

Iron Deficiency Anemia Management Pathway in Pregnancy

Table of Contents

HISTORY AND PHYSICAL EXAM	2
ANEMIA SCREENING & DIAGNOSIS	2
DIAGNOSTIC CRITERIA FOR ANEMIA	2
MONITORING & TREATMENT OVERVIEW	2
FIRST LINE: ORAL TREATMENT	3
SUPPLEMENT TIPS.....	3
IRON	3
VITAMIN B12	3
FOLATE	3
SECOND LINE: IV IRON TREATMENT	4
THIRD LINE: PACKED RED BLOOD CELL TRANSFUSION.....	4
TREATMENT FLOW CHART FOR ANEMIA IN PREGNANCY	4
ALASKAN IRON-RICH FOODS.....	5
ALASKAN VITAMIN C–RICH FOODS TO BOOST IRON ABSORPTION	5
FOLATE RICH FOODS (CDC: Folate - Health Professional Fact Sheet).....	5
VITAMIN B 12 RICH FOODS (CDC: Vitamin B12 - Health Professional Fact Sheet)	6
REFERENCES.....	7
VERSION HISTORY	7

HISTORY AND PHYSICAL EXAM

All first prenatal care visits, regardless of gestational age (GA), should include taking a thorough history including a review of systems and a family history. Review of systems for anemia includes palpitations, tiredness, dizziness and the physical exam can indicate pallor or tachycardia. Family history is important to exclude high risk for sickle cell disease or thalassemia diseases.^{1,2} This guideline is specifically to review iron needs and iron deficiency in pregnancy; however other anemia causes should not be overlooked. A (curbside) consultation with an OBGYN and possible referral to hematology could be considered. Prior to hematology appointment, the following laboratory studies are requested: CBC, reticulocyte count, iron studies, folate, vitamin B12, peripheral smear, and LDH. Hematology also recommends rechecking CBC and ferritin four to six weeks after starting iron supplementation to ensure it is trending in the right direction. Regardless of the consultation, iron supplementation initiation should not be delayed.

All pregnant patients should be taking low dose iron supplemental oral (PO) iron (ferrous gluconate 324mg PO MWF), due to increased iron needs in pregnancy. Iron supplementation is essential for both maternal and fetal needs in pregnancy.¹ Anemia is a late sign of iron deficiency. A normal iron level is needed for good skeletal, cardiac, and brain growth and function.^{3,4} Education about anemia and iron need and intake should be given to all pregnant people. This information should include facts and encouragement about iron-rich foods. See “Nutritional Support supplement to this Anemia Pathway.”^{5,6}

ANEMIA SCREENING & DIAGNOSIS

Timing	Tests
Initial prenatal visit	CBC, Ferritin, Vit B12, Folate
24–28 weeks GA	CBC, Ferritin (Vit B12 & Folate if initially low or not previously tested)
32–36 weeks GA	CBC, Ferritin (Vit B12 & Folate if initially low or not previously tested)

DIAGNOSTIC CRITERIA FOR ANEMIA

- Anemia: Hemoglobin <10 g/dL
 - Iron deficiency in women⁷: ferritin <50 ng/mL
 - Vitamin B12: <300 pg/mL
 - Folate (Vitamin B9): <4 ng/mL
- **If any value is diagnostic, start supplementation and follow up in four weeks with repeat laboratory studies.

MONITORING & TREATMENT OVERVIEW

PO iron	
4 weeks after treatment initiation	→ Recheck abnormal values
If hemoglobin rises ≥ 1 g/dL	→ Continue oral iron Recheck every 4 weeks until not anemic
Poor PO tolerance	→ Change type of PO iron Recheck in 4 weeks
Not taking PO Iron	→ Find out why Encourage PO iron Recheck in 4 weeks

IV iron

Known absorption issue (gastrectomy, gastric band, hyperemesis, etc)	→	IV iron supplementation
No response but taking oral iron	→	Consider IV iron
GA <32 weeks Hb <8 g/dL	→	Consider IV iron with PO supplementation
GA >32 weeks Hb <10 g/dL	→	Consider IV iron with PO supplementation

Packed Red Blood Cells (PRBCs)

Any GA with Hb < 6 g/dL	→	Transfuse 2 units of PRBCs
Any GA with symptomatic anemia	→	Consider PRBC transfusion
Labor and delivery admission Hb < 8 g/dL	→	Consider PRBC transfusion

FIRST LINE: ORAL TREATMENT

Formulation	Dose	Notes
Iron supplementation		
Ferrous sulfate	325 mg OD	Common, low-cost
Ferrous gluconate	324 mg BID	Gentler on GI
Polysaccharide iron	150 mg OD	Fewer side effects available as liquid (only OTC currently)
Heme iron polypeptide	12 mg BID	Well tolerated, non-constipating (not available yet in our formulary)

Other supplementation

Vitamin B12	1000mcg IM qM	Can be given x3/week (for those without absorption issues)
	500 mcg PO qD	
Folate	1 mg PO qD	

Bowel regimen options

Milk of Magnesium	30mL PO qD	Drink 30mL prior to bed time
MiraLax	17gm PO qD	Dissolve 17 gm in 4-8 ounces of water
Fiber Con		For extra Fiber intake OTC
Psyllium		For extra Fiber intake OTC (available for RASU/Village)

Additional Rx Support

Vitamin C	200-300 mg PO	Take with Iron on empty stomach if tolerated for better Iron absorption
-----------	---------------	---

SUPPLEMENT TIPSIRON

- Take iron with Vit C supplemented Orange juice. Avoid calcium (milk), tea, coffee near dosing. **Alternate-day dosing** improves absorption and tolerability.

