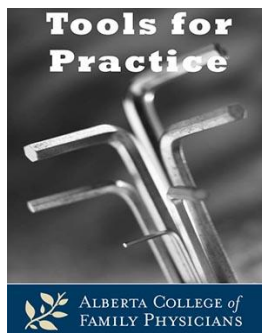


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Evidence Updated: None
Bottom Line: Unchanged
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Iron Deficiency Anemia in the Elderly: How much iron is enough?

Clinical Question: In elderly adults with iron deficiency anemia (IDA), what is the appropriate dose of iron?

Bottom Line: In elderly patients with iron deficiency anemia, low doses of iron raise hemoglobin similar to higher doses with considerably less adverse events in most patients. Options for dosing include ½ of a 300 mg ferrous gluconate per day or 2.5 mL of Fer-In-Sol syrup a day. Clinicians should work-up the cause of anemia as appropriate.

Evidence:

- A Randomized Controlled Trial (RCT) addresses this question.
 - 90 anemic patients (mean age 85, 59% female) randomized to 15 mg, 50 mg, or 150 mg of elemental iron per day.¹
 - At two months, there was no difference among the groups in hemoglobin or serum ferritin.
 - Hemoglobin increased 14 g/dL in all three groups.
 - Adverse events were significantly more common at higher doses.
 - Number Needed to Harm (NNH) for 150 mg versus 15 mg:
 - Abdominal cramps: NNH=2.
 - Nausea/vomiting: NNH=2.
 - Constipation: NNH=5.
 - Drop-out due to adverse events: NNH=5.

Context:

- IDA is common in the elderly.²
 - >10% have IDA at age ≥65 and >20% have IDA at age ≥85.
- IDA in older patients requires work-up for potential causes, including gastrointestinal malignancy.³
- In the very elderly (age 85), IDA carries an increased risk of mortality, hazards ratio 1.41 (1.13 to 1.76), in addition to the condition causing anemia.⁴

- In pregnant^{5,6} and non-pregnant young women⁷ recommendations are difficult.
 - Low dose reduced adverse events^{6,8} but did not improve ferritin^{5,7} and hemoglobin⁶ as much as high dose. High-dose (≥ 60 mg/day) also decreased the risk of low birth weight.^{9,10}
- Iron is commercially available in 300mg tablets. For dose conversion:
 - Ferrous fumarate 300 mg = 99 mg elemental iron.
 - Ferrous sulfate 300 mg = 60 mg elemental iron.
 - Ferrous gluconate 300 mg = 35 mg elemental iron.
- For dosing to 15 mg of elemental iron per day consider:
 - $\frac{1}{2}$ of ferrous gluconate 300 mg tablet (or one every other day).
 - 2.5 mL of Fer-In-Sol syrup a day or one dropper (1 mL) of the Fer-In-Sol drops daily.
- Taking iron on an empty stomach improves absorption.⁵

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