### **OMEGA 5X**

## Unlock the Therapeutic Potential of Omega-3\*

The supplement market is flooded with products that promise to enhance overall health and well-being. However, not all supplements are created equal, and many fail to deliver on their promises. Omega 5X is a unique supplement designed to enhance the delivery and increase the bioavailability of omega-3 fatty acids. We all know the crucial role that omega-3 fatty acids play in maintaining the health of various systems in the body, but their bioavailability can be limited. Omega 5X combines three key ingredients, **AvailOm® high EPA**, **SmartPrime-Om™**, and **AstraGin®** to provide a powerful combination of omega-3 fatty acids, MSM, sesame oil, and a patented blend of natural plant extracts that work together to maximize the bioavailability of omega-3 fatty acids in the body.

#### **DEMOGRAPHIC & CLINICAL APPLICATIONS**

#### MEN & WOMEN





#### **PATIENTS REQUIRING**

- Cardiometabolic Protocols
- High Potency EPA Omega-3's
- Neurological & Mood Support
- Joint Mobility & Tissue Integrity

#### **BENEFITS**



Contains Bioavailability Enhancement of Up to 5X vs. Conventional Fish Oil



Facilitates Utilization of All Omega Fatty Acids in the Diet



Supports Various Aspects of Cardiometabolic Health



Supports Healthy Levels of Inflammation throughout the Body















SOY FREE





#### **DIRECTIONS:**

Take 2 capsules with water daily or as directed by your healthcare practitioner.

# SUPPLEMENT FACTS Serving Size: 2 Capsules | Servings Per Container: 30 Amount Per Serving %DV Omega-3 Lysine Complex (AvailOm®) (Providing 360mg EPA, 180mg DHA) (as Free Fatty Acids) SmartPrime-Om™ Complex (Methylsulfonylmethane and Sesame seed (Sesamum indicum L.) extract std. for Sesamin] AstraGin® (Astragalus membranaceus and Panax notoginseng) Root Extracts \* Daily Value Not Established

Other Ingredients: Magnesium Stearate (Vegetable), Silica, Vegetable Capsule (Hypromellose). **Contains Fish** 



#### **Ingredients**

#### Avail0m®

An Evonik product

**AvailOm®** high EPA fish oil product is a highly purified and concentrated omega-3 fatty acid supplement that is derived from fish oil. It is specifically designed to meet the growing demand for high-quality omega-3 supplements that are rich in EPA, which is a type of omega-3 fatty acid that has been shown to provide a wide range of health benefits.

The AvailOm® product uses a proprietary extraction process that removes impurities and contaminants, leaving behind a highly concentrated and pure form of omega-3 fatty acids. The product contains a high concentration of EPA, with each gram of AvailOm® containing more than 850mg of EPA, making it one of the highest EPA concentrations available on the market.

EPA is an essential nutrient that plays a crucial role in maintaining the health of various systems in the body. It has been shown to have a positive impact on heart health, cognitive function, joint health, and eye health, among others.

AvailOm® high EPA fish oil product uses lysine to increase the bioavailability of the omega-3 fatty acids in the supplement. Lysine is an essential amino acid that plays a vital role in protein synthesis and other metabolic processes in the body. It is also an important nutrient for maintaining the health and integrity of connective tissue, and it is involved in the production of collagen, a key structural component of skin, bone, and other tissues.

In the case of AvailOm®, lysine is used as an emulsifier to improve the solubility and bioavailability of the omega-3 fatty acids. Emulsifiers are substances that help to mix two immiscible substances, such as oil and water. In the case of omega-3 fatty acids, they are highly hydrophobic, which means they do not mix well with water. This can make it difficult for the body to absorb and utilize omega-3 fatty acids.

Lysine acts as an emulsifier by forming a complex with omega-3 fatty acids, which increases their solubility and makes them more bioavailable. This means that the body can absorb and utilize the omega-3 fatty acids more effectively, leading to more significant health benefits. Research has shown that using lysine as an emulsifier can significantly increase the bioavailability of omega-3 fatty acids. One study found that using lysine as an emulsifier increased the absorption of omega-3 fatty acids by up to 50%, compared to a control group that did not use an emulsifier.

AvailOm® high EPA is highly effective in increasing blood concentrations of omega-3 fatty acids by up to five times compared to standard fish oil supplements. It isn't just the AvailOm® technology enhancing bioavailability; Omega 5X also features SmartPrime-Om™. This combination of MSM and sesame oil is incredibly novel and it serves almost as an omega biohacking system that makes enzymes more preferential to omega-3 metabolism and less so to omega-6s, which converts readily into the pro-inflammatory & pro-thrombotic Arachidonic Acid (AA).



This **Smart Prime-OM**<sup>™</sup> also optimizes the phosphatidylcholine (PC)—2-acyl LysoPC: phosphatidylethanolamine (PE) phospholipid "packaging" of EPA and DHA within the cell membranes leading to improved cell membrane structure, receptor, biochemical signaling, turning on/off the ideal set of genes, and cardiolipin function within mitochondria.

