

**PERKHIDMATAN NUTRISI PARENTERAL (TPN)
JABATAN FARMASI, HOSPITAL TAIPING**

HTPG/FAR/TPN/01 (pind.1/2024)

BORANG PESANAN LARUTAN NUTRISI PARENTERAL DEWASA

Nama Pesakit : _____ Tarikh : _____ Day ___ on TPN
 R/N : _____ Wad/ Katil : ___/___
 Umur : _____ tahun Berat : _____ kg Tinggi : _____ cm
 Diagnosis : _____
 Catatan : Tarikh mengambil BUSE: _____ Insulin infusion : _____ unit/hr
 BUN : _____ Na⁺ : _____ K⁺ : _____ Cl⁻ : _____ CBS : _____ I/O Balance : _____
 SrCr : _____ Ca²⁺ : _____ PO₄²⁻ : _____ Mg²⁺ : _____ Urine Output (w/in 24 hours) : _____

* Please at appropriate []
 *Renal failure * [] Liver failure * [] Cardiac failure * []

COMPOUNDING PN	* []	NPC: N : _____
Total Calorie : _____ kcal / kg (_____ kcal / day)		
Total Volume : _____ ml / 24hr (including lipid volume)		
Amino Acid : _____ g / kg / day (up to 2gm/kg/day) _____ g / day	Supplement : _____ Glutamine _____ Fish Oil (<input checked="" type="checkbox"/> if applicable)	
Dekstros : _____ g / kg / day (up to 6gm/kg/day) _____ g / day		
Lipid : _____ g / kg / day (up to 2gm/kg/day) _____ g / day		
Sodium : _____ mmol / kg / day		
Potassium : _____ mmol / kg / day	Calcium : _____ mmol / kg / day	
Magnesium : _____ mmol / kg / day	Phosphate : _____ mmol / kg / day	
Trace elements (Addamel) : 10 ml / day	Chloride : _____ mmol / kg / day	
Vitamin (Soluvit + Vitalipid) : 10 ml / day		

COMMERCIAL PN	* []						
Content	PERI 1 SMOF * []	PERI 3 SMOF * []	PERI 2 * []	CENTRAL 1 (Electrolyte-Free) * []	CENTRAL 1 SMOF * []	CENTRAL 2 * []	CENTRAL 3 SMOF * []
Volume	1.2 litre	1.5 litre	1.875 litre	1 litre	1 litre	1.5 litre	1.5 litre
Hang Time (Maximum)	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours
Amino Acid (g)	38	46	60	50	50	85.4	75
Dextrose (g)	85	103	120	125	125	165	187
Lipid (g)	34	41	75	38	38	60	56
Sodium (mmol)	30	36	75	0	40	52.5	60
Potassium (mmol)	23	28	45	0	30	45	45
Calcium (mmol)	1.90	2.3	4.5	0	2.5	5.3	3.8
Magnesium (mmol)	3.80	4.6	4.5	0	5	6.0	7.5
Phosphate (mmol)	9.90	11.9	11.3	0	12	22.5	19
Chloride (mmol)	27	32	72	0	35	68	52
Total Energy (kcal)	800	1000	1435	1100	1100	1600	1600
Route of Administration	Peripheral	Peripheral	Peripheral	Central	Central	Central	Central
Additive (If required)							

Recommended rate of infusion:
ml/hour
 Calorie: kcal/kg/d

 Doctor's stamp & Signature

- Perhatian: 1. Setiap kes baru mesti ditandatangani timbal oleh Doktor Pakar.
 2. Pesanan untuk formula "Compounding PN" / tambahan *additives* pada hari bekerja selepas 10 am/ hari sabtu/ ahad/ cuti umum tidak akan dilayan.
 3. Pesanan Peri 1/ Peri 3 sahaja yang boleh dibuat untuk kes baru pada hari sabtu/ ahad/ cuti umum (sebelum 12pm ke Farmasi Satelit B).
 4. Pastikan berat badan dan tinggi pesakit dilengkapkan untuk setiap borang inden.

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NOTA PANDUAN

Body weight

BMI Calculation= Body weight(kg)/ height (m ²)	BMI Classification		PN dosing body weight
	<18.5 kg/m ²	Underweight	Use actual body weight
	18.5-24.9 kg/m ²	Normal	Use actual body weight
	25-30 kg/m ²	Overweight	Use ideal body weight (IBW)*
	>30 kg/m ²	Obese	Use adjusted body weight**

* IBW=22.5kg/m² x (height in metre)²

Assuming ideal BMI of 22.5kg/m²

**Adjusted body weight= IBW + 0.4(actual body weight-IBW)

General calorie requirement

Non-stressed/general ward patients	25-30 kcal/kg
Critically ill patients	20-25 kcal/kg

General Amino Acid, Carbohydrate and Lipid Requirement

Macronutrients	General Requirement (g/kg/day)	Calorie/gram
Amino acids	0.8-1.5	4 kcal
Carbohydrates	2-5	4 kcal
Lipid	0.7-1.5	9 kcal

Ratio Carbohydrate: Lipid
70:30
60:40
50:50

Nitrogen to Non-Protein Calorie (N: NPC)	
Non-critically ill	1:150
Moderate stress	1:125
Critically ill	1:100

Fluid requirement: 30-45 ml/kg

Intravenous access

1. Confirm line placement for CVL prior to PN infusion
2. Maximum peripheral line osmolarity limit = 900mOsm/L
3. Do not share PN infusion line with other drugs/blood products

PN Monitoring Parameters-Baseline before PN starts

Parameters	Unstable Patients	Stable Patients
Full Blood Counts (FBC)	Daily	Weekly
Renal Profile	Daily	Twice weekly
Calcium, Magnesium, Phosphate	Daily	Twice weekly
Liver function test (LFT)	Twice weekly	Once weekly
Lipid Profile	Twice weekly	Once weekly
Body weight (kg)	Twice weekly	Once weekly
Capillary Blood sugar (CBS)	Every 6 hours	Daily