

Patient: _____

Indication:

Ht: _____ Age: _____ Sex: M F

Actual Wt: _____ kg IBW: _____ kg BMI: _____

Comorbidities:

Diabetic: Yes No

We started SSI: Yes No

We started E-lytes: Yes No

Allergies:

Clinical Pearls	
<p><u>Diabetes (no more than 2-3mg/kg/min in diabetics)</u> Do not increase TPN rate until BG < 200 for 24 hrs (this applies to non-diabetics as well) BG goal 110-150 in ICU. Allow up to 180 for Non-ICU patients. Add Levemir 5-10 units daily, increase as needed per P&T Protocol</p>	
<p><u>Renal Impairment</u> Watch electrolytes (K⁺, Mg⁺⁺, & PO₄ may accumulate) PO₄ is NOT cleared by HD, but is cleared by CRRT Add B-6 50mg/d, B-12 100mcg/d, Thiamine 100mg/d to TPN while on CRRT</p>	
<p><u>Liver</u> Do not restrict calories or protein. Restricting protein will not <i>prevent</i> encephalopathy from occurring.</p>	
<p><u>Ascites</u> Fluid and Na⁺ restrict: NO added Na⁺ to TPN unless Na⁺ <130</p>	
<p><u>Pancreatitis</u> Watch Na⁺ -- problems with third spacing of fluids in these patients NO added Na⁺ to TPN unless Na⁺ <130 Check Triglycerides – Decrease fat if TG's ≥300, Hold fat only if TG ≥400mg/dl TPN with no fat >2 weeks or so may cause “fatty liver” (not having fat in TPN will require glucose to supply calories and can cause hyperglycemia also) Watch calcium, may be low.</p>	
<p><u>Malnourished Patients</u> 1. Patients with albumin <2 2. Patients with recent significant weight loss 3. Patients that have been NPO or have not taken a significant amount of nourishment in 5-7 days 4. Patients with significant decrease in intake over last few months Patients will be at risk for refeeding syndrome caused by release of large amounts of insulin in response to high glucose load in TPN. In malnourished patients, K⁺, Mg⁺⁺, PO₄ will be likely to shift intracellularly causing serum levels to drop. Initiate TPN slowly. Start with CHO at no more than 2mg/kg/min. Add extra K, Mg and Phos, and monitor closely.</p>	
<p><u>Obese Patients</u> Increase protein calories vs. dextrose calories. See protein guidelines based on BMI in calculations</p>	<p><u>Electrolyte Pearls</u> If K⁺, PO₄, and Mg are low, bolus before starting TPN, except in renal failure. Prolonged TPN: add B-12 1000 mcg once weekly. ↑K⁺ by 10 mEq/L minimum to see increase in serum. Serum K⁺ will not increase if Mg⁺⁺ levels are low. D/C of NGT causes increase in K⁺ levels. If patient unexpectedly has high K⁺ levels & high BG – recheck lab, may be incorrect lab draw. ↑ Na⁺ by 20 mEq/L minimum to see increase. High glucose can make Na⁺ appear falsely low. Phos & Mg⁺⁺ take 2-3 days to correct – order serum levels x 3 days at least. Keep PO₄ level at 4 for vent and heart patients. Carboplatin & Cisplatin cause decreased Mg and Ca. Use only ionized calcium for ICU patients.</p>
<p><u>Sepsis</u> May consider decreasing lipids by half because Omega 6 Fatty acids are proinflammatory. Add back once sepsis is resolved (Controversial) Keep BG < 150. Maximize Protein as able</p>	
<p><u>Oncology</u> Protein should be 1.5-2 g/kg Ovarian and Esophageal cancer are at an increased nutritional risk.</p>	
<p><u>Critically Ill:</u> Advance toward goal rate for first 3 days, increase to goal as tolerated at day 3, if pt otherwise stable. Protein at 1.8-2 gm/kg, as pt can tolerate. Max Protein on day one, then increase CHO/Fat.</p>	<p><u>Acid/Base Balance:</u> Will only correct for metabolic problems. Acidosis: bicarb should be low Alkalosis: bicarb should be high Otherwise, it's a respiratory problem so do nothing.</p>