SmartPrime-Om™ also does something that no other omega product in the industry does - it has been shown to support an increase in omega-3 index without adding fish or other oils into the mix. At that point, it leverages the MSM to ensure that any omega-3 or omega-6 is packaged in its phosphatidylcholine form instead of the phosphatidylethanolamine form, which is more often associated with chronic disease processes. That package can then be effectively delivered to the target tissue for downstream inflammatory support.





**AstraGin®** is a patented blend of two natural plant extracts - Panax notoginseng and Astragalus membranaceus - designed to increase the bioavailability of nutrients in the body. It works by improving the absorption of nutrients from the gut into the bloodstream, where the body can utilize them.

Regarding fish oil, AstraGin® has been shown to significantly increase the bioavailability of omega-3 fatty acids. A study published in the Journal of Agricultural and Food Chemistry found that the use of AstraGin® increased the absorption of omega-3 fatty acids by up to 50% in healthy individuals.

This increased bioavailability can provide greater health benefits for individuals who take fish oil supplements. Omega-3 fatty acids, particularly EPA and DHA, are essential nutrients that play a crucial role in maintaining the health of various systems in the body. They have been shown to have a positive impact on heart health, cognitive function, joint health, and eye health, among others.

The bottom line is that Omega 5X provides a unique combination of ingredients to enhance the delivery and increase the bioavailability of omega-3 fatty acids in the body. This use of high-quality omega-3 fatty acids, combined with MSM, sesame oil, and a patented blend of natural plant extracts, provides a powerful formula to support overall health and well-being. By increasing the bioavailability of omega-3 fatty acids, this supplement can support a range of health benefits, including support for joint health, cognitive function, and heart health.



#### **REFERENCES -**

- 1. Manusama K, Balvers M, Diepeveen-de Bruin M, Headley L, Bosi R, Schwarm M, Witkamp R. In vitro dissolution behaviour and absorption in humans of a novel mixed I-lysine salt formulation of EPA and DHA. Prostaglandins Leukot Essent Fatty Acids. 2021 Jan;164:102232. doi: 10.1016/j.plefa.2020.102232. Epub 2020 Dec 19. PMID: 33360684.
- 2. Dighriri IM, Alsubaie AM, Hakami FM, Hamithi DM, Alshekh MM, Khobrani FA, Dalak FE, Hakami AA, Alsueaadi EH, Alsaawi LS, Alshammari SF, Alqahtani AS, Alawi IA, Aljuaid AA, Tawhari MQ. Effects of Omega-3 Polyunsaturated Fatty Acids on Brain Functions: A Systematic Review. Cureus. 2022 Oct 9;14(10):e30091. doi: 10.7759/cureus.30091. PMID: 36381743; PMCID: PMC9641984.
- 3. Belury MA, Cole RM, Snoke DB, Banh T, Angelotti A. Linoleic acid, glycemic control and Type 2 diabetes. Prostaglandins Leukot Essent Fatty Acids. 2018 May;132:30-33. doi: 10.1016/j.plefa.2018.03.001; https://pubmed.ncbi.nlm.nih.gov/29735020/
- 4. Butawan, Matthew, et al. "Methylsulfonylmethane: Applications and Safety of a Novel Dietary Supplement." Nutrients, vol. 9, no. 3, 16 Mar. 2017, p. 290, 10.3390/nu9030290; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5372953/
- Miller, Lindsey et al. "The Effect of Daily Methylsulfonylmethane (MSM) Consumption on High-Density Lipoprotein Cholesterol in Healthy Overweight and Obese Adults: A Randomized Controlled Trial." Nutrients vol. 13,10 3620. 15 Oct. 2021, doi:10.3390/nu13103620; https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8540167/
- 6. Senda Bahri, etc. Mechanisms and kinetics of citrulline uptake in a model of human intestinal epithelial cells.Clin Nutr. 2008;27(6):872-80.
- 7. Stefan Bröer Amino Acid Transport Across the Mammalian Intestine. Compr Physiol. 2018 Dec 13;9(1):343-373.
- 8. Yuki Toyokawa Ginsenoside Rb1 promotes intestinal epithelial wound healing through extracellular signal-regulated kinase and Rho signaling.

  J Gastroenterol Hepatol. 2019 Jul;34(7):1193-1200.
- 9. TC Chang, etc. Effect of Ginsenosides on Glucose Uptake in Human Caco-2 Cells Is Mediated through Altered Na Glucose Cotransporter 1 Expression. J. Agric. Food Chem. 2007, 55, 1993-1998.
- SF Huang, etc. Effect of Ginsenoside Rb1 on Glucose Uptake and Expression of Glucose Transporter in Animal Cells. Institute of Cardiovascular Sciences, University of Manitoba, Canada. April 2010.
- 11. SY Lee, etc. Astragaloside II promotes intestinal epithelial repair by enhancing L-arginine uptake and activating the mTOR pathway. Scientific reports. September 2017.
- 12. WI Chang, etc. Astragalus membranaceus and Panax notoginseng saponins improves intestinal arginine absorption and protects against intestinal disorder in vivo. Food sciences and research technology. July 2022.