REFEEDING SYNDROME GUIDELINE

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- Written in collaboration with Nutrition Team, Dietetics, Pharmacy, Critical Care, Gastroenterology and General Surgery.
- Approved by Enteral and Parenteral Steering group.
- Presented to Gastroenterology and Surgery at QIHD meetings.

If review of existing guideline what has been changed:

- N/A – New guideline.

What National Guidance has been incorporated:

- NICE guideline [CG32] Nutrition Support for Adults: Oral Nutrition Support, Enteral Tube Feeding and Parenteral Nutrition, updated 2017.
- ESPEN Guidelines and Consensus Papers (see references, page 11).
- ASPEN Consensus Recommendations for Refeeding Syndrome 2020.
- Parenteral and Enteral Nutrition Group of the British Dietetic Association Guide to Clinical Nutrition 2018.

Scope (who does the guidelines apply to or not apply to):

- Applies to all Registered and Non-registered Healthcare Staff, including Nutrition Team, all Acute and Community Staff that are involved in initiating and supporting Enteral and Parenteral Feeding.

Perma-link: https://connect2.swbh.nhs.uk/Refeeding-guideline-PtCARE-030/ (use link for referencing this document in other documents/reports)

DOCUMENT CONTROL AND HISTORY

Version No	Date Approved	Date of implementation	Next Review Date	Reason for change *(e.g. full rewrite, amendment to reflect new legislation, updated flowchart, etc.)*
1	May 2023	November 2023	November 2026	New guideline, links in with PtCARE/105 Parenteral Nutrition

CLINICAL GUIDELINE

Refeeding Syndrome Guideline

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1. INTRODUCTION

Refeeding syndrome (*RFS*) is a potentially fatal condition defined by electrolyte and fluid shifts as a result of a rapid reintroduction of nutrition after a period of inadequate nutritional intake.

The route of nutrition provision does not increase or decrease the risk of RFS, therefore the commencement of oral, enteral and parenteral nutrition can precipitate RFS in starved patients. Risk can be categorized as; '**at risk**', '**high risk**' or '**very high risk**'.

1.1 Pathophysiology

In starvation the secretion of insulin is decreased in response to a reduced intake of carbohydrates. Instead, fat and protein stores are catabolised to produce energy. As starvation becomes more profound, these energy stores, as well as vitamins and intracellular electrolytes, are depleted.

Upon the introduction of carbohydrates, insulin is released into the blood stream and there is a shift of metabolism from fat to carbohydrates. This stimulates cellular uptake of phosphate, potassium and magnesium. Rising insulin levels drive phosphorus and potassium intracellularly both by demand (i.*e. phosphorylation of glucose as glycolysis is initiated*) and through the direct effects of insulin (*i.e. stimulation of the sodium-potassium adenosine triphosphatase*). The mechanism for decrements in magnesium levels in this context has not been well elucidated. These decreases may occur even if serum levels are initially normal. The decrease in serum electrolytes may be sudden and severe and can be deadly for an individual who has been in a starved or catabolic state.[1]

Thiamine deficiency may also manifest as a result of RFS. The demand for thiamine greatly increases during the transition from starvation to feeding, as it is a cofactor for glucose-dependent metabolic pathways.[1] This phenomenon usually occurs between 1–5 days of re-starting nutrition, occasionally later.

2. GLOSSARY AND DEFINITIONS

BMI	Body mass index
Ca	Calcium
ECG	Electrocardiogram
EN	Enteral nutrition
ICU	Intensive care unit
IV	Intravenous
IU	International units
Mg	Magnesium
NT	Nutrition team
PN	Parenteral nutrition
RFS	Refeeding syndrome
U&E	Urea and electrolytes

3. RECOGNISING THOSE AT RISK OF REFEEDING SYNDROME

3.1 Groups Potentially at Risk of refeeding syndrome

Potential conditions for risk of refeeding;[1]

- Acquired immunodeficiency syndrome.
- Chronic alcohol or drug use disorder.
- Dysphagia and oesophageal dysmotility.
- Eating disorders (*e.g., anorexia nervosa*).
- Food insecurity, homelessness, refugees.
- Failure to thrive, including physical and sexual abuse and victims of neglect.
- Hyperemesis gravidarum or protracted vomiting.
- Major stressors or surgery without nutrition for prolonged periods of time.
- Malabsorptive states (*e.g., short-bowel syndrome, Crohn's disease, cystic fibrosis, pyloric stenosis, maldigestion, pancreatic insufficiency*).
- Cancer.
- Advanced neurologic impairment or general inability to communicate needs.
- Post-bariatric surgery.
- Postoperative patients with complications.
- Prolonged fasting (*e.g., individuals on hunger strikes, anorexia nervosa*).
- Protein malnourishment.

