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NHS
Gloucestershire Health and Care
NHS Foundation Trust

CLINICAL GUIDELINE
Refeeding Guidelines for Physical Health, Mental Health and Learning Disability Inpatients

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Guideline Number	CLG081
Version:	V3
Purpose:	To aid clinical staff in identifying and safely managing patients admitted to Trust inpatient settings at risk of Refeeding Syndrome
Consultation:	[redacted] ST6 Advanced Trainee in Older Adults and Liaison Psychiatry, [redacted] Lead Pharmacist for MH/LD
Approved by:	Clinical Policy Group
Date approved:	17/09/2024
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Date issued:	04/10/2024
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Audience:	All GHC in-patient medical, nursing and dietetic staff
Dissemination:	The guidelines will be published on the GHC intranet, and its update will be listed on the Clinical Policy update bulletin
Impact Assessments:	This guideline has been subjected to an Equality Impact Assessment. This concluded that this guideline will not create any adverse effect or discrimination on any individual or particular group and will not negatively impact upon the quality of services provided by the Trust

Version History

Version	Date Issued	Reason for Change
V1	07/10/2020	Initial version
V2	15/07/2021	Adapted to include all Trust inpatient settings
V3	04/10/2024	This document has been updated to include a clearer description of refeeding syndrome and its symptoms and is reflective of current evidence-based guidance on refeeding, monitoring standards and treatment.

SUMMARY

- This document provides guidelines to assist staff in the identification and management of patients with refeeding syndrome in in-patient settings.
- It is intended for use by inpatient medical and nursing staff.
- It includes criteria to identify the condition, grade severity, replace missing electrolytes, supplement vitamins and minerals and monitor progress.
- It includes guidance on which patients should be escalated to the acute hospitals, if eligible.

