# OmegAvail<sup>™</sup> Hi-Po

**b** designs for health<sup>®</sup>

1,600 and 3,000 mg 1:1 EPA-DHA

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This information is provided as a medical and scientific educational resource for the use of physicians and other licensed health-care practitioners ("Practitioners"). This information is intended for Practitioners to use as a basis for determining whether to recommend these products to their patients. All recommendations regarding protocols, dosing, prescribing, and/or usage instructions should be tailored to the individual needs of the patient considering their medical history and concomitant therapies. This information is not intended for use by consumers.

OmegAvail<sup>™</sup> Hi-Po and OmegAvail<sup>™</sup> Hi-Po Liquid are Designs for Health's highest potency omega-3 fatty acid formulas, providing 1,600 mg of eicosapentaenoic acid (EPA) plus docosahexaenoic acid (DHA) per 2 softgels (800 mg each) or 3,000 mg EPA plus DHA (1,500 mg each) per 1 teaspoon liquid serving, each at a 1:1 ratio. These products are optimal for long-term supplementation to support the foundational needs of EPA and DHA. Supplementation with a high concentration of EPA and DHA (75% provided in these formulas) ensures the enrichment of tissues with these essential fatty acids occurs much faster than with lower concentrated fish oils due to the competitive nature of other fatty acids. Liquid omega-3 applications may be ideal for children and older adults who have trouble swallowing softgels and can easily be integrated into foods and shakes.

### **Ingredient Highlights**

- Sustainably sourced from Marine Stewardship Council (MSC)-certified wild Alaskan fish oils
- Two convenient delivery options for dosing and titration flexibility
- 1,600 mg (800 mg each of EPA and DHA) per 2-softgel serving in a 1:1 ratio
- 3 grams (1,500 mg each of EPA and DHA) per 1-teaspoon serving in a 1:1 ratio
- Contains 1% of vitamin E isomers (as DeltaGold® delta- and gamma-tocotrienols) for enhanced stability and to protect fish oils from oxidation
- Added lipase for improved digestibility and absorption

Omega-3 fatty acids have a desirable effect on many pathophysiological conditions.<sup>1-4</sup> EPA is beneficial for supporting healthy brain function, balanced moods, skin health, normal cholesterol levels, and a proper inflammatory response.<sup>5-8</sup> DHA supports proper brain development and function, visual acuity, maintenance of normal triglyceride levels and blood pressure already in the normal range, eye development, and a healthy pregnancy for expectant mothers.<sup>9-13</sup>

A meta-analysis showed that EPA and DHA supplementation reduced serum triglycerides and raised high-density lipoprotein cholesterol.<sup>14</sup> Patients, who have hypertriglyceridemia and were already taking a statin, ingested 4 g of EPA per day that significantly reduced the incidence of major cardiovascular events, suggesting cardioprotective effects.<sup>15,16</sup> In a meta-analysis, n-3 polyunsaturated fatty acids with EPA levels  $\geq 60\%$  at a dosage of  $\leq 1$  g per day demonstrated therapeutic effects for the improvement of depression in patients due to their anti-inflammatory properties.<sup>7</sup> Inflammation has been shown to contribute to depressive disorders. Both EPA and DHA have been shown to decrease the production of the inflammatory cytokines, tumor necrosis factor-alpha (TNF-α), interleukin (IL)-1-beta, IL-2, and IL-6 that are related to depression.<sup>7</sup> According to a review, high levels of fish consumption and n-3 supplementation demonstrated protective effects against Alzheimer's disease, decreased the incidence of Parkinson's disease and depressive symptoms associated with this disease, and improved the quality of life in patients with multiple sclerosis.<sup>17</sup> Compared with the control group who received corn oil, test subjects with rheumatoid arthritis who supplemented 130 mg/kg of body weight per day of n-3 fatty acids for 30 weeks had significant reductions in pain, morning stiffness, and tender joints.<sup>18</sup>

### The Need for a 1:1 Ratio of EPA and DHA in Long-term Supplementation

A balanced ratio of EPA to DHA is similar to that found in seafood, although many commonly consumed fish contain a slightly higher level of DHA compared to EPA.<sup>19</sup> EPA and DHA were significant components of human evolutionary diets, with seafood being an important component due to the ease of procurement.<sup>20,21</sup>

# Benefits\*

- Helps support cardiovascular health
- Supports neurological function and brain health
- Promotes mood balance
- Supports skin, hair, and eye health
- Promotes a healthy inflammatory response
- Promotes healthy lipid metabolism
- Promotes cell membrane health
- May help support oral mucosal health and normal tissue regeneration

## OmegAvail™ Hi-Po Liquid

#### Supplement Facts Serving Size 5 mL (approx. one teaspoon) Servings Per Container about 47 % Daily Value **Amount Per Serving** Calories 40 Total Fat 4.5 g 6%\*\* Cholesterol 2%\*\* 5 mg Omega-3 Fatty Acids (from fish oil) EPA (Eicosapentaenoic Acid) 1,500 mg DHA (Docosahexaenoic Acid) 1.500 mg \*Daily Value not established. \*\*Percent Daily Values are based on a 2,000 calorie diet. Other Ingredients: Natural lemon flavor, DeltaGold®

tocotrienols. Contains fish (Alaska pollock).

