# Adult Intravenous Iron Administration Standard Orders
## (for emergency department & outpatient clinics)

**FOR NEPHROLOGY & ONCOLOGY PATIENTS –** see Manitoba Renal Program www.kidneyhealth.ca or CCMB ARIA

*These orders are to be used as a guideline and do not replace sound clinical judgement and professional practice standards. Patient allergy and contraindications must be considered when completing these orders.*

■ Automatically activated (If not in agreement with an order cross out and initial). ☐ Requires a check(√) for activation

**Allergies:** ☐ **Unknown** ☐ **No** ☐ **Yes (describe)**_____

**Height (cm):** _____ **Weight (kg):**_____

### INDICATION (indicate rationale for IV iron: check (✓) appropriate box(es)

■ INDICATION (refer to table on page 2) _____

☐ Clinically significant anemia (Hgb less than 90 g/L) at risk of imminent transfusion

**OR**

☐ Hgb less than 110 g/L: *date*_____ *result*_____

***AND***

☐ Ferritin less than 20 mcg/L: *date*_____ *result*_____

***OR***

☐ Iron/transferrin saturation less than 16% within the last 4 weeks: *date*_____ *result*_____

***AND*** (one of the following):

☐ Intolerance to at least 2 forms of oral iron: *name*_____*date*_____*reaction*_____
*name*_____*date*_____*reaction*_____

☐ Inadequate response to an adequate trial of oral iron (see criteria on page 2)

☐ Progressive anemia (decreased Hgb by greater than 10 g/L) despite oral iron supplementation

☐ Other:_____

### MEDICATION ORDERS

***Select one of the 2 regimens:***

☐ **ferric derisomaltose** (Iron isomaltoside Monoferric)

- ■ No test dose is required.
- ■ Check one(✓):
  - ☐ ferric derisomaltose _____ mg (for doses less than or equal to 1000 mg) IV in 100 mL normal saline at 170 mL/hour for ten minutes. If tolerated, increase to 340 mL/hour (total infusion time approximately 25 minutes)
  - ☐ ferric derisomaltose _____mg (for doses greater than 1000 mg but no more than 1500 mg) IV in 100 mL normal saline at 120 mL/hour for ten minutes. If tolerated, increase to 240 mL/hour (total infusion time approximately 35 minutes)
  - ☐ ferric derisomaltose 500 mg undiluted IV over 2 minutes

☐ **Iron Sucrose (Venofer)**

- ■ No test dose is required.
- ■ Check one (✓):
  - ☐ Iron sucrose 100 mg IV in 100 mL normal saline infused over 15 minutes
  - ☐ Iron sucrose 200 mg IV in 100 mL normal saline infused over 30 minutes
  - ☐ Iron sucrose 300 mg IV in 250 mL normal saline infused over 1.5 hours

***Frequency and Duration for Recurrent Doses:*** (refer to dosing table on page 2)

☐No repeat

☐Repeat the above IV dose every ____ day(s) x _____

☐Other frequency/duration _____

### GENERAL ORDERS

- ■ Admit & follow-up with _____(prescriber)
- ■ Place patient in a reclining or semi-reclining position during infusion and during 30-minute monitoring period.
- ■ Vital signs:
  Monitor blood pressure and heart rate:
  - ■ Prior to start of infusion, then every 30 minutes
- ■ Notify physician:
  - ■ Immediately should patient have anaphylactic type reaction (dyspnea, angioedema and urticaria)
- ■ Laboratory (pre-iron administration). Check one or more (✓):
  - ☐ No current laboratory studies required
  - ☐ CBC
  - ☐ Ferritin
  - ☐ TSTAT (Percent transferrin saturation; report includes iron & TIBC)
  - ☐ Other: _____
- ■ Repeat laboratory studies 4 to 8 weeks after IV administration
- ■ May discontinue monitoring patient 30 minutes post IV iron dose
  - ■ Vital signs stable
  - ■ No signs of symptoms of hypersensitivity
  - ■ No other nursing concern
- ■ If an anaphylactic reaction occurs
  - Stop infusion
  - Initiate Anaphylaxis Standard Orders CLI.5110.SG.009.FORM.02
  - Notify prescriber _____

PRESCRIBER'S SIGNATURE: _____ PRINTED NAME: _____ Date _____ Time _____

| Order Transcribed | FAX TO PHARMACY |
|---|---|
| Date: _____ Time: _____ Init _____ | Date: _____ Time: _____ Init _____ |

