# PARENTERAL NUTRITION ORDER FORM

Orders must be scanned to pharmacy by 2 PM to be processed same day.
Parenteral Nutrition Orders must be written on this order form.
Changes in Parenteral Nutrition orders on any other order form will not be processed by pharmacy.
Parenteral Nutrition Orders are limited to once in 24 hours, and to the one designated prescriber per patient.

**DATE:** ______________  **TIME:** ______________

- **Patient Weight (Daily):** __________ kg
- **Initiate Parenteral Nutrition Protocol** (see protocol on page 2 of this form)
- **Bedside blood sugars per Parenteral Nutrition Protocol** – sliding scale insulin to be ordered by individual physician if necessary.
- **Give Vitamin K 10 mg subcutaneously every Monday except if patient is receiving warfarin (Coumadin).**
- **Multivitamins (10 ml) and Trace Elements (1 ml) will be added to one bag daily**

**PERIPHERAL STANDARD FORMULA**

500 ml of 8.5% Amino Acid Solution with LYTES mixed with 500 ml of 10% Dextrose in Water
- Each liter contains 170 non-protein calories (50 grams of carbohydrate) and 42.5 grams of protein
- **STANDARD ELECTROLYTE FORMULA** (concentration per liter)
  - Sodium: 35 mEq, Potassium: 33 mEq, Magnesium: 5 mEq, Chloride: 49 mEq, Acetate: 71 mEq, Phosphate: 14 mM
- Also contains Calcium Gluconate 4.65 mEq/L and Heparin 1000 units/L

**CENTRAL STANDARD FORMULA**

500 ml of 8.5% Amino Acid Solution with LYTES mixed with 500 ml of 50% Dextrose in Water
- Each liter contains 850 non-protein calories (250 grams of carbohydrate) and 42.5 grams of protein
- **STANDARD ELECTROLYTE FORMULA** (concentration per liter)
  - Sodium: 35 mEq, Potassium: 33 mEq, Magnesium: 5 mEq, Chloride: 49 mEq, Acetate: 71 mEq, Phosphate: 14 mM
- Also contains Calcium Gluconate 4.65 mEq/L and Heparin 1000 units/L

**NON-STANDARD PARENTERAL NUTRITION SOLUTIONS**
(Select an AA and Dextrose Solution)

- 8.5% PLAIN / 500 ml
- 8.5% with LYTES / 500 ml
- Aminosyn RF (Renal) 5.2% / 500 ml
- HepatAmine 8% / 500 ml
- Aminosyn 10% / 500 ml

**PRESCRIBED ELECTROLYTE FORMULA**
(to be ADDED to each bag):

<table>
<thead>
<tr>
<th>Electrolyte</th>
<th>Amount (mEq/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium Gluconate</td>
<td></td>
</tr>
<tr>
<td>Magnesium Sulfate</td>
<td></td>
</tr>
<tr>
<td>Potassium Acetate</td>
<td></td>
</tr>
<tr>
<td>Sodium Acetate</td>
<td></td>
</tr>
<tr>
<td>Sodium Chloride</td>
<td></td>
</tr>
<tr>
<td>Potassium Chloride</td>
<td></td>
</tr>
<tr>
<td>Potassium Phosphate</td>
<td></td>
</tr>
<tr>
<td>Sodium Phosphate</td>
<td></td>
</tr>
</tbody>
</table>

*If selected a standard formula above, electrolytes prescribed here would be IN ADDITION to those contained in the standard formula.*

**ADDITIONAL ADDITIVES / DRUGS**

- Heparin __________ units/bag
- Pepcid (famotidine) 20 mg/bag
- Pepcid (famotidine) __________ mg/bag
- Regular Insulin __________ units/bag

**RATE**
(please check one)

- 42 ML / HR
- 84 ML / HR
- 125 ML / HR
- OTHER __________ ML / HR

**INTRAVENTOUS FAT EMULSION**
(Select one)

- **STANDARD**: Fat Emulsion 10% – 500 ml: Infuse over 6 hours.
- Fat Emulsion 10% - 500 ml: Infuse 500 ml over ____ hours.
- Fat Emulsion 20% - 500 ml: Infuse 500 ml over ____ hours.

**Physician Signature:**

<table>
<thead>
<tr>
<th>Date:</th>
<th>Time:</th>
</tr>
</thead>
</table>

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Version 3.8.07
Parenteral Nutrition Protocol:

On Initiation:
- STAT chest x-ray for central line placement (for Central Parenteral Nutrition)
- Nutritional Consult for assessment and follow-up.

