

Practice Update

February 2025

Oral Iron Alternate Day Dosing

Background

Oral iron salts are the standard treatment for iron-deficiency anaemia unless an alternative route is clinically required. Ferrous salts have only small differences in absorption. In Aotearoa, funded options are ferrous fumarate and ferrous sulfate.¹ Supply of ferrous sulfate (Ferrograd®) tablets ended in September 2025 and they will be delisted on 1 March 2026.²

The NZF recommends 100–200 mg elemental iron daily.¹ Emerging evidence shows that taking the same total dose on alternate days can improve absorption and reduce side effects.³

Conventional dosing schedules

Iron salt	Brand name	Dose of iron salt	Content of ferrous iron (elemental iron)	NZF recommended dose for iron-deficiency anaemia
Ferrous fumarate	<i>Ferro-Tab</i>	200 mg	65.7 mg	1 tablet three times daily.
Ferrous fumarate + folic acid	<i>Ferro-F-Tab</i>	310mg (+ 310 mcg folic acid)	100mg	1 tablet once daily.
Ferrous sulfate	Ferrograd Not currently available in NZ	325 mg	105 mg (modified release)	1 tablet once daily.
Ferrous sulfate (oral liquid)	<i>Ferodan</i> <i>Ferro-Liquid</i>	150 mg (in 5 mL)	30 mg (in 5 mL)	5mL -10mL three times daily.

Alternate day dosing

A 2015 study of 40 women found that 60 mg ferrous sulfate absorbed better when taken on alternate days.³ A subsequent Swiss study of 150 women showed that alternate-day iron supplementation with 100 mg elemental iron daily as ferrous sulfate, matched the efficacy of daily 100mg dosing in raising ferritin levels among iron-depleted women. Alternate day dosing was also better tolerated, with fewer overall and intake-day side effects, particularly mild gastrointestinal symptoms.⁴ Evidence for ferrous fumarate is limited; a pregnancy study is currently underway.⁵

Mechanism of improved absorption

Oral iron triggers an increase in serum hepcidin within a few hours. Hepcidin blocks iron absorption by degrading ferroportin (the transporter that moves iron from gut cells into the bloodstream). After a dose, hepcidin remains elevated for around 24 hours, reducing absorption of subsequent doses taken too soon.⁶ The mechanism should theoretically be the same for any iron salt. Due to this mechanism, there is also no reason to give more than one dose of iron per day.⁷

Considerations

Daily and alternate-day regimens have similar overall efficacy; the choice should reflect patient preference and adherence. If an alternate-day regimen is preferable consider one to two tablets Ferro-Tab on alternate days or one tablet Ferro-F-Tab® on alternate days.

Iron absorption modestly improves with acidic conditions, patients could benefit from being co-prescribed ascorbic acid, but the therapeutic advantage is minimal.¹

When to consider parenteral iron

Around 10% of patients cannot tolerate oral iron. Before switching to IV therapy, consider⁸:

- Using a formulation with lower elemental iron.
- Switching to liquid iron.

- Taking iron with food (though absorption is reduced by calcium, fibre, tea, coffee, and wine).

Ferric carboxymaltose (Ferinject®) is preferred in primary care due to short infusion time but requires [Special Authority](#), and prior trial of oral iron.

Patient resources

- Healthify: [Iron supplements \(orals\)](#)

Further reading

- Community HealthPathways Te Matau a Māui Hawke's Bay: [Iron deficiency anaemia](#)
- Health Hawke's Bay CPO Clinical Pathway: [Iron infusion pathway](#)
- Goodfellow Unit Gems: [Iron supplements on alternative days](#)

References:

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