Low-dose omega-3 linked to lower blood pressure

21/03/2007 - **Low doses of the omega-3 fatty acids docosahexaenoic acid (DHA) successfully reduced diastolic blood pressure by 3.3 mmHg in a clinical trial, backing up previous results with higher doses.**

"A significant reduction in diastolic BP was noted which is likely to be of clinical significance with regard to risk of future vascular events in middle-aged subjects," wrote researchers.

Omega-3 has been identified as one of the super-nutrients taking the food and supplements industry by storm. Much of its healthy reputation that is seeping into consumer consciousness is based largely on evidence that it can aid cognitive function and may help protect the heart against cardiovascular disease.

Several intervention trials have reported positive benefits on blood pressure and cardiovascular disease using omega-3 fatty acids. Indeed, researchers noted that a meta-analysis of randomized, controlled trials showed significant decreases in both systolic and diastolic blood pressure with omega-3 doses in the region of two to three grams per day.

To test if lower doses also conferred a positive effect, researchers recruited 38 middle-aged subjects (average age 48.6, average BMI 24 kg per sq.m, baseline average blood pressure 121.6/79.15 mmHg) to randomly receive either a 0.7 gram daily dose of DHA derived from *Crypthecodinium cohnii* (Martek Biosciences) or an olive oil placebo for three months. A four-month washout period separated the cross-over to the alternative intervention.

Researchers stated that the daily DHA supplement increased DHA levels in red blood cells (erythrocytes) by 58 per cent.

Diastolic blood pressure decreased by an average of 3.3 mmHg, while no significant differences occurred for systolic blood pressure, she said.

Other measures of cardiovascular function, like the markers of inflammation, C-reactive protein and interleukin-6 (IL-6), were not affected significantly by supplemental DHA.

The potential mechanism behind these effects was not studied directly, but the researchers state that other studies have proposed a direct effect of the omega-3 fatty acids on the electrophysiology of the heart by affecting the sinus node (the heart's natural pacemaker) or efficiency of the ventricles.

"Future work is needed to confirm these findings and to investigate further the effects of DHA on cardiac function," concluded the researchers.

Hypertension, defined as having a systolic and diastolic BP greater than 140 and 90

mmHg, affects about 600 million people worldwide and is associated with over seven million deaths.