3.2 Identifying Factors for Those at Risk of Refeeding Syndrome

***Table 1*:** Criteria for determining patients at risk of RFS.[2, 3]

<table>
<tr><th>At Risk</th><th>High Risk</th></tr>
<tr><td>Any patient who has had very little* or no food intake for more than 5 days.</td><td rowspan="2">Any patient in a starved state is at higher risk of re-feeding syndrome if they also have any one of the following;
• BMI <16 kg/m^2
• Unintentional weight loss >15% within the last 3–6 months
• Very little or no nutrition for >10 days
• Low levels of potassium, magnesium or phosphate prior to feeding.
OR
If a patient has 2 or more of the following;
• BMI <18.5 kg/m^2
• Unintentional weight loss >10% within the last 3–6 months
• Very little or no nutrition for >5 days
• A history of alcohol abuse or some drugs including insulin, chemotherapy, antacids or diuretics</td></tr>
<tr><td>Very High Risk
Patients are at extremely high risk if they have any one of the following;
• In a starved state with a BMI <14 kg/m^2
• Very little or no nutrition for >15 days</td></tr>
</table>

* *Little nutritional intake will be different for each service user and should be assessed in comparison to their usual nutritional intake.*

3.3 Clinical Features and Consequences Associated with Refeeding Syndrome

Table 2: Complications associated with RFS and the possible consequences.[2]

System	Low Phosphate	Low Potassium	Low Magnesium	Fluid / Glucose	Thiamine
Cardiac	• Altered myocardial function • Arrhythmia • Congestive heart failure • Sudden death	• Arrhythmia • Cardiac arrest • ECG changes	• Arrhythmia • Tachycardia	• Congestive heart failure	• Congestive heart failure • Cardiomegaly
Respiratory	• Acute ventilatory failure • Dyspnea	• Respiratory depression	• Respiratory depression	• Pulmonary oedema • Respiratory depression	--
Hepatic	• Liver dysfunction	• Exacerbation of hepatic encephalopathy	--	• Fatty liver	--
Renal	• Acute kidney injury • Bicarbonate and glucose wasting • Acute tubular necrosis	• Decreased urinary concentrating ability • Polyuria and polydipsia • Decreased eGFR	• Increased potassium loss secondary to hypokalaemia	• Osmotic diuresis	--
Gastro-intestinal	• Anorexia • Nausea and vomiting	• Constipation • Ileus • Nausea and vomiting	• Abdo pain • Nausea and vomiting • Anorexia • Diarrhoea • Constipation	--	--
Neuro-muscular	• Lethargy • Weakness / paralysis • Paraesthesias • Confusion / delirium • Encephalopathy • Coma • Seizures • Diaphragm weakness • Rhabdomyolysis	• Paralysis • Rhabdomyolysis • Paraesthesias • Weakness • Muscle necrosis	• Ataxia • Confusion • Coma • Seizures • Muscle tremors • Paraesthesias • Tetany • Weakness	• Hyperosmotic non-ketotic coma	• Ataxia • Confusion • Coma • Wernicke's encephalopathy
Haematological	• Haemolytic anaemia, • Leukocyte, red blood cell and platelet dysfunction • Thrombocytopenia • Haemorrhage • Red cell [2,3], diphospho-glycerate deficiency	--	--	--	--
Metabolic	• Reduced oxygen release to tissues from haemoglobin	• Glucose intolerance • Metabolic acidosis	• Hypocalcaemia • Hypokalaemia	• Metabolic acidosis • Hyperglycaemia • Hypernatraemia or Hyponatraemia • Dehydration	• Lactic acidosis

4. MANAGEMENT OF PATIENTS AT RISK OF REFEEDING SYNDROME

Patients at risk of RFS should commence feeding at low levels of energy and protein. Most patients at risk of RFS also need generous supplementation of thiamine and other B group vitamins from the onset of feeding. Some patients will also require supplementation of potassium, magnesium and phosphate. It is important to appreciate that patients with normal or high pre-feeding levels of electrolytes can still be at high risk and develop a reduction in levels when the feeding starts and therefore require careful monitoring and supplementation as necessary.

