

Mar. 8, 2011 — Magnesium-containing cathartics are commonly used to treat chronic constipation. Although hypermagnesemia is a rare clinical condition, it can occur as a side effect of increased intake of magnesium salts. The Japanese government has recently reported fatal cases of hypermagnesemia in adults treated with magnesium oxide. It is now important for pediatricians to know whether hypermagnesemia can develop in children with functional constipation who are receiving daily magnesium oxide treatment.

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A research article to be published on February 14, 2011 in the *World Journal of Gastroenterology* addresses this question. The authors enrolled 120 patients (57 male and 63 female) aged 1-14 years old (median: 4.7 years old) with functional constipation from 13 hospitals and two private clinics. All patients fulfilled the Rome III criteria for functional constipation and were treated daily with oral magnesium oxide for at least 1 mo. The median treatment dose

was 600 (500-800) mg/d. Patients were assessed by interview and laboratory examination to determine possible hypermagnesemia. Serum magnesium concentration was also measured in sex- and age-matched control subjects (n = 38).

Serum magnesium concentrations increased significantly after daily magnesium oxide treatment, but the magnitude of the increase appeared modest. Serum magnesium level decreased significantly with age in constipated children treated with magnesium oxide, but not in the control children. No correlation was found between duration of treatment or daily dose of magnesium oxide and serum magnesium concentration.

The authors concluded that serum magnesium concentrations increase significantly after daily magnesium oxide intake, but the magnitude of the increase appears modest. Younger age, but not prolonged use of daily magnesium oxide might be a relative risk factor, and it should be determined by further studies whether serum magnesium concentration should be assessed in these subjects.

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Journal Reference:

1. Tatsuki M, Miyazawa R, Tomomasa T, Ishige T, Nakazawa T, Arakawa H. **Serum magnesium concentration in children with functional constipation treated with magnesium oxide.** *World Journal of Gastroenterology*, 2011; 17 (6): 779 DOI: [10.3748/wjg.v17.i6.779](#)

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