**ORDER AND SIGNATURE**

**PARENTERAL NUTRITION ORDER FORM (ADULT ICU)**

**NOTE:** Orders must be received in pharmacy by 1300h, otherwise solutions will be supplied for the following day**

- New Order (complete Section A and Section B)
- Continue Enteral Nutrition (EN) ______________________ (solution) at 10 mL/h
- Order Modification (complete only section B)
- Initiate Adult ICU Glycemic Control Protocol (Physician to complete an Adult ICU Glycemic Control Protocol order form)

**Section A:** New Parenteral Nutrition (PN) Orders

1. Consult Clinical Dietician (required for all initial orders).
2. CBC, platelets, INR, PTT, blood glucose, electrolytes, calcium, phosphate, magnesium, urea, creatinine, triglycerides, serum albumin, AST, alkaline phosphatase, total bilirubin.
3. Twice weekly weights (every Monday and Thursday).
4. Monitor intake/output q12 h.
5. Initiate amino acid and dextrose infusion IV at ______ mL/h for 6 hours, then increase by 25 mL/h every 6 hours if blood glucose is less than 9 mmol/L until target PN rate reached (as ordered in section B).
6. Daily electrolytes and blood glucose until patient has received PN for 5 days at target PN rate.
7. Twice weekly (every Monday and Thursday) calcium, magnesium, phosphate, urea, creatinine, prealbumin, electrolytes and blood glucose.
8. Weekly (every Monday) CBC, AST, alkaline phosphatase, total bilirubin, triglycerides, serum albumin, 24 hour urinary urea and creatinine clearance.

**Section B:** New or Modified Parenteral Nutrition (PN) orders (refer to the Calculation of Adult Daily Energy Requirements on reverse)

1. Base solution (select one):
   - Amino acids 5% and dextrose 25% (central) at target PN rate of ______ mL/h
   - Amino acids 5% and dextrose 16.6% (central) at target PN rate of ______ mL/h
   - Amino acids 4.25% and dextrose 10% (central/peripheral) at target PN rate of ______ mL/h
   - Other (consult pharmacy): ____________________________________ at target PN rate of ______ mL/h.

**Physician Signature:**

**Printed Name:**

**Date & Time:**
2. **Electrolytes:**

   - □ Standard
   - □ Non-Standard
     - Calcium 2.25 mmol/L
     - Magnesium 2.5 mmol/L
     - Sodium 35 mmol/L
     - Potassium 40 mmol/L
     - Phosphate 15 mmol/L
     - OR
     - Calcium _____ mmol/L
     - Magnesium _____ mmol/L
     - Sodium _____ mmol/L
     - Potassium _____ mmol/L
     - Phosphate _____ mmol/L

3. **Multivitamins IV – one dose daily.**
   - Trace elements IV – one dose daily.

4. □ Vitamin K ________ mg IV/IM once weekly on Fridays.

5. **If PN is longer than 1 week:**
   - □ Fat emulsion 20% 250 mL IV at 20 mL/h once a week.
   - □ Fat emulsion 20% IV at ________ mL/h.

6. □ Glutamine 15 grams PO/NG tid.

7. **Other orders:**

   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
   - __________________________________________________________
CALCULATION OF ADULT DAILY ENERGY REQUIREMENTS

R.E.E. (RESTING ENERGY EXPENDITURE) x STRESS FACTOR

A) R.E.E. (Resting energy expenditure from Harris Benedict Equation)

R.E.E. Men (kJ/day) = (66.47 + 13.75 W + 5.0 H – 6.76 A) x 4.2

R.E.E. Women (kJ/day) = (655.1 + 9.56 W + 1.85 H – 4.68 A) x 4.2

W = weight in kilograms
H = height in centimeters
A = age in years

B) Stress Factor

- Post-op with complications or prolonged recovery: 1.24
- Depletion: 1.2
- Peritonitis: 1.2 - 1.5
- Skeletal trauma: 1.1 - 1.3
- Multiple trauma: 1.3 - 1.6
- Sepsis: 1.3 - 1.6
- Burns: 1.2 - 2.0
- Cancer: 1.2

CALCULATION OF ADULT DAILY REQUIREMENTS

- Mild Stress: 0.8 – 1 g/kg
- Moderate Stress: 1 – 2 g/kg
- Severe Stress: 2 – 3 g/kg

CALCULATION OF ADULT DAILY ELECTROLYTE REQUIREMENTS

- Calcium: 5 – 10 mmol
- Magnesium: 5 – 15 mmol
- Potassium: 60 - 180 mmol
- Phosphate: 30 - 45 mmol
- Sodium: 60 – 150 mmol

For further information regarding the multivitamins and trace elements contact the Pharmacy Department.

FOR PEDIATRIC REQUIREMENTS REFER TO PROTOCOL