Effect of DHA Omega-3 Supplementation During Pregnancy

Reference:

Effect of DHA Supplementation During Pregnancy on Maternal Depression and Neurodevelopment of Young Children: a Randomized Controlled Trial


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Summary:

The present study was designed to determine if supplementation with DHA omega-3 fatty acid (docosahexaenoic acid) during the latter half of pregnancy could have favourable effects on depression amongst the mothers or on neurodevelopmental and other outcomes in their offspring during early childhood. For this purpose, 2399 eligible women were recruited to either receive a control supplement (lacking DHA) or to receive a fish oil-derived omega-3 concentrate providing 800 mg DHA plus 100 mg EPA (eicosapentaenoic omega-3) in encapsulated form daily. The enrolled women were having singleton pregnancies and began supplementation prior to 21 weeks of gestation. The percentage of mothers having high levels of depressive symptoms during the first 6 months postpartum (as assessed by the Edinburgh Postnatal Depression Scale) averaged at 10.4% and did not differ between the two groups as neither did the cognitive and language composite scores in their children at 18 months as measured by the Bayley Scales of Infant and Toddler Development.

However, other outcomes were found to be significantly different between the DHA versus control groups. As expected, the measured cord levels of DHA were significantly higher in the DHA-supplemented group relative to controls. The prevalence of very preterm babies (Dr. Holub’s Comments:}
While previous studies which evaluated longer-term fish or DHA/EPA supplementation during pregnancy and lactation have indicated cognitive and visual benefits in the offspring up to 8 years of age, the present study did not observe cognitive and language development benefits with supplemental 800 mg DHA (plus 100 mg EPA) during the last half of pregnancy. Future studies using varying doses of DHA/EPA over prolonged intervals (pregnancy and lactation) which include visual assessments, psychomotor development indices (including hand-eye coordination), and other measures up to and including adolescence will be of considerable interest. Finally, breaking down the maternal population according to their omega-3 status (via blood measurements) at entry would allow for 'risk group' identifications who may be subject to particular benefit (and their offspring) from DHA/EPA supplementation during pregnancy.