Patients at risk of RFS should be assessed by healthcare professionals, who are appropriately skilled and trained and have expert knowledge of nutritional requirements and nutrition support.[1]

4.1 Recommended Management Plan to Reduce Refeeding Risk in Adult Patients

For patients identified to be at any level of risk of refeeding it is best practice to test for electrolyte disturbances before initiating feeding. For intensive care patients please refer to ICU Guidelines – '*Nutrition in the Critically Ill Adults*' (*SWBH/CCS/084*).

The following additional action should be taken, defined by the level of risk;

1. **Adult Patients 'At Risk':**
   - Nutrition support should be started at no more than 50% of the estimated target for energy and protein needs. It should be built up to meet full needs over the first 24–48 hours depending on gastrointestinal tolerance and if clinical and biochemical monitoring reveals no signs of RFS.
   - Continue to monitor biochemistry including urea and electrolytes, potassium, phosphate and magnesium.

2. **Adult Patients at 'High Risk':**
   - Initiate nutrition support at between 10–20 kcal/kg/day, but aim to meet at least 50% of requirements, if considered safe to do so. Where feeding is initiated at <20 kcal/kg/day and there is no evidence of refeeding, the feed should be increased incrementally aiming for 20 kcal/kg/day within 48 hours unless contraindicated.[4]
   - Provide vitamins immediately before and during the first 7 (*sometimes up to 10*) days of feeding (*Table 3*). This should be started at least 30 minutes before the initiation of feed.

3. **Adult Patients at 'Very High Risk':**
   - Start nutrition at maximum of 10 kcal/kg/day and increase gradually to meet full needs by 4–7 days [1, 3] and monitor closely (*see Section 7. Monitoring*)
   - Provide vitamins immediately before and during the first 7 (*sometimes up to 10*) days of feeding (*Table 3*). This should be started at least 30 minutes before the initiation of feed.

4.2 Specifics

1. For orally fed patients;
   - Consider avoiding fat free juice based nutritional supplements (*i.e. Fortijuice*) when initiating feeding in view of their high carbohydrate content [2], which will increase their risk of refeeding.
2. For enterally fed patients;
   - See Starter Feeding Regime when dietitian not available – Appendix 1.
3. For parenterally fed patients;
   - Refer to '*Adult Parenteral Nutrition guideline*' (*PtCARE/105*)

4.3 Community Patients at Risk of Refeeding

- Patients '**at risk**' of refeeding can be monitored in the community, providing there are facilities to follow the current guidelines.
- Patients at '**high risk**' and '**very high risk**' of refeeding should be admitted for close monitoring and management.

5. VITAMIN SUPPLEMENTATION

5.1 Vitamin Supplementation Recommendations

Table 3: Recommended vitamin supplementation depending on the risk level.

Patient Status	High Risk of Refeeding	Very High Risk
Patient on intravenous therapy only	**Provide immediately before and during the first 3-7 days of feeding;** High strength vitamin B & C (*Pabrinex®*) injection 5 ml of ampoule 1 plus 5 ml of ampoule 2 in sodium chloride 0.9% – once daily for 3–7 days.	
Patient able to tolerate oral therapy	**Provide immediately before and during the first 10 days of feeding;** Oral thiamine 200–300 mg daily, AND vitamin B compound strong 1–2 tab three times daily, AND Forceval® soluble once daily. ***OR*** IV High strength vitamin B & C (*Pabrinex®*), 1 pair ampoules twice a day up to 7 days (*depending on clinical condition*), AND Soluble multivitamin preparation (*Forceval®*) soluble one tablet daily.	
Patient on enteral feeding tube	**Provide immediately before and during the first 10 days of feeding;** Enteral thiamine 200–300 mg, AND vitamin B compound strong 1–2 tab three times daily, AND Forceval® soluble once daily. ***OR*** IV Pabrinex®, 1 pair ampoules twice a day up to 7 days (*depending on clinical condition*), AND daily Forceval® soluble od.	

5.2 Other Vitamins and Minerals

1. For PN Patients;
   - An additional infusion of vitamins and trace elements (*Solivito® and Vitlipid® and Addaven®*) will be prescribed alongside PN by the Nutrition team, unless the PN bags already contain Cernevit® (*an IV vitamin supplement*) and Additrace® (*an IV mineral supplement*).

