

Management of Iron Deficiency Anaemia in Pregnancy

Author: Eve Watkins
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1. Purpose

To provide a standardised, evidence-based approach for the prevention, diagnosis, and management of iron deficiency anaemia (IDA) in pregnancy to optimise maternal and fetal health outcomes. This policy integrates the recommendations from:

- British Society for Haematology (BSH)
- NHS Blood and Transplant (NHSBT) Obstetric Anaemia Toolkit
- National Institute for Health and Care Excellence (NICE)
- Royal College of Obstetricians and Gynaecologists (RCOG)

2. Definitions

- Anaemia in Pregnancy:
 - First trimester: Hb <110 g/L
 - Second and third trimesters: Hb <105 g/L
 - Postpartum: Hb <100 g/L
- Iron Deficiency Anaemia (IDA): Anaemia with serum ferritin <30 µg/L
- Ferric Derisomaltose (FDI): A high-dose intravenous iron preparation used to treat IDA.

3. Screening and Diagnosis

3.1 Routine Testing

- Full Blood Count (FBC) at dating scan appointment (ideally <14 weeks gestation) and at 28 weeks. Women in the high risk groups (3.2) require a ferritin at dating, to be requested along with routine antenatal screening bloods by the Community Midwife
- Repeat FBC and ferritin sample if in a high-risk group (see 3.2) or symptomatic of anaemia at 20 weeks gestation, request form to be created by the community midwife at time of booking and again at 28 weeks gestation for the high risk groups

3.2 High-Risk Groups

- History of anaemia
- Multiple pregnancy
- Teenage pregnancy
- Short interpregnancy interval (<1 year)
- Vegetarian/ plant-based/vegan diet
- Multiparity ≥ P3
- Known poor dietary intake
- Recent history of clinically significant bleeding
- Declining blood products (Religious or moral beliefs)
- Known haemoglobinopathy
- Autoimmune conditions
- Gastrointestinal disease
- Weight loss surgery e.g. Gastric sleeve

3.3 Confirmatory Testing

- Measure serum ferritin in:
 - Women with low Hb
 - Intolerance to oral iron
 - Persistent symptoms despite oral treatment

4. Management

4.1 Non-Anaemic Women with Low Ferritin (<30 µg/L)

- Offer dietary counselling
- Consider prophylactic oral iron (e.g., ferrous sulphate 200 mg OD, liquid oral iron can be offered as an alternative if not tolerated (e.g. Ferrous fumarate 10mls once daily))

4.2 Mild to Moderate IDA (Hb ≥90 g/L and <105 g/L in 2nd/3rd trimester)

- First-line: Oral iron therapy (e.g., ferrous sulphate 200 mg OD). Liquid oral iron can be offered as an alternative if not tolerated (e.g. Ferrous fumarate 10mls once daily)
- Recheck Hb and ferritin after 2-3 weeks
- Consider IV iron if:
 - Intolerant to oral iron
 - Poor response (<10 g/L rise in Hb in 2-3 weeks)
 - Late gestation with insufficient time for oral iron

4.3 Severe Anaemia (Hb <90 g/L) or Symptomatic Anaemia

- Consider direct IV iron infusion, particularly if >34 weeks or significant symptoms
- Discuss with consultant obstetrician/haematologist

5. Intravenous Iron Therapy

5.1 Indications for IV Iron infusion

- Intolerance or non-response to oral iron
- Severe anaemia (Hb <90 g/L)
- Late pregnancy (>34 weeks) with need for rapid correction
- Pre-operative preparation (e.g., planned Caesarean section)

5.2 Contraindications to IV iron

Intravenous iron preparations should not be used in the following circumstances:

- First trimester of pregnancy.
- Non iron deficiency anaemia (e.g., Low vitamin B12, low folic acid, haemolytic anaemia) and women with haemoglobinopathies, e.g., sickle cell and thalassaemia without evidence of concomitant iron deficiency.
- Iron overload or disturbances in the utilisation of iron, e.g., haemochromatosis
- Known serious hypersensitivity to any parenteral iron product or hypersensitivity to specific product to be used.
- Acute or chronic bacteraemia
- Decompensated liver disease (ferric derisomaltose)

