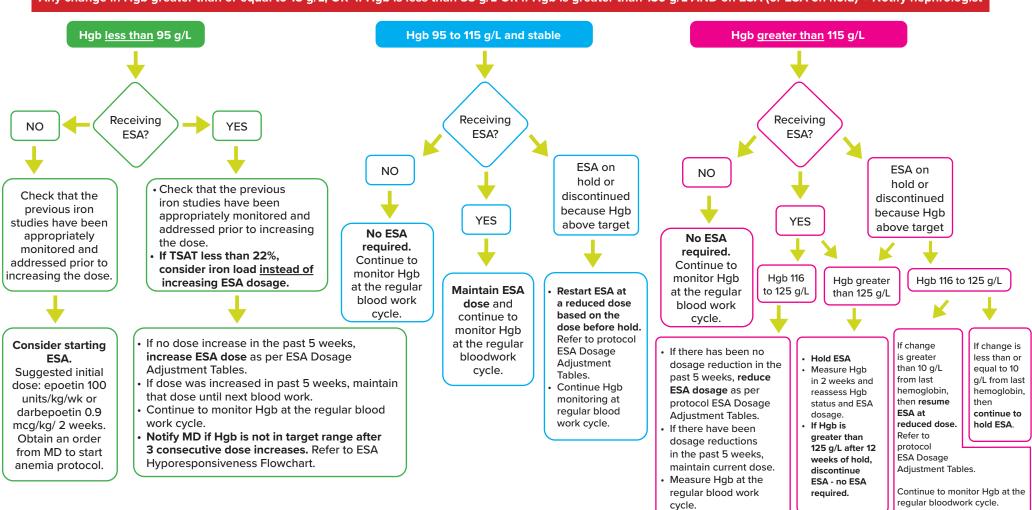
### **Peritoneal Dialysis Anemia Management Protocol**



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.

### Peritoneal Dialysis Anemia Management Protocol



#### 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 <u>less than 22%</u> **REPLETE IRON STORES** 

#### START IRON LOADING DOSE

If patient is currently not receiving iron therapy:

Contact MD to start ferrous fumarate (e.g. 300

- Contact MD to start ferrous fumarate (e.g. 30 mg po HS)
- If TSAT less than 10%, order ferrous fumarate 300 mg po HS x 1 week, then 600 mg po HS

#### If patient is currently receiving oral iron therapy:

- Assess iron compliance and proper administration (empty stomach)
- Increase ferrous fumarate by 300 mg/day as tolerated (max. 900 mg/day)

If patient's Hgb greater than 115 g/L, decrease ferrous fumarate dosage to 300 mg po daily.

If ferritin >1000 or Tsat ≥ 50% on 3 or more occasions over the past year, give half the iron loading dose if patient is on IV iron.

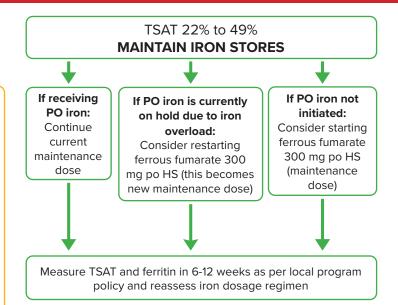
If ferritin between 800 -1000 mcg/L, give half IV iron load if patient is on IV iron.

Notify MD if iron parameters remain low after 3 consecutive blood work cycles.

If oral iron ineffective or patient is intolerant, consider giving IV iron.



Measure TSAT and ferritin at next regular blood work cycle and reassess iron dosage regimen



#### If patient is unable to tolerate or adhere to oral iron regimen:

Schedule IV iron regularly as per nephrologist's prescription. Measure TSAT and ferritin every 12 weeks (and at least 1 week after last IV iron dose).

#### Usual maximum single doses tolerated of common agents:

- Iron sucrose 200-300mg over 2-3 hours as per local practice and policy
- Iron isomaltoside (Monoferric) 500-1000 mg IV (infusion time varies)
- Sodium ferric gluconate (Ferrlecit®) 125mg IV over 1 hour

TSAT greater than or equal to 50% POSSIBLE IRON OVERLOAD

**HOLD IRON** 

Measure TSAT and ferritin at next routine blood work cycle and reassess iron dosage regimen.

Note: Notify MD if iron indices remain high for 3 consecutive blood work cycles.

