



Date: 9/9/15
 ID: 25496
 Subject:
 Sample Date: 8/28/15
 Receipt Date: 9/3/15

The Holman Omega 3 Test Report
www.Omega3Test.com

	Result (%)	Typical USA% Control	Percent of Control (%)	Target
Total Omega 3 Score	9.2	4.8	191	> 9%
% Omega 3 in HUFA	45	24	191	> 50%
% Omega 6 in HUFA	55	76	72	< 50%
Omega 6/Omega 3 Ratio	4.0	8.1 to 1	49	< 5:1
AA/EPA Ratio	4.5	18.3 to 1	25	<5:1
Omega 3 Family				
ALA (18:3 ω 3)	0.6	0.5	125	
EPA (20:5 ω 3)	1.8	0.6	303	>3%
DPA (22:5 ω 3)	1.4	1.0	142	>1%
DHA (22:6 ω 3)	5.0	2.6	194	>4%
Omega 6 Family				
Total Omega 6 Score	36.4	39.0	93	
LA (18:2 ω 6)	25.8	25.1	103	
DGLA (20:3 ω 6)	1.0	1.3	80	
AA (20:4 ω 6)	8.0	10.8	74	

Omega 3 Family

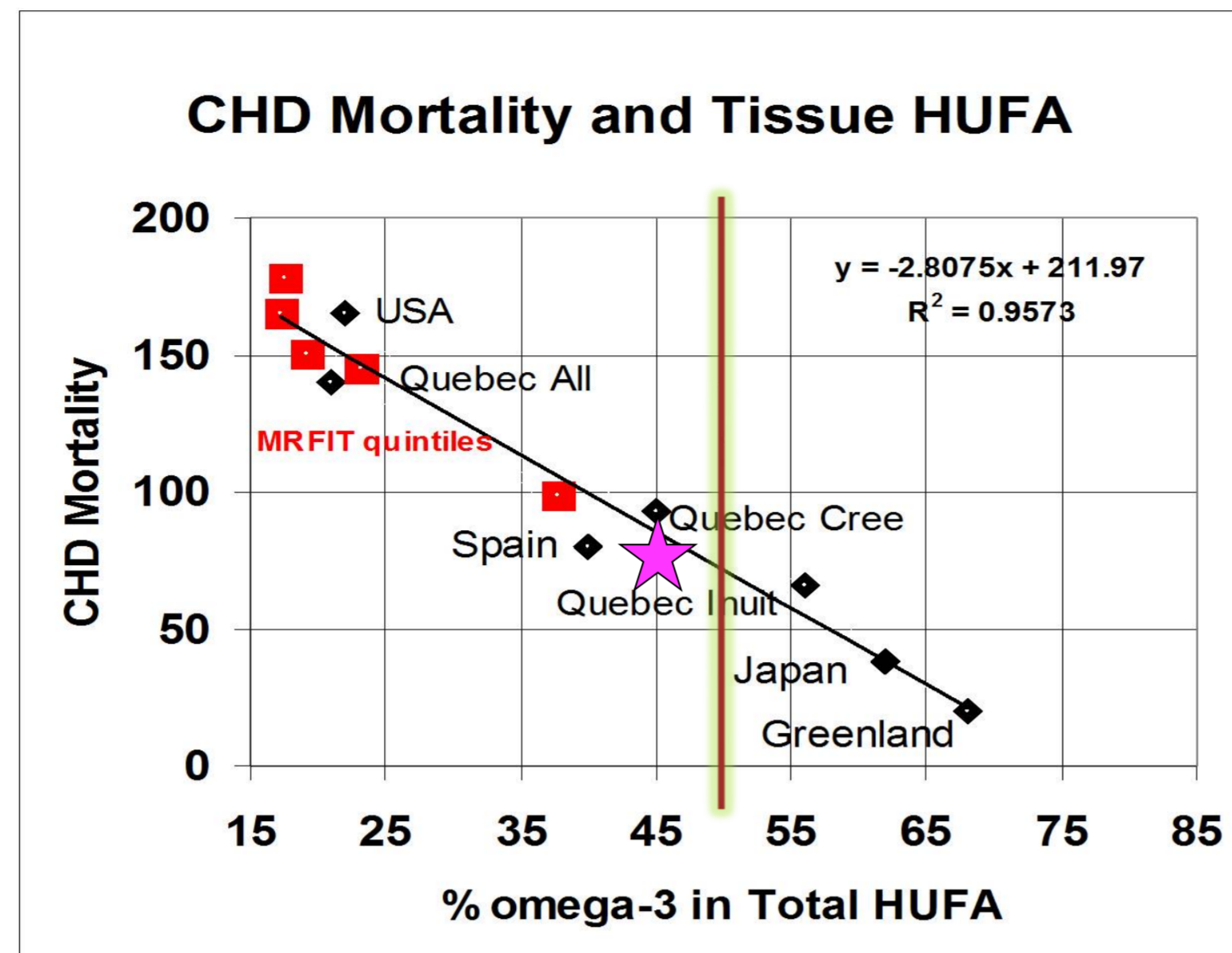
ALA = alpha Linolenic acid (Plant Omega 3)
 EPA = Eicosapentaenoic Acid (Marine Omega 3)
 DPA = Docosapentaenoic Acid (Marine Omega 3)
 DHA = Docosahexaenoic Acid (Marine Omega 3)
 Omega 3 Score = ALA, EPA, DPA, DHA