TABLE OF CONTENTS

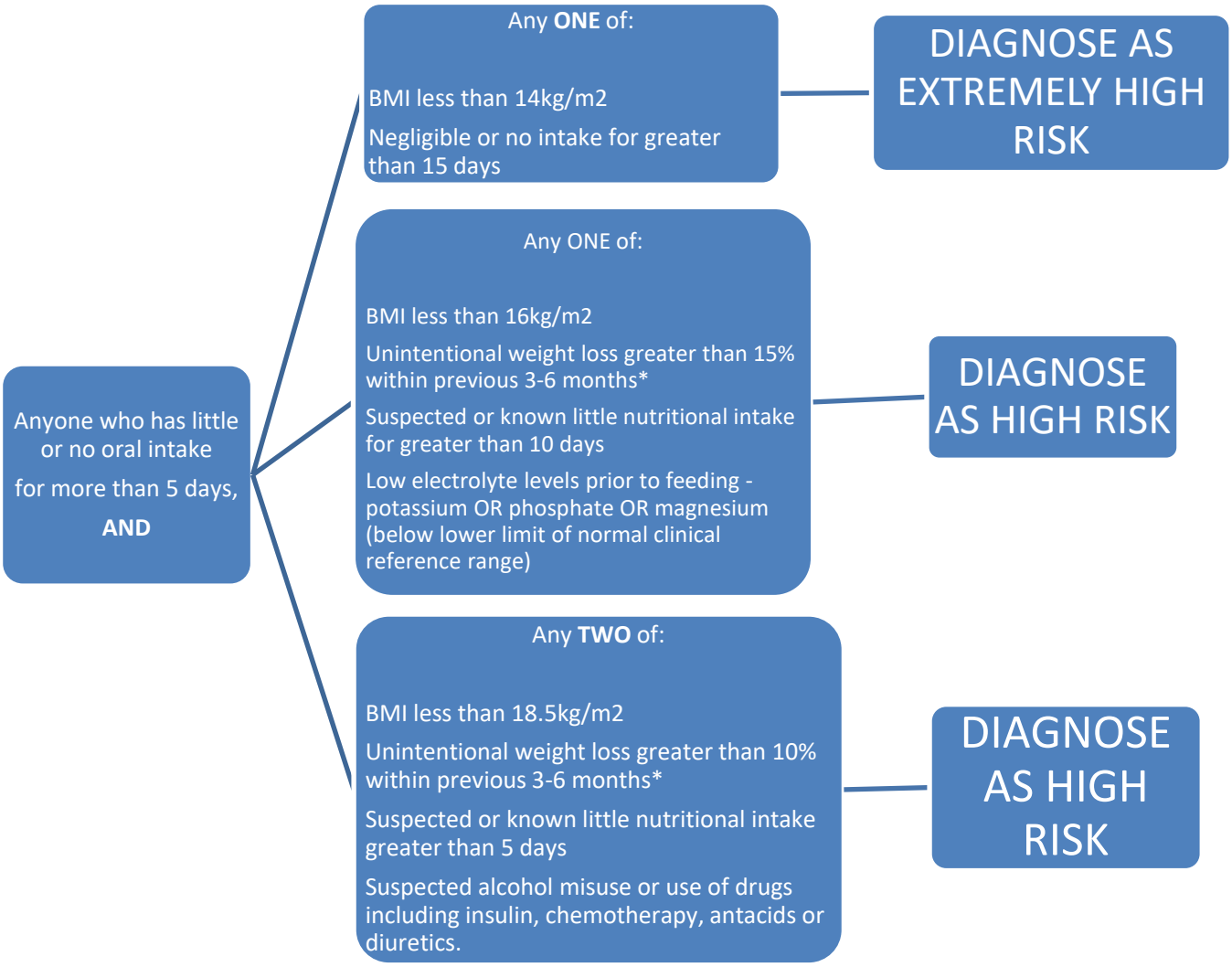
ABBREVIATIONS

Abbreviation	*Full Description*
BMI	Body Mass Index
GHC	Gloucestershire Health and Care NHS Foundation Trust
GHFT	Gloucestershire Hospitals NHS Foundation Trust
RFS	Refeeding Syndrome
EPR	Electronic Patient Record System
TTO	To Take Out
U&E	Urea & Electrolytes

ACTION CARD

Refeeding Guidelines for GHC Inpatients

Step 1: Identify patients who are at High or Extremely High Risk of Refeeding Syndrome



*If weight history is unavailable from patient or relatives then consider GP records or subjective measures of weight loss including clothes clearly being too large, loose wedding ring, needing a smaller hole on belt buckle etc.

Please note that **refeeding syndrome can present in patients who are classified as overweight or obese**. A higher BMI does not protect from Refeeding Syndrome and patients who meet the criteria above and have a BMI greater than 25kg/m^2 should be treated in line with the guidance that follows.

ACTION CARD

Refeeding Guidelines for GHC Inpatients

Step 2: Assess those at High or Extremely High Risk

Request same day baseline bloods for U&E's including potassium, magnesium, phosphate levels.

Please do not request as 'refeeding bloods' but be specific about which tests are required (as requested by the Laboratory). If the arranging clinician is unable to personally review the results, e.g. because of shift changes, this should be handed over, either to the on-call medical team, or senior nursing staff depending on the setting, for same-day action.

If baseline bloods are any of:

- **Magnesium less than 0.5mmol/L OR**
- **Phosphate less than 0.4mmol/L OR**
- **Potassium less than 2.5mmol/L**

Then admit patient to acute hospital for review and IV replacement

Note that biochemistry lab should phone to alert the ward to levels:

- **Magnesium less than 0.4mmol/L OR**
- **Phosphate less than 0.3mmol/L OR**
- **Potassium less than 2.6mmol/L OR greater than 6.0 (Dialysis patients greater than 6.5mmol/L)**

(Lab turnaround time (TAT) depends on whether request has been stated as 'urgent' (if so, they aim to achieve a 95% TAT of 2 hours and treat Community Hospitals same as acute inpatient wards, starting from time of receipt of blood samples).

For routine non-urgent inpatient requests, lab aim to achieve TAT of 4 hours from receipt of samples for 95% of samples).

If patient will be remaining in GHC setting then:

1. Notify dietitian:

   email: communityhospitalinpatient.dietitians@ghc.nhs.uk for community physical health hospitals.

   email a referral form to MentalHealthIP.Dietitian@ghc.nhs.uk – for mental health and LD inpatient units.
   Note - There is no weekend service for dietetics currently in Community or Mental Health Hospitals.
2. Assess fluid status – for both underhydration or overhydration.
3. Commence food and fluid chart – consider input/output recording.
4. Body weight twice weekly.
5. Capillary blood glucose twice daily.
6. Consider – any undiagnosed mental disorder such as depression or dementia. Consider a referral to Mental Health Liaison if in Community Hospital.
7. Consider – does patient need an adult safeguarding referral?

