

Comparison of Available Formulations of IV Iron

	Iron Dextran (InFeD®)	Sodium Ferric Gluconate (Ferrlecit®)	Iron Sucrose (Venofer®)
Composition	A complex of ferric hydroxide with partially hydrolyzed dextrans of low molecular weight.	Ferric saccharate centers chelated by gluconate, which has a high affinity for ferric ions and forms a bridge between ferric oxide centers.	The polynuclear inner sphere of ferric hydroxide is surrounded by sucrose molecules.
Molecular Weight	~5000 to 7500 daltons	~350,000 daltons	~43,000 daltons
Severe Hypersensitivity	< 1%	Nearly nonexistent	Nearly nonexistent
Non-Life-Threatening ADR	5-40%	< 5%	< 5%
Comparative Rate of Iron Dissociation from the Complex	Slow	Rapid	Intermediate
Clearance by Hemodialysis	Minimal	Minimal	Minimal
How Supplied	100 mg elemental iron diluted in 2 ml of sucrose (50mg/ml)	62.5 mg elemental iron diluted in 5 ml of sucrose (12.5mg/ml)	100 mg elemental iron diluted in 5 ml of water (20mg/ml)
Usual Dose for Repletion of Iron Stores	100 mg per dialysis for 10 sessions, for total dose of 1000 mg	125 mg per dialysis for 8 sessions, for total dose of 1000 mg	100 mg one to three times per week for total dose of 1000mg
Total Dose Infusion	1000 mg* in 500 ml NS	62.5 mg administered over 30 minutes or 125 mg in 100 ml NS administered over 1 hour or 250 mg in 250 ml NS given over 2 hours	300 mg* in 250 ml NS administered over 4 hours. 500 mg* in 250 ml NS administered over 4 hours in ICU.
Test Dose Required	Yes. May be given 1 ml over 5 minutes.	No	No
Approved for IM Use	Yes	No	No
IV Push Administration	May be given undiluted at a rate of 25 mg/minute (5 minutes)	May be given undiluted at a rate of 12.5 mg/minute (10 minutes)	A maximum of 100 mg may be given no faster than 20 mg/minute
Slow IV Administration	Dilute in 100 ml to 250 ml of NS and administer over 30 minutes to 2 hours	Dilute in 100 ml to 250 ml of NS and administer over 60 minutes to 2 hours	Dilute in 100 ml to 250 ml of NS and administer over 0.5 to 4 hours
Compatibility Information	Not compatible with other medications or parenteral nutrition solutions	Not compatible with other medications or parenteral nutrition solutions	Not compatible with other medications or parenteral nutrition solutions
Cost	\$ 18.71 per 100 mg vial	\$ 24.37/ per 62.5 mg vial (38.99 per 100 mg)	\$ 38.89 per 100 mg vial

IMPORTANT NOTE : Fatal and nonfatal anaphylactic reactions have occurred with the parenteral use of complexes of iron and carbohydrates. Parenteral iron products should only be used in patients with clearly established indications that are not amenable to oral therapy

TOTAL DOSE REPLACEMENT:

One time total dose replacement of iron stores is a useful way to treat iron deficiency anemia when multiple infusions are not convenient. Iron sucrose has been given in doses up to 500 mg by slow IV infusion ; Because hypotension is related to the total dose administered and the rate of infusion, it may be best to administer large doses of iron sucrose as a 4 hour infusion. The manufacturer of sodium ferric gluconate recommends a 2-hour infusion if 250 mg is administered.