

# ORTHOMEGA<sup>®</sup> SELECT DHA



## CLINICAL APPLICATIONS

- Powerful Omega-3 Concentrate – 5:1 DHA to EPA Ratio
- Targeted Support to Maintain Healthy Blood Pressure Levels
- High-Intensity Support for Healthy Blood Lipid Levels
- Boosts Cognitive Function and Healthy Brain Development
- Increases Visual Acuity and Ocular Health

## CARDIOVASCULAR HEALTH

Orthomega<sup>®</sup> Select DHA is a high-concentration docosahexaenoic acid (DHA) fish oil formula for those needing intensive nutritional support from this essential fatty acid. DHA, or docosahexaenoic acid, is a fatty acid well-known for its role in cardiovascular and cognitive health, as well as in boosting mood, memory and focus. It is sourced from waters off the Chilean coast, where cold, fresh waters provide the cleanest, most sustainable source of fish in the world. Each soft gel delivers 580 mg DHA in the natural triglyceride form for superior absorption. This high-concentration DHA fish oil is purified, vacuum-distilled, and independently tested to ensure heavy metals, pesticides and polychlorinated biphenyls (PCBs) are removed to undetectable levels.

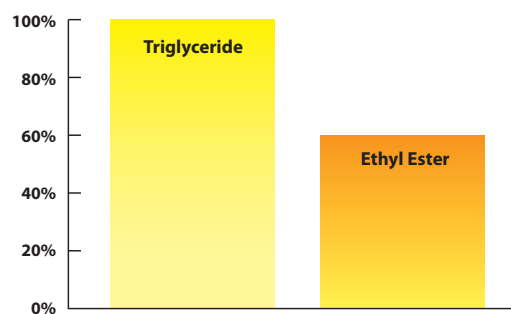
### Overview

While EPA/DHA combination formulas remain the backbone of any fish oil regimen, as research on fish oil continues to accumulate, new evidence has emerged supporting the value of unique formulations of high-intensity DHA for more targeted uses. Fatty acids in the n-3 family are considered essential to humans because our bodies are unable to make them; in humans, the retro-conversion between ingested DHA to plasma EPA is higher than the conversion of EPA to DHA, making the specific supplementation of DHA important for those with impaired conversion.<sup>1</sup> Extensive studies have shown that DHA from fish oil plays a special role in cardiovascular health, specifically important for maintaining healthy blood pressure and supporting optimum lipid levels. DHA also boosts cognitive health and is an essential part of the structural integrity of the central nervous system making it a key component of neurological wellness. With over 10,000 published studies on fish oil in the last three decades, DHA from fish oil is among the most researched natural ingredients available and has a long history of safety and efficacy.

### Fish Oil Delivery – Triglycerides vs. Ethyl Esters<sup>†</sup>

While the amount of EPA and DHA provided in a fish oil product is important for efficacy, the type of fish oil delivered is another significant factor in defining fish oil effectiveness. The human body is accustomed to digesting and absorbing EPA and DHA in the natural triglyceride form. Even though triglyceride-based fish oils are the preferred form for superior fish oil absorption, due to cost, the vast majority of fish oil products available on the market are packaged in semi-synthetic ethyl ester form. While less expensive, their unusual structure is resistant to the digestive enzymes that enable fat breakdown. In a study comparing EPA and DHA digestion in both the natural triglyceride and ethyl ester form, five common digestive lipase enzymes were shown to more easily digest fish oil in the natural triglyceride form as compared to the ethyl ester substrate.<sup>2</sup> A review of the existing literature has shown that fish oil provided in the natural triglyceride form is more efficiently digested and is 70% more absorbable than the ethyl ester form.<sup>3</sup>

### Relative % Bioavailability of Triglyceride Compared to Regular Ethyl Ester



Triglyceride form has a natural glycerol backbone offering up to 70% more absorption than ethyl ester.

<sup>†</sup> 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.

## Omega-3 Depletion†

An accumulating body of research shows that the typical modern diet does not provide a sufficient amount of omega-3s for optimal health. Symptoms of general omega-3 deficiency are common and often overlooked. These symptoms may include dry, itchy or flaky skin, poor sleep quality, poor circulation, eye discomfort and mood imbalance.<sup>4,5</sup>

## Cardiovascular Health†

DHA has been found to have positive effects on key aspects of cardiovascular health including balancing blood lipids, stabilizing cardiac function and increasing relaxation of arteries to help support normal blood pressure levels. Mori et al. has reported that 4 g/day of DHA has a significant impact on arterial health and helps to maintain healthy blood pressure levels.<sup>5-6</sup> Additionally, cerebrovascular health has been found to be protected by optimal levels of phospholipid DHA, indicating that sufficient amounts of DHA supports brain circulatory health.<sup>7</sup> In a systematic review of 11 randomized, controlled trials published between 1996 and 2011 (which analyzed the association between DHA and changes in concentration of blood fat profile components), DHA supplementation was found to maintain healthy blood lipid levels and increase levels of good fats in people with cardiovascular concerns.<sup>8</sup> DHA, but not EPA, has also been found to enhance dilation of the arteries by decreasing the release of calcium within smooth muscle that causes arterial constriction. This novel mechanism of action makes DHA the omega-3 fatty acid of choice for those with blood pressure concerns.<sup>9</sup>

## Ocular and Cognitive Health †

The retina is a specialized portion of the nervous system that has one of the highest levels of long-chain fatty acids in the human body, and is especially high in DHA.<sup>10,11</sup> Research has shown that children supplemented with DHA (115 mg/day) from six months to one year of age had significantly improved visual acuity than control children;<sup>12</sup> in adults, fish and DHA intake reduces age-related visual concerns.<sup>13,14</sup> Patients with retinal concerns have been found to have lower levels of DHA,<sup>15</sup> partly due to reduced activity of the enzyme delta-5-desaturase, an enzyme responsible for increasing essential fats in the body. In addition, 1,200 mg/day of DHA increased the positive effects of vitamin A in those with visual challenges.<sup>16</sup> Increased dietary intake of fish and DHA (but not EPA) has also been correlated with better cognitive health.<sup>17</sup>

## Maternal and Infant Health †

Research has confirmed that maternal fatty acid levels, especially DHA levels, steadily drop in late pregnancy,<sup>18</sup> increasing risk for postpartum mood changes.<sup>18</sup> Rapid growth in the brain occurs during the last trimester of pregnancy and the first several postnatal months; therefore the need for maternal DHA is critical during these months for brain development. In addition, a meta-analysis of 41 studies showed that lower fish

consumption and breast milk DHA content were associated with increased risk for low mood after pregnancy.<sup>20</sup> Several reports suggest that maternal supplementation of fish oils or DHA alone during the third trimester and while breast-feeding can improve cognitive development in newborns,<sup>21</sup> improve sleep patterns,<sup>22</sup> and even increase IQ scores at age four.<sup>23</sup>

## Directions

1 soft gel capsule per day or as recommended by your health care professional.

## Does not contain

Gluten, corn, yeast, artificial colors and flavors.

## Cautions

If you are pregnant or nursing, consult your physician before taking this product.

Supplement Facts <sup>v4</sup>		
Serving Size 1 Soft Gel Capsule		
Servings Per Container 60		
1 soft gel capsule contains	Amount Per Serving	% Daily Value
Calories	15	
Total fat	1.5 g	2%*
Cholesterol	5 mg	2%
DHA (Docosahexaenoic Acid)	580 mg	**
EPA (Eicosapentaenoic Acid)	130 mg	**

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

ID# 449060 60 Soft Gel Capsules

† 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.

## References

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