2. For EN Patients;
   - One capsule daily of a balanced multivitamin supplement should be

administered for 7 days for oral or tube fed patients.

- If folate deficient, 5 mg of folic acid should be provided daily.
- Oral vitamin supplements should be continued at discharge in patients who are malnourished or who have inadequate diets. However, patients who no longer clinically require multivitamins should be encouraged to buy these over the counter.

6. REPLACING ELECTROLYTES

Electrolyte supplements available (*please discuss with your Pharmacist for further information*);

- **Phosphate** i.e. Addiphos®, phosphate Polyfusor®, sodium glycerophosphate, Phosphate Sandoz®.
- **Potassium** i.e. potassium chloride, Sando K®, Kay-Cee-L® 2–4 mmol/kg/day.
- **Magnesium** i.e. magnesium sulfate, magnesium aspartate sachets.

Table 4: How to supplement electrolytes

Electrolyte	Route	Dose	Comments
Potassium	IV	• Serum Potassium of 2.5–3.5 mmol/L – provide between 20 mmol potassium in 500 ml to 40 mmol potassium in 1000 ml of sodium chloride 0.9% at a maximum recommended infusion rate of 10 mmol per hour. Additional potassium may need to be given after completing the infusion and measuring potassium levels. • Serum Potassium less than 2.5 mmol/L likely to require replacement in the monitored bay of intensive care setting, seek specialist advice. Higher concentrations can be used in the ICU settings.	Always use premixed manufacturer bags. Check for and replace hypomagnesaemia. Rate of >10 mmol/Lhr requires continuous ECG monitoring.
	Oral	• **Sando K®** 2 tab three times daily.	Each tablet contains 12 mmol of potassium.
Phosphate	IV	• Phosphate of 0.3–0.7 mmol/L – provide 20–30 mmol of Phosphate. • Phosphate below 0.3 – provide 40–50 mmol of Phosphate. Depending on replacement needs, use; • **Phosphate Polyfusor®** (*500 ml bag – 50 mmol phosphate, 81 mmol sodium and 9.5 mmol potassium*). • **Addiphos®** (*one 20 ml vial – phosphate 40 mmol, potassium 30 mmol, sodium 30 mmol*) in 1000 ml of sodium chloride 0.9% or glucose 5% over 8–12 hours – for patients with low Phosphate and Potassium levels that require	Likely phosphate requirement for people at high risk of developing refeeding symptoms is 0.3–0.6 mmol/kg/day. Serum phosphate level <0.3 mmol/L is severely low and associated with severe clinical manifestations. These include cardiac failure, hypotension, arrhythmias, respiratory failure and seizures. This will need correcting as soon as possible, preferably before the PN and during its administration.

Electrolyte	Route	Dose	Comments
		replacement. This is requested via Controlled Drug Order Book. Nutrition Team will advise on administration. • **Sodium glycerophosphate** (*one 20 ml vial – phosphate 20 mmol, sodium 40 mmol*).	Beware that glucose solutions can enhance re-feeding, therefore should be avoided whilst the patient is at risk.
	Oral	• **Phosphate Sandoz®** 2 tab three times daily.	Each tablet contains phosphate 16.1 mmol, sodium 20.4 mmol, potassium 3.1 mmol. **NB:** May cause diarrhoea.
Magnesium	IV	Magnesium sulphate; • Magnesium level <0.7 mmol/L–10 mmol (*2.5 g*) in 100–1000 ml sodium chloride 0.9% over 6–12 hours • Magnesium <0.4 mmol/L–20 mmol (*5 g*) in 100–1000 ml sodium chloride 0.9% over 6–12 hours	Avoid using glucose solutions as this can contribute to the RFS. Longer slower infusions are more effective.
	Oral	• Magnesium glycerophosphate 2 tab three times daily.	Each tablet contains 4 mmol of magnesium. **NB:** May cause severe diarrhoea
Calcium	IV	• Calcium gluconate 10 ml 10% over 5 min.	2.2 mmol of calcium in 10 ml. Check magnesium and replace first if deficient. ECG monitoring required during and after the injection.
	Oral	• **Calcichew®** 1 tab three times daily. • **Adcal D3®** 1 tab twice daily, contains calcium carbonate (*1500 mg*) and vitamin D3 (*400 IU*).	Each tablet contains 12.5 mmol Calcium. **Caution:** May act as Phosphate binder, please discuss with Pharmacy if further information required.