5.3 Cautions with IV iron. Carefully consider the risk benefit of giving IV iron in the following patient groups:

- Enhanced risk of reaction such as drug allergies, history of severe asthma, eczema or other atopic allergy or patients with immune or inflammatory conditions (e.g. systemic lupus erythromatosus, rheumatoid arthritis)
- Acute or chronic infection – consider delaying treatment until infection addressed
- Compensated liver dysfunction - IV iron should be avoided if ALT/AST >3x upper limit of normal range
- Severe asthma/respiratory illness/cardiac condition – consider infusion as an inpatient

Following a consultation with an obstetrician the consent section at the bottom of the pre-infusion checklist and consent form will have to be signed by both the woman and the obstetrician. All details on the form need to be completed in full including the risk of skin staining. A failure to complete this form in full will cause the referral being rejected.

5.4 Product of Choice: Ferric Derisomaltose (FDI) OVER 18’S ONLY

- Preparation: Administer in secondary care setting with resuscitation facilities
- Dosing/ administration of each preparation:
- Ferric derisomaltose Pharmacosmos 100mg/ml should not be diluted to concentrations less than 1mg iron / ml including the volume of solution, and never in more than 500ml
- Prescribe/Administer dose(s) based on table below:

Dosing Table (based on body weight and haemoglobin):

Hb (g/l)	Booking weight <50kg	Booking weight 50-70kg	Booking weight ≥70kg
<100	500mg	1500mg	2000mg
≥100	500mg	1000mg	1500mg

- **Maximum dose to prescribe is 20mg/Kg of booking weight**
- Note on Dosing Source: The following dosing table is derived from the Monofer® Summary of Product Characteristics (SmPC) and standard NHS protocols, as the BNF does not provide specific dosing guidance for ferric derisomaltose.

Table 1

Iron dose	Diluent	Administration
≤1000mg	100ml 0.9% sodium chloride	infusion over >15 mins
>1000mg	250ml (0.9% sodium chloride)	Infusion over ≥30 mins

- Administration:
 - Dilution: use Table 1

- At least one week required between doses if needs to split over two infusions for full dose

5.5 Safety and Monitoring

Patient Monitoring

- Ferric derisomaltose Pharmacosmos 100mg/ml:
Pulse, respirations, oxygen saturations, temperature, blood pressure and fetal auscultation should be checked prior to infusion, pulse and blood pressure every 15 minutes throughout infusion and 30 minutes at the end of the infusion. Patients who have had Ferric derisomaltose should stay for at least 30 minutes after the infusion has been completed (Keep cannulated particularly if day patient until last set of observations completed).
- Advise on mild side effects: flushing, nausea, metallic taste in mouth
- Advise skin staining may occur
- If anaphylaxis occurs complete DATIX and yellow form on BNF
- Repeat Hb and ferritin 2-3 weeks post-infusion

5.6 Use of Ferinject (Ferric Carboxymaltose) in Adolescents Under 18

- Ferinject is not routinely recommended under UK formulary for individuals under 14 years old. Use in those aged 14–17 years should be restricted to cases where:
 - Oral iron is ineffective or not tolerated, **and**
 - Other IV iron options are unsuitable, **and**
 - Decision has been discussed with a consultant haematologist or paediatrician.
- Not recommended in first trimester of pregnancy; in second or third trimester, use only after risk-benefit discussion.
- Dosing:
 - Up to 15 mg/kg body weight, maximum 1000 mg per infusion.
 - A total dose exceeding 1000 mg must be split with a 7-day interval.

Dose Calculation Table for Ferinject in Adolescents (14–17 years):

Haemoglobin (g/l)	Patient body Weight		
	Under 35kg	35-70kg	70kg and over
Less than 100	500mg	1500mg	2000mg
100-140	500mg	1000mg	1500mg

Administration:

Administer in a setting with immediate access to resuscitation equipment.

- Ferinject should not be diluted to concentrations less than 2 mg iron/ml.

- Administration volumes/times: Dilute 500mg in 100mL sodium chloride 0.9% and infuse over a minimum of 6 minutes. Dilute 1000mg in 250mL sodium chloride 0.9% and infuse over a minimum of 15 minutes
- **Monitoring:**
 - Pulse, respirations, oxygen saturations, temperature, blood pressure and fetal auscultation should be checked prior to infusion, at the end of infusion, 30 minutes and 60 minutes after the infusion. Women and birthing people who have had Ferinject should stay for at least 1 hour after the infusion has been completed (Keep cannulated particularly if day patient, until last set of observations completed).
 - Monitor Hb and ferritin 2–3 weeks after administration.

