



Appendix A: Oral Iron Formulations and Adult Doses

This Appendix is a supplement to the *BC Guideline Iron Deficiency – Investigation and Management*.

One iron preparation is not preferred over another; patient tolerance should be the guide. While polysaccharide and polypeptide formulations can be taken with food to reduce GI side effects, they are more expensive than the iron salt formulations and are not a PharmaCare benefit. Remind patients that products are kept behind the counter in the pharmacy and to see a pharmacist to confirm the product.

Adverse GI reactions (nausea, vomiting, dyspepsia, constipation, diarrhea, and dark stools) are dependent on the dose of elemental iron. These adverse reactions are temporary and will likely disappear with continued treatment, with the exception of dark stools which can remain for the duration of therapy.

Therapeutic doses can range from 100 to 200 mg of elemental iron/day,^{21,47} depending on severity of symptoms, ferritin levels, age of the patient, and GI side effects. If poor tolerability with oral iron, consider a lower dose, a different formulation or alternative dosing schedules (such as every other day dosing).²⁴ Resolution of symptoms and replenishment of iron stores may take longer.

| Iron Product | Formulation (elemental iron) | Usual Adult Daily Dose | Therapeutic Considerations ^{42,21 †} | Cost per 30 Days [‡] and Pharmacare Coverage | |
|-----------------------------------|----------------------------------|--|---|---|--|
| ferrous sulfate | Tablets 300 mg (60 mg Fe) | 1 tablet BID-TID | <ul style="list-style-type: none"> Needs acid in the stomach to get absorbed. To increase absorption, take on an empty stomach — at least 1 hour before or 2 hours after eating, with 600–1200 mg vitamin C⁵¹. Absorption may be decreased if taking antacids or medications that reduce stomach acid. § To reduce adverse GI reactions with iron salts, start with a low dose and increase gradually after 4 to 5 days. If bothersome, take initially with food and gradually shift the timing away from meals to improve absorption. Iron suspension formulations may stain teeth. This can be prevented by drinking through a straw or mixing with water or fruit juice. | \$4–8 (Regular benefit) | |
| | Suspension 30mg/mL (6 mg Fe/mL) | 10 mL BID-TID | | \$ 20–35 (Regular benefit) | |
| ferrous gluconate | Tablet 300 mg (35 mg Fe) | 1–2 tablet BID-TID (Max 5 tablets/day) | | <ul style="list-style-type: none"> Taken with or without food. Does not need acid in the stomach to get absorbed. Good choice if taking medications that reduce stomach acid. Capsule can be opened and contents mixed into water or sprinkled over soft food. Virtually tasteless. | \$5–10 (Regular benefit) |
| | ferrous fumarate | Capsule/Tablet 300 mg (100 mg Fe) | | | 1 capsule OD-BID |
| Suspension 60 mg/mL (20 mg Fe/mL) | | 5 mL OD-BID | | | \$ 20–35 (Regular benefit) |
| Tablet 200 mg (65.7 mg Fe) | | 1 tablet BID-TID | | | \$6–10 (Non-benefit) |
| polysaccharide iron | Capsules 150mg (150 mg Fe) | 1 capsule OD | | | <ul style="list-style-type: none"> More bioavailable than nonheme iron. Taken with or without food. Does not need acid in the stomach to get absorbed. Good choice if taking medicines that reduce stomach acid. Contains animal (cow) products. |
| | Powder 60 mg/teaspoon (60 mg Fe) | 1 tsp BID-TID | \$35–100 (Non-benefit) | | |
| heme iron polypeptide | 11 mg heme Fe | 1 tablet OD-TID | | \$20–80 (Non-benefit) | |

Abbreviations: BID twice daily; Fe elemental iron; GI gastrointestinal; IV intravenous; IM intramuscular; mg milligrams; mL milliliters; PO orally; TID three times daily.

† Treatment with oral iron may take as long as six to eight weeks in order to fully ameliorate the anemia, and as long as six months to replenish iron stores.

‡ Estimated retail prices as of January 2019 based on the adult dose range. All prices are subject to change. In most situations, oral iron products are least expensive when purchased over the counter. However, PharmaCare benefits may reduce the cost to the patient when a prescription is provided. PharmaCare coverage is subject to the patient's plan rules, including any deductible requirement. Patients can discuss with their pharmacist for more information.

§ Iron absorption may be decreased by antacids or supplements containing aluminum, magnesium, calcium, zinc, proton pump inhibitors, and histamine2 receptor antagonists.