Clinical Update

Omega-3 needs of pre-term infants higher than thought

The requirements of the omega-3 fatty acid DHA may be higher for pre-terms infants than previously thought, according to a new study from Australia.

(*American Journal of Clinical Nutrition*, October 2008)

The optimal dose of DHA (docosahexaenoic acid) to ensure correct visual development and clarity was one gram – over double that commonly used currently - according to results of a double-blind randomised controlled trial.

Writing in the *American Journal of Clinical Nutrition,* Lisa Smithers and co-workers from the University of Adelaide report that it is known that the visual outcomes of preterm infants are improved when fed a formula containing between 0.2 and 0.4 per cent (DHA) compared with no supplementation with DHA. However, the optimal dose had not been elucidated, they said. About one third of European infant formulas and follow-on formulas include DHA and/or ARA (arachidonic acid). Such fortification occurs more frequently in the US where world leader Martek has a 95% market share.

Pre-term infants were randomly assigned to one of three groups: one group was fed with human milk (control group), while the other two groups were fed formula with either high (1%) or current (0.3 %) levels of DHA. The same level of ARA was used in both formulas. The feeding was maintained until the infants reached their due dates. All infants were born before the 33rd week of gestation. A normal gestation period is 40 weeks.

After the infants reached two months of age relative to their estimated due dates if the pregnancy had gone to term, the researchers observed that there were no differences between the high DHA group and the control group. However, after four months, the visual acuity of the infants fed the high-DHA formula was 1.4 cycles per degree higher than in the control group, indicating greater visual development. No other differences were observed between the groups.

Infant formula is a highly emotive area, with watchdogs keeping a close eye on companies' marketing tactics lest they drift towards promoting their products as preferable to breast-feeding.

While it is agreed that breastfeeding is the best way to ensure an infant receives the nutrients it needs in its first months, formulas are indispensable in cases where mothers are unable to feed their children - be it for health or logistical reasons. Mothers' desire to give their children the best possible start in life means that there is scope for fortification.

A diet rich in the omega-3 fatty acid DHA during pregnancy and breastfeeding is thought to support healthy pregnancies as well as the healthy development of infants.

Source: www.nutraingredients.com