitamin C,
Insulin, Zn, Mg

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Important Regulators:
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Elongase

Delta-6-Desaturase

Omega-6 Metabolism



Commentary

For more information regarding Essential and Metabolic Fatty Acids clinical interpretation, please refer to the NutrEval Support Guide at www.gdx.net/nutrevalguide

This test has been developed and its performance characteristics determined by Genova Diagnostics, Inc. It has not been cleared by the U.S. Food and Drug Administration.

The **Reference Range** is a statistical interval representing 95% or 2 Standard Deviations (2 S.D.) of the reference range population. One Standard Deviation (1 S.D.) is a statistical interval representing ~68% of the reference population. Values between 1 and 2 S.D. are not necessarily abnormal. Clinical Correlation is suggested.

