

# Time is of the essence for reducing the long-term effects of iron deficiency

June 28 2013

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Iron deficiency is a worldwide problem, especially in developing countries and among infants and pregnant women. In infancy, iron deficiency is associated with poorer cognitive, motor, and social-emotional outcomes. In a new study scheduled for publication in *The Journal of Pediatrics*, researchers report on a 25-year follow-up of infants studied in Costa Rica for iron deficiency.

Betsy Lozoff, MD, and colleagues from the University of Michigan, Oakland University, and Instituto de Atención Pediátrica, Costa Rica, completed a 25-year follow-up of 191 infants (12-23 months old) from an urban community near San Jose, Costa Rica. The original analysis compared those with chronic, severe [iron deficiency](#) in infancy with those who were iron-sufficient before and/or after iron therapy. All infants with iron deficiency received iron therapy for 3 months. Because iron deficiency likely had lasted for months before it was identified and treated, some infants still had reduced iron status even after iron-deficiency [anemia](#) had been corrected.

122 subjects participated in the adult follow-up assessment. On average, the 33 adults who had chronic iron deficiency as infants completed one less year of schooling and were less likely to complete secondary school or pursue further education or training, or get married. Additionally, the chronically iron-deficient group rated their [emotional health](#) worse and reported more [negative emotions](#) and detachment/dissociation.

Although outcomes were better in those individuals who became iron-

sufficient after 3 months of iron therapy, this long-term follow-up shows that individuals with chronic iron deficiency in [infancy](#) had poorer adult functions in all domains except for physical health and employment. According to Dr. Lozoff, "This observation suggests that poor long-term outcome, at least for overall functioning, may be prevented if iron treatment is given before iron deficiency becomes chronic and severe." Therefore it is important to prevent iron deficiency, monitor iron status, and initiate treatment as soon as a deficiency is detected.

**More information:** *The Journal of Pediatrics*, [DOI 10.1016/j.jpeds.2013.05.015](#)

Provided by Elsevier

Citation: Time is of the essence for reducing the long-term effects of iron deficiency (2013, June 28) retrieved 11 May 2023 from <https://medicalxpress.com/news/2013-06-essence-long-term-effects-iron-deficiency.html>

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