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. This test was developed and its performance characteristics determined by Lipid Technologies, LLC. It has not been cleared or approved by the US Food and Drug Administration (FDA). Results of this test are for investigational purposes only. The results should not be used as a diagnostic procedure without confirmation of the diagnosis by another medically diagnostic product or procedure. Reported fatty acid data may be subject to trace contamination and error as other fatty acids may not separate from reported fatty acids during instrument analysis or due to inherent method standard error.

Omega 3 in HUFA = 45 %



US Average = 24% Optimal > 50%

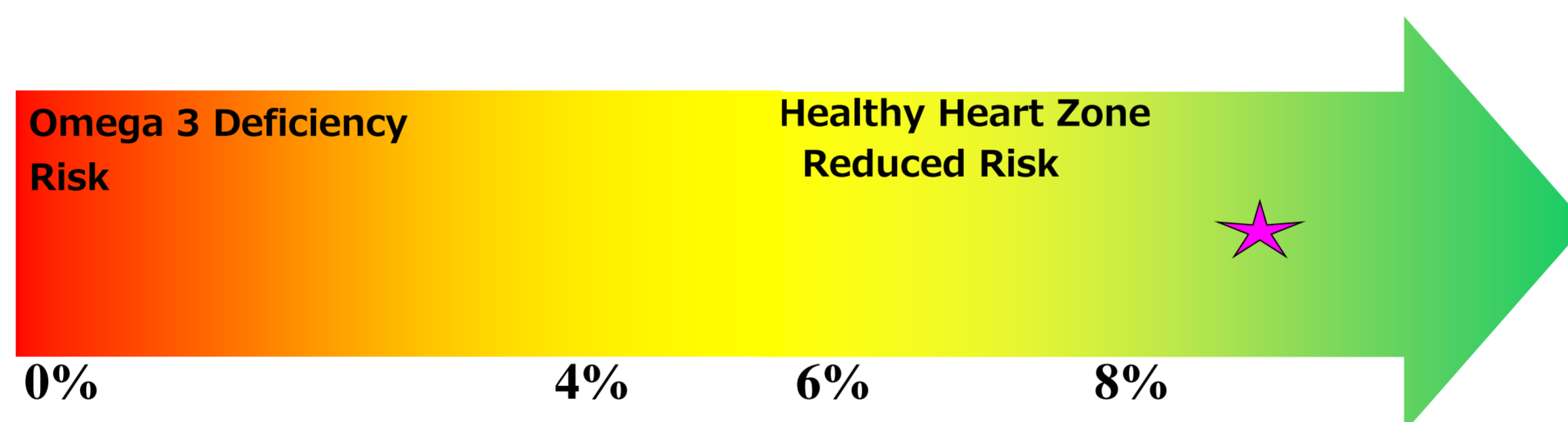
LANDS' Figure: Coronary Heart Disease (CHD) Mortality versus % of omega 3 in HUFA. HUFA stands for Highly Unsaturated Fatty Acids. HUFA are the precursors of hormone like compounds call eicosanoids or prostaglandins that drive inflammation.

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 target score for this test is 50% (or higher) which represents a balance of omega 3 and omega 6 per Dr Lands.

Omega 6 HUFA are potent mediators of inflammation while Omega 3 HUFA are less so. Omega 3 HUFA compete with Omega 6 HUFA based on Dr Lands' research. Omega 3 HUFA are thus seen as anti-inflammatory.