6. Postpartum Management

- Reassess Hb levels within 48-72 hours post-delivery if:
 - Significant blood loss
 - Clinical signs of anaemia
- Treat ongoing anaemia with oral or IV iron depending on severity and tolerance

7. Documentation

- Document all screening, diagnosis, treatment decisions, and patient discussions in the maternity record using proforma attached to this document

8. Audit and Review

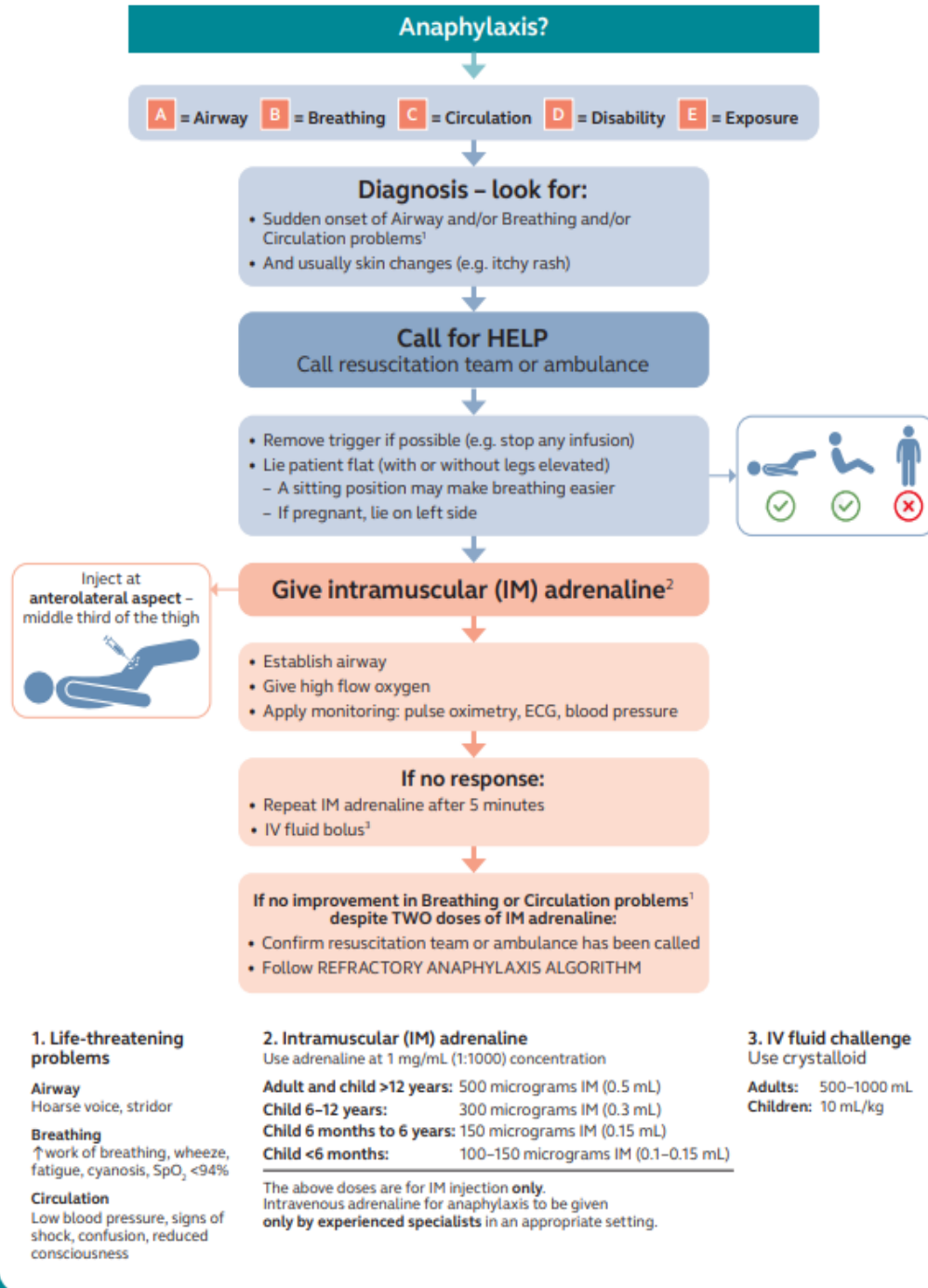
- Annual audit of adherence to this guideline
- Patient outcome metrics: prevalence of anaemia, IV iron usage, transfusion rates
- Update policy in line with national guidance revisions

