Nutrition Support Fact Sheet

	Enteral	Parenteral
Cost	~$25/ day Reduced hospital LOS	~$700-$1000/day
Initiation	Best outcome when TF started within 24-48 hours. Bowel sounds or flatus **NOT** required **Not** contraindicated with mild to moderate ileus	***Not before 7-10 days if pt well nourished or 5-7 days if pt malnourished (PAB<10; DBW <75%). Studies show increase risk of mortality and complications with PN compared to no nutrition within the above perimeters.*** Only if the gut does **NOT** work and the anticipated duration of therapy ≥7 days.
GI Function	***Supports gut integrity by maintaining tight junctions b/w the intraepithelial cells and stimulating blood flow, which releases trophic endogenous agents and maintains villous height.*** Promotes gut motility (Study shows BM for GI CA Dx 4.2 days vs. 6.3 days with NPO or PN).	Increase risk of bacterial translocation d/t increase risk of gut permeability.
Immunity	Diminished activation and release of inflammatory cytokins. Modulates systemic immune response. Supports the mass of secretory IGA- producing immunocytes which comprise the GALT.	Does **not** help to favorably modulate the stress and systemic immune response.
Infections	Studies show reduced infectious morbidity and mortality. 8% decrease incidence of pneumonia in trauma pts.	***90% nosocomial infections are d/t central lines with cost of ~$2000.00 for Abx + ~7 extra days in hospital.*** (In house: 12 in FY09Q3 with decrease to 1 in FY10Q3)
Blood Sugar	Easier to keep serum glucose levels b/w the recommended 110-150mg/dl, which has shown to reduce sepsis, ICU LOS and decrease hospital mortality.	Increase risk of hyperglycemia and it's complications.
Tolerance	Per 10 randomized studies, the majority of surgical GI pts tolerated 80% of their goal rate within 36-48 hours. ***New studies show that residuals of <500 ml are not an indication to stop TF. Pain/abd. distention/ intractable N/V/D are better indicators of tol.***	Increased risk of refeeding syndrome and other electrolyte imbalances.
Stability	Use caution if pt hypotensive or hemodynamically-unstable.	Only 80% of energy requirements should be the goal until pt stabilizes if TF is not feasible.
Pancreatitis	Early EN via post-pyloric tube, in severe acute dz., has shown to reduce infectious morbidity. 2 studies show successful feeds to pt with severe acute dz via gastric or jejunum.	Providing nutrition support for mild to moderate acute dz. prior to 7 days in well-nourished pts shows no significant change in outcome.

McClave S, Martindale R, Vanek V, McCarthy M, Roberts P, Taylor B, Ochoa J, Napolitano L, Cresci G, the A.S.P.E.N Board of Directors, American College of Critical Care Medicine. Guidelines for Provision and Assessment of Nutrition Support Therapy in the Adult Critically Ill Patient. JPEN. 2009;33:277-316.

TF/TPN SHEET

Do **Not** use TF if:

- Active shock or ongoing resuscitation
- MAP <60mmHG or increasing vasoactive support to maintain MAP >60mmHg (HOB decrease unless feeds past ligament of treitz)
- Generalized Peritonitis
- Total SBO
- Surgical discontinuity of bowel
- Paralytic Ileus
- Intractable vomiting/diarrhea refractory to medical management (Anti-diarrheal meds not rec. with C-diff pts unless persists >48hr after abx started)
- Mesenteric Ischemia
- Major GI bleed
- High Output(>900ml/day) Fistula (if less rec. try elemental formula)
- NG/OG decompression with >900 ml output/day
- Abdominal compartment syndrome evidenced by bladder pressure >25mmHg.
- Pancreatic pseudo-cyst (may vary)
- High JP drainage output if tube placed in an organ (liver, pancreas, GI tract-monitor daily output)

Consider **PN** if:

- Unable to meet >60% caloric needs enterally by day 5 -7 if malnourished or 7-10 days if nourished.
- Any of the above conditions if anticipated to (or does) last greater than 5-7 or 7-10 days.
- Massive small bowel resection refractory to enteral feeds (may want to rec. TF if NG/OG/G-tube output <900/day within the 5-10 day period).

Consider **Elemental** formula if:

- Proven intolerance to other formulas
- Persistent severe diarrhea (>400-600ml/day) (make sure motility agent held)
- Burns
- Pancreatic or duodenal injury
- Moderate to severe distention >24 hrs.
- SBS

Consider Formulas with **Arginine** (caution with severe sepsis) or **Glutamine** (caution with liver failure) if:

- Trauma pt. for first 7 days
- Malnourished pts. under going major GI/abdominal surgeries.
- Prolonged starvation > 7 days
- High output distal colonic fistula (>900 ml/day)
- Large open wounds(consider Vit C-1000mg IV q 8hr, ZNS04 220mg/day –monitor with renal and liver failure & reassess every 7 days)
- Intractable diarrhea resistant to fiber or SBS (glutamine).

- TF should be initiated within 24-48 hours for trauma pts. for best results.
- It is possible to have a NG/OG tube to LWS via one nare and a dobhoff post pyloric via the other nare. However, be aware that if dobhoff is not post pyloric enough, TF may be sx out of NG/OG tube.