Total Omega 3 9.2 % US Average 4.8%

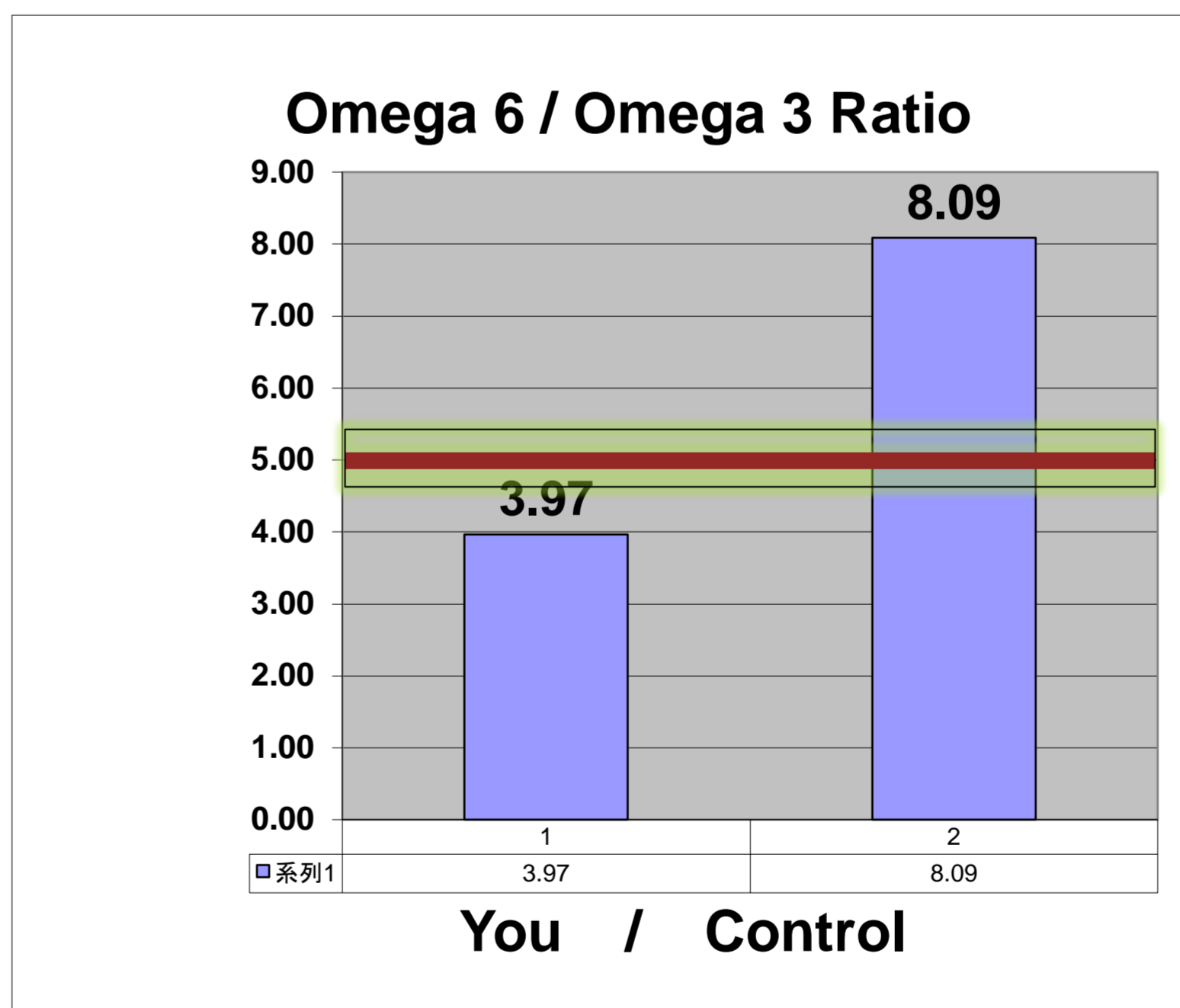