References:

1. BSH Guidelines: Management of Iron Deficiency in Pregnancy (2019)
2. NHSBT Obstetric Anaemia Toolkit (2021)
3. NICE NG110: Anaemia Management in Pregnancy and the Postnatal Period
4. RCOG Green-top Guideline No. 47: Blood Transfusion in Obstetrics
5. Electronic Medicines Compendium (emc)
6. British National Formulary (BNF)
7. Monofer® SmPC

Appendix 1: Anaphylaxis pathway

Anaphylaxis



Appendix 2: Iron infusion exclusion checklist and consent form

THIS FORM IS TO BE COMPLETED BY A MEDICAL DOCTOR PRIOR TO BOOKING AN IRON INFUSION

If this form is incompletely filled in and/or the infusion has not been prescribed the referral may be declined.

	Date of blood test
	Hb
	Ferritin

PO iron therapy started on _____ at _____ weeks gestation.

PO Iron taken for _____ weeks to empty stomach with orange juice, not tea or coffee for 2 h after.

After 2 weeks of PO iron therapy Hb _____ and Ferritin _____.

Indications for IV Iron:

- Intolerance or non-response to oral iron
- Severe anaemia (Hb <90g/L)
- Late pregnancy (>34 weeks) with need for rapid correction
- Pre-operative preparation (e.g., planned LSCS)

Over 18 years old?

- Yes- for Ferric Derisomaltose
- No- for Ferrinject
- Risk of skin staining explained**
- Advise on mild side effects: flushing, nausea, metallic taste in mouth**

More susceptible to hypersensitivity if has any of the following:

- Liver disease
- Asthma
- Eczema
- SLE
- Rheumatoid disease

Suitable for out-patients administration in ADAU

Suitable for in-patients administration on ward 19 / CDS

CONSENT FOR IRON INFUSION:

I CONFIRM THAT I UNDERSTAND THE PROCESS AND RISKS:

Patient signature: _____

Date: _____

Witness name and grade: _____

Date: _____

Appendix 3: Ferric derisomal tose dose calculation

Patient booking weight _____ kg

Last Hb _____ g/L

Dose Calculation Table (based on body weight and haemoglobin):

Hb (g/l)	Booking weight <50kg	Booking weight 50-70kg	Booking weight ≥70kg
<100	500mg	1500mg	2000mg
≥100	500mg	1000mg	1500mg

Total dose required _____ mg

Administration: Maximum dose should not exceed 20mg/kg of booking weight

At least one week required between doses if needs to split over two infusions for total dose

Number of doses required based on max dose not exceeding 20mg/kg of booking weight _____

NB if requiring 2 doses please prescribe each dose to the nearest 500mg to reduce waste.

Dilution: If ≤1000mg dilute in 100ml N/Saline 0.9%

If >1000mg dilute in 250ml N/Saline 0.9%

FERINJECT DOSE CALCULATION

Patient booking weight _____ kg

Last Hb _____ g/L

Dose Calculation Table for Ferinject in Adolescents (14–17 years):

Haemoglobin (g/l)	Patient body Weight		
	Under 35kg	35-70kg	70kg and over
Less than 100	500mg	1500mg	2000mg
100-140	500mg	1000mg	1500mg

Total dose required _____ mg

Administration: Up to 15 mg/kg body weight, maximum 1000 mg per infusion.

A total dose exceeding 1000 mg must be split with a 7-day interval.

Dilution: Ferinject should not be diluted to concentrations less than 2 mg iron/ml.

Dilute 500mg in 100mL sodium chloride 0.9% and infuse over a minimum of 6 minutes.