ACTION CARD

Refeeding Guidelines for GHC Inpatients

Step 3: Oral replacement for any low electrolytes

If baseline bloods are below the lower limit of normal, but not requiring acute hospital admission:

Magnesium 0.5 - 0.7 mmol/L

Phosphate 0.4 - 0.8 mmol/L

Potassium 2.6 - 3.5 mmol/L

Identify and manage any Acute Kidney Injury (AKI)

Orally supplement any electrolytes that are low as below:

Magnesium:

If no symptoms of hypomagnesaemia and oral access possible, then prescribe regular magnesium aspartate 243mg (10mmol) sachets one twice a day. Diarrhoea/stoma output may be dose limiting or necessitate IV administration.

Monitor magnesium level at least alternate days and continue accordingly. GHFT (2021)

Phosphate:

Oral phosphate supplementation is Phosphate Sandoz® effervescent tablets. Each tablet contains phosphate 16.1mmol, sodium 20.4mmol and potassium 3.1mmol. A common dose is 2 tablets twice daily (64mmol). The dose should be reviewed daily and adjusted according to phosphate levels. Phosphate supplementation may cause hypocalcaemia (UKMi, 2017).

Potassium:

If Potassium in the range 3.0 – 3.4 mmol/l provide:
Oral replacement Sando-K: 2 tablets three times daily (72mmol/day)

- Or, if Sando-K unavailable and patient able to swallow tablets, use: Potassium chloride 600mg (potassium 8mmol) modified release tablets: 3 tablets three times daily (72mmol/day)
- Or, if Sando-K unavailable and patient unable to swallow tablets, use: Kay-Cee-L: 25ml three times daily (75mmol/day)

If Potassium in the range 2.5 – 2.9 mmol/l provide:
Oral replacement Sando-K: 2 tablets four times daily (96mmol/day)

- Or, if Sando-K unavailable and patient able to swallow tablets, use: Potassium chloride 600mg (potassium 8mmol) modified release tablets: 3 tablets four times daily (96mmol/day)
- Or, if Sando-K unavailable and patient unable to swallow tablets, use: Kay-Cee-L: 25ml four times daily (100mmol/day)

GHFT (2023)

Please note if patient has hypokalaemia - check for hypomagnesaemia is also present and correct for any low levels of potassium, phosphate and magnesium

ACTION CARD

Refeeding Guidelines for GHC Inpatients

Step 4: Vitamin and mineral supplementation

For 10 days, prescribe for all patients on this pathway:

1) Thiamine 100mg tablets twice daily (if patient has a history of alcohol misuse advise 100mg Thiamine three times daily, and if these patients are also at risk of malnourishment, thiamine may continue after discharge). RMOC (Nov 2019)
2) Vitamin B Co-strong 1 tablet 3 times daily.
3) Multivitamin and mineral supplement e.g. Forceval / Sanatogen Gold A-Z / cost effective alternative, 1 tablet once daily.

It is important to start Thiamine supplementation (200-300 mg) **before** starting to refeed patient (risks precipitating thiamine deficiency syndromes including Wernicke's encephalopathy, neuromuscular disorders[1]).

If enteral route is not possible, consider prescribing via intramuscular route:

- Pabrinex Intramuscular High Potency Injection 1 pair once daily for 3 days (due to be discontinued by April 2025 and supplies will be limited until then) OR
- Thiamine injection 200mg/2ml once daily for 3 days. Prescribers must note that IM Thiamine is an unlicensed product.

Please note:

- where compliance with medication is poor, Thiamine will be the micronutrient to prioritise
- the prescribing of nutritional supplements e.g. Fortisip, should be undertaken with caution given the **need for gradual calorie re-introduction in this group, please see Supplement Alternative Meal plan (Appendix 2)**.

Step 5 – Re-introduction of Calories (via oral or enteral route)

Guidance will be provided from the Dietitian

However, where dietetic support is not immediately available, menu guidance is attached and should be started at A1 offering 500kcal in total, and patients should move to the next stage daily, increasing the calorie increment by 250kcal daily (Appendix 1). A dairy-free meal plan may also be implemented for those patients requiring this (Appendix 1).