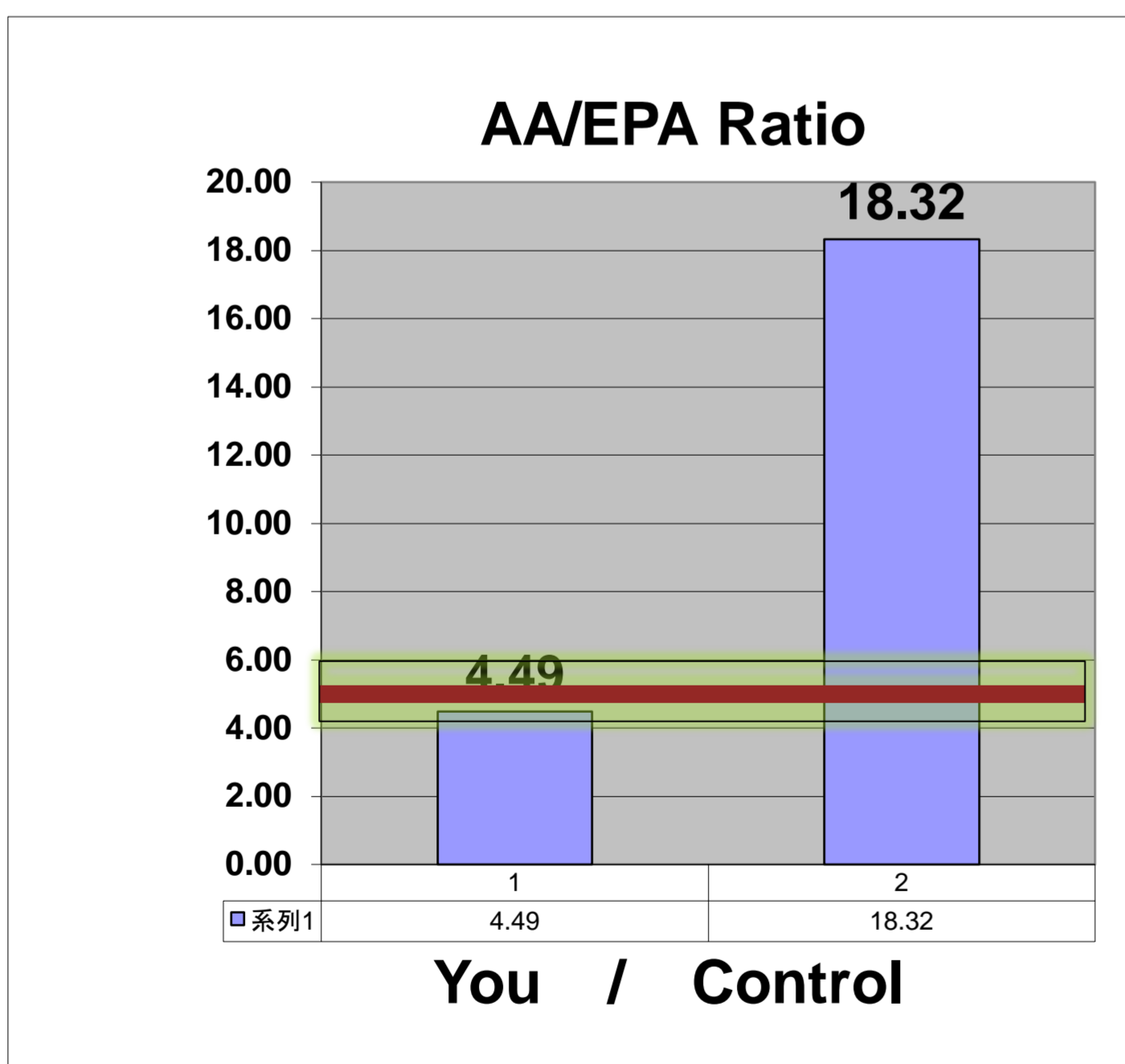
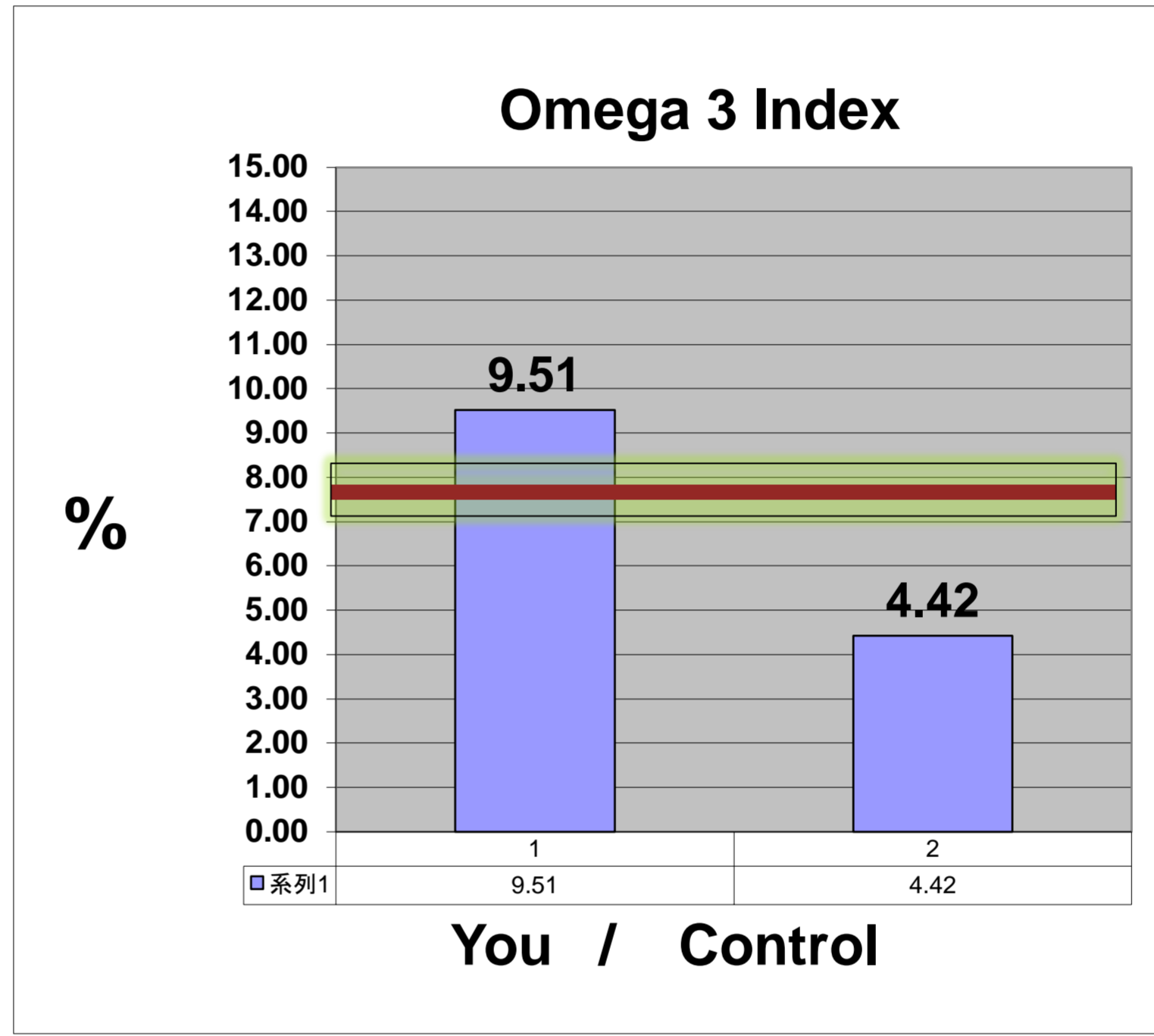
