

on neurodevelopment of children? Three-year follow up of a randomized controlled trial. Nazeri P, Tahmasebinejad Z, Pearce EN, Zarezadeh Z, Tajeddini T, Mirmiran P, Azizi F. Eur J Nutr. 2021 Oct;60(7):4083-4091. doi: 10.1007/s00394-021-02574-4. Epub 2021 May 11. PMID: 33974129 Clinical Trial. RESULTS: A total of 122 children provided neurodevelopmental data as follows: 300 g/d iodine group: 45; 150 g/d iodine group: 35; and placebo group: 42. ...However, supplementation with 150 g iodine/d had no effect on language or motor development. No signifi

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Does maternal iodine supplementation during the lactation have a positive impact on neurodevelopment of children? Three-year follow up of a randomized controlled trial

[Pantea Nazeri](#)¹, [Zhale Tahmasebinejad](#)², [Elizabeth N Pearce](#)³, [Zinat Zarezadeh](#)¹, [Tahere Tajeddini](#)¹, [Parvin Mirmiran](#)^{4,5}, [Fereidoun Azizi](#)⁶

Affiliations

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Abstract

Purpose: The aim of this study was to examine, for the first time, the neurodevelopmental outcomes in children whose mothers received different doses of iodine supplements during lactation.

Methods: We conducted a follow-up study on children whose mothers participated in a randomized clinical trial to receive placebo, 150 µg/day or 300 µg/day of iodine until 12 months postpartum. Child neurocognitive development was assessed at 36 months of age using the Bayley Scales of Infant and Toddler Development Third Edition. Linear mixed-model analysis was preformed to assess iodine supplement dose effects on child cognitive, language, and motor functions.

Results: A total of 122 children provided neurodevelopmental data as follows: 300 µg/d iodine group: 45; 150 µg/d iodine group: 35; and placebo group: 42. Cognitive scores were higher in children whose mothers received 150 µg iodine/d compared to children whose mothers received placebo [102.8 (SD 13.2) vs. 99.2 (SD 10.5); $\beta = 4.43$, $P = 0.032$]. However, supplementation with 150 µg iodine/d had no effect on language or motor development. No significant differences

were observed in cognitive, language, or motor functions between children whose mothers received 300 µg iodine/d and those whose mothers received 150 µg iodine/d or placebo.

Conclusion: Maternal iodine supplementation with 150 µg/d during lactation may have a beneficial effect on child cognitive development; however, we found no evidence of either improved or delayed neurodevelopmental outcomes in children whose mothers received iodine supplements at doses higher than recommended. Further randomized controlled trials with larger sample sizes are needed to confirm these results.

Clinical trial registry: IRCT201303164794N8; registration date: 2013-05-20.

Keywords: Early childhood; Iodine; Lactation; Neurocognitive development; Supplementation.

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