

## ALA – The Mother of all Omega-3's

*The evidence is finally in—eating oily fish prevents heart attacks, reduces the chances of depression and makes our children smarter. But is fish oil the whole story, or are we missing out on the mother of all omega-3's? Toni Jordan investigates.*

If you believe everything you hear, fish oil is the new panacea for a host of illnesses. Recently a bevy of research and publicity has been released showing that fish oil has a positive effect on heart disease and cardiovascular health, the chance of developing depression and children's language development and vision. No-one's denying the terrific health benefits that come from regular consumption of oily fish, but there are a few problems with the 'fish is best' theory.

For instance, consider vegetarians. No longer considered a fringe group, more and more people are embracing a vegetarian or vegan lifestyle as an answer to culture, religious, environmental or health concerns—including 1 million Americans and 1 billion Indians. The paradox is this: vegetarians don't eat fish. If fish oil is the best source of omega 3's, all these people should have depression, compromised intelligence and heart disease. But the facts are completely different. Not only do vegetarians have normal brains, but they have some of the world's lowest rates of heart disease—all without eating any fish at all. How can this be possible?

To understand this, it's important to understand the facts behind the action of fish oil. Fish oil's healthy benefits come about because fish is a rich source of omega-3 fatty acids—specifically, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). These omega-3's are a type of fat essential to human health. Luckily for vegetarians (and for the rest of us), fish are not the only source of omega 3's.

Alpha-linolenic acid (ALA) is also an omega-3 fatty acid, but it's found in vegetables, nuts and seeds, especially soy beans, navy beans and walnuts. One of the highest sources of ALA is flaxseed oil, which contains twice as much omega 3's than fish. ALA is, in fact, the mother of all Omega 3's—our bodies convert ALA into EPA and DHA, the important omega 3's from fish oil. So what are the advantages of ALA?

Firstly, not all the ALA ingested by humans is converted into EPA and DHA. So what happens to the rest of the ALA we eat? Now researchers recognise that ALA is also metabolised by other biochemical pathways in the body, and these pathways may have a wider range of actions on human health.<sup>1</sup> One of these pathways is the production of saturated and monounsaturated fatty acids in the nervous system. Also, animal studies have shown ALA plays an important role in the maintenance of healthy skin and fur. More research needs to be done on ALA to explore the significance of these findings in humans.

Another benefit of ALA is the improvements it can bring to the whole diet. Diets rich in ALA are often called the 'Mediterranean' diet—essentially a diet high in fruits, vegetables and olive oil. As well as being rich in ALA, this type of diet also includes a

wide range of phytochemicals and antioxidants, together with fibre, and is proven to prevent coronary heart disease<sup>2</sup>.

Also, increasing the amount of oily fish in the diet is not that easy. Overfishing, high mercury and toxin levels in oily fish, the distance people live from the coast and the increasing cost of fish can make it difficult for many people to obtain their omega-3's from fish alone. Some people, especially young children, just don't like the taste of fish, especially the oily fish that contain the most fatty acids. But increasing the dietary intake of ALA-rich vegetable oils can overcome these problems. After all, it's the Omega 3's that count, not where they come from.

It's much easier to substitute high- ALA vegetable oils, like flaxseed oil, into the average Australian diet in spreads, salad dressings (with a little lemon juice or apple cider vinegar) and mayonnaise. Try a little flaxseed oil mixed with oatmeal, in soups or deserts. Choose a flaxseed oil that's unrefined, cold pressed and GMO free. Organic flaxseed oils are a great idea, because this guarantees there are no pesticide, herbicide or chemical residues in the oil. Make sure the amount of ALA present in the flaxseed oil is displayed on the label, and that it's packed in dark-coloured glass or plastic to protect the oil from light. Always refrigerate the oil after opening.

All parents want the best for their children, but it's sometimes not easy to follow the best intended professional advice. If you're one of those parents desperately trying to tempt your children to eat more fish—don't despair. There are other great sources available to make sure that you, and your family, don't miss out on the benefit of Omega 3's.

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<sup>1</sup> Sinclair AJ, Li D. Alpha-linolenic acid - defining new roles for an old molecule. Proceedings of the Nutrition Society of Australia 2000; 24:86-95.

<sup>2</sup> De Lorgeril, M et al. Mediterranean alpha-linolenic acid-rich diet in secondary prevention of coronary heart disease. The Lancet 1994; 343: 1454-1459

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