VITAMIN B12

- Most commonly deficient secondary to: gastritis, malabsorption due to metformin/PPI/Omeprazol/H2blocker use, or limited animal protein intake during pregnancy and or lactation.

FOLATE

- Best taken on the empty stomach for absorption.

SECOND LINE: IV IRON TREATMENT

Formulation	Typical Regimen	Notes
Iron Sucrose (Venofer)	100–300 mg per dose, multiple doses (total ~1000 mg)	Widely used in pregnancy
Iron Dextran (Infed)	300 mg per day for total of 3 doses	Mostly used in pediatrics
Ferric Derisomaltose (Monoferric)*	1000mg elemental iron	Can be infused in 20 min

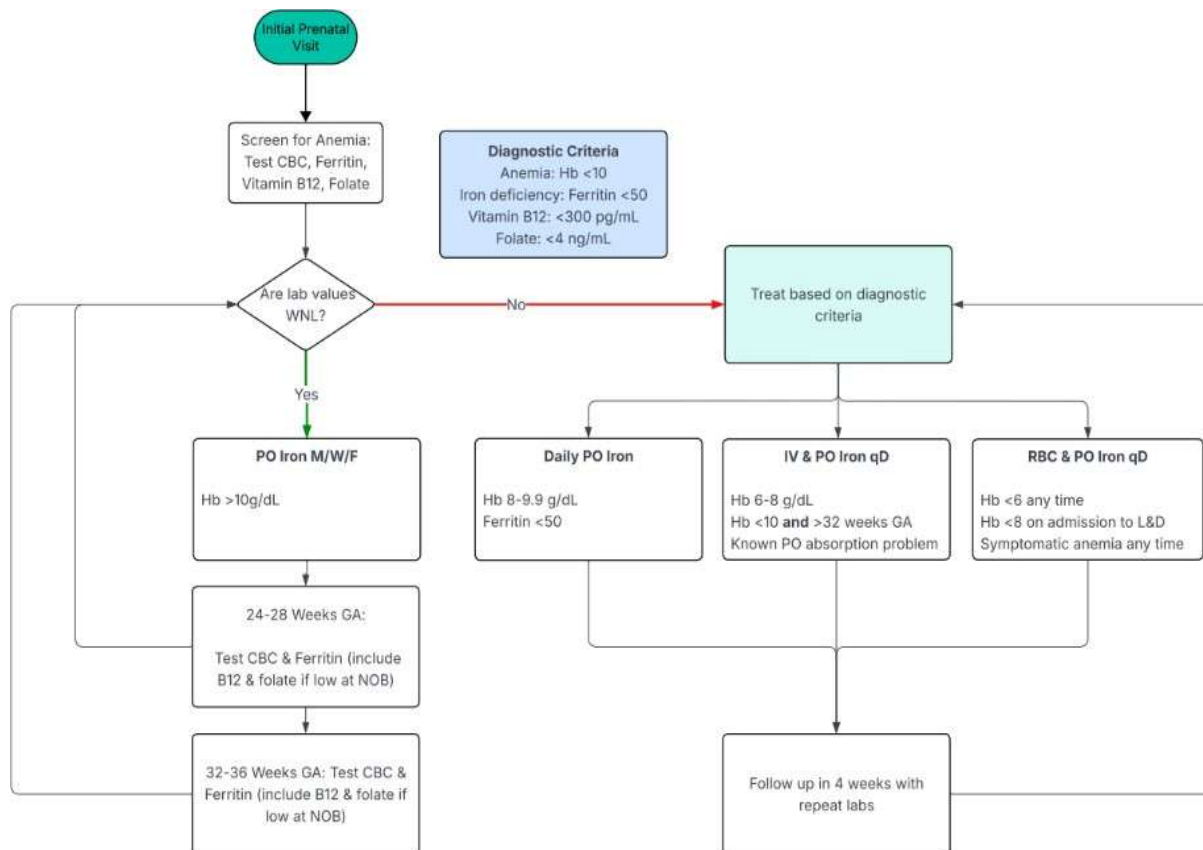
* *Ferumoxytol (Feraheme)* is used off-label in pregnancy but has shown good safety in the 2nd and 3rd trimester

THIRD LINE: PACKED RED BLOOD CELL TRANSFUSION

This anemia in pregnancy pathway is set in place to meet the needs of our customer owners. With the use of an active iron supplementation protocol, there is the potential to avoid the need for transfusions. However, oxygenation of the fetus has been shown to decrease when there is severe anemia, specifically with a hemoglobin level less than 6g/dL.¹