Step 6 – Monitor

- Continue fluid and food charting, twice daily capillary blood glucose (CBG) and twice weekly weights. Document NEWS as per standard policy.
- Supplement electrolytes and continue to check magnesium, phosphate and potassium at least 2-3 times a week, until all are in the normal range
- Continue to liaise with dietitian.
- Refer to the 'Quick Guide' (Appendix 3) for clinical symptoms that care team should remain alert for during this period[1]

ACTION CARD
Refeeding Guidelines for GHC Inpatients

Step 7 – Change in Risk Status

A qualified clinician (who has access to recent bloods, is able to review food charts and can assess any clinical symptoms), after a 10-day period of regular intake, should review risk status and document if it is safe to be reduced. The reason for documentation is to ensure that the care team are aware that free access to food and fluids is now permitted, and micronutrient supplementation can be discontinued. The qualified clinician in the first instance should be the Specialist Dietitian, and if not available the Medic or Senior Nursing Clinician for the ward.

Step 8 – Discharge

Be sure to document refeeding syndrome on the discharge summary. Unless advised by dietitians, do not prescribe TTOs for:

- Oral nutrition supplements such as Fortisip
- Electrolyte medicines
- Thiamine, Vitamin B Co-Strong, or Multivitamins
- In the case of Thiamine and alcohol dependency see reference for guidance (RMOC 2019)

1. INTRODUCTION

1.1 Refeeding syndrome (RFS) is not a singular condition but a group of biochemical shifts and clinical symptoms that can occur in the malnourished or starved individual upon the reintroduction of oral, enteral or parenteral nutrition. The patient can be at risk of morbidity and mortality if these risks are not managed.

Long periods of under eating switch the body into a starvation period, known as starvation syndrome.

Starvation Syndrome

- Switches to breaking down muscle (protein), fat and glycogen stores to create glucose as a source of energy as dietary sources of carbohydrate are insufficient
- Uses up stores of important minerals such as phosphate, potassium or magnesium which are important for essential body functions, including cellular respiration
- Has generally reduced blood glucose (blood sugar) levels
- Cause fluid shifts in the body e.g. puffy ankles and face
- Cause vitamin deficiencies.

When we start to re-nourish the body, it works hard to interrupt 'starvation syndrome' and re-balance chemical levels in the blood and cells.

During the first 1-2 weeks of re-nourishing (refeeding) the body, certain chemicals and fluids can become unbalanced. If left unmonitored and unmanaged, this can lead to serious health complications including low phosphorous levels in the blood. This can cause muscle weakness and breakdown, including weakness in breathing muscles and heart muscle.

Full refeeding syndrome is when catastrophically low levels of phosphorous and dangerous oedema (fluid retention) occur in patients who have taken on nutrition too quickly after being in a starved state.

As well as the biochemical changes (changes in chemical levels in the blood), there are some physiological symptoms to look out for:

- Abdominal pain, bowel changes
- Confusion
- Difficulty breathing
- Fatigue
- Heart palpitations, increased heart rate, low blood pressure
- Muscle pain, weakness
- Nausea, vomiting
- Swelling (oedema), rapid weight gain (from fluid retention)
- Paralysis
- Seizures.

Consequences of refeeding syndrome and thiamine deficiency can include: Neuromuscular disorders e.g. Wernicke's encephalopathy, ataxia, coma, cardiac problems e.g. congestive cardiac failure, cardiomegaly, and respiratory conditions e.g. pulmonary oedema, pleural effusion.

The patient can be at risk of morbidity and mortality if these risks are not managed.

In practice electrolyte disturbances are often observed but with no adverse clinical symptoms. This is often referred to as 'biochemical refeeding' while RFS with clinical symptoms is often referred to as 'symptomatic refeeding'. This guideline will enable suitable patients to be managed in GHC hospitals, with higher risk patients transferred to GHFT.

