Overview:

Omega-3 fatty acids are critical for good health. They support cardiovascular health, mental well-being and cognitive function, skin and cell structure, and a healthy inflammation response.* While omega-3 fatty acids are most typically available in supplemental form as flax or fish oils, there is a more convenient, natural, and absorbable source – omega-3s from fish, naturally bound to phospholipids, in a tablet delivery system.

EuroMedica-3™ has a level of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) absorption that is much higher than that seen with traditional triglyceride-bound omega-3 products. In fact, the omega-3 fatty acids in EuroMedica-3 show intracellular absorption rates up to 50 times higher than the triglyceride-bound omega-3s found in most fish oils.¹ This extraordinary absorption is due to the patented extraction method used to extract omega fatty acids, phospholipids, and peptides from salmon.² The omega-3 fatty acids in EuroMedica-3 are extracted from the head of the salmon, where they are naturally bound to phospholipids, not triglycerides.

The EuroMedica-3 difference:

EuroMedica-3 is the end result of a French government research project. In 2001, the French government, in conjunction with the National Interprofessional Office for Sea Products and Aquaculture, asked researchers throughout France to investigate potential uses of marine resources and accessory catches.

This governmental research project gave rise to “Vectorization,” a unique and patented manufacturing process developed at the University of Nancy. Vectorization is a process that extracts EPA and DHA naturally bound to phospholipids from salmon. The active matter in this product, which we call phospholipo-protein compound from salmon, is extracted according to this patented process – using no extreme heat, chemicals or solvents. Only cold water and proteolytic enzymes are used in Vectorization.
The intense concentration of the phospholipid complex allows EurOmega-3™ to be delivered in a unique form as well: shelf stable tablets versus capsules or bottled oil, as found in traditional triglyceride-bound omega-3 products. Because of superior phospholipid absorption, the average dosage level can be much lower – just 1 to 2 tablets per day. This makes patient compliance much more likely than is typically seen with triglyceride-bound omega-3 products, which may require multiple softgels or spoonsful of liquid oils.

**Phospholipids vs. Triglycerides:**

Phospholipids (PL) form the membranes of cells. Their chemical structure is essentially a fatty acid, a phosphate group, and an organic molecule. A triglycerol (TAG) is glycerol with three fatty phosphatidylcholine (PC) acids. Both phospholipids and triglycerides can act as carriers for omega fatty acids. However, omega-3 fatty acids bound to phospholipids (EurOmega-3) have been shown in scientific research to have greatly enhanced bioavailability and stability (not prone to rancidity) versus fatty acids transported via triglyceride carriers.¹⁻⁷

Additionally, during the processing of fish oil, exposure to heat, pressure and solvents alters the position of the fatty acids on the TAG carbon chain, redistributing them from the preferred sn-2 position to the less desirable sn-1, sn-3 positions. This means the EPA and DHA are no longer identical to their natural state. It is theorized that this redistribution has an impact on absorption and utilization. It is true that omega-3 fatty acids are absorbed from fish oil; hence, the excellent medical studies. However, several grams must be used on a regular basis to achieve results, because triglycerides are such ineffective transport mechanisms. When EPA or DHA is located in the sn-2 position on the carrier chain, better effects have been reported than when found in the sn-1,3 positions.⁸⁻⁹ Since EurOmega-3 is not subjected to harsh processing methods, the omega-3 fatty acids remain in their original positions on the carbon chain (sn-2), which is in turn bioidentical to the positioning of omega-3 fatty acids in the human brain. This allows for a perfect match with how the body utilizes these important compounds.

Because of their proven superiority over triglyceride-bound omega-3s, the phospholipid-bound omega-3s in EurOmega-3 deliver a demonstrable advantage. With EurOmega-3, the omega-3 fatty acids attached to phospholipids are absorbed 50 times better than those attached to a triglyceride carrier, as is seen in most fish oils.¹

This uniquely enhanced absorption was documented in a scientific report in 2007 from the University of Nancy in France.¹⁰ Also incorporating scientific data from an earlier 2004 study, the absorption levels of omega-3 fatty acids bound to triglycerides were compared to omega-3 fatty acids in EurOmega-3.¹¹ The study used an accepted and validated test of gastrointestinal absorption called a CACO-2 study.
Phospholipids in EurOmega-3™

<table>
<thead>
<tr>
<th>Phosphatidylcholine (PC)</th>
<th>Growth and regeneration. Assists in the introduction of DHA into the heart muscle. Protects mitochondria from oxidative damage.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphatidylethanolamine (PE)</td>
<td>Combined with PC, helps in the building of the myelin sheath and the astrocyte development of synapses. It is strongly concentrated around the medullar motoneurons.*</td>
</tr>
<tr>
<td>Phosphatidylserine (PS)</td>
<td>One of the most widespread of all membrane PLs, provides broad spectrum brain support.*</td>
</tr>
<tr>
<td>Phosphatidylinositol (PI)</td>
<td>Has a major role as a precursor of intracellular signal molecules. Acts on the regulation of cellular calcium. Has a positive impact on mood, brain and heart health.*</td>
</tr>
<tr>
<td>Sphingomyelin (Sph)</td>
<td>One of the most widespread of all membrane PLs, provides broad spectrum brain support.*</td>
</tr>
</tbody>
</table>

Peptides

In addition to the phospholipid-bound omega-3s, EurOmega-3 also contains a natural array of bioactive peptides. Bioactive peptides, which are naturally occurring in milk, eggs, meat and fish, as well as in many plants, remain inactive until they are released during gastrointestinal digestion or during food processing (e.g., cheese ripening or milk fermentation). EurOmega-3 contains medium-sized (average 10kDa), food-derived peptides, which contribute to its overall bioavailability, as well as offer additional cardiovascular health-supporting properties. 12-14

Safety and Purity

EurOmega-3 is 100% sustainable and derived from 100% pure North Atlantic Salmon. Its patented extraction process uses no extreme heat, chemicals, or solvents. Each batch is analyzed using the highest sensitivity tests for heavy metals, PCBs and other toxins. EurOmega-3 passes both US and European standards for purity.
Additional Considerations

EurOmega-3™ provides patients with greater absorption and bioavailability of EPA and DHA in a smaller dosage that is more convenient and encourages a greater compliance.

Additionally, several groups may find this delivery system especially effective. Those individuals who may have difficulty fully digesting oils [individuals with colostomies/ileostomies, weight loss surgeries, and/or reduced digestive function (i.e., celiac disease, Crohn’s, chronic intestinal inflammation)], may have better absorption using the delivery system in EurOmega-3.\(^{15}\) Individuals who have difficulty breaking up fats (i.e., people without gallbladders or diminished pancreatic function) may better absorb omega-3s that are not part of a triglyceride/oil compound.\(^{15}\)

Individuals with diabetes, who may have concerns about the fat in fish oil adversely affecting serum glucose levels, can safely use EurOmega-3. It has less than 2 calories per tablet, compared to 30-60 fat calories per dose from traditional fish oils.

Conclusion

EurOmega-3 is the only omega-3 with DHA/EPA in a biologically active phospholipid form as it naturally occurs in salmon (not chemically altered or artificially spiked), ensuring absorption and improved stability.*

Dosage: 1 to 2 tablets daily.

References:

3. Arer M, Duclaut J. Assessment of biological and clinical effects of Vectomega among healthy volunteers. 2006; Clinique Médical. Rennes et St Etienne, France.


