

Omega-3 fatty acid could boost IQ for preterm babies

October 27 2022



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New research from SAHMRI has found a link between the omega-3 fatty acid known as docosahexaenoic acid (DHA) and increased IQ among children born prematurely.

Preterm children are more likely to have lower IQ scores and cognitive impairments compared with term-born children.

Dr. Jacqueline Gould, who led the study now published in the *New England Journal of Medicine*, says infants born at the earliest gestations are deprived of the natural supply of DHA that normally builds up in the brain during the last trimester of pregnancy.

"These babies have low concentrations of DHA in their [brain tissue](#), which may contribute to poorer cognitive outcomes," Dr. Gould said.

"The goal of our research was to test if supplementing these children with DHA after they're born, can make up for some of what they lacked due to [preterm birth](#) and boost brain development."

The study followed 323 infants born before 29 weeks' gestation, who were given 60mg of DHA/kg per day via enteral or control tube feeding.

They were compared with 333 children in the [control group](#), who received an emulsion with no DHA. At five years old, children in both groups underwent the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) IQ test.

"On average, those in the DHA group scored 3.5 points higher on the IQ scale than those in the control group," Dr. Gould said.

"These very promising results suggest DHA has the potential to improve cognitive performance when administered via emulsion for infants born before 29 weeks' gestation."

Although medical advances over the past 30 years have increased the survival rates of infants born before 29 weeks' gestation, there has been no improvement in their cognitive development.

Supplying DHA to these infants while they are in hospital may be one simple intervention that can help boost brain function.

More information: Jacqueline F. Gould et al, Neonatal Docosahexaenoic Acid in Preterm Infants and Intelligence at 5 Years, *New England Journal of Medicine* (2022). [DOI: 10.1056/NEJMoa2206868](https://doi.org/10.1056/NEJMoa2206868)

Provided by SAHMRI

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