1. *Please note that these levels of electrolyte replacement are for guidance only and may not be suitable for cardiac, renal and critical care patients.*
2. *For patient specific advice please contact the Nutrition Team.*

7. MONITORING

After initiating the feed, monitor the following parameters;

1. Heart rate, pulse rate, blood pressure, respiratory rate and level of consciousness – as per guidelines at ward level (*i.e. 4-hourly or 6-hourly, depending on patient*).
2. Daily temperature and fluid balance. Ensure all fluids given are taken into account (*PN, oral intake, electrolyte supplementations and IV drugs*) when assessing patent fluid and electrolyte requirements.
3. Blood glucose – 4-hourly initially (*high risk of hypoglycaemia*) then daily once stable. If persistently above 10 mmol/L – review.
4. Daily monitoring of electrolytes over the first week and until stable is essential (*include serum potassium, calcium, phosphate, magnesium, glucose*) (*Table 5*). Low levels should be corrected (*Table 4*). If you patient is parentally fed, the

nutrition team will advise whether this can be done via PN bags or at the ward level (*Parenteral nutrition guideline PtCARE/105*).

5. Weight; 1–2 times a week.
6. Consider ECG if patient has an abnormal heart rate, serum potassium or phosphate levels. If evidence of cardiac abnormalities on assessment or during refeeding, patient will require cardiac monitoring. If necessary, transfer to appropriate ward.
7. Consider septic screen as high risk of infection and need for antibiotics. Patient may not manifest clinical symptoms. Have a high level of suspicion.

Table 5: Blood tests monitoring

Parameter	Frequency
U&E	Daily until stable, then 1 or 2 times a week
Glucose	Baseline 4-hourly initially, daily once stable
Magnesium	Baseline daily until stable, then 1–2 times weekly
Phosphate	Baseline daily until stable, then 1–2 times weekly
Liver function tests	Baseline daily until stable, then 1–2 times weekly
Calcium	Baseline daily until stable, then 1–2 times weekly
C-reactive protein	Baseline daily until stable, then 1–2 times weekly

8. AUDITABLE STANDARDS / PROCESS FOR MONITORING EFFECTIVENESS

Key Performance Indicators will be audited on a yearly basis by the Dietitians in conjunction with the Nutrition Team.

Element to be monitored	Lead	Method	Frequency	Reporting
Identifying if the patient is at risk of refeeding.	Clinical lead NT	Audit using patient database and electronic patient records.	Yearly	Reported at Nutrition Steering Committee meetings.
Electrolyte monitoring prior to initiating feed and during feeding (*U&E, Calcium, Magnesium, Phosphate*).	Clinical lead NT		Yearly	
Replacing electrolytes (*Potassium, Calcium, Magnesium, Phosphate*).	Clinical lead NT		Yearly	

9. TRAINING AND AWARENESS

This guideline will be circulated to all existing clinical staff during implementation and is incorporated into nutrition training days available for staff of all grades and across a range of clinical groups.

10. EQUALITY IMPACT ASSESSMENT (EIA)

The Trust recognises the diversity of the local community and those in its employment. Our aim is, therefore, to provide a safe environment free from discrimination and a place where all individuals are treated fairly, with dignity and appropriately to their need. As part of its development, this guideline and its impact on equality have been reviewed and no detriment was identified.

11. OTHER GUIDELINES TO WHICH THIS GUIDELINE RELATES

- Adult Parenteral Nutrition (*PtCARE/105*) https://connect2.swbh.nhs.uk/Parenteral-Nutrition-in-Adults-PtCARE-105/
- Enteral Feeding Guidelines in Adults (*PtCARE/024*) https://connect2.swbh.nhs.uk/Enteral-Feeding-Guidelines-in-Adults-Pt-Care024-SWBH/
- ICU GUIDELINES – Nutrition in the Critically Ill Adult (*SWBH/CCS/084*) https://connect2.swbh.nhs.uk/Nutrition-Guideline-ICU-Critically-Ill-Adult-1/
- Potassium Solutions Procedure for Safe Ordering, Supply and Storage (*CLINPHARM/002*) https://connect2.swbh.nhs.uk/potassium-solutions-safe-supply-and-storage-clinpharm-002/

