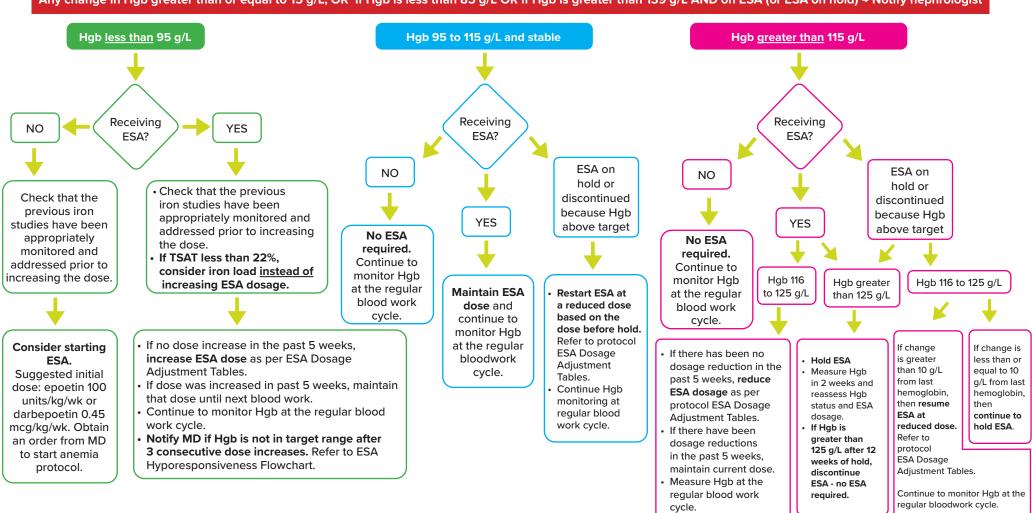
Hemodialysis Anemia Management Protocol



The following protocol, on order of physician, transfers anemia management of hemodialysis patients to non-physician staff (i.e. RNs and renal pharmacists). **This protocol is intended to serve as a guide and cannot replace clinical judgment.** The recommendations included may be inappropriate for specific clinical situations (e.g. patients with hemochromatosis, thalassemia, PRCA, allergy to IV iron or an erythropoiesis stimulating agent (ESA), history of stroke, active malignancy, history of malignancy, etc.). The lowest ESA dosage to achieve acceptable Hgb range should be used. This algorithm is based on the assumption that the patient is compliant to medication and blood work. **Note: ESA refers to both epoetin alfa (Eprex®) and darbepoetin alfa (Aranesp®).**

Any change in Hgb greater than or equal to 15 g/L, OR if Hgb is less than 85 g/L OR if Hgb is greater than 139 g/L AND on ESA (or ESA on hold) → Notify nephrologist



AFTER Hgb STATUS ASSESSMENT ABOVE, ASSESS IRON STATUS. Refer to page 2 for ferrous fumarate or intravenous iron protocol.

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PAGE 2: ASSESS IRON STATUS (Standard Iron Parameters – TSAT & Ferritin)

If the patient has signs and symptoms of sepsis (e.g. temperature greater than 38', chills, rigors, unexplained hypotension), notify the nephrologist to assess ongoing iron use. If the serum ferritin is above 1000mcg/L, hold intravenous iron.

Notify nephrologist if ferritin less than 20 mcg/L TSAT less than 22% TSAT 22% to 49% TSAT greater than or equal to 50% **REPLETE IRON STORES** POSSIBLE IRON OVERLOAD **MAINTAIN IRON STORES** START IRON LOADING DOSE If receiving If iron loading If iron is If not on IV iron: **HOLD IRON** maintenance dose just currently on Start IV iron iron: If TSAT is less than 22% and ferritin completed: hold: maintenance Continue is greater than 1000 mcg/L, refer Start iron Restart iron dose (obtain MD current to MD for an assessment and iron order to start maintenance maintenance maintenance anemia protocol) management prescription. dose dose Measure TSAT and ferritin at dose If ferritin >1000 or Tsat $\geq 50\%$ on 3 or next routine blood work cycle more occasions over the past year, give and reassess iron dosage regimen. half the number of IV iron doses in the load (e.g. 4 x sodium ferric gluconate **Note: Notify MD if iron indices** Refer to 125 mg). If ferritin between 800 -1000 Sodium ferric gluconate Sodium ferric remain high for 3 consecutive current (Ferrlecit®) gluconate (Ferrlecit®) mcg/L, give half the number of IV iron maintenance 125 mg IV 2 times/month 125 mg IV monthly blood work cycles. doses in the load. dose Do not start/continue IV iron loading Iron sucrose Iron sucrose *** If iron blood work appears unusual dose if Hgb is greater than 115 g/L → 100 mg IV 2 times/month 100 mg IV monthly compared to previous results (e.g. give iron monthly maintenance dose. replacement of iron stores, TSAT Note: No more than 3 courses of iron goes from less than 25% to greater replacement may be administered in Measure TSAT and ferritin in 6-12 weeks as per local program than 49%) repeat the blood work a row. Notify MD if iron indices remain policy and reassess iron dosage regimen. before initiating next action. low.

