OmegaCheck™

CPT Code 82542
Sample Type Whole Blood

Order Code C302
Tube Type Lavender Top

supplements

Low omega-3 fatty acid levels are associated with:

- Hypertriglyceridemia
- High blood pressure
- Increased risk of heart disease

Description

Omega-3 and omega-6 fatty acids are polyunsaturated long chain fatty acids (PUFA) required by the body for proper functioning, normal growth and the formation of neural synapses and cellular membranes. Omega-3 and -6 fatty acids are considered "essential" and obtained primarily from dietary sources.

Three of the most important omega-3 fatty acids are eicosapentaenoic acid (EPA), docosapentaenoic acid (DPA) and docosahexaenoic acid (DHA). Omega-3 fatty acids are primarily obtained from food sources, such as oily fish. They have anti-oxidant[1], anti-inflammatory[2] and anti-thrombotic[3] effects, and can help to reduce triglyceride levels[4-6]. Two of the most important omega-6 fatty acids are arachidonic acid (AA) and linoleic acid (LA). Omega-6 fatty acids are obtained from animal sources and plant oils, and have pro-inflammatory[2,7] and pro-thrombotic[7] properties at high levels.

Clinical Use

OmegaCheck™ may be performed on individuals with hypercholesterolemia, hypertriglyceridemia, hypertension, and/or those at high metabolic or cardiovascular risk.

Clinical Significance

- Consumption of omega-3 fatty acids reduces the occurrence of major acute cardiac events in healthy individuals or patients with cardiovascular risk factors or who have cardiovascular disease[8-14].
- Consumption of omega-3 fatty acids leads to a reduction in triglycerides[4-6] and non-HDL[6], as well as Lp-PLA_2 levels[6].
- A high intake of omega-6 fatty acid precursors can interfere with the absorption of omega-3 fatty acids[8].
- The mean omega-6:omega-3 ratio of the standard American diet is approximately 10:1[8]. A diet with an omega-6:omega-3 fatty acid ratio of 4:1 or less may reduce total mortality up to 70% over 2 years[11].

Testing frequency

Testing frequency depends on the individual's medical history. OmegaCheck™ may be run alongside a standard lipid panel or other cardiometabolic tests.

Sample Type

OmegaCheck™ should be performed on a whole blood sample. Fasting samples are preferred, but not required, and omega-3 supplementation should not be altered immediately prior to the blood draw.

Commercial Insurance or Medicare Coverage

Coverage guidelines, also known as NCD (National Coverage Determination) or LCD (Local Coverage Determination), have not been established or posted by CMS (Medicare & Medicaid). We have reviewed the larger Carriers (Aetna, United HealthCare, Cigna, Blues) and information has not been posted or is limited. Medical necessity and specificity of diagnosis should be provided when ordering this test.

Understanding Medical Necessity

The following ICD-10 codes for OmegaCheck™ are listed as a convenience for the ordering physician. The ordering physician should report the diagnosis code that best describes the reason for performing the test.

Diagnosis	Diagnosis Code
Type 2 Diabetes Mellitus with Hyperglycemia	E11.65
Type 2 Diabetes Mellitus without Complications	E11.9
Other Specified Diabetes Mellitus without Complications	E13.9
Pure Hypercholesterolemia, Unspecified	E78.00
Familial Hypercholesterolemia	E78.01
Pure Hyperglyceridemia	E78.1
Mixed Hyperlipidemia	E78.2
Other Hyperlipidemia	E78.4
Hyperlipidemia, Unspecified	E78.5
Metabolic Syndrome	E88.81
Essential (primary) Hypertension	I10
Atherosclerotic Heart Disease of Native Coronary Artery without Angina Pectoris	I25.10
Impaired Fasting Glucose	R73.01
Impaired Glucose Tolerance Test (oral)	R73.02

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RELATIVE RISK

OmegaCheck™
(% by weight)

≥5.5	3.8-5.4	≤3.7
Low	Moderate	High

The OmegaCheck™ was developed and validated at Cleveland HeartLab with the support of Nutrasource Diagnostics, Inc.

Sample Considerations

Omega-3 and -6 fatty acid levels can be measured in whole blood or within red blood cell (RBC) membranes. The OmegaCheck™ test measures omega-3 and -6 fatty acid levels in whole blood. The whole blood test provides a complete picture of the amount of omega-3 and -6 fatty acids in the body, and may reflect more recent levels of supplementation or dietary intake. RBC membrane levels provide a picture of consumption levels over a longer period of time, because the incorporation of these fatty acids into the membranes of RBC takes several days to weeks. Regardless, both whole blood (EPA+DPA+DHA (%)) and RBC membrane (EPA + DHA (%)) measurements demonstrate positive correlation (r=0.91, p<0.0001)[14]. This finding has been confirmed by studies run by Cleveland HeartLab.

Treatment Considerations

These treatment considerations are for educational purposes only. Specific treatment plans should be provided and reviewed by the treating practitioner.

✓ **Assess dietary intake of omega-3 and omega-6 fatty acids.**

- Dietary sources of omega-3 fatty acids include fatty fishes, such as salmon or sardines, nuts, and plant oils. Foods high in omega-6 fatty acids include red meat, poultry, eggs, plant oils, and nuts.

✓ **Consider omega-3 fatty acid supplementation.**

- If currently taking, consider adjusting dosage and retest in 1-2 months.

✓ **Assess lifestyle habits.**

- Consider diet/exercise/weight reduction efforts if appropriate.

References

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