

Patient:

### 3540 Essential & Metabolic Fatty Acids Bloodspot

Methodology: GCMS

Omega-3 Fatty Acids		Omega-6 Fatty Acids	
Analyte	Reference Range	Analyte	Reference Range
<b>Omega-3 Fatty Acids</b>		<b>Omega-6 Fatty Acids</b>	
	(cold water fish, flax, walnut)		(vegetable oil, grains, most meats, dairy)
α-Linolenic (ALA) 18:3 n3	9.13 >= 0.28 wt %	Linoleic (LA) 18:2 n6	21.8 18.8-28.3 wt %
Eicosapentaenoic (EPA) 20:5 n3	0.24 >= 0.12 wt %	γ-Linolenic (GLA) 18:3 n6	0.32 0.15-0.54 wt %
Docosapentaenoic (DPA) 22:5 n3	0.79 >= 0.34 wt %	Dihomo-γ-linolenic (DGLA) 20:3 n6	4.77 >= 1.02 wt %
Docosahexaenoic (DHA) 22:6 n3	1.2 >= 0.8 wt %	Arachidonic (AA) 20:4 n6	8 7-12 wt %
% Omega-3s	11.4 >= 1.6	Docosatetraenoic (DTA) 22:4 n6	0.68 0.45-1.25 wt %
<b>Omega-9 Fatty Acids</b>		<b>Monounsaturated Fatty Acids</b>	
	(olive oil)	<b>Omega-7 Fatty Acids</b>	
Oleic 18:1 n9	17 14-21 wt %	Palmitoleic 16:1 n7	1.11 ≤ 2.58 wt %
Nervonic 24:1 n9	1.6 1.1-1.8 wt %	Vaccenic 18:1 n7	0.12 ≤ 1.65 wt %
% Omega-9s	18.4 17.3-22.5	<b>Trans Fats</b>	
<b>Saturated Fatty Acids</b>		<b>Delta-6-Desaturase Activity</b>	
	(meat, dairy, coconuts, palm oils)	Upregulated Functional Impaired	
Palmitic C16:0	21 19-27 wt %	Linoleic / DGLA 18:2 n6 / 20:3 n6	4.6 12.6-31.5
Stearic C18:0	10 9-12 wt %	<b>Cardiovascular Risk</b>	
Arachidic C20:0	0.27 0.24-0.40 wt %	<b>Analyte</b>	
Behenic C22:0	1.11 0.88-1.61 wt %	Omega-6s / Omega-3s	3.1 8.5-27.4
Tricosanoic C23:0	0.21 0.19-0.26 wt %	AA / EPA 20:4 n6 / 20:5 n3	32 10-86
Lignoceric C24:0	1.3 1.1-1.9 wt %	Omega-3 Index *	3.7 ≥ 4.0
Pentadecanoic C15:0	0.24 0.14-0.30 wt %		
Margaric C17:0	0.29 0.24-0.45 wt %		
% Saturated Fats	33.6 39.8-43.6		

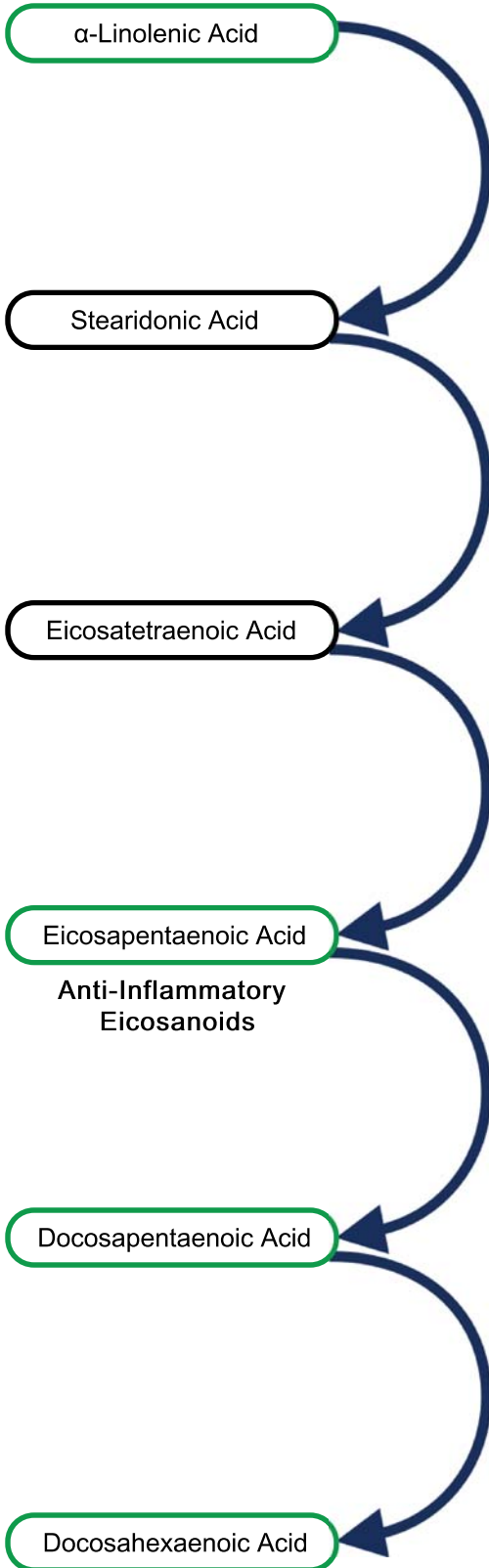
The Essential Fatty Acid reference ranges are based on an adult population.