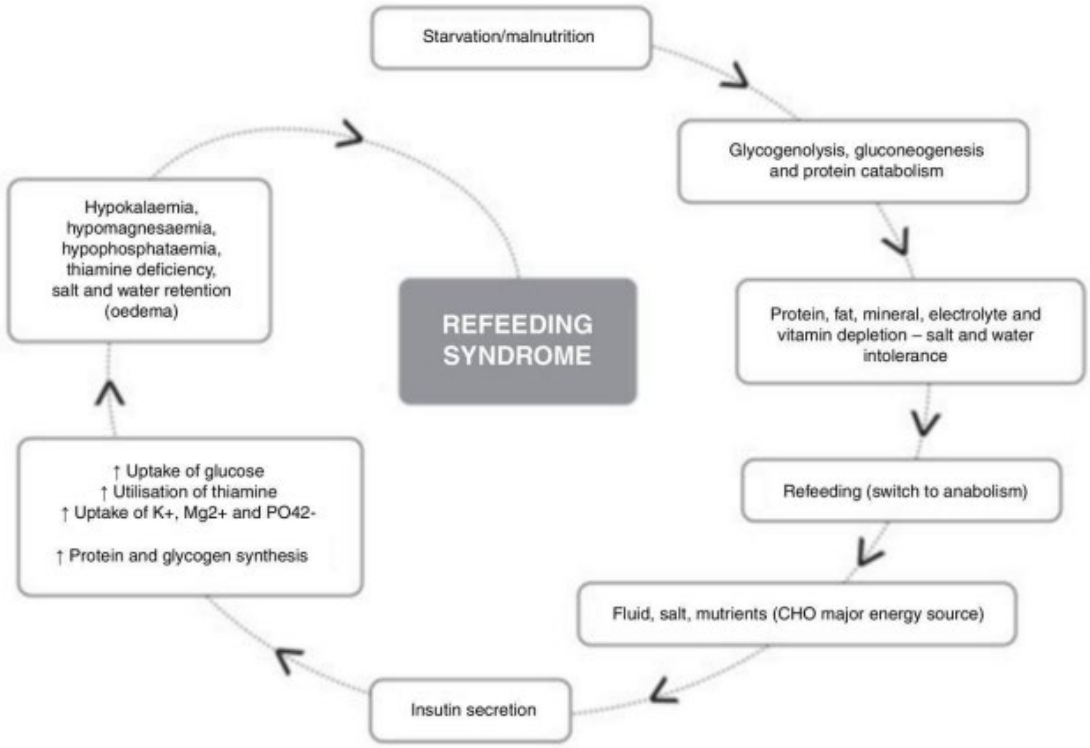


Figure 1: Development of Refeeding Syndrome. Frontline Gastroenterol 2020;11:404-409

2. PURPOSE

- To identify patients who at risk of refeeding syndrome.
- To increase awareness of symptoms of refeeding syndrome.
- To provide a structure to manage and monitor patients.

3. SCOPE

3.1 This guideline applies to the Trusts' physical health, mental and learning disability inpatient population, with the exceptions of:

1) Where the burden would exceed the benefits, e.g. severe frailty, palliative care,
2) In the context of Advance Care Planning e.g. not for admission to acute hospital on such grounds.

It is intended to be used by ward staff in these settings, including medical and nursing staff, with support from dietetics.

4. DUTIES

4.1 General Roles, Responsibilities and Accountability

Gloucestershire Health and Care NHS Foundation Trust (GHC) aims to take all reasonable steps to ensure the safety and independence of its patients and service users to make their own decisions about their care and treatment.

In addition, **GHC** will ensure that:

- All employees have access to up-to-date evidence-based policy documents.
- Appropriate training and updates are provided.
- Access to appropriate equipment that complies with safety and maintenance requirements is provided.

Managers and Heads of Service will ensure that:

- All staff are aware of and have access to policy documents.
- All staff access training and development as appropriate to individual employee needs.
- All staff participate in the appraisal process, including the review of competencies.

Employees (including bank, agency and locum staff) must ensure that they:

- Practice within their level of competency and within the scope of their professional bodies where appropriate.
- Read and adhere to GHC policy
- Identify any areas for skill update or training required.
- Participate in the appraisal process.
- Ensure that all care and consent complies with the Mental Capacity Act (2005).

5. MENTAL CAPACITY ACT COMPLIANCE

5.1 Where parts of this document relate to decisions about providing any form of care treatment or accommodation, staff using the document must do the following: -

- Establish if the person able to consent to the care, treatment or accommodation that is proposed? (Consider the 5 principles of the Mental Capacity Act 2005 as outlined in section 1 of the Act. In particular principles 1,2 and 3) Mental Capacity Act 2005 (legislation.gov.uk).
- Where there are concerns that the person may not have mental capacity to make the specific decision, complete and record a formal mental capacity assessment.
- Where it has been evidenced that a person lacks the mental capacity to make the specific decision, complete and record a formal best interest decision making process using the best interest checklist as outlined in section 4 of the Mental Capacity Act 2005 Mental Capacity Act 2005 (legislation.gov.uk).
- Establish if there is an attorney under a relevant and registered Lasting Power of Attorney (LPA) or a deputy appointed by the Court of Protection to make specific decisions on behalf of the person (N.B. they will be the decision maker where a relevant best interest decision is required. The validity of an LPA or a court order can be checked with the Office of the Public Guardian) Office of the Public Guardian - GOV.UK (www.gov.uk).