\*\*\* If iron blood work appears unusual compared to previous results (e.g. replacement of iron stores, TSAT goes from less than 25% to greater than 49%) repeat the blood work before initiating next action.

# Peritoneal Dialysis 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	20 mcg	every 2 weeks	D/C, chec	k Hgb in 2 weeks
20 mcg	every 2 weeks	30 mcg	every 2 weeks	10 mcg	every 2 weeks
30 mcg	every 2 weeks	40 mcg	every 2 weeks	20 mcg	every 2 weeks
40 mcg	every 2 weeks	50 mcg	every 2 weeks	30 mcg	every 2 weeks
50 mcg	every 2 weeks	60 mcg	every 2 weeks	40 mcg	every 2 weeks
60 mcg	every 2 weeks	80 mcg	every 2 weeks	50 mcg	every 2 weeks
80 mcg	every 2 weeks	100 mcg	every 2 weeks	60 mcg	every 2 weeks
100 mcg	every 2 weeks	130 mcg	every 2 weeks	80 mcg	every 2 weeks
130 mcg	every 2 weeks	150 mcg	every 2 weeks	100 mcg	every 2 weeks
150 mcg	every 2 weeks	100 mcg	every 1 week	130 mcg	every 2 weeks
100 mcg	every 1 week	130 mcg	every 1 week	150 mcg	every 2 weeks
130 mcg	every 1 week	150 mcg	every 1 week	100 mcg	every 1 week
150 mcg	every 1 week	No further in	ncrease, check with nephrologist	130 mcg	every 1 week

<sup>\*</sup>For dosage increase or decrease, change interval to use up current syringes before starting new dosage.

Refer to ESA Dosing Interval Adjustment Table.

#### **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 H	gb 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	4,000 units	every 1 week	2,000 units	every 1 week
4,000 units	every 1 week	5,000 units	every 1 week	3,000 units	every 1 week
5,000 units	every 1 week	6,000 units	every 1 week	4,000 units	every 1 week
6,000 units	every 1 week	8,000 units	every 1 week	5,000 units	every 1 week
8,000 units	every 1 week	10,000 units	every 1 week	6,000 units	every 1 week
10,000 units	every 1 week	6,000 units	2 times per week	8,000 units	every 1 week
6,000 units	2 times per week	8,000 units	2 times per week	10,000 units	every 1 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		8,000 units	3 times per week

<sup>\*</sup>For dosage increase or decrease, change interval to use up current syringes before starting new dosage.

Refer to ESA Dosing Interval Adjustment Table.

# Peritoneal Dialysis Anemia Management Protocol: ESA Dosing Adjustment Table



## DARBEPOETIN ALFA (ARANESP®) DOSING INTERVAL ADJUSTMENT TABLE (to use up current supplies at home)

CURRENT DOCE	INCREASED DOSE	DECREASED DOSE	
CURRENT DOSE	CHANGE INTERVAL TO	CHANGE INTERVAL TO	
10 mcg every 2 weeks		HOLD	
20 mcg every 2 weeks		Every 21 days	
30 mcg every 2 weeks			
40 mcg every 2 weeks			
50 mcg every 2 weeks	Even (10 days		
60 mcg every 2 weeks	Every 10 days		
80 mcg every 2 weeks			
100 mcg every 2 weeks			
130 mcg every 2 weeks			
150 mcg every 2 weeks			
100 mcg every 1 week	Eveny E days	Every 10 days	
130 mcg every 1 week	Every 5 days		
150 mcg every 1 week	Check with MD		

## EPOETIN ALFA (EPREX®) DOSING INTERVAL ADJUSTMENT TABLE (to use up current supplies at home)

CURRENT DA	265	INCREASED DOSE	DECREASED DOSE
CURRENT DO	J3E	CHANGE INTERVAL TO	CHANGE INTERVAL TO
1,000 units	every 1 week		HOLD
2,000 units	every 1 week		
3,000 units	every 1 week		
4,000 units	every 1 week		
5,000 units	every 1 week	Every 5 days	Every 10 days
6,000 units	every 1 week		
8,000 units	every 1 week		
10,000 units	every 1 week		
6,000 units	twice per week		
8,000 units	twice per week	Every 3 days	Every 5 days
10,000 units	twice per week		
8,000 units	three times per week	Every 2 days	Front 2 days
10,000 units	three times per week	Check with MD	Every 3 days