



## Appendix B: Parenteral Iron Formulations and Adult Doses

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

Iron Product	Formulation (elemental iron)	Usual Adult Daily Dose	Adverse Reactions	Therapeutic Considerations**	Cost per 30 Days and PharmaCare Coverage††
iron sucrose	Injection (IV): 20 mg Fe/mL	100 to 300 mg IV intermittent per session, given as a total cumulative dose of 1000 mg over 14 days	CNS: headache, fever CVS: hypotension GI: metallic taste, nausea, vomiting MSK: muscular pain, cramps	<ul style="list-style-type: none"> <li>Hypotension may occur from rapid IV administration; doses greater than 300 mg associated with significant hypotension.</li> </ul>	\$405/1000mg (Non-benefit)
iron dextran complex	Injection (IV or IM): 50 mg Fe/mL	Based on body weight and hemoglobin; IV intermittent (maximum 1000 mg/day); or IM up to 100 mg Fe per site (maximum 250 mg/day)	CNS: fever MSK: arthralgia, myalgia	<ul style="list-style-type: none"> <li>A test dose of 25mg elemental iron (0.5 mL) must be given before administering the first therapeutic dose.<sup>2</sup></li> <li>Total dose depends on patient's weight and hemoglobin level.<sup>2</sup></li> <li>IM iron therapy is not recommended because risks include unpredictable absorption and local complications (e.g. pain, permanent staining of the skin).</li> </ul>	\$297/1000 mg (Regular benefit)
ferric gluconate complex	Injection (IV): 12.5 mg Fe/mL	125 mg (10 mL) IV per dose; up to 1000 mg over 8 sessions	CNS: generalized seizures CVS: hypotension, hypertension, vasodilation GI: diarrhea, nausea	<ul style="list-style-type: none"> <li>Indicated for treatment of iron-deficiency anemia in patients 6 years and older with chronic kidney disease undergoing hemodialysis in conjunction with supplemental erythropoietin therapy.</li> </ul>	\$460/1000 mg (Non-benefit)

Maximum hemoglobin response to IV iron usually occurs within 2 to 3 weeks of the last dose.

**Abbreviations:** **BID** twice daily; **CNS** central nervous system; **CVS** cardiovascular system; **Fe** elemental iron; **GI** gastrointestinal; **IV** intravenous; **IM** intramuscular; **max** maximum; **mg** milligrams; **mL** milliliters; **MSK** muscular skeletal.

**Reference:** Vancouver Coastal Health Pharmaceutical Sciences Clinical Services Unit. Iron Dextran and Iron Sucrose. Vancouver Coastal Health Parenteral Drug Manual. Vancouver British Columbia. Vancouver Coastal Health – 2008.

Iron Dextran dose: total dose (mg) required to restore hemoglobin (Hgb in g/L) to normal:  $50 \times (0.00442 [\text{desired Hgb} - \text{observed Hgb}] \times \text{LBW} + [0.26 \times \text{LBW}])$   
 LBW in kg (male) =  $50 \text{ kg} + (2.3 \times \text{inches over 5 feet})$   
 LBW in kg (female) =  $45.5 \text{ kg} + (2.3 \times \text{inches over 5 feet})$

†† Prices are estimates as of January 2019 based on the maximum adult dose. All prices are subject to change.