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Vitamin B12 Linked to Cognitive Performance in Children

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Vitamin B12 status in infancy may impact development and performance on social perception tasks and visuospatial abilities at 5 years of age, according to research published in the American Journal of Clinical Nutrition. Poor vitamin B12 (cobalamin) status is widespread in South Asia and has been linked to poor neurodevelopment in young children. For this study, researchers measured the associations between vitamin B12 status in infancy (2-12 months) and the development and cognitive functioning in Nepalese children 5 years later. Vitamin B12 status was assessed in infancy with the use of plasma cobalamin, total homocysteine (tHcy), and methylmalonic acid (MMA). At 5 years of age, researchers measured development with the use of the Ages and Stages Questionnaire, 3rd edition (ASQ-3), and cognitive functioning by using the Developmental Neuropsychological Assessment, 2nd edition (NEPSY II), in 320 children. In regression models, they estimated the associations between vitamin B12 status, including a combined indicator of vitamin B12 status (3cB12) and scores on the ASQ-3 and NEPSY II subtests.

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Researchers concluded B12 status in infancy is associated with development and performance on social perception tasks and visuospatial abilities at 5 years of age. The long-term effects of poor vitamin B12 status in infancy need further investigation in randomized controlled trials.