

Maternal omega-3 consumption boosts offspring's coordination

20/12/2007 - **Increased intake of the omega-3 DHA during pregnancy could produce improved motor function in the offspring in later life, suggests a new study from the Netherlands.**

Over 300 children were followed for seven years, with the results showing a positive effect on docosahexaenoic acid (DHA: 22:6n-3) levels in the umbilical blood during pregnancy and nervous system health in the children, states the study in the *European Journal of Clinical Nutrition*.

"Our results suggest that prenatal [DHA](#) availability, which can be influenced by maternal dietary DHA intake during pregnancy, can have an effect on quality of movement in later life," wrote researchers.

The research adds to our understanding of how [omega-3](#) play an important role in the development of the [baby](#) in utero, with a wealth of other studies reporting that a diet rich in the DHA omega-3 fatty acid (docosahexaenoic acid) during pregnancy and breastfeeding is associated with a healthy pregnancies as well as the mental and visual development of infants.

Mothers are also aid to be less at risk of post partum depression or mood change, and to recover more quickly after pregnancy, if they consume enough of the fatty acid.

Researchers told NutraIngredients.com that they expected omega-3 recommendations to become broader and broader, including supplements during pregnancy and early childhood. This is because of the benefits reported for mental development, and there are studies that show omega-3 supplementation can influence breast milk composition and subsequently a child's brain, they said.

The new results support the growing body of science indicating the benefits of an omega-3-rich maternal diet and improved health of the offspring.

Researchers, in collaboration with researchers from the University Hospital Maastricht, obtained umbilical blood samples to measure DHA levels, and related this to the motor function of the offspring after seven years, using the Maastricht Motor Test (MMT).

They report a positive relationship between DHA concentrations and the MMT total and quality score, even after adjusting the results corrected for the covariables gender, cognitive performance, gestational age and age at measurement

However, no relationship between DHA concentrations and quantitative movement scores was reported by the researchers.

The study supports an earlier report from Australia involving 98 pregnant women given fish oil supplements (1.1 g of eicosapentaenoic acid (EPA) and 2.2 g of DHA) from 20 weeks of pregnancy until the birth of their babies (*Archives of Disease in Childhood (Fetal and Neonatal Edition)*, doi: 10.1136/adc.2006.099085).

While no significant differences were observed in overall language skills and growth between the two groups of children, the researchers report that the children whose mothers had taken fish oil supplements had higher scores for receptive language (comprehension), average phrase length, and vocabulary.

They also report that high levels of omega-3 fatty acid in cord blood were strongly associated with good hand-eye coordination.

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.

According to Frost and Sullivan, the European omega-3 market was worth around €160m (£108m) in 2004, and is expected to grow at rates of 8 per cent on average to 2010.

Despite such impressive growth rates, a recent survey by the Washington, DC-based Society for Women's Health Research (SWHR) reported that only 41 per cent of mothers and expectant mothers know they

should be consuming omega-3 fatty acids during pregnancy. Questions were put to the women regarding the "Big 3" of pregnancy nutrition: folic acid, calcium with vitamin D and omega-3 fatty acids.

The finding that women are less aware of the need for omega-3, compared with other nutrients for healthy mothers and babies, implying formulators' omega-3 message has still not saturated the prenatal market.