12. REFERENCE DOCUMENTS AND BIBLIOGRAPHY

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2. Parenteral and Enteral Nutrition Group of the British Dietetic Association; *Guide to clinical nutrition*, 5th edition 2018 https://www.peng.org.uk/publications-resources/pocket-guide.php
3. NICE guideline [CG32]; *Nutrition support for adults: oral nutrition support, enteral tube feeding and parenteral nutrition*, 2006 updated 2017 https://www.nice.org.uk/guidance/cg32
4. ESPEN Guidelines and Consensus Papers; *Micronutrient Guideline*, Clinical Nutrition 41 (2022) 1357-1424. *Clinical nutrition and hydration in geriatrics*, Practical guideline, Clinical Nutrition 41 (2022) 958-989. *Home enteral nutrition*, Clinical Nutrition 41 (2022) 468-488. *Hospital nutrition guideline*, Clinical Nutrition 40 (2021) 5684-5709. *Clinical nutrition in surgery*, Clinical Nutrition 40 (2021) 4745-4761. *Clinical nutrition in chronic intestinal failure*, Clinical Nutrition 40 (2021) 5196-5220. https://www.espen.org/guidelines-home/espen-guidelines

APPENDIX 1

Adult Standard Enteral Feed Starter Regime (*Out-of-Hours / Emergency Regime*)

This regime is only to be used when a Dietitian is not available e.g. weekends, bank holidays, out-of-hours.

- Authorisation to start enteral feeding must be given by relevant medical/surgical team.
- Ensure referral is completed on UNITY for Dietitian assessment (*for feeding*) or to Nutrition Nurse (*for tube issues*).
- Before commencing feeding safe tube position must be confirmed and documented.
- Identify if your patient is at risk of refeeding and choose the appropriate feeding regime.
- **For patients post GI surgery and/or with GI issues consult with the surgical/parent team and consider starting feeding at 10 ml/hour and building up gradually as tolerated.**
- Use **Nutrison®** (*standard*), unless patient has allergy or intolerance to ingredients (*i.e. milk intolerance – replace with* ***Nutrison Soya®***). Check intolerances and contents of the feed before prescribing.

Is patient at risk of refeeding syndrome?

YES

Contact medical team/on call doctor who needs to follow the instructions below (*for full details of electrolyte and vitamin supplementation see Refeeding guidelines*);

- Check U&Es, Magnesium and Phosphate.
- Supplement Potassium, Magnesium or Phosphate if less than hospital reference ranges.
- Provide immediately before and during the first 10 days of feeding; Oral / enteral thiamine 200–300 mg daily, AND Vit B Compound Strong 1-2 tablets TDS AND Forceval® soluble od
  OR IV Pabrinex® 1 pair ampoules twice a day up to 7 days (*depending on clinical condition*), AND daily Forceval® soluble od.
- Recheck blood results daily and supplement electrolytes as necessary.

NO

	Patient 54 kg or less	Patient 55 kg and above
Day 1	400 ml @ 20 ml/hour for 20 hours, then 4-hour rest period	800 ml @ 40 ml/hour for 20 hours, then 4-hour rest period
Day 2	600 ml @ 30 ml/hour for 20 hours, then 4-hour rest period	1000 ml @ 50 ml/hour for 20 hours, then 4-hour rest period
Day 3	800 ml @ 40 ml/hour for 20 hours, then 4-hour rest period	1200 ml @ 60 ml/hour for 20 hours, then 4-hour rest period

	Patient 54 kg or less	Patient 55 kg and above
Day 1	800 ml @ 40 ml/hour for 20 hours, then 4-hour rest period	1000 ml @ 50 ml/hour for 20 hours, then 4-hour rest period
Day 2	1000 ml @ 50 ml/hour for 20 hours, then 4-hour rest period	1200 ml @ 60 ml/hour for 20 hours, then 4-hour rest period
Day 3	1200 ml @ 60 ml/hour for 20 hours, then 4-hour rest period	1500 ml @ 75 ml/hour for 20 hours, then 4-hour rest period

For All Tube Fed Patients;

- Ensure 50 ml flushes sterile water to be given before and after feed and before and after medications (with 10 ml water flush after each medication).
- Additional fluids to be provided by IV fluids as advised by the medical team.
- Ensure all fluids are documented on fluid balance chart.
- Patient to be positioned at 30-45° when feeding.
- Monitor bowel movement.
- Continue with appropriate regime until patient is assessed by the dietitian.