

Follow-up study finds supplementing preterm infants with DHA has no effect on neurodevelopment

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Research led by the University of Adelaide, Australia, has found that supplementing infants born at less than 29 weeks gestation with

docosahexaenoic acid (DHA) has no impact on behavioral functioning later in life.

In [a paper](#) titled "High-Dose Docosahexaenoic Acid in Newborns Born at Less Than 29 Weeks' Gestation and Behavior at Age 5 Years," published in *JAMA Pediatrics*, the team conducted a follow-up of a randomized clinical trial with [preterm infants](#). The researchers looked at behavioral and [cognitive development](#) at age five, some of whom had received DHA supplementation as neonates.

Children born preterm are known to face higher risks of neurobehavioral disabilities and cognitive difficulties. Previously observed reductions in neural DHA concentration among preterm infants were considered as a potential negative influence on neurodevelopment.

The clinical trial was conducted at ten Australian centers from 2012 to 2015. Infants born before 29 weeks were randomized to receive daily enteral emulsions providing 60 mg/kg/d of DHA (n=361) or a soy-oil emulsion (n=370) from within the first three days of enteral feeding until 36 weeks' postmenstrual age or discharge home, whichever occurred first.

The five-year outcomes were measured based on parent-reported surveys without medical or psychological verification using the Strengths and Difficulties Questionnaire (SDQ), Behavior Rating Inventory of Executive Functioning (BRIEF), and other health-related quality of life assessments.

DHA supplementation for [infants](#) born preterm showed no improvement in behavioral functioning at age five. No significant differences were found in asthma, and no adverse effects were reported.

Despite previous findings of increased IQ with DHA supplementation,

the study highlights the distinctness of behavioral and cognitive domains, suggesting that while DHA may affect cognition, it might not be able to influence behavior.

More information: Jacqueline F. Gould et al, High-Dose Docosahexaenoic Acid in Newborns Born at Less Than 29 Weeks' Gestation and Behavior at Age 5 Years, *JAMA Pediatrics* (2023). [DOI: 10.1001/jamapediatrics.2023.4924](https://doi.org/10.1001/jamapediatrics.2023.4924)

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