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Special Issue Reprint

Maternal DHA Impact on Child Neurodevelopment

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ISBN 978-3-0365-1616-5 (Hardback)

ISBN 978-3-0365-1615-8 (PDF)



In this Special Issue, we focus on maternal docosahexaenoic acid, 22:6n-3 (DHA), and arachidonic acid, 20:4n-6 (ARA), on children's neurodevelopment. During the last trimester of gestation and for the first 18 months after birth, both DHA and ARA are preferentially deposited within the cerebral cortex at a rapid rate. The mode of action of these two fatty acids and their derivatives at different structural-functional roles, and their levels in the signaling pathways of the brain have been continuously studied. These fatty acids are also involved in various brain developmental processes; however, their mechanistic cross talks are not yet clearly known. Recent data suggest that there may be a need for a balanced proportion of ARA and DHA in infant formula due to their complementary benefits. This review describes the importance of ARA in addition to DHA to support optimal brain development and growth in an infant, and functional roles in the brain.



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