

# Adding Fish Oil (omega-3 fatty acids) to Your Diet Improves Metabolic Syndrome



Although metabolic syndrome increases the risk of developing cardiovascular disease, coronary heart disease, and total mortality; most people may not even be aware that they have it. About one of every three adults in America suffers from this syndrome, and the risk increase with age and obesity according to the National Cholesterol Education Programs' Adult Treatment Panel III (NCEP/ATP III) report.

## How is metabolic syndrome defined?

Metabolic syndrome is the name for a group of risk factors: high waist circumference, high triglycerides, blood pressure, blood glucose and low levels of high-density lipoprotein. Individuals with three or more of the above risk factors are classified as metabolic syndrome patients.

Risk Factors	Defining level			
	Men	Asian Men	Women	Asian Wom
Abdominal obesity Waist Circumference (inches)	>40	>37-39	>35	>31-35
	Men		Women	
Triglycerides ( mg / dL )	≥150		≥150	
HDL cholesterol ( mg / dL )	< 40		< 50	
Blood pressure ( mmHg )	≥( 135 / 85 )		≥( 135 / 85 )	
Fasting glucose ( mg / dL )	≥100		≥100	
Legend: > means greater than; ≥ means greater than or equal to; < means less than				

Sources: U.S. Department of Health and Human Services. National Health Statistics Reports. Number 13. May 5,

## What can Nutraceutical help for metabolic syndrome?

It is easy to say, "Exercise, eat more fruit and vegetables and avoid deep fried foods!" But how many of us can really do what we say? What if lifestyle changes are not possible or are inadequate to prevent or treat metabolic syndrome? Don't give up, I have a good news for you!

Studies show that fish oil supplementation (omega-3) combined with a low-fat, high-carbohydrate diet have beneficial effects for patients with metabolic syndrome. In a study published in The Journal of Nutrition, 117 of the metabolic syndrome patients were randomly assigned to one of the four diets:

- (1). A high saturated fatty acid diet (38% energy from fat like lard or butter)
- (2). A high monounsaturated fatty acid diet (38% energy from fat such as olive oil or nuts)
- (3). A high complex carbohydrate diet (such as whole grain, fruits and vegetables)
- (4). A high complex carbohydrate diet with omega-3 supplementation (1.24g/d).

The main purpose of this research was to determine the effects of the quantity and quality of dietary fat on the risk factors associated with metabolic syndrome. It was found that both long-term intake of a low-fat, high-carbohydrate diet supplemented with omega-3 and high monounsaturated fat diet has a positive effect for metabolic syndrome patients. Most significantly, fish oil in combination with a high complex carbohydrate diet (No. 4 diet) was shown to have a protective effect by preventing the increases in triglyceride and cholesterol induced by a high complex carbohydrate diet only (No.3 diet). The researchers concluded that fish oil supplementation could correct many metabolic alterations associated with insulin resistance including reduced after meal blood triglyceride levels, thereby reducing the risk factors associated with metabolic syndrome. Therefore, in addition to a daily healthy diet, fish oil supplementation is recommended for daily use.

If you have any questions about nutrition or nutritional supplement, please contact Dietitian / Nutritionist at 949-252-0001 ext 117 for more information.

## References

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