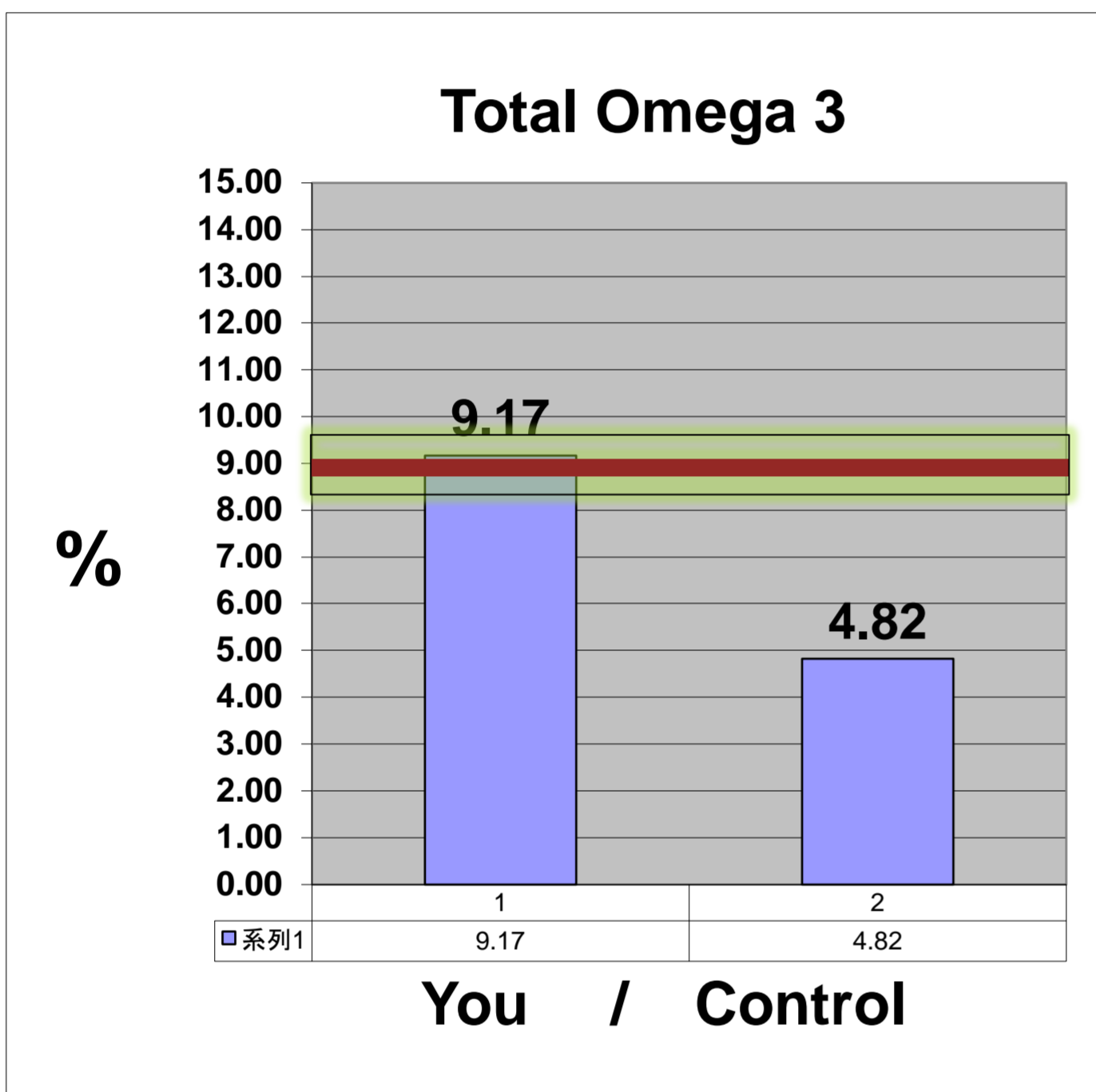
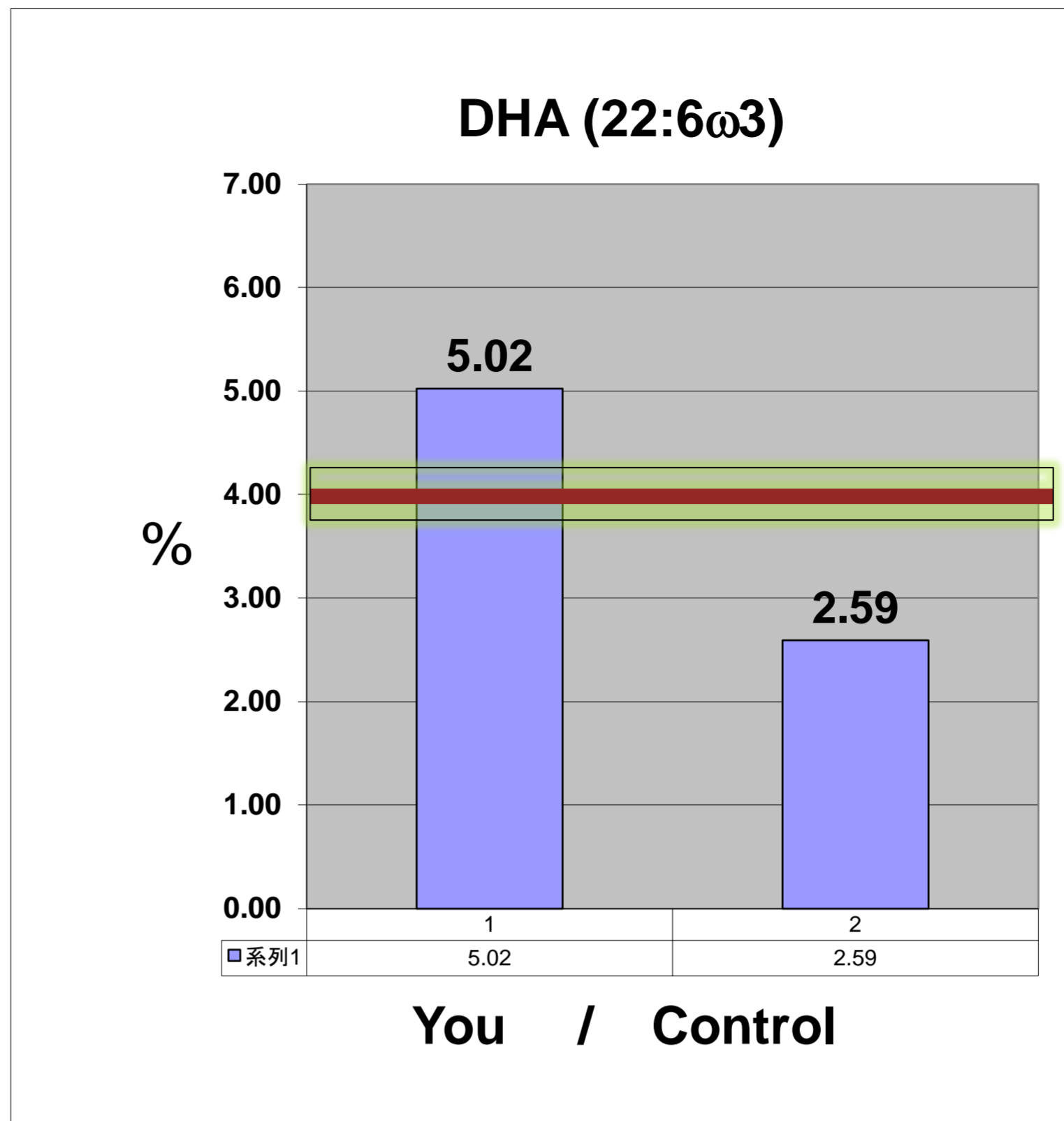