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### OmegAvail™ Hi-Po

Supplement Serving Size 2 softgels Servings Per Container 60	t Fac	:ts
Amount Per Serving	% Daily	Value
Calories	20	
Total Fat	2 g	2%*
Omega-3 Fatty Acids (from fish oil	) 900 mg	
DHA (Docosahexaenoic Acid)	800 mg	
*Percent Daily Values are based on a 2,000 calorie diet. †Daily Value not established.		
ther Ingredients: Bovine gelatin, purified water,		

glycerine, annatto (color), natural lemon flavor, DeltaGold® tocotrienols, lipase. Contains fish (Alaska pollock). EPA competes with DHA during absorption and incorporation into cell membranes. Thus, a balanced 1:1 ratio of EPA and DHA provides them with an equal opportunity to optimize the corresponding body contents. Conversely, as a result of supplementation with a high EPA:DHA formula, tissues are more greatly enriched with EPA than DHA because the conversion of EPA to DHA is very poor.<sup>22,23</sup> Both EPA and DHA are beneficial for optimizing health and reducing the risk of various conditions.\* However, they differ significantly in the pattern of tissue deposition, the types of active metabolites, and the specific physiological effects on inflammation, immune function, brain and eye structures and function, blood lipids, blood pressure, cardiometabolic function, and more.<sup>24-29</sup>

### Benefits of Liquid Omega-3 Application

Individuals with conditions of oral mucosa and the esophagus that are inflammatory in nature may benefit from the liquid fish oil application.\* Results from a double-blind, randomized, clinical trial of 60 patients with chemotherapy-induced mucositis showed that 1 g of n-3 (containing 2,000 mg of fish oil, 360 mg of EPA, and 240 mg of DHA) supplementation significantly lowered symptom severity after weeks 1 and 2, and after 2 weeks, there was no evidence of mucositis in the treatment group.<sup>30</sup> Compared to the placebo (containing 2,000 mg of corn oil, 360 mg of EPA, and 240 mg of DHA), the n-3 fish oil group reported a significant improvement in the ability to eat, sleep, and swallow, and in quality of life and reduced pain severity scores.<sup>30</sup> Experimental animal models have shown that topical (liquid) n-3 fish oil application supports oral and gastric epithelial health and integrity.<sup>31-33</sup> In oral ulcer-induced rats, topical n-3 fish oil (30% EPA:DHA) supplementation showed significant improvements in TNF-a after 2 days and 4 days compared to the systemic n-3-treated group and the control group, and improved IL-8 levels after 8 days.<sup>32</sup> The oral epithelial degeneration caused by the injury gradually re-epithelialized between 4 days and 8 days in both the topical and systemic n-3-treated groups.<sup>32</sup> In a rat model of acute indomethacin-induced gastric injury, local DHA administration demonstrated gastroprotective effects mediated by decreased gastric leukotriene B(4) levels.<sup>33</sup>

### The TruTG<sup>™</sup> Advantage

OmegAvail<sup>™</sup> Hi-Po softgels and OmegAvail<sup>™</sup> Hi-Po Liquid have high bioavailability due to their 90%+ triglyceride content. The omega-3 fatty acids in this formula are derived from sustainably sourced fish oils in their natural triglyceride (TG) form, which is the same way they occur naturally in fish. Most mass-marketed fish oil supplements come in the synthetic ethyl ester (EE) form that is more convenient to produce, but is not as readily recognized, digested, and assimilated by the body, and is more prone to oxidation and production of free radicals.<sup>26</sup> To receive the maximum benefits from n-3 fish oil supplementation, it is critical for these fats to be provided in the most bioavailable and bioidentical form, which is the same form that is naturally found in fish and in the tissues of the human body. The TG form is broken down 12% to 15% faster than the EE form by pancreatic lipase, which is also included in this formula for enhanced digestion and absorption. Because the natural TG form is most easily digested and available for the body to use, this TruTG<sup>™</sup> advantage promotes healthy n-3 levels in the body.\*

### Purity

These formulas also include vitamin E isomers (as DeltaGold<sup>®</sup> delta- and gamma-tocotrienols), which protect these fragile oils from oxidation and rancidity. Additionally, these fish oils are molecularly distilled and filtered to ensure purity and to maximize the removal of metals, pesticides, PCBs, and other contaminants.

### **Recommended Use:**

**OmegAvail™ Hi-Po:** Take 2 softgels per day with meals or as directed by your health-care practitioner.

**OmegAvail™ Hi-Po Liquid:** Take 5 mL (approximately one teaspoon) per day with a meal or as directed by your health-care practitioner.

Warning: Consult your health-care practitioner before use if you are taking blood thinning medication or are planning to have surgery.

For a list of references cited in this document, please visit:

https://www.designsforhealth.com/api/library-assets/literature-reference---omegavail-hi-po-tech-sheet-references

DeltaGold\* is a registered trademark of American River Nutrition, LLC and protected by US Patent Number 8,586,109.

\*These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure, or prevent any disease.

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