- If a person lacks mental capacity, it is important to establish if there is a valid and applicable Advance Decision before medical treatment is given. The Advance Decision is legally binding if it complies with the MCA, is valid and applies to the specific situation. If these principles are met it takes precedence over decisions made in the persons best interests by other people. To be legally binding the person must have been over 18 when it was signed and had capacity to make, understand and communicate the decision. It must specifically state which medical treatments, and in which circumstances the person refuses and only these must be considered. If a patient is detained under the Mental Health Act 1983 treatment can be given for a psychiatric disorder.

6. GUIDELINE DETAIL

There are many patient groups admitted to GHC settings who may be at risk of refeeding. This can be due to:

1) Mental Health Disorders – such as anorexia nervosa, ARFID, Paranoia or OCD in relation to food, depression or anxiety.
2) Gastrointestinal Disorders – such as previous bariatric surgery, bowel resection, malabsorption.
3) Conditions affecting ability or desire to eat - such as stroke and dysphagia, cancer-related anorexia caused by treatment, and tumour obstructions.
4) Social Factors - such as alcohol and substance misuse, food insecurity and homelessness.
5) Wernike-Korsakoff Syndrome - particularly seen in alcoholics who may have low liver stores of thiamine. It also occurs in patients with chronic vomiting. Patients should be managed as for refeeding syndrome with particular attention and likely high doses of thiamine and other B vitamins. It is caused by acute thiamine deficiency when re-feeding a malnourished patient, precipitated by increased thiamine demand as starving cells switch back to carbohydrate metabolism. The syndrome of acute neurological abnormalities comprises of one or more of the following:
   - Apathy and disorientation
   - Nystagmus, ophthalmoplegia or other eye movement disorders
   - Ataxia
   - Severe impairment of short-term memory often with confabulation.

Guidelines for the identification and management of any of these at-risk patients are documented on the Action Card - Refeeding Guidelines for Inpatients

Dietetic colleagues should be aware of the recommendations outlined below when developing meal plans for high risk patients, and can refer to the refeeding meal plans attached in Appendix 1 and for alternative oral supplementation plans in Appendix 2.

- People who have eaten little or nothing for more than 5 days should have nutrition support introduced at no more than 50% of requirements for the first 2 days, before increasing feed rates to meet full needs if clinical and biochemical monitoring reveals no refeeding problems (NICE, 2017).
- It can be helpful to remember that inclusion of high phosphate foods (such as milk, cheese and yogurt) are prioritised within the meal plan (Appendix 1).
- Higher energy or fat-based supplements such as Fortisip Compact/2kcal (Appendix 2) or Calogen will provide a lower energy:carbohydrate ratio than options such as

Fortijuice or standard Fortisips.

- The British Dietetic Association (BDA) guidelines, recommend that refeeding starts at 30–35kcal/kg/day (less if the patient is of very low weight and clinically unstable) and increases by 200–300kcal/day every 2–3 days, so that weight is starting to increase by the seventh day (although this may be delayed if purging, or other behaviours either driven by fear of weight restoration continuing or confusion/paranoia/refusal to eat).
- Fluid intake of 20-30mls/kg/day is recommended to prevent fluid overload and refeeding oedema (PENG, 2018).
- People who are malnourished are likely to have reduced creatine and urea, and therefore they can be dehydrated whilst having normal blood results; it is important to perform a full assessment of fluid status and not to solely rely on blood results.
- Be aware of patients who are very malnourished, dehydrated or those with kidney impairment as they can present with normal or high electrolyte concentrations which can reduce quickly, due to the combined effects of rehydration and refeeding syndrome. It is easy to overlook significant kidney impairment in patients with very low BMI and recent starvation who have low creatinine and urea production. These patients may have normal or only modestly raised plasma, creatinine and urea concentrations, but still be dehydrated with normal electrolytes. Please note that those who are malnourished will have an increased risk of developing sepsis (PENG, 2018).

