



Date: 12/13/13
 ID: 20074
 Patient: CK Norris
 Sample Date: 11/30/13

The Holman Omega 3 Test Report
www.Omega3Test.com

	Result	(%)	Typical USA% Control	Percent of Control (%)	Target
Total Omega 3 Score	4.8		4.8	99	> 9%
% Omega 3 in HUFA	20		24	83	> 50%
% Omega 6 in HUFA	80		76	106	< 50%
Omega 6/Omega 3 Ratio	8.7		8.11 to 1	86	< 5:1
AA/EPA Ratio	20.2		18.3 to 1	80	<5:1
Omega 3 Family					
ALA (18:3ω3)	0.9		0.5	171	
EPA (20:5ω3)	0.6		0.6	104	>3%
DPA (22:5ω3)	0.6		1.0	65	>1%
DHA (22:6ω3)	2.4		2.6	95	>4%
Omega 6 Family					
Total Omega 6 Score	41.6		39.0	107	
LA (18:2ω6)	25.9		25.1	103	
DGLA (20:3ω6)	1.2		1.3	90	
AA (20:4ω6)	12.4		10.8	115	

Omega 3 Family

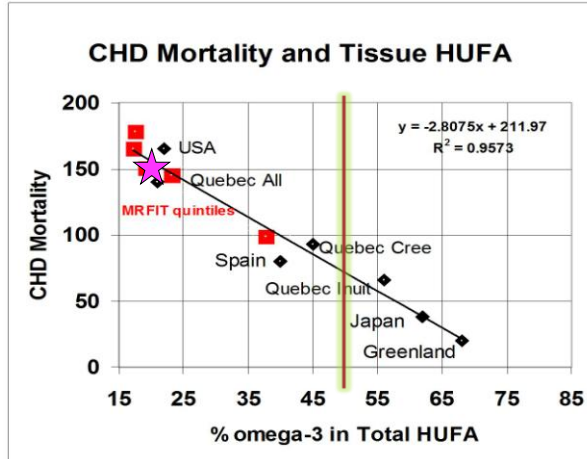
ALA = alpha Linolenic acid (Plant Omega 3)
 EPA = Eicosapentaenoic Acid (Marine Omega 3)
 DPA = Docosapentaenoic Acid (Marine Omega 3)
 DHA = Docosahexaenoic Acid (Marine Omega 3)

Omega 6 Family

LA = Linoleic Acid (Plant based omega 6 ; soybean oil, walnuts)
 DGLA = dihomo-gamma-linolenic Acid (Animal omega 6)
 AA = Arachidonic Acid (Animal based Omega 6)

The FDA has not evaluated these statements. This product is not meant to treat, diagnose or cure disease. It is solely for informational purposes only. Consult a healthcare provider for interpretation.

Omega 3 in HUFA = 20 %



US Average = 24% Optimal > 50%

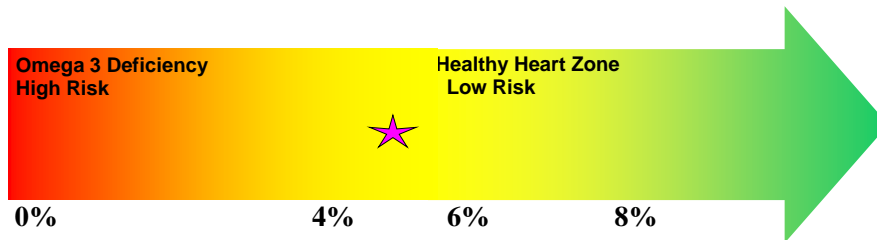
Coronary Heart Disease (CHD) Mortality versus % of omega 3 in HUFA. HUFA stands for Highly Unsaturated Fatty Acids. HUFA are the precursors of hormone like compounds called eicosanoids or prostaglandins that drive the inflammation.

In the figure, as the % in omega 3 HUFA INCREASES there is a strong linear reduction in CHD mortality. This is based on studies done in various populations and based on research by Dr Bill Lands. The optimal score for this test is 50% (or higher) which represents a balance of omega 3 and omega 6.