Dilute 1000mg in 250mL sodium chloride 0.9% and infuse over a minimum of 15 minutes

FERRIC DERISOMALTOSE / FERINJECT ADMINISTRATION SHEET

DATE _____

	Date of blood tests Hb Ferritin Decision for IV Iron made by
--	---

FERRIC DERISOMALTOSE ADMINISTRATION

FERINJECT ADMINISTRATION

DUE DATE _____

GESTATION _____

ALLERGIES _____

BOOKING WEIGHT _____ KG

INITIAL OBSERVATIONS BEFORE INFUSION:

BP _____/_____ Pulse _____ Temp _____

Resp. rate _____ SatO2 _____

Fetal movements normal Yes/ No

FH Auscultation _____ bpm

IV Iron infusion started at _____

Dose given _____ mg

Batch number _____

Peripheral intravenous cannula care bundle completed

Medical team informed of starting the infusion

OBSERVATIONS IMMEDIATELY AFTER STARTING THE INFUSION (every 5 minutes for the first 15 minutes):

Time: _____ BP _____/_____ Pulse _____

Time: _____ BP _____/_____ Pulse _____

Time: _____ BP _____/_____ Pulse _____

OBSERVATIONS AFTER THE INFUSION:

Time: _____ BP _____/_____ Pulse _____

OBSERVATIONS 30 MINUTES AFTER THE INFUSION:

Time: _____ BP _____/_____ Pulse _____

FOLLOW UP PLAN:

Recommence PO Iron on _____ (5 days post IV Iron)

Repeat FBC and Ferritin due on _____ (2 weeks post IV Iron)

Next CMW appointment _____

Next ANC/ USS appointment _____

Fetal movements leaflet given

Iron rich diet information given

Appendix 4: GP letter Singleton



Antenatal Clinic

Singleton Hospital

Sketty Lane

Swansea SA2 8 QA

Tel. 01792 285393

Date:

Dear

Prescription request for iron in pregnancy

A recent blood test has shown that you are anaemic (Hb \quad g/L). This can be treated by taking iron tablets.

Please take this letter to your GP for iron tablets prescription. This will normally be ready to collect in around 5 working days.

The following is recommended:

- Ferrous fumarate or ferrous sulphate are equally suitable. Your GP can decide which one to prescribe.
- Take one tablet daily in the morning.
- Take the iron tablet on an empty stomach with water or orange juice. Please avoid tea and coffee for 2 hours after taking the iron tablet. Avoid any food for 60 minutes after taking the iron tablet.
- You may require iron tablets for the rest of your pregnancy and for 3 months after birth. Your GP may check your iron levels approximately 6 weeks after you giving birth.

Yours sincerely,

Midwife/ Doctor

Cc: GP

Dear Doctor, please see the above and prescribe iron as suggested.

Appendix 5: GP letter Neath Port Talbot Hospital



Antenatal Clinic
Neath Port Talbot Hospital
Baglan Way
Port Talbot SA12 7BX
Tel. 01639 862118
Date:

Dear

Prescription request for iron in pregnancy

A recent blood test has shown that you are anaemic (Hb g/L). This can be treated by taking iron tablets.

Please take this letter to your GP for iron tablets prescription. This will normally be ready to collect in around 5 working days.

The following is recommended:

- Ferrous fumarate or ferrous sulphate are equally suitable. Your GP can decide which one to prescribe.
- Take one tablet daily in the morning.
- Take the iron tablet on an empty stomach with water or orange juice. Please avoid tea and coffee for 2 hours after taking the iron tablet. Avoid any food for 60 minutes after taking the iron tablet.
- You may require iron tablets for the rest of your pregnancy and for 3 months after birth. Your GP may check your iron levels approximately 6 weeks after you giving birth.

Yours sincerely,

Midwife/ Doctor

Cc: GP

Dear Doctor, please see the above and prescribe iron as suggested.

Maternity Services

Checklist for Clinical Guidelines being Submitted for Approval

Title of Guideline:	Management of Iron Deficiency Anaemia in Pregnancy
Name(s) of Author:	Eve Watkins, Outi Morris, Sian Phillips
Chair of Group or Committee approving submission:	Antenatal Forum
Brief outline giving reasons for document being submitted for ratification	Review of previous guideline
Details of persons included in consultation process:	
Name of Pharmacist (mandatory if drugs involved):	Holly Breeze-Jones
Issue / Version No:	4
Please list any policies/guidelines this document will supercede:	Management of Iron Deficiency Anaemia including iron infusion (Monofer® for over 18 and Ferinject® for under 18). 2023
Date approved by Group:	26 August 2025
Next Review / Guideline Expiry:	26 August 2028
Please indicate key words you wish to be linked to document	Anaemia, anaemic, iron, infusion, monofer,
File Name: Used to locate where file is stores on hard drive	