Additional considerations in regards the refeeding of patients with severe anorexia nervosa can be found within the Medical Emergencies in Eating Disorders: Guidance on Recognition and Management: College Report CR233 (MEED, 2023).

7. PROCESS FOR MONITORING COMPLIANCE

Are the systems or processes in this document monitored in line with national, regional, trust or local requirements?	NO

Compliance will not be routinely monitored, but will be demonstrated by documentation on EPR, prescription charts, Datix and in response to complaints.

8. INCIDENT AND NEAR MISS REPORTING AND REGULATION 20 DUTY OF CANDOUR REQUIREMENTS

8.1 To support monitoring and learning from harm, staff should utilise the Trust's Incident Reporting System, DATIX. For further guidance, staff and managers should reference the Incident Reporting Policy. For moderate and severe harm, or deaths, related to patient safety incidents, Regulation 20 Duty of Candour must be considered and guidance for staff can be found in the Duty of Candour Policy and Intranet resources. Professional Duty of Candour and the overarching principle of 'being open' should apply to all incidents.

9. TRAINING

9.1 Training is accessed through Care to Learn and is available as eLearning, or face to face training provided by the Professional Development and Clinical Skills Team Nutrition/MUST Training (ghc.nhs.uk).

It is expected that this guideline does not require specific training or additional skills beyond those available above.

10. REFERENCES

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Appendix 1 – Guidance on standard calorie-controlled meal plans for Dietitians (based upon MARSIPAN Guidance, RCPsych)

Dietetic meal plan (Cereal: cornflakes, rice krispies, Weetabix)

STAGE	BREAKFAST	AM SNACK	LUNCH	PM SNACK	DINNER	EVENING SNACK	KCAL TOTAL
A1	2 tbsp cereal & 100ml ss milk or 1 non diet yoghurt	100ml milk or 1 plain biscuit	1 slice of toast with 1 tsp flora or 2 tbsp baked beans	1 apple or 1 plain biscuit	½ portion of soup	100ml ss milk	~500
A2	2 tbsp cereal & 100ml ss milk or 1 non diet yoghurt	100ml milk or 1 plain biscuit	½ sandwich	1 apple or 1 plain biscuit	½ portion of cooked meal with equal portion of veg. protein and carbohydrate	100ml ss milk	~750
A3	2 tbsp cereal & 100ml ss milk or 1 non diet yoghurt	Yoghurt (non-diet) or 200ml ss milk	½ sandwich	Cheese and biscuits	½ portion of cooked meal with equal portion of veg. protein and carbohydrate	200ml ss milk OR yoghurt	~1000
B1	2 tbsp cereal & 100ml ss milk or 1 non diet yoghurt	Yoghurt (non-diet) or 200ml ss milk	½ sandwich	Cheese and biscuits	Full portion of cooked meal (equal portions)	200ml ss milk OR yoghurt	~1250
C1	4 tbsp cereal & 200ml ss milk	Yoghurt (non-diet) or 200ml ss milk	Full sandwich	Yoghurt (non-diet) or 200ml ss milk	Full portion of cooked meal (equal portions)	200ml ss milk OR yoghurt	~1500
C2	4 tbsp cereal & 200ml ss milk	Yoghurt (non-diet) or 200ml ss milk	Full sandwich + Dessert (not yoghurt)	Yoghurt (non-diet) or 200ml ss milk	Carton of juice + full portion of cooked meal (equal portions)	200ml ss milk OR yoghurt	~1750
C3	4 tbsp cereal & 200ml ss milk + carton of juice	Yoghurt (non-diet) or 200ml ss milk	Full sandwich + Dessert (not yoghurt)	Yoghurt (non-diet) or 200ml ss milk	Carton of juice + full portion of cooked meal (equal portions) + Dessert (not yoghurt)	200ml ss milk OR yoghurt	~2000
C4	4 tbsp cereal & 200ml ss milk + carton of juice	Yoghurt (non-diet) +150 ml ss milk	Full portion of cooked meal + Dessert (not yoghurt)	Yoghurt (non-diet) or 200ml ss milk	Carton of juice + full portion of cooked meal (equal portions) + Dessert (not yoghurt)	Cheese & Biscuits	~2250
C5	4 tbsp cereal & 