Lab:

1. BASELINE
   - Comprehensive Chemistry Panel (CCP)
   - CBC with differential, PT, PTT, Magnesium, Iron/TIBC
   - Prealbumin
   - Triglycerides
   - Phosphorous

2. Day #1 and Day #2
   - Basic Chemistry Profile (BCP)
   - Triglycerides

3. Every 3rd day
   - Comprehensive Chemistry Panel (CCP)

4. Every 7th day
   - CBC with differential, PT, PTT, Magnesium, Iron/TIBC
   - Triglycerides
   - Phosphorous
   - Prealbumin

5. Blood Glucose (bedside glucose):
   - 0730-1130-1630-2100 if eating; 0600-1200-1800-2400 if not eating
   - Notify physician if blood sugar is greater than 200mg/dl.

Pro13: glucose, BUN, creatinine, sodium, potassium, chloride, CO2, calcium, total protein, albumin, alkaline phosphatase, AST, ALT, anion gap, BUN/Cr, globulin, A/G ratio, osmolality

Pro7: glucose, BUN, creatinine, sodium, potassium, chloride, CO2, calcium, BUN/Cr, osmolality

Nursing Orders:
- Daily weight.
- Strict intake and output.
- Temperature, pulse, respiration, and blood pressure once per shift or more frequently if indicated. Notify physician of sudden temperature elevation, chills, or evidence of skin inflammation.
- Administer all parenteral nutrition via infusion pump.
- If the TPN solution is not available, infuse D10W at same rate until new solution is available.
- Do not use parenteral nutrition line for blood products or medication.
- Change dressing weekly and as needed. Document on medication administration record.
- Change tubing and filter every 24 hours and as needed. Document on medication administration record.
- Chart centimeters on central line every shift in nursing notes.
- Notify physician in event of clotted line, leakage from catheter or insertion site, redness at insertion site, or change in catheter position.
- Inform Clinical Nutrition Services when parenteral nutrition is discontinued.
Electrolyte Content of Available Amino Acid Solutions:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Potassium</th>
<th>Chloride</th>
<th>Acetate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminosyn 8.5% PLAIN</td>
<td>2.7mEq / 500ml</td>
<td>17.5 mEq / 500ml</td>
<td>45 mEq / 500ml</td>
</tr>
<tr>
<td>Aminosyn 8.5% with LYTES</td>
<td>35 mEq / 500ml</td>
<td>33 mEq / 500ml</td>
<td>5 mEq / 500ml</td>
</tr>
<tr>
<td>Aminosyn RF (Renal) 5.2%</td>
<td>33 mEq / 500ml</td>
<td>49 mEq / 500ml</td>
<td>71 mEq / 500ml</td>
</tr>
</tbody>
</table>

Calcium Gluconate: 1 Gram contains 4.65 mEq CALCIUM
Magnesium Sulfate: 1 Gram contains 8.12 mEq MAGNESIUM
Potassium Phosphate: 1ml contains 3mM Phosphate and 4.4mEq Potassium
Sodium Phosphate: 1ml contains 3mM Phosphate and 4 mEq Sodium

Protein Content:

<table>
<thead>
<tr>
<th>Formula</th>
<th>Protein Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aminosyn 8.5%</td>
<td>42.5 grams / 500ml</td>
</tr>
<tr>
<td>Aminosyn RF (Renal) 5.2%</td>
<td>26 grams / 500ml</td>
</tr>
<tr>
<td>HepatAmine 8%</td>
<td>40 grams / 500ml</td>
</tr>
</tbody>
</table>

Non-Protein Calorie Content:

| Dextrose 10%            | 170 kcal / 500ml |
| Dextrose 20%            | 340 kcal / 500ml |
| Dextrose 40%            | 680 kcal / 500ml |
| Dextrose 50%            | 850 kcal / 500ml |
| Dextrose 70%            | 1190 kcal / 500ml |
| Fat Emulsion 10%        | 550 kcal / 500ml |
| Fat Emulsion 20%        | 1000 kcal / 500ml |

1 gram protein = 4 kcal
1 gram dextrose = 3.4 kcal

Fat Emulsion 10% provides: 1.1 kcal per ml
Fat Emulsion 20% provides: 2 kcal per ml

Peripheral Standard Formula = 340 non-protein calories / liter
Central Standard Formula = 850 non-protein calories / liter