

Desferrioxamine is a chelating agent indicated in cases of severe clinical toxicity occurring as the result of exposure to iron (Fe).

Indications

- See separate *Iron guideline*

Contraindications:

- Known hypersensitivity, established anuric renal failure

Adverse effects:

- Non-IgE hyper-sensitivity reactions: urticaria, flushing, bronchospasm, hypotension (more likely to occur with rapid rate of infusion)

- Pulmonary toxicity and Acute Respiratory Distress

Syndrome (ARDS): when administered for > 24 hours

- Secondary infection e.g., *Yersinia enterocolitica*

Note: chelated Fe complex may cause urine discolouration

Pregnancy:

- Desferrioxamine is not associated with fetal toxicity and is potentially life- saving

- Dose is based on pre-pregnancy weight

Renal failure:

- eGFR 10-50 mL/min: use 25-50% of recommended dose

- eGFR < 10 mL/min: discuss with clinical toxicologist

Presentation: Desferrioxamine mesylate powder in 500 mg/vial or 2 g/vial

Dose and Administration: Ensure adequate fluid resuscitation prior to commencing DFO infusion

(1) Prepare a 2 g (2000 mg) desferrioxamine solution using one of the following two options:

- a. If using 500 mg vials: Prepare 4 x 500 mg vials. Reconstitute each vial with 5 mL water for injection.
- b. If using 2 g vials: Reconstitute 2 g vial with 20 mL of water for injection.

(2) Inject the 2 g (20 mL) final DFO solution into the 250 mL normal saline bag (final concentration = 8 mg/mL)

(3) Begin infusion **slowly** 5 mg/kg/hour, increase by 2.5 mg/kg/hour every 10-15 mins up to max 15 mg/kg/hr

Weight (kg)	Desferrioxamine infusion rate (mL/hour) based on required mg/kg/hour dose				
	5mg/kg/hour	7.5mg/kg/hour	10mg/kg/hour	12.5mg/kg/hour	15mg/kg/hour
40	25 mL/hour	38 mL/hour	50 mL/hour	63 mL/hour	75 mL/hour
50	31 mL/hour	47 mL/hour	63 mL/hour	78 mL/hour	94 mL/hour
60	38 mL/hour	56 mL/hour	75 mL/hour	94 mL/hour	113 mL/hour
70	44 mL/hour	66 mL/hour	88 mL/hour	109 mL/hour	131 mL/hour
80	50 mL/hour	75 mL/hour	100 mL/hour	125 mL/hour	150 mL/hour
90	56 mL/hour	84 mL/hour	113 mL/hour	141 mL/hour	169 mL/hour
100	63 mL/hour	94 mL/hour	125 mL/hour	156 mL/hour	188 mL/hour
>110	69 mL/hour	103 mL/hour	138 mL/hour	172 mL/hour	206 mL/hour

Discontinuation of desferrioxamine: Treatment for **6 hours** is usually sufficient.

- Maximum dose: 90 mg/kg/24 hours. Consider discontinuation once clinical toxicity (including metabolic acidosis) is resolving and serum iron concentration is < 60 umol/L