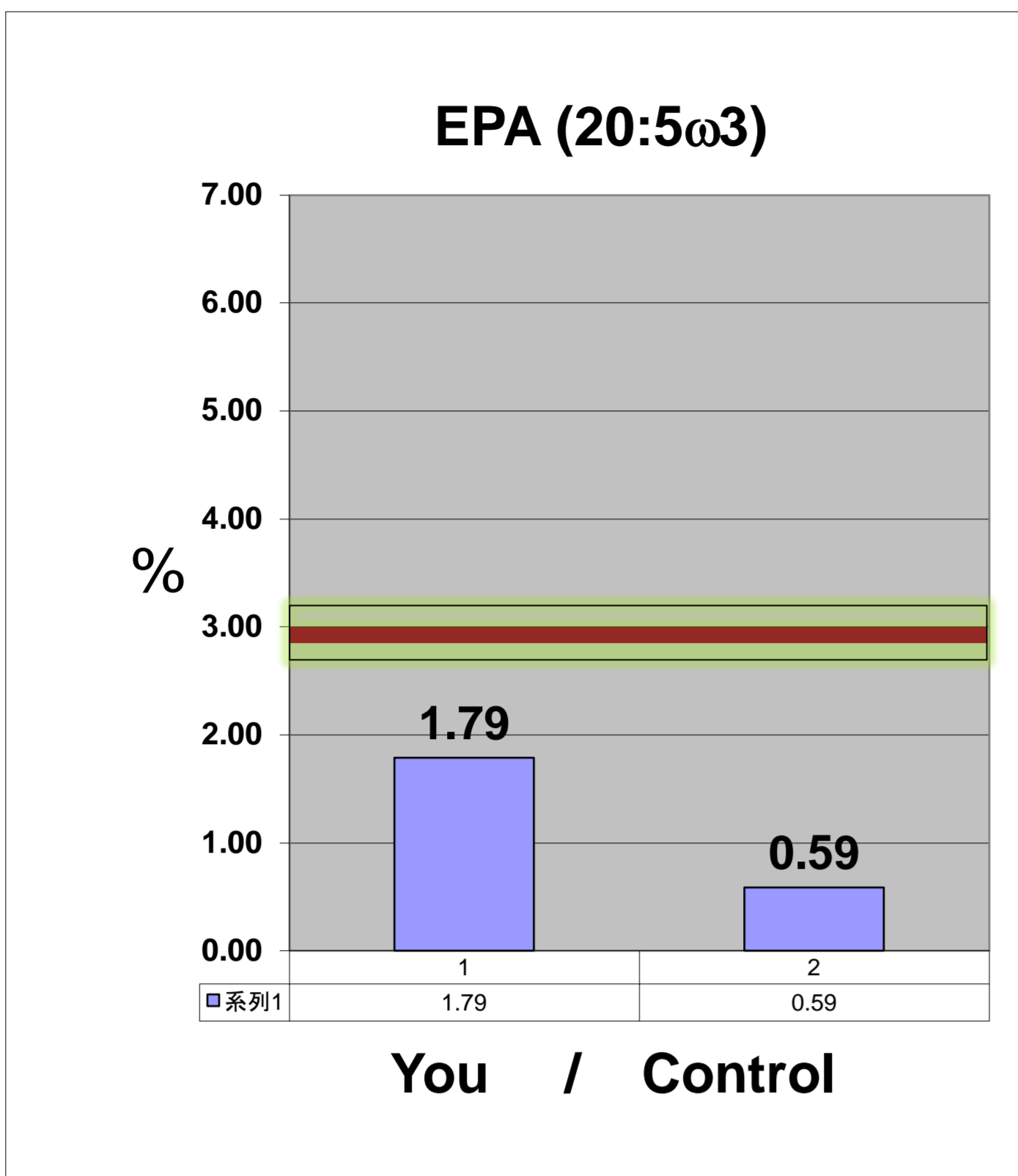
Desired >9%: correlates with a 90% risk reduction for sudden cardiac death (Albert et al)



