

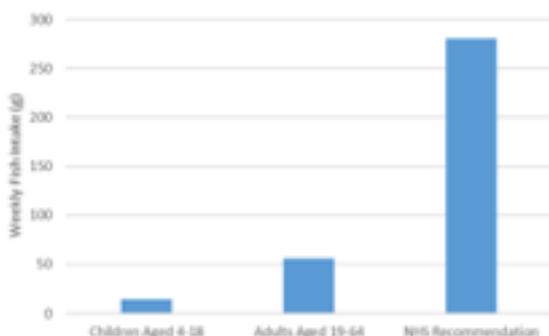
Our new Efamax Ultra Strength fish oil reflects the latest research which highlights the most up to date understanding of optimal levels of supplementation.

### THE UK POPULATION FAIL TO EAT ENOUGH DHA

Fish, particularly oily fish, is high in long chain omega 3 fatty acids which includes DHA.

The UK NHS currently recommends that we should eat 2 portions of fish per week, with one of these being oily<sup>1</sup>.

Two major surveys of UK dietary nutrition found that these recommendations were not being met. Adults aged 19 to 64 years consume 56g per week but this is still a long way off the recommended intake<sup>2</sup>. This is shown in Figure 1.



### The importance of DHA for brain health has been demonstrated repeatedly in trials on healthy adults for example:

A study on 2617 people tested for mental ability at age 11 years and again at age 64 years. The results demonstrated that those who took fish oil supplements had recorded a higher total red blood cell count of omega-3 fatty acids. These higher scores were associated with better cognitive function including nonverbal reasoning, verbal memory, executive function or purposive action, speed of information processing, psychomotor performance and constructional ability according to standardised tests.<sup>3</sup>

A randomised, placebo controlled double blind study in 2005 confirmed that omega-3 fatty acid supplementation can enhance brain function and mood in the general population. The study included 49 healthy adults aged 22 to 51 years old who were administered with fish oil supplements for 35 days. The results showed that those taking fish oil were better able to control anger & repress unsuitable responses, had less anxiety, fatigue and depression and had increased vigor.<sup>4</sup>

A study in 2011, partially funded by Efamol and a distributors, Health & Herbs International in New Zealand included 176 healthy adults aged 18-45 years. The group were asked to take either 1.16 g DHA daily or placebo for 6 months. In women, memory accuracy, working memory and speed of delayed word recognition significantly improved with DHA supplementation compared to placebo. In men, speed of working memory significantly improved by 15% with DHA supplementation compared to placebo<sup>5</sup>.

### The nutritional content of Efamol Efamax Ultra Strength Pure Fish Oil is as follows:

#### NUTRITIONAL INFORMATION:

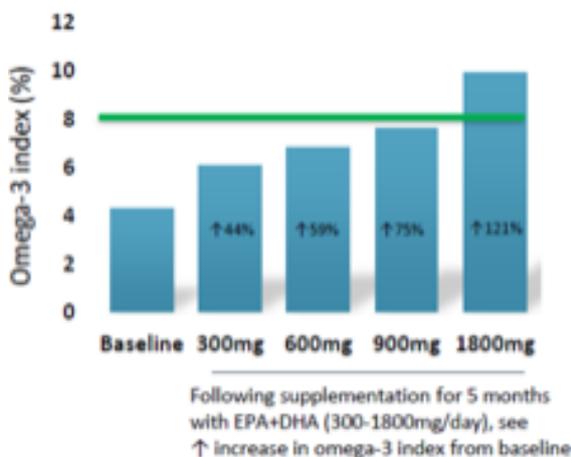
Per Daily Intake (One capsule)		%NRV*
High Strength Fish Oil	1000mg	**
of which: Omega 3	850mg	**
of which: DHA	320mg	**
EPA	480mg	**

\*Nutrient Reference Value formerly known as Recommended Daily Allowance. \*\*No NRV Established.

Therefore, with 320mg of DHA and 480mg of EPA per daily intake there is a combined amount of 800mg of DHA and EPA in our Efamax capsules. The importance of high intakes of DHA and EPA is discussed below:

### Flocl MR et al J Am Heart Assoc. 2013,2(^):e000513

Optimal blood omega 3 levels are 8% or more. In the UK in many countries worldwide we have low blood omega levels on average of around 4%. We have designed Efamax at optimum levels to raise Omega 3 levels up to 8% in 5 months, taking 2 capsules a day for the first 12 weeks.



Our new Efamax Ultra Strength fish oil reflects the latest research which highlights the most up to date understanding of optimal levels of supplementation.

### Boespflug et al., 2016

This study investigated fish oil use over 24-weeks in healthy adults with subjective memory impairment versus a placebo. The treatment group of 11 adults received a combined total of 2.4g a day of DHA and EPA while the placebo group of 10 adults received no fish oil, DHA or EPA. The amount of DHA and EPA in red blood cell membranes increased significantly in the treatment group. An enhanced neuronal response to a working memory challenge was seen in the study group, this activity was recorded using an MRI machine. This greater neuronal response was shown to improve working memory performance in the group supplemented with fish oil.

### Külzow et al., 2016

This study investigated omega 3 long chain polyunsaturated fatty acid (LCPUFA) supplementation in the maintenance of cognitive function as we age. Omega 3 LCPUFA includes DHA and EPA. The investigation focused on 44 cognitively healthy adults aged 50 to 75 years who were randomly assigned to receive either 2,200mg a day omega 3 LCPUFA or placebo for 26 weeks. The amount of omega 3 in the blood, the omega 3 index, increased significantly in the group receiving the supplement. The participants also took part in an object-location memory task where it was found the group receiving omega 3 supplements had significantly better memory recall than the placebo. Omega 3 LCPUFA supplementation exerts positive effects on memory functions in healthy older adults.

### Zulyniak et al., 2015

This study investigated the age-related effects of fish oil supplementation in younger and older men. Healthy young (18-30 years, n=10) and older (60-74 years, n=9) men consumed five fish oil capsules daily, providing 2.0 g/d EPA and 1.0g/d DHA, for three months or placebo (young n=5, old n=8). A reduction in blood triglycerides of around 30% was seen in both young and old groups taking the fish oil. The effect of supplementation on increasing red blood cell DHA levels was far greater in the younger male group compared to the older males and placebo. The study also found that small improvements in serum oxylipin profile occurred in both groups receiving supplementation. Oxylipins derived from DHA and EPA are often anti-inflammatory and possess vasodilatory actions. Both young and older men experience the triglyceride lowering benefits associated with fish oil supplements while also gaining an improved oxylipin profile.

### References

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3. Whalley LJ, Fox HC, Wahle KW, Starr JM, Deary IJ. Cognitive aging, childhood intelligence, and the use of food supplements: possible involvement of n-3 fatty acids. *Am J Clin Nutr* 2004;80(6):1650-1657.
4. Fontani G, Corradeschi F, Felici A, Alfatti F, Migliorini S et al. Cognitive and physiological effects of omega-3 polyunsaturated fatty acid supplementation in healthy subjects. *Eur J Clin Invest* 2005;35:691-699.
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