

RGH Pharmacy E-Bulletin

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A joint initiative of the Patient Services Section and the Drug and Therapeutics Information Service of the Pharmacy Department, Repatriation General Hospital, Daw Park, South Australia. The RGH Pharmacy E-Bulletin is distributed in electronic format on a weekly basis, and aims to present concise, factual information on issues of current interest in therapeutics, drug safety and cost-effective use of medications.

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Iron deficiency anaemia

The WHO defines anaemia as being characterised by a finding of a Haemoglobin (Hb) concentration of <130 g/L in men, <120 g/L in women, and <110 g/L in pregnant women and preschool children. Clinical manifestations of iron deficiency anaemia (IDA) include weakness, headache, irritability and fatigue. Less common symptoms include glossal pain, dry mouth, alopecia and generalised pruritus. Iron deficiency, without overt anaemia, is associated with cognitive impairment in pre-schoolers, teenagers and the elderly. The impact of even mild iron deficiency anaemia upon physical functioning of the elderly can be significant. A trial involving community dwelling elderly women found those with borderline Hb of 120–130 g/L performed worse than those with Hb 130–150 g/L on tests of walking speed, balance and ability to rise from a chair.

Serum ferritin is the most meaningful index of iron deficiency. It is generally accepted that a finding of a serum ferritin concentration of <15 mcg/L is diagnostic of iron deficiency and levels of 15–30 mcg/L are highly suggestive. Serum ferritin is an acute phase protein and in patients with elevated CRP, serum ferritin levels may increase at least three-fold; hence iron deficiency may be present with ferritin levels of 60–100 mcg/L. Serum iron concentrations are not useful for diagnosing iron deficiency as they show significant diurnal variation and are low in the presence of inflammation.

Identification of the underlying cause of IDA should occur in parallel with the initiation of iron replacement. Oral iron is an effective first line strategy for most patients. The therapeutic dose of elemental iron in adults is 100–200 mg/day (3–6 mg/kg/day in children), given in daily or in 2–3 divided doses according to tolerability. In the absence of ongoing blood loss, the administration of a therapeutic dose of iron would normally produce a rise in Hb of approximately 20 g/L within a period of 3–4 weeks. Once Hb is normalised, iron therapy is usually continued for 3–6 months for adults and 2–3 months for children, to ensure iron stores are replete.

To maximise oral absorption iron should be taken before food; however if gastrointestinal adverse effects occur it may be taken with food or at night. There are a number of potential drug interactions with oral iron. Of note patients receiving oral iron and a proton pump inhibitor (PPI) may experience an attenuated response to oral iron (impaired absorption due to hypochlorhydria). If this interaction is suspected consider withdrawal of the PPI (if clinically appropriate), or seek expert advice regarding the need for administration of IV iron.

For more information on ID and other anaemias, including an illustrated iron tablet dosing chart and consumer information refer to <http://www.health.sa.gov.au/bloodsafe/>

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FOR FURTHER INFORMATION – CONTACT THE PHARMACY DEPARTMENT ON 82751763 or email: chris.alderman@rgh.sa.gov.au
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