NUTRITION

Recommended average daily requirements:

Daily Energy Expenditure	25-40kcal/kg/day Basal energy expenditure (kcal/day) = 25 X wt (kg) (simplified equation) severe stress: BEE X 1.6
Carbohydrates	2-4mg/kg/day
Lipid	0.5g/kg-2.5g/kg/day (lipid yields 9.1kcal/g)
Protein	normal metabolism: 0.8 – 1.0g/kg hypercatabolism 1.2 – 1.6g/kg (protein yields 4.0kcal/g)
Vitamins, trace elements	

Enteral Feeding

- Patients should be started on enteral feeding as soon as possible after admission unless there are contraindications (common problems include early postoperative period, patients fasted for potential intubation etc.)
- All nasogastric tubes (finebore or widebore) must be confirmed radiologically before commencement of feeds. Note that nasogastric tube must be avoided in patients with basal skull fracture. Orogastric tube should also be considered in patient with significant coagulopathy and thrombocytopenia
- If patient is at risk of gastroparesis, please use wide bore feeding tubes

Constituents of the common enteral formulas in our ICU (per 1000ml)

Feeds	Calories	CHO(g)	Protein(g)	Fat(g)	Na(mmol)	K(mmol)
Isocal	1000	126	33	42	21	32
Osmolite	1000	144	44	36	40	40
Jevity	1060	155	44	36	40	40
Nepro	2000	215	70	95	36	27

- Commence feeding:
  1. check NG position
  2. check for contraindications for enteral feeding (please check with surgeons before commencing feeds in surgical patients)
  3. start Isocal 30ml/hr and follow feeding protocol
  4. nurse 30 degrees head up
  5. look for intolerance of feeds:
     huge gastric aspirates
     abdominal distension
     diarrhea

- patients with huge gastric aspirates => follow lactobacillus protocol
  1. rule out mechanical obstruction, perform AXR
  2. try to correct causes for paralytic ileus e.g. decrease sedation if appropriate
  3. add prokinetic agent – only metoclopramide available in our unit
  4. if all else fails – discuss with ICU senior for insertion of fine bore catheter to duodenum

Parenteral Feeding

- Indications: patients who cannot be fed via the GI tract for more than a few days
- Monitoring: fluid status
  - Electrolytes daily
  - Glucose monitoring
  - Watch out for line infection

Preparation:

ICU no longer have pharmacy-prepared TPN formulation (allow modification of electrolytes) – previous Formula A

Commercial preparations are now available eg.

Kabiven (central and peripheral)

Vitrimix (peripheral) – previous Formula B

Constituents and upper limits of Na, K, PO4 and Mg one can administer printed on the order form

- start TPN: 50% of goal first day
  75% second day
  100% third day

intralipid supplement can be given 2-3 times a week

- when stopping TPN – watch out for hypoglycaemia, especially if also on insulin