

# Giving DHA supplements to breastfeeding mothers

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Docosahexaenoic acid (DHA), an omega-3 fatty acid, is essential for the growth and development of infants' brains. Very premature infants may be deficient in DHA because they miss out on the third trimester in utero when the fatty acid accumulates in tissues. In addition, their gastrointestinal system is immature, and health problems often increase the risk of malnutrition.

Furthermore, breastfeeding mothers' diets may lack DHA, which is found in cold water fatty fish and fish oil supplements.

Canadian researchers sought to determine if giving mothers DHA supplements would increase DHA levels in breastfed preemies.

"Results suggested that an early supplementation with DHA to lactating mothers with low dietary DHA was successful in increasing DHA status in very [preterm infants](#)," said Isabelle Marc, MD, PhD, lead author of the study, which will be presented Saturday, May 1 at the Pediatric Academic Societies (PAS) annual meeting in Vancouver, British Columbia, Canada.

Mothers of 12 infants born at 29 weeks' gestation or earlier who planned to breastfeed received high dosages of DHA supplements until 36 weeks post-conception. Researchers compared DHA levels in the mothers' breast milk, mothers' and babies' plasma lipids, and daily DHA intakes in the preterm infants from birth to day 49 with a control group of very preterm infants and mothers who did not receive DHA supplements

during lactation.

Results showed that DHA levels in the [breast milk](#) of mothers who received supplements were almost 12 times higher than levels in the milk of mothers in the control group. Although there was no difference in the enteral (tube) feeding intake among both groups of infants, those in the intervention group received about seven times more DHA than the control group. In addition, plasma DHA concentrations in mothers and babies in the DHA group were two to three times higher than the control group.

"Our study has shown that supplementing mothers is a feasible and effective way of providing DHA to low birthweight [premature infants](#)," said Dr. Marc, an assistant professor in the Department of Pediatrics at Laval University in Quebec, Canada, and clinician researcher at Centre Hospitalier Universitaire de Québec.

"Our results underline the urgent need for recommendations addressing dietary DHA intake during lactation of mothers of very preterm infants to reach optimal DHA level in milk to be delivered to the baby for optimal growth and neurodevelopment, since the human milk DHA content in mothers not consuming fish during this period is most probably insufficient."

Provided by American Academy of Pediatrics

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