

MegaOmega™

GUT-SPECIFIC FISH OIL SUPPLEMENT



Better Than Your Average Fish Oil

MegaOmega™ is the most comprehensive, full-spectrum fish oil scientifically formulated to support a healthy gut microbiome with a superior ratio of EPA, DHA, and the “forgotten” DPA, as well as naturally-occurring metabolites called pre-resolving mediators (PRMs) shown to support a healthy immune and inflammatory response. **MegaOmega™** is specifically formulated with higher EPA content than DHA content in order to support a healthy gut.**

Fish Oil for a Healthy Gut

There is no doubt that fish oils are beneficial to human health, but many fish oil supplements miss the mark when it comes to formulation. Furthermore, some fish oil products that claim to benefit the gut microbiome are actually formulated more for brain health than gut health based on their omega-3 ratios. Fish oil is indispensable in natural medicine, but it has been severely underutilized for digestive and intestinal health.

A recent experimental study published in the *Journal of Scientific Reports* found that **omega-3 supplementation increases microbial diversity**, specifically *Bifidobacterium*, *Akkermansia muciniphila*, and *Lactobacillus*, and enhances the production of intestinal alkaline phosphatase (IAP) - an endogenous antimicrobial peptide that **suppresses *E. coli*, detoxifies LPS, and balances gut microbiota.**¹

The primary omega-3 fatty acids include eicosapentanoic acid (EPA), docosahexanoic acid (DHA), and docosapentanoic acid (DPA) - each with unique health benefits to the host.





EPA is the most powerful omega-3 for supporting gut health and well-documented for its ability to protect intestinal mucosa and reduce oxidative damage in the gut.² A recent experimental study published in the *Journal of Scientific Reports* found that EPA supplementation reduced levels of fecal calprotectin and improved mucosa production and goblet cell differentiation.³



DHA is most known for its beneficial impact on brain health. One of DHA's most important roles is the modulation of an important part of phospholipid membranes, known as phosphatidylserine (PS). This substance promotes healthy signal conduction and protects neuronal survival not only to cells in the brains but also to neurons in the GI tract.⁴



DPA, also known as the "forgotten fatty acid", is receiving more attention in the omega-3 family due to its unique ability to increase EPA and DHA tissue status, but it also supports a healthy gut by reducing pro-inflammatory cytokines and macroscopic damage.^{5,6} Supplementation with DPA can also inhibit inflammatory cyclooxygenase (COX) pathways, resulting in healthier cells and tissues.⁷



PRMs, or pre-resolving mediators, **are omega-3 derivatives that are responsible for terminating an inflammatory response and repairing damaged tissue** through a process known as remediation.⁸ PRMs fall into four families: lipoxins, resolvins, protectins, and maresins. They resolve everyday inflammation by sequestering proinflammatory cytokines, clearing neutrophils and inflammatory debris, and increasing lymphatic removal of phagocytes following an inflammatory response.⁹

While the human body is able to convert omega-3's to PRMs, the process is time-consuming and requires multiple steps to complete. Furthermore, it can be inhibited due to stress, disease, genetics, diet and lifestyle factors.¹⁰ Supplementation provides the body with an abundance of PRMs, so that remediation and tissue restoration can proceed quickly and without limitation.**

SUPPLEMENT FACTS

Serving Size: 2 Softgels
Servings Per Container: 30

Amount Per Serving	% Daily Value	
Calories	25	
Total Fat	2.5 g	3%*
Cholesterol	10 mg	3%*
Protein	<1 g	
Total PRMs	200 mcg	†
Total Omega-3 Fatty Acids	1500 mg	†
EPA (Eicosapentaenoic Acid)	850 mg	†
DHA (Docosahexaenoic Acid)	450 mg	†
DPA (Docosapentaenoic Acid)	100 mg	†

* Percent Daily Values are based on a 2,000 calorie diet.
† Daily value not established.

INGREDIENTS: Highly Refined and Concentrated Omega-3 Marine Oil (one or more of **anchovy, squid, sardine, herring, and mackerel**), Capsule Shell (gelatin, glycerin, purified water), Natural Lemon Flavor, Natural Mixed Tocopherols. **Contains ingredients derived from fish and shellfish listed above.**

Suggested Use:

Ages 8+: Take 2 softgels daily with a meal, or as directed by your healthcare practitioner.

1. Kaliannan K, et al. A host-microbiome interaction mediates the opposing effects of omega-6 and omega-3 fatty acids on metabolic endotoxemia. *Sci Rep.* 2015;5:11276.
2. Calder PC. Omega-3 fatty acids and inflammatory processes. *Nutrients.* 2010;2(3):355-374. 3. Prossomariti A, et al. Short-term treatment with eicosapentaenoic acid improves inflammation and affects colonic differentiation markers and microbiota in patients with ulcerative colitis. *Scientific Reports.* 2017;7(1). 4. Oliver E, et al. Docosahexaenoic acid attenuates macrophage-induced inflammation and improves insulin sensitivity in adipocytes-specific differential effects between LC n-3 PUFA. *The Journal of Nutritional Biochemistry.* 2012;23(9):1192-1200. 5. Byelashov OA, et al. Dietary sources, current intakes, and nutritional role of omega-3 docosapentaenoic acid. *Lipid Technol.* 2015;27(4):79-82. 6. Gobbetti T, Dall' J, Colas RA, et al. Lipid mediators control gut inflammation. *PNAS.* 2017;114(15):3963-3968. 7. Norris PC, et al. Omega-3 fatty acids cause dramatic changes in TLR4 and purinergic eicosanoid signaling. *Proc Natl Acad Sci U S A.* 2012;109(22):8517-8522. 8. Norling LV, et al. Resolving inflammation by using nutrition therapy: roles for specialized proresolving mediators. *Curr Opin Clin Nutr Metab Care.* 2017;20(2):145-152. 9. Serhan CN, et al. Protectins and maresins: New pro-resolving families of mediators in acute inflammation and resolution bioactive metabolome. *Biochim Biophys Acta.* 2015;1851(4):397-413. 10. Serhan CN. Pro-resolving lipid mediators are leads for resolution physiology. *Nature.* 2014;510(7503):92-101.