Measure TSAT and ferritin at next regular blood work cycle

1 gram IV iron loading dose given as:

- Sodium ferric gluconate (Ferrlecit®) 125 mg IV every dialysis for 8 doses
- Iron sucrose 100 mg IV every dialysis for 10 doses

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Hemodialysis Anemia Management Protocol: ESA Dosing Adjustment Table



The following tables provide guidance for most dosage adjustments. If a patient's Hgb cannot be maintained within the desired range with 3 consecutive dose modifications using the dosage schedule below, contact a nephrologist or renal pharmacist for advice. If a patient's erythropoiesis stimulating agent (ESA) dosage is not available in the tables below, please contact a nephrologist for ESA dosage modification. The lowest ESA dosage to maintain Hgb within acceptable range should be used.

Darbepoetin Alfa (Aranesp®) Dosage Adjustment Table

Pre-filled syringes available include: 10 mcg, 20 mcg, 30 mcg, 40 mcg, 50 mcg, 60 mcg, 80 mcg, 100 mcg, 130 mcg and 150 mcg.

Current Dose		Increase Dose*	Decrease Dose*	
10 mcg	every 2 weeks	10 mcg every 1 week	D/C, check Hgb in 2 weeks	
10 mcg	every 1 week	20 mcg every 1 week	10 mcg <u>every 2 weeks</u>	
20 mcg	every 1 week	30 mcg every 1 week	10 mcg every 1 week	
30 mcg	every 1 week	40 mcg every 1 week	20 mcg every 1 week	
40 mcg	every 1 week	50 mcg every 1 week	30 mcg every 1 week	
50 mcg	every 1 week	60 mcg every 1 week	40 mcg every 1 week	
60 mcg	every 1 week	80 mcg every 1 week	50 mcg every 1 week	
80 mcg	every 1 week	100 mcg every 1 week	60 mcg every 1 week	
100 mcg	every 1 week	130 mcg every 1 week	80 mcg every 1 week	
130 mcg	every 1 week	150 mcg every 1 week	100 mcg every 1 week	
150 mcg	every 1 week	No further increase, check with nephrologist	130 mcg every 1 week	

Epoetin Alfa (Eprex®) Dosage Adjustment Table

Pre-filled syringes available include: 1000 units, 2000 units, 3000 units, 4000 units, 5000 units, 6000 units, 8000 units and 10,000 units.

Current Dose		Increase Dose*		Decrease Dose*	
1,000 units	every 1 week	2,000 units	every 1 week	D/C, check Hgb in 2 weeks	
2,000 units	every 1 week	3,000 units	every 1 week	1,000 units	every 1 week
3,000 units	every 1 week	2,000 units	2 times per week	2,000 units	every 1 week
2,000 units	2 times per week	3,000 units	2 times per week	3,000 units	every 1 week
3,000 units	2 times per week	4,000 units	2 times per week	2,000 units	2 times per week
4,000 units	2 times per week	5,000 units	2 times per week	3,000 units	2 times per week
5,000 units	2 times per week	6,000 units	2 times per week	4,000 units	2 times per week
6,000 units	2 times per week	8,000 units	2 times per week	5,000 units	2 times per week
8,000 units	2 times per week	10,000 units	2 times per week	6,000 units	2 times per week
10,000 units	2 times per week	8,000 units	3 times per week	8,000 units	2 times per week
8,000 units	3 times per week	10,000 units	3 times per week	10,000 units	2 times per week
10,000 units	3 times per week	No further increase, check with nephrologist		8000 units	3 times per week