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. Your provider may recommend more or less. 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: 9/9/15



Subject	
Sample	Blood Spot
SampleDate	8/28/15
Sample Receipt Date	9/3/15
Subject ID	25496

Subject		Typical USA	Common Names
12:0	0.00	0.00	Lauric acid
14:0	0.93	0.64	Myristic
14:1	0.00	0.05	Myristoleic
15:0	0.00	0.21	Pentadecanoic
15:1	0.00	0.09	
16:0	21.57	21.05	Palmitic
16:1ω9	0.00	0.08	
16:1ω7	1.36	1.11	Palmitoleic
17:0	0.00	0.21	Heptadecanoic
17:1	0.00	0.10	
18:0	9.04	11.92	Stearic
18:1ω9	20.32	17.79	Oleic
18:1ω7	0.00	0.00	Vaccenic
18:1ω5	0.00	0.00	
18:2ω6	25.82	25.10	Linoleic (LA)
18:3ω6	0.21	0.24	gamma-linolenic (GLA)
18:3ω3	0.63	0.52	alpha-linolenic (ALA)
18:4ω3	0.17	0.05	Steridonic acid (SDA)
20:0	0.11	0.18	Arachidic
20:1ω9	0.03	0.04	
20:1ω7	0.19	0.22	11-Eicoenoic
20:2ω6	0.19	0.34	Eicosadienoic
20:3ω9	0.04	0.06	Mead's acid
20:3ω6	1.04	1.31	Dihomogamma-linolenic acid (DGLA)
20:4ω6 (AA)	8.03	10.81	Arachidonic (AA)
20:3ω3	0.01	0.07	Eicosatrienoic acid-omega 3
20:4ω3	0.12	0.04	Eicosatetraenoic acid-omega 3
20:5ω3 (EPA)	1.79	0.59	Eicosapentaenoic (EPA)
22:0	0.39	0.21	Behenic
22:1ω9	0.04	0.03	Erucic
22:4ω6	0.73	0.76	Docosatetraenoic
22:5ω6	0.38	0.41	Docosapentaenoic -omega 6
22:5ω3 (DPA-ω3)	1.42	0.96	Docosapentaenoic -omega 3
24:0	0.11	0.21	Lignoceric
22:6ω3 (DHA)	5.02	2.59	Docosahexaenoic (DHA)
24:1	0.31	0.12	Nervonic
other	0.00	1.89	
sum	100.00	100.00	
Saturated	32.15	34.42	Total Saturated fatty acids
Monounsatur	20.88	18.42	Total Monounsaturated fatty acids
PUFA	45.61	43.85	Total Polyunsaturated fatty acids
HUFA	18.59	17.60	Highly unsaturated fatty acids
T/T Ratio	0.01	0.006	Triene/Tetraene ratio
Total ω3	9.17	4.82	Total Omega 3
Total ω6	36.40	38.97	Total Omega 6
Total ω9	20.68	18.03	Total Omega 9
ω6/ω3	3.97	8.09	Omega 6 to Omega 3 Ratio
AA/EPA	4.49	18.32	AA (20:4ω6) to EPA (20:5ω3) ratio
% Omega 3 HUFA	45	24.15	Percent of Omega 3 in HUFA
% Omega 6 HUFA	55	75.85	Percent of Omega 6 in HUFA
WB EPA+DHA	6.81	3.18	Whole Blood EPA + DHA
RBC EPA+DHA	9.51	4.42	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.