

Omega-3 May Reduce High Blood Pressure Associated with Metabolic Syndrome

A study by a research team from Denmark has suggested overweight teenagers could reduce their blood pressure by taking fish oil supplements.

Scientists from Copenhagen University divided a group of 80 slightly overweight teenage boys into two groups, one of which took daily doses of fish oil while the other took similar quantities of vegetable oil, used as a study placebo.

The 16-week study showed the youngsters who consumed the fish oil had 3.8 mm Hg lower systolic pressure (the top reading) and 2.6 mm Hg lower diastolic pressure (the bottom reading) than the group taking vegetable oil.

Results

After the intervention, the red blood cell (RBC) content of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) were $1.2\% \pm 0.5\%$ and $6.7\% \pm 1.6\%$, respectively, in the those receiving fish oil (FO group), compared with $0.6\% \pm 0.3\%$ and $4.1\% \pm 0.9\%$ in the control group. Systolic blood pressure (SBP) was 3.8 ± 1.4 mm Hg lower ($P < .006$) and diastolic blood pressure (DBP) was 2.6 ± 1.1 mm Hg lower ($P < .01$) in the FO group compared with the control group. Plasma triacylglycerol (TAG) concentration and insulin sensitivity were unaffected by either of the treatments. Plasma high-density lipoprotein (HDL) and non-HDL cholesterol were increased by 5% and 7%, respectively, in the FO group, and by 2% and 0% in the control group ($P < .01-.02$). The changes in RBC EPA content were inversely correlated with the changes in SBP and DBP and directly correlated with the increases in HDL cholesterol and non-HDL cholesterol concentrations. No association was seen between RBC EPA and plasma TAG concentration or insulin sensitivity.

Adults with high blood pressure can take fish oil to treat their condition and a 3 mm Hg drop in pressure can lead to a 15% less chance of suffering a stroke, the researchers pointed out.

Senior researcher Dr. Lotte Lauritzen told The Journal of Pediatrics:

“Starting with a healthy diet and keeping it throughout life may provide better protection than waiting until later when you are more at risk.”

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Scientists Call for Update on Pregnancy Fish Consumption

Scientists on both sides of the Atlantic are urging Margaret Hamburg of the FDA to complete its 2009 draft assessment on fish consumption for pregnant women.

In a letter dated May 26, Prof Tom Brenna from Cornell University and Prof Michael Crawford from the Institute of Brain Chemistry and Human Nutrition at London Metropolitan University, UK, urge an “update [to] the FDA’s 2004 advice about fish consumption for fertile and pregnant women”. The letter states that advice issued in 2004 is now out of date and may now be “inadvertently causing harm”.

Prof Brenna explained that the 2004 advice for pregnant and fertile women was issued to protect the developing foetus from the harms of methyl-mercury pollutants in fish.

“The core problem is that the benefits of fish could not be appropriately considered in 2004,” state the scientists. “Current science has advanced to the point where it is no longer consistent with the recommendation to limit consumption of all fish to a maximum of 12 ounces per week for pregnant and lactating women and women who may become pregnant.

“There is persuasive new evidence that consumption of more than 12 ounces per week of most marketplace species will actually improve foetal neurodevelopment. This improvement occurs in spite of methyl-mercury in most, if not all fish.

Since the 2004 advice was issued, however, the science has moved on considerably, said Prof Brenna, and the scientists are now encouraging “FDA to complete work on this assessment on a priority basis”.

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