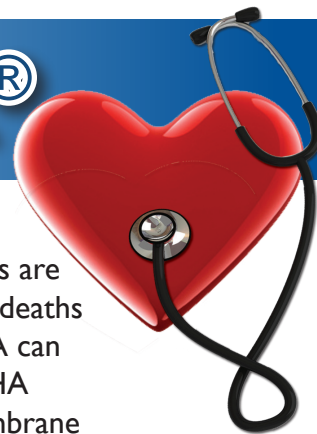


# HS-Omega-3 Index®



## Overview

Determines the patient's risk for sudden cardiac death (SCD). Half of all fatal heart attacks are due to SCD which is defined as death within one hour of the event. Most sudden cardiac deaths are due to cardiac arrhythmia. An adequate level of the omega-3's EPA and especially DHA can reduce this risk by 90%. The HS-Omega-3 Index® measures the percentage of EPA and DHA levels in red blood cell membranes (RBC's) which are highly correlated to myocardial membrane omega-3 levels. Most Americans have a 4% RBC omega-3 fatty acid percentage which represents normal risk; however an 8% RBC level may reduce the risk of SCD by 90%. The HS-Omega-3 Index® is a great compliment to the LPP™ test for cardiovascular risk reduction and the management and treatment of lipoprotein disorders.

## Why is the HS-Omega-3 Index® a better technology?

This specific method, developed by OmegaQuant, LLC, has more research behind it than any other method, with many more studies to be published in the coming years. A significant advantage of the HS-Omega-3 Index® is the ability to correlate it with clinical outcomes from major epidemiological and interventions studies.

## What is the target range for the HS-Omega-3 Index®?

The target HS-Omega-3 Index® is 8% and above, a level that current research indicates is associated with the lowest risk\* for death from CHD. This is also a typical level in Japan, a country with one of the lowest rates of sudden cardiac death in the world. An Index of 4% or less (which is common in the US) indicates the highest risk. At present, there are no known sex- or age-specific values.

## What can be done to correct an HS-Omega-3 Index®?

Increase intake of EPA+DHA. The amount a patient would need to take in order to raise their HS-Omega-3 Index® into the target range (>8%) depends in part on the starting level, but it cannot be predicted with certainty. Nevertheless, if the HS-Omega-3 Index® is between 4% and 8%, we would recommend that you increase your current EPA+DHA intake by ½ - 1 gram (500 - 1000 mg) per day. This can be accomplished in two ways: eating more oily fish and/or taking fish oil supplements. If it is less than 4%, our recommendation would be that you raise your intake by 1-3 g (1000 - 3000 mg) per day. Although this can be accomplished by eating more oily fish, fish oil supplements are usually necessary to achieve this level of EPA+DHA intake.

## If patients are taking omega-3 supplements, won't their HS-Omega-3 Index® be above 8%?

**NOT NECESSARILY.** There is no way to predict – for any given person – what his/her HS-Omega-3 Index® will be just by knowing how much fish they eat or how many capsules they take.

## How can HS-Omega-3 Index® be used to reduce cardiovascular risk?

The HS-Omega-3 Index® is a great compliment with SpectraCell's LPP™ test for cardiovascular risk reduction and the management and treatment of lipoprotein disorders. When treating triglycerides and/or RLP (remnant lipoprotein) as measured by the LPP™ test, omega-3's and especially DHA should be considered due to the added benefit of SCD reduction. Often triglycerides are treated with fenofibrates or niacin which have no effect on the HS-Omega-3 Index®. In metabolic syndrome patients the omega-3 DHA will not only reduce triglycerides and RLP but will increase the size of LDL and increase HDL 2b as measured with the LPP™ test.