\* 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.

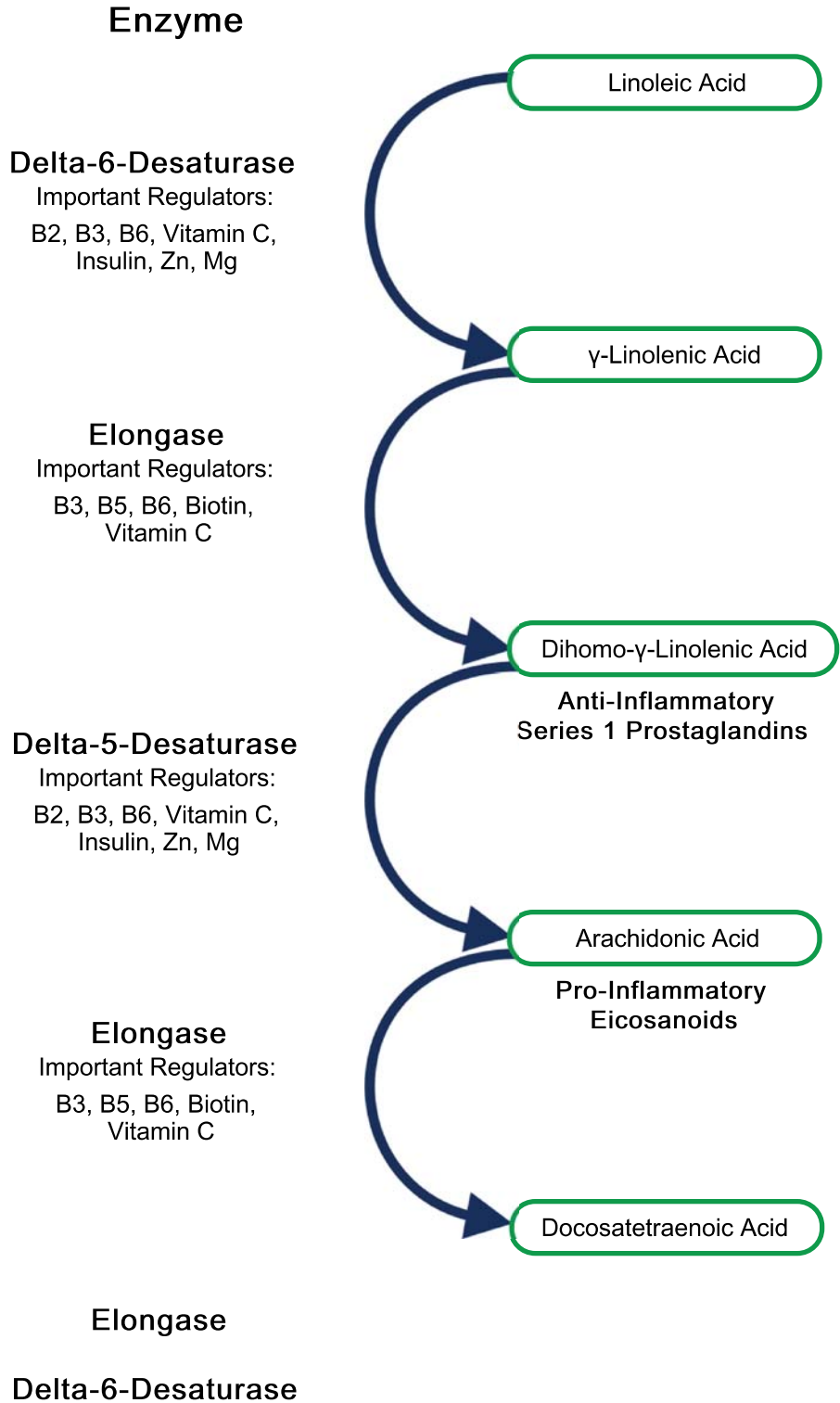


## Fatty Acid Metabolism

### Omega-3 Metabolism



### Omega-6 Metabolism





## Commentary

For more information regarding Essential and Metabolic Fatty Acids clinical interpretation, please refer to the Fatty Acids Support Guide at <https://www.gdx.net/core/support-guides/fatty-acid-support-guide.pdf>

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.

