

Omega-3-rich drink may affect omega-3 index

By Stephen Daniells, 29-Apr-2010

Consuming a convenience drink enriched with omega-3 fatty acids led to increases in blood levels of the beneficial fatty acids, and may enhance heart health, says a new study from Germany.

The heart health benefits of consuming oily fish, and the omega-3 fatty acids they contain, are well-documented, being first reported in the early 1970s by Jorn Dyerberg and his co-workers in *The Lancet* and *The American Journal of Clinical Nutrition*. To date, the polyunsaturated fatty acids (PUFAs) have been linked to improvements in blood lipid levels, a reduced tendency of thrombosis, blood pressure and heart rate improvements, and improved vascular function.

Despite the growth in awareness of the cardiovascular benefits of the fatty acids, not everyone finds oily fish and encapsulated concentrated derivatives of fish oils palatable, explained researchers led by Professor Clemens von Schacky from the Ludwig-Maximilians-University in Munich.

An omega-3 fortified convenience drink was tested for bioavailability of omega-3, safety and tolerability in 50 people with atherosclerotic disease. All 50 had an omega-3 index of less than 5 per cent. (the incidence of sudden cardiac death (SCD), for example, is 10 per cent lower in people with an omega-3 index of over 8 per cent, compared with an omega-3 index of less than 4 per cent, said the researchers.)

Prof von Schacky and his co-workers used the commercial product Smartfish, which containing 3.6 grams of salmon oil per drink, providing 200 mg of EPA, 300 mg of DHA, and 100 mg of DPA.

Subjects were randomly assigned to receive either the omega-3-rich convenience drink or a placebo drink containing 1.1 grams of linoleic acid from corn oil for eight weeks.

According to results published in the *British Journal of Nutrition*, the average omega-3 index of the Smartfish group increased from 4.37 to 6.80 per cent, but there was high inter-individual variability in the response. No change in omega-3 index was observed in the placebo group.

"Based on circumstantial evidence, the mean increase of the omega-3 index of 2.43 per cent, from 4.37 to 6.80 per cent, observed in the present study is associated with an estimated 70 per cent decrease in the risk for sudden cardiac death, and a less pronounced decrease in the risk for other cardiovascular events, such as the acute coronary syndrome," wrote the researchers.

The drink was found to *"well tolerated and highly palatable"*, wrote Prof von Schacky and his co-workers. *"Therefore, the convenience drink studied appears to be a viable alternative to fish or fish oils."*

"The variability in response provides a rationale for future studies targeting a predefined omega-3 index with flexible doses of omega-3 fatty acids," they concluded.

Welcome results

The results were welcomed by Norway's Smartfish, the company behind the drink and sponsor of the study. The company told NutraIngredients: *"We are very pleased to document that our Smartfish drink composition provides high bioavailability of the essential Omega 3 fatty acids – in fact the increase in the Omega 3 Index was higher than the scientists had expected.*

"Another important result was the very high score on palatability – knowing that compliance is a difficult matter. We strongly believe that our delivery format of fresh, stable marine omega 3s (also combined with other specific nutrients) – can provide additional benefits compared to traditional delivery formats."

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"Effects of a convenience drink fortified with n-3 fatty acids on the n-3 index"

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