® registered trademark of OmegaQuant, LLC



# Sample Report

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Houston, TX 77072

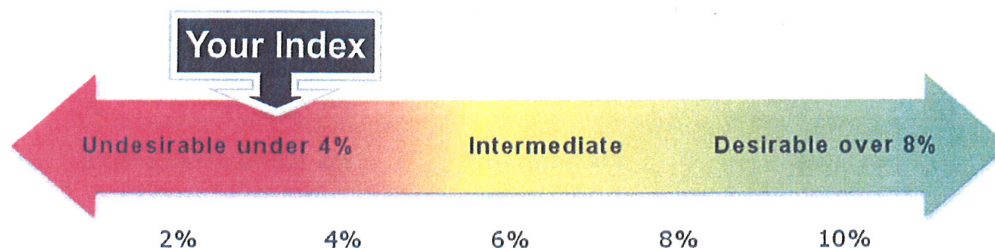


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Dr. Smith  
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Suite 121  
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USA

Name: Patient, Test  
DOB: 04/05/2001  
Accession Number: 1234  
Date of Collection: 07/16/2009  
Date Reported: 07/15/2009

## OmegaQuant HS-Omega-3 Index = 3.2%



## Fatty Acid Profile

|                        |               |        |                 |                                  |            |        |                 |
|------------------------|---------------|--------|-----------------|----------------------------------|------------|--------|-----------------|
| Omega-3 Fatty Acids:   |               |        | Total* = 3.9 %  | cis-Monounsaturated Fatty Acids: |            |        | Total* = 24.0 % |
| Alpha-Linolenic        | (18:3n3)      | 1.0 %  |                 | Palmitoleic                      | (16:1n7)   | 1.4 %  |                 |
| Eicosapentaenoic       | (EPA, 20:5n3) | 0.5 %  |                 | Oleic                            | (18:1n9)   | 22.3 % |                 |
| Docosapentaenoic-n3    | (22:5n3)      | 0.9 %  |                 | Eicosenoic                       | (20:1n9)   | 0.2 %  |                 |
| Docosahexaenoic        | (DHA, 22:6n3) | 1.5 %  |                 | Nervonic                         | (24:1n9)   | 0.1 %  |                 |
| Whole Blood EPA + DHA† |               | 2.0 %  |                 |                                  |            |        |                 |
| Omega-6 Fatty Acids:   |               |        | Total* = 38.3 % | Saturated Fatty Acids:           |            |        | Total* = 33.0 % |
| Linoleic               | (18:2n6)      | 29.2 % |                 | Myristic                         | (14:0)     | 2.0 %  |                 |
| Gamma-Linolenic        | (18:3n6)      | 0.3 %  |                 | Palmitic                         | (16:0)     | 22.3 % |                 |
| Eicosadienoic          | (20:2n6)      | 0.3 %  |                 | Stearic                          | (18:0)     | 8.4 %  |                 |
| Dihomo-γ-linolenic     | (20:3n6)      | 1.6 %  |                 | Arachidic                        | (20:0)     | 0.1 %  |                 |
| Arachidonic            | (AA, 20:4n6)  | 5.6 %  |                 | Behenic                          | (22:0)     | 0.1 %  |                 |
| Docosatetraenoic       | (22:4n6)      | 1.0 %  |                 | Lignoceric                       | (24:0)     | 0.1 %  |                 |
| Docosapentaenoic-n6    | (22:5n6)      | 0.3 %  |                 |                                  |            |        |                 |
| Fatty Acids Ratios*    |               |        |                 | Trans Fatty Acids:               |            |        | Total* = 1.0 %  |
| Omega-6:Omega-3        |               | 9.9    |                 | Trans Palmitoleic                | (16:1n7t)  | 0.1 %  |                 |
| AA:EPA                 |               | 11.9   |                 | Trans Oleic                      | (18:1t)    | 0.6 %  |                 |
|                        |               |        |                 | Trans Linoleic                   | (18:2n6tt) | 0.3 %  |                 |

\*Provided for reference only. Except for the HS-Omega-3 Index, there are no evidence based data from which to set norms for other fatty acids or ratios.

†The HS-Omega-3 Index is calculated from whole blood EPA+DHA by a regression equation (see FAQ section on our website).

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Spectracell Laboratories  
CLIA# 45D0710715

Analysis performed at OmegaQuant LLC  
2329 N. Career Ave., Suite 113, Sioux Falls, SD 57107 USA  
CLIA# 43D1105229

John F. Crawford, Ph.D.  
Laboratory Director

**Specimen Requirements: FASTING REQUIRED.** Fasting 9 to 12 hours prior to the blood collection is required. Whole blood is required. Collect one purple top (EDTA) tube. Do not centrifuge or freeze. Ship in the LPP™ kit or the micronutrient test kit provided.