HUFA stands for highly unsaturated fatty acids. These fatty acids are the precursors for hormone like compounds called eicosanoids that produce the inflammatory response. The Omega 6 HUFA are potent mediators of inflammation. Omega 3 HUFA cool the inflammatory fire and inhibit omega 6 HUFA.

Total Omega 3 4.8 % US Average 4.8%

Desired >9%: correlates with a 90% risk reduction for sudden cardiac death (Albert et al)

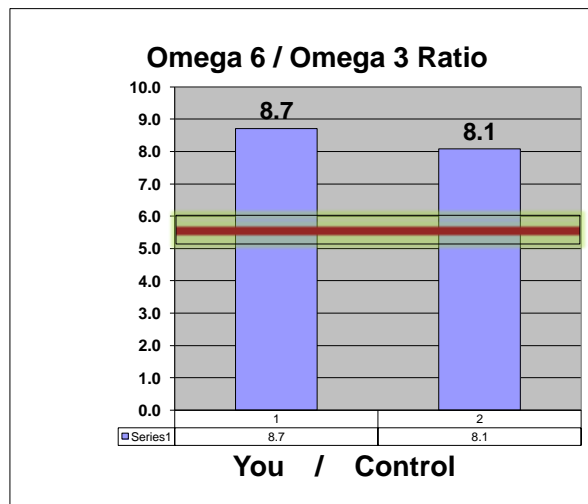
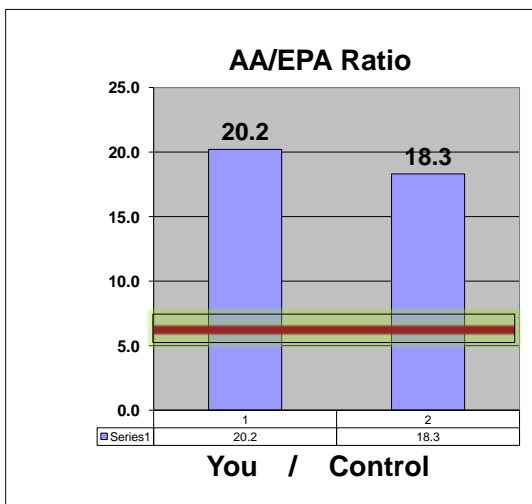
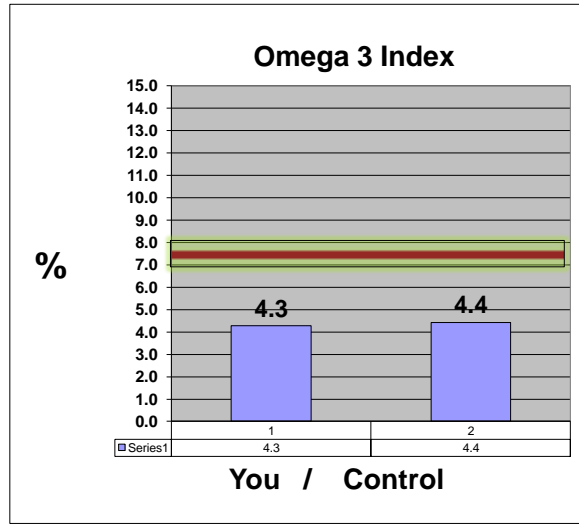
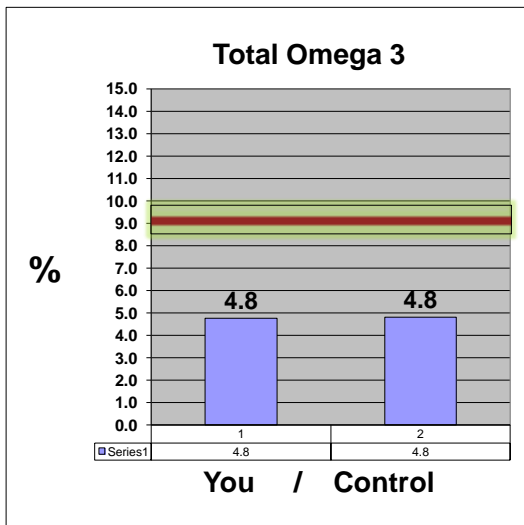
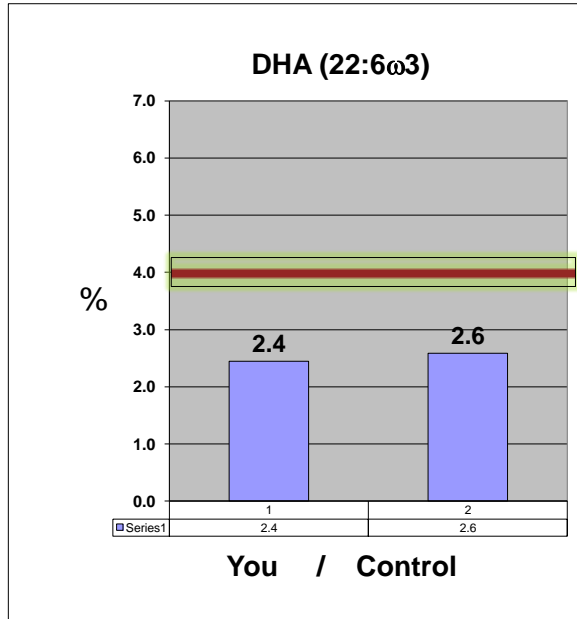
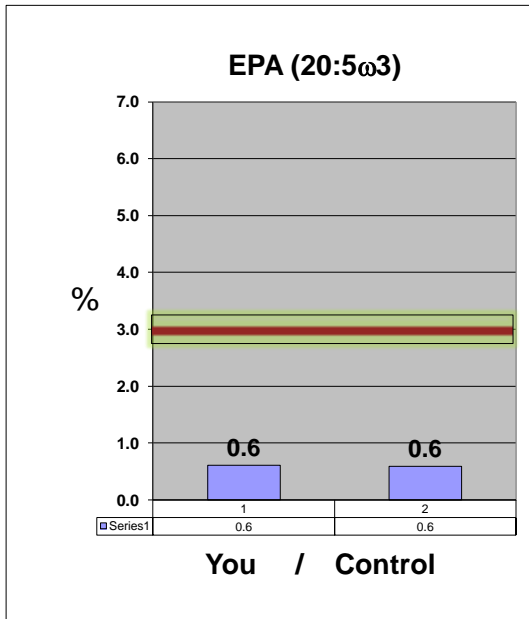


