

Omega-3 shows benefits for fat loss in diabetics

13/12/2007 - **Supplementation with omega-3 fatty acids could reduce fat mass in diabetics, as well as improving blood lipid levels associated with the formation of arterial plaque, suggests a new study from France.**

Twenty-seven women with type-2 [diabetes](#) took part in the study, published in this month's *American Journal of Clinical Nutrition*, which also reported no changes to overall energy intake after two months of [omega-3](#) supplementation.

Omega-3 fatty acids have been linked to a wide-range of health benefits, including reduced risk of cardiovascular disease ([CVD](#)) and certain cancers, good development of a baby during pregnancy, joint health, and improved behaviour and mood.

The researchers randomly assigned the volunteers to receive either daily supplements of fish oil (three grams, providing 1.8 grams of omega-3) or placebo (paraffin oil) for two months. The subjects did not show signs of high triglyceride levels.

At the end of the study, researchers reported significant reductions in total fat mass and the diameter of fat cells beneath the surface of the skin (subcutaneous adipocytes) in the omega-3, but not the placebo, group.

Moreover, risk factors for plaque formation in the arteries (atherogenic markers), such as triacylglycerol levels and the ration of triacylglycerol to HDL ('good') cholesterol, were significantly lower as a result of omega-3 supplementation, indicating considerable cardiovascular benefits for the women.

"A subset of inflammation-related genes was reduced in subcutaneous adipose tissue after the fish oil, but not the placebo," added the researchers.

No significant changes occurred in insulin sensitivity measures, they noted.

"A moderate dose of omega-3 PUFAs for two months reduced adiposity and atherogenic markers without deterioration of insulin sensitivity in subjects with type-2 diabetes," concluded the researchers.

"Some adipose tissue inflammation-related genes were also reduced. These beneficial effects could be linked to morphologic and inflammatory changes in adipose tissue."

Only recently, researchers from the University of Colorado at Denver reported that increased intake of omega-3 fatty acids from marine sources may protect children at high risk of type-1 diabetes from developing the disease (*JAMA*, Vol. 298, pp. 1420-1428).

An estimated 19 million people are affected by type-2 diabetes in the EU 25, equal to four per cent of the total population. This figure is projected to increase to 26 million by 2030.

In the US, there are over 20 million people with diabetes, equal to seven per cent of the population. The total costs are thought to be as much as \$132 billion, with \$92 billion being direct costs from medication, according to 2002 American Diabetes Association figures.