

## Strategies for bridging the omega-3 nutrition gap

7/21/2005 - The Council for Responsible Nutrition (CRN) is advising people to up their consumption of oily fish or start taking fish or algal oil supplements if they are to receive the health benefits of omega-3 fatty acids, *reports Jess Halliday.*

In a [white paper](#) published yesterday, the supplements industry association said: "Dietary intakes are typically very low. Frequent fish consumption or supplementation with EPA and DHA are the best ways to achieve a protective intake level of about 0.5 g/d."

The benefits of EPA (eicosapentaenoic acid) and DHA (docosahexaenoic acid) for a variety of health conditions or processes, including heart health, cognitive function, fetal development, have been well documented by clinical intervention studies.

Canada, Sweden, the UK, Australia and Japan, have all established adequate intake levels of EPA and DHA, typically between 0.3 and 0.5 g/d. The US does not, but the Dietary Guidelines for Americans recommend two fish meals a week to provide 0.5g per day.

But according to the CRN, most Americans are consuming less than 0.1g per day – an amount that is creating a nutritional gap that could be bridged by supplements.

The paper also clarifies some of the differences between different types of omega-3 fatty acids – that is, between DHA and EPA and their precursor, ALA (alpha-linolenic acid).

Since the body cannot produce its own ALA, it must be obtained from the diet, where it occurs naturally in grains, nuts and plant oils. But, as NutraIngredients-USA.com explained in an [article](#) last month, ALA must be converted by the body into EPA or DHA before it is of any benefit – a process which involves the elongation of the carbon chain from 18-carbon to 20- (EPA) or 22- (DHA).

However studies have shown that a lot of the benefit is lost along the way, and humans glean only two to five percent of the DHA from ALA that they would through consuming the same quantity of DHA in the first place.

The FDA's permitted qualified health claim for dietary supplements and conventional foods, that "supportive but not conclusive research shows that consumption of EPA and DHA omega-3 fatty acids may reduce the risk of coronary heart disease," does not apply to omega-3 derived from plants such as flax or canola – the main sources of ALA.

Despite the evidence supporting the benefits of EPA and DHA, it has not been plain sailing for the fish oil industry.

In March 2004, fears were raised over the consumption of fish by pregnant women and young children by an FDA advisory on mercury levels in some fish, which may harm the development of the nervous system.

Although the FDA pointed out the importance of EPA and DHA for heart health and children's development and set out protective measures that could be taken, fish consumption by women fell by 17 percent following the advice, according to George Gray of Harvard Business School.

Speaking at IFT this week, Grey warned that if all consumers reduced their consumption by this amount, overall public health would go into a decline.

Conversely, he said: "*If consumers instead increase their same fish intake by a whopping 50 percent there would be a marked increase in the collective life expectancy.*"

*"The mercury controversy will continue. We've got to work hard to improve the good message and provide means to promote it,"* said Purdue University's Charles Santerre, an expert in fish safety.

But the CRN said: *"Women of childbearing age should follow FDA guidelines on fish consumption to limit exposure to environmental contaminants."*

Meanwhile, a [survey](#) conducted this year by Environmental Defense into measures taken by supplement makers to ensure their fish oil products were contaminant-free concluded that the majority adhere to the strictest standards.

The CRN also cited traditional foods fortified with EPA and DHA as a useful way for consumers to up intake.

According to Ian Lucas, VP marketing and new product development for Ocean Nutrition Canada, there has been "overwhelming acceptance and explosion in sales" in countries where omega-3 products have been introduced, such as Spain and Australia.

Referring to North America, he said: *"With success in these markets, it is critical for us to move now."*

Lucas cites several factors that he believes are converging to set the stage for omega-3 in mainstream food products:

*"Science and data clearly show that deficiencies exist in the American diet. There is microencapsulated technology that enables formulation without the taste or smell of fish. There is also a positive regulatory environment and increasing consumer awareness of the need for Omega-3."*

In 2004, 150 new products containing omega-3 were launched in the USA and Canada in 2004. However details on the type and origin of the fatty acid in each were not available from the market researcher, ProductScan.