TREATMENT FLOW CHART FOR ANEMIA IN PREGNANCY

Please use this flow chart for your convenience and refer to this guideline for details



ALASKAN IRON-RICH FOODS

Food	Iron Type	Notes
Moose, Caribou, Seal meat	Heme	High absorption
Duck, Goose	Heme	Traditional protein source
Salmon (fresh, smoked, dried)	Heme	Also provides omega-3
Seal liver (once per week maximum)	Heme	Vitamin A

ALASKAN VITAMIN C–RICH FOODS TO BOOST IRON ABSORPTION

Food	Notes
Salmonberries, blueberries, crowberries	High in antioxidants
Fireweed shoots, wild greens	Vitamin C and iron
Citrus fruits, bell peppers, broccoli	Strong enhancers of iron absorption

Avoid tea, coffee, dairy and calcium supplementation around iron-rich meals or supplements

FOLATE RICH FOODS (CDC: [Folate - Health Professional Fact Sheet](#))

Food	Micrograms (mcg) DFE per serving	Percent of daily value (DV)
Beef liver, braised, 3 ounces	215	54
Spinach, boiled, ½ cup	131	33
Black-eyed peas (cowpeas), boiled, ½ cup	105	26
Breakfast cereals, fortified with 25% of the DV†	100	25
Rice, white, medium grain, cooked, ½ cup†	90	22
Asparagus, boiled, 4 spears	89	22
Brussels sprouts, frozen, boiled, ½ cup	78	20
Spaghetti, cooked, enriched, ½ cup†	74	19
Lettuce, romaine, shredded, 1 cup	64	16
Avocado, raw, sliced, ½ cup	59	15
Spinach, raw, 1 cup	58	15
Broccoli, chopped, frozen, cooked, ½ cup	52	13
Mustard greens, chopped, frozen, boiled, ½ cup	52	13
Bread, white, 1 slice†	50	13
Green peas, frozen, boiled, ½ cup	47	12
Kidney beans, canned, ½ cup	46	12
Wheat germ, 2 tablespoons	40	10
Tomato juice, canned, ¾ cup	36	9
Crab, Dungeness, 3 ounces	36	9
Orange juice, ¾ cup	35	9
Turnip greens, frozen, boiled, ½ cup	32	8
Peanuts, dry roasted, 1 ounce	27	7

Orange, fresh, 1 small	29	7
Papaya, raw, cubed, ½ cup	27	7
Banana, 1 medium	24	6
Yeast, baker's, ¼ teaspoon	23	6
Egg, whole, hard boiled, 1 large	22	6
Cantaloupe, raw, cubed, ½ cup	17	4
Vegetarian baked beans, canned, ½ cup	15	4
Fish, halibut, cooked, 3 ounces	12	3
Milk, 1% fat, 1 cup	12	3
Ground beef, 85% lean, cooked, 3 ounces	7	2
Chicken breast, roasted, 3 ounces	3	1

VITAMIN B 12 RICH FOODS (CDC: [Vitamin B12 - Health Professional Fact Sheet](#))

Food	Micrograms (mcg) per serving	Percent Daily Value
Beef liver, cooked, pan fried, 3 ounces	70.7	2,944
Clams (without shells), cooked, 3 ounces	17	708
Oysters, eastern, wild, cooked, 3 ounces	14.9	621
Nutritional yeast, fortified (check label), about ¼ cup	8.3 – 24	346 – 1,000
Salmon, Atlantic, cooked, 3 ounces	2.6	108
Tuna, light, canned in water, 3 ounces	2.5	104
Beef, ground, 85% lean meat/15% fat, pan browned, 3 oz	2.4	100
Milk, 2% milkfat, 1 cup	1.3	54
Yogurt, plain, fat free, 6-ounce container	1	43
Fortified breakfast cereals	0.6	25
Cheese, cheddar, 1½ ounces	0.5	19
Egg, whole, cooked, 1 large	0.5	19
Turkey, breast meat, roasted, 3 ounces	0.3	14
Tempeh, 1/2 cup	0.1	3
Banana, 1 medium	0	0
Bread, whole wheat, 1 slice	0	0
Strawberries, raw, halved, 1/2 cup	0	0
Beans, kidney, boiled, 1/2 cup	0	0
Spinach, boiled, drained, 1/2 cup	0	0

REFERENCES

1. ACOG Practice Bulletin 233: Anemia in pregnancy.
2. ACOG Practice Bulletin 78: Hemoglobinopathies in pregnancy.
3. ACOG September 2025 presentation on iron deficiency in reproductive life.
4. FIGO Iron Deficiency Statement.
5. CDC [Folate - Health Professional Fact Sheet](#)
6. CDC [Vitamin B12 - Health Professional Fact Sheet](#)
7. Hematology article on Iron Deficiency in women

VERSION HISTORY

9/12/26 formatted pca

5/26 rsg