How Much Omega 3 should I try to get in my diet?

Experts recommend eating 1000mg to 2000mg of EPA and DHA per day and 2000mg of ALA per day with fish, fish oil and ground flax seed. Green vegetables are also a good source of plant based omega 3. Vegetables typically have a balanced ratio of omega 3 and omega 6 and are also a rich source of antioxidants, fiber and nutrients.

Experts also recommend avoiding omega 6 rich oils like soybean, corn, peanut and safflower that compete with omega 3 for metabolism

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Percent Composition of Blood

Date: 12/13/13

Subject	CK Norris
Sample	Blood Spot
SampleDate	11/30/13
Patient ID	20074
	na

Subject	CK Norris	Typical USA	Common Names
12:0	0.0	0.0	Lauric acid
14:0	2.3	0.6	Myristic
14:1	0.2	0.1	Myristoleic
15:0	0.0	0.2	Pentadecanoic
15:1	0.0	0.1	
16:0	18.7	21.1	Palmitic
16:1 ω 9	0.0	0.1	
16:1 ω 7	1.9	1.1	Palmitoleic
17:0	0.0	0.2	Heptadecanoic
17:1	0.0	0.1	
18:0	10.2	11.9	Stearic
18:1 ω 9	19.6	17.8	Oleic
18:1 ω 7	0.0	0.0	Vaccenic
18:1 ω 5	0.0	0.0	
18:2 ω 6	25.9	25.1	Linoleic (LA)
18:3 ω 6	0.4	0.2	gamma-linolenic (GLA)
18:3 ω 3	0.9	0.5	alpha-linolenic (ALA)
18:4 ω 3	0.2	0.1	Steridonic acid (SDA)
20:0	0.3	0.2	Arachidic
20:1 ω 9	0.0	0.0	
20:1 ω 7	0.2	0.2	11-Eicoenoic
20:2 ω 6	0.1	0.3	Eicosadienoic
20:3 ω 9	0.1	0.1	Mead's acid
20:3 ω 6	1.2	1.3	Dihomogamma-linolenic acid (DGLA)
20:4 ω 6 (AA)	12.4	10.8	Arachidonic (AA)
20:3 ω 3	0.0	0.1	Eicosatrienoic acid-omega 3
20:4 ω 3	0.0	0.0	Eicosatetraenoic acid-omega 3
20:5 ω 3 (EPA)	0.6	0.6	Eicosapentaenoic (EPA)
22:0	0.0	0.2	Behenic
22:1 ω 9	0.0	0.0	Erucic
22:4 ω 6	1.1	0.8	Docosatetraenoic
22:5 ω 6	0.5	0.4	Docosapentaenoic -omega 6
22:5 ω 3 (DPA- ω 3)	0.6	1.0	Docosapentaenoic -omega 3
24:0	0.0	0.2	Lignoceric
22:6 ω 3 (DHA)	2.4	2.6	Docosahexaenoic (DHA)
24:1	0.0	0.1	Nervonic
other	0.0	1.9	
sum	100.0	100.0	
Saturated	31.6	34.4	Total Saturated fatty acids
Monounsaturated	20.1	18.4	Total Monounsaturated fatty acids
PUFA	46.5	43.9	Total Polyunsaturated fatty acids
HUFA	19.0	17.6	Highly unsaturated fatty acids
T/T Ratio	0.0	0.0	Triene/Tetraene ratio
Total ω 3	4.8	4.8	Total Omega 3
Total ω 6	41.6	39.0	Total Omega 6
Total ω 9	19.9	18.0	Total Omega 9
ω 6/ ω 3	8.7	8.1	Omega 6 to Omega 3 Ratio
<u>AA/EPA</u>	20.2	18.3	AA (20:4 ω 6) to EPA (20:5 ω 3) ratio
<u>% Omega 3 HUFA</u>	19.5	24.1	Percent of Omega 3 in HUFA
<u>% Omega 6 HUFA</u>	80.5	75.9	Percent of Omega 6 in HUFA
<u>WB EPA+DHA</u>	3.1	3.2	Whole Blood EPA + DHA
<u>RBC EPA+DHA</u>	4.3	4.4	RBC EPA and DHA (Omega 3 Index)



The Holman Omega 3 Test™:

Welcome to the Holman Omega 3 Test™, the quick and easy way to measure your omega 3 health. This report identifies your entire fatty acid profile but focuses on your omega 3 and omega 6 fatty acids. Your total omega 3 score is the total amount of omega 3 in your blood in a percentage. In example, if your omega 3 score is 5% then 5% of the fatty acids in your blood are made up of omega 3 fatty acids which includes several family members like EPA, DPA and DHA.

In populations like the Japanese who consume large amounts of marine based foods their total omega 3 score is often over 15%. Dr. Ralph T. Holman, the Grandfather of Omega 3, pioneer of this test and inventor of the term 'Omega 3', has a total omega 3 score of 25% that directly reflects his daily intake of fish, fish oil and avoidance of omega 6 rich oils.

This report also includes indicators of heart health. Two common tests describe our omega 3 levels as they relate to cardiovascular health. The first is the Land's test, named after Dr. Bill Lands who invented this test and terminology. It is called the Omega 3 HUFA test. The term HUFA stands for 'highly unsaturated fatty acids'. These fatty acids generally form the basis for our inflammatory response. Armed with the knowledge that the inflammatory response produced from omega 6 fatty acids is quite vigorous compared to the response from omega 3 HUFA it has been proposed desirable to have a lower Omega 6 HUFA score and a higher Omega 3 HUFA score. Dr. Land's has modeled several populations, their Omega 3 HUFA score and their death mortality rate from cardiovascular disease (displayed above in graphic form).

Typical Americans have a Omega 3 HUFA score of 20%, that correlates with a high incidence of mortality from heart disease. Populations with a Omega 3 HUFA score of 50% or higher have lower incidences of death from cardiovascular disease.