

# Clinical Influence of Triple Omega Fatty Acids (Omega-3, 6, 9)



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## Abstract

Fatty acids play a vital role in biological life, one of the most important fatty acid triple omega. These fatty acids are unsaturated fatty acids, two from them are essential where the body cannot synthesize them (omega 3, and 6), while the other is an essential fatty acid the body can synthesize it but this needs an adequate amount from omega 3, and 6. Each type of omega fatty acids has its own chemical structure, sources, and functions. Triple omega play an essential role in protecting the human body from heart attack. It is very necessary to make a balance between triple omega dose, the high level leads to deposition of fats in the body, and this leads to several health problems.

**Keywords:** Triple Omega; Fatty Acids, Omega-3; Omega-6; Omega-9; Heart Attack

## Introduction

Fatty acids are considered vital biochemical components for all organs of the human body, such as skin, lungs, heart, and brain [1]. Fatty acids are categorized into two classes according to their chemical structure, two classes are saturated fatty acids in which the number of hydrogen atoms attached to the carbon backbone of these molecules, while the other group is unsaturated fatty acid, where a few hydrogen atoms are missing with double bonds between the carbons where those hydrogen atoms would go. Also, fatty acids can be classified according to the body requirements into essential fatty acids that your body does not produce on its own, and non-essential fatty acids where the body can produce them [2]. Omega fatty acids are described as unsaturated healthy fats due to them preventing a number of medical problems such as depression, cardiovascular disease, brain dysfunction, asthma and arthritis [3]. There are 3 types of omega fatty acids; Omega-3, Omega-6, and Omega-9, each one from them has its own chemical structure and biological roles [4]. Omega-3 fatty acid ( $\alpha$ -linolenic acid) is an essential fatty acid that plays a significant role in brain function and may help in prevention

heart attack. The American Heart Association recommends a diet in which fatty fish, like salmon, herring, sardines and tuna are consumed at least twice a week [5].

In addition to their role in the structure and function of cells throughout your body, the omega-3s reduce your risk of cardiovascular disease through multiple actions. They fight inflammation, keep blood vessels healthy, and reduce levels of cholesterol and triglycerides. They may also help prevent rheumatoid arthritis and cancer, according to the Harvard School of Public Health [6]. The other essential fatty acid is Omega-6 fatty acid (Linoleic Acid); omega-6 should be taken about twice as much as omega-3; where omega-6 to omega-3 ratio is 2:1 [7]. Finally, Omega-9, or monounsaturated oleic and stearic acid, is a non-essential fatty acid which is produced naturally by the body in the presence of enough amount of both Omega 3 and 6 fatty acids. In the absence of omega fatty acids 3, and 6 omega 9 must be taken from the diet. Natural foods and healthy benefits for triple omega are summarized in the following (Table 1)[6].

**Table 1:** Natural foods & Biological Benefits for Triple omega.

Natural Foods	Biological Benefits
<b>Omega-3</b>	
a) Salmon	a) Reduce risk of heart attack, through decrease the level of cholesterol b) Anti-inflammatory. c) Lower blood pressure d) Treatment of various diseases such as, Asthma, Diabetes, Osteoporosis, Arthritis, and Some Cancers.
b) Mackerel	
c) Eggs	
d) Fruits	
e) Grains	
f) Spirulina	

g)	Brazil Nuts	
h)	Mustard Seeds	
i)	Pumpkin Seeds	
j)	Chia Seed Oil	
k)	Wheat Germ Oil	
l)	Green Leafy Vegetables	
<b>Omega-6</b>		
a)	Seeds	a) Reduce risk for developing type 2diabetes. b) Reduce the level of cholesterol. c) Treatment of allergy, and multiple sclerosis.
b)	Nuts	
c)	Grains	
d)	Green leafy vegetables	
e)	Cold vegetable oils	
<b>Omega-9</b>		
a)	Almonds	a) Reduces bad cholesterol (LDL) and increasing good cholesterol (HDL) in bloodstream. b) Form myelin sheath as cover to protect nerves. c) Weight Loss d) Eye Disorder e) Heart disease f) Immune System
b)	Macadamia Nuts	
c)	Chia Seed Oil	
d)	Olives & Olive Oil	
e)	Avocados	
f)	Pecans	
g)	Pistachios	
h)	Cashews	

Usually maintains a healthy diet that provides all nutrients. It will keep you away from many diseases [8]. As a result of consumption Omega 3 6 9, this creates unbalance between these nutrients. In line for unbalance of nutrients it creates deposition of those extra fats. These lead to a health problem. These fatty acids must be taken according to the American Heart Association (AHA) as the following doses [7]:

Omega 3: < 3 gram / daily

Omega 6: Less than Omega 3

Omega 9: Less than Omega 6

Some signs can be happen if triple omega take in large dose includes:

- a) Skin Rashes or itching
- b) Dizziness
- c) Swelling of tongue, face or throat
- d) Breathing problem.

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