## General indications and criteria for IV iron

- Inadequate response to an adequate* trial of oral iron
- Gastrointestinal intolerance to at least 2 forms of oral iron
- Demonstrated non-adherence to oral iron
- Ongoing blood loss that exceeds the capacity of oral iron to meet requirements
- Inability to absorb oral iron (e.g. Celiac disease, Whipple's disease, inflammatory bowel disease, gastric surgery such as bypass or resection)
- Chronic kidney disease, pregnancy, elderly, patients undergoing chemotherapy or radiation
- Treatment of pre-operative iron deficiency anemia before high blood loss surgery

*Adequate trial: duration of at least 3 months, adequate dose of 200 mg/day of elemental iron, 250 - 500 mg Vitamin C with each dose of iron to enhance absorption, administration on an empty stomach 1 hour before breakfast or at bedtime

## Oral Iron Products

| Product (iron salt) | Elemental iron per tablet/capsule | Cost Estimate per Month |
|---|---|---|
| Ferrous gluconate 300 mg | 35 mg | $ |
| Ferrous sulfate 300 mg | 60 mg | $ |
| Ferrous fumarate 300 mg | 100 mg | $ |
| Polysaccharide-iron complex 150 mg (e.g. FeraMAX, Polyride Fe) | 150 mg | $$ |

**Strategies to improve tolerability:**

- Take every other day (or Monday-Wednesday-Friday)
- 1 to 3 tablets based on patient tolerance (target 100 to 200 mg elemental iron/day)
- One dose per day preferably 1 hour before breakfast (take with food if not tolerated)
- Take with orange juice or 500 mg Vitamin C tablet (increases absorption)
- Take for a minimum of 3 months

## Dosage of IV iron

<table>
<tr><th>Iron</th><th>Usual Dose<br>• Calculate "Iron Deficit" (total dose needed) using Ganzoni formula**<br>• Divide "Iron Deficit" into appropriate individual doses</th><th>Cost estimate for 1000 mg</th></tr>
<tr><td>Iron Sucrose (Venofer)</td><td>Administer as total dose divided in increments of 100 to 300 mg per session every 2 to 3 days.<br>Ex. Total Iron Deficit 1000 mg, consider: 200 mg IV x 5 doses</td><td>$$$$</td></tr>
<tr><td>Ferric derisomaltose (Iron Isomaltoside Monoferric)</td><td>Ex. Total Iron Deficit 1000 mg, consider 1000 mg IV x 1 dose OR 500 mg IV x 2 doses<br>OR simplified table below:
<table>
<tr><th>Hemoglobin (g/L)</th><th>Less than 50 kg</th><th>50 to less than 70 kg</th><th>Greater than or equal to 70 kg</th></tr>
<tr><td>Greater than or equal to 100</td><td>500 mg</td><td>1000 mg</td><td>*Dose 1: 1000 mg<br>Dose 2: 500 mg<br>Total dose: 1500 mg</td></tr>
<tr><td>Less than 100</td><td>*Dose1: 500 mg<br>Dose 2: 500 mg<br>Total dose: 1000 mg</td><td>*Dose1: 1000 mg<br>Dose 2: 500 mg<br>Total dose: 1500 mg</td><td>*Dose1: 1000 mg<br>Dose 2: 1000 mg<br>Total dose: 2000 mg</td></tr>
</table>
*dose 1 and 2 given at least 7 days apart</td><td>$$$</td></tr>
</table>

*Above are general dosing examples. Consult SHSS IV monograph for specific indicators, dosing and administration. Professionals familiar with dosing, administration and appropriate monitoring should only use parenteral iron.

** **Iron deficit (mg) = weight (kg) x [(target Hgb (g/L) – current Hgb) ÷ 10] x 2.145 + iron stores (mg) if desired (**Use ideal body weight (IBW) for obese patients. Iron stores are 500 mg for patients greater than or equal to 35 kg (15 mg/kg for patients less than 35 kg)).

## Monitoring of IV iron therapy

Patients receiving regular parenteral iron require monitoring of hematologic parameters and iron indices. Repeat laboratory studies should not be performed until 4 to 8 weeks after the completion of administration since IV iron interferes with most assays or iron studies.