Reference:

Beneficial effects of a polyunsaturated fatty acid on infant development: evidence from the inuit of arctic Quebec.


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Summary:

The present study assessed the relationship of DHA omega-3 levels in the cord blood plasma (phospholipid biomarker) and various measures of infant development in 109 Inuit infants in Arctic Quebec. The blood samples were taken from the umbilical cord after it was severed. The results indicated that higher DHA concentrations in cord blood samples were associated with longer gestation, better visual acuity, better novelty preference on the Fagan test at 6 months, and better Bayley Scale mental and psychomotor performance at 11 months. The authors conclude that their findings are ‘consistent with the need for substantial increases in this critically important fatty acid during the third semester spurt of synaptogenesis in brain and photoreceptor development’.

Dr. Holub's Comments:

Since levels of DHA in cord blood from this Inuit population can be expected to be much higher than such in North America and elsewhere due to much lower intakes of DHA during pregnancy, it remains to be studied whether the very interesting associations reported herein would be found in the latter populations. Also, the ‘optimal’ level of DHA in cord blood and the ‘optimal’ intakes of maternal DHA intakes during pregnancy for the optimal development of the infant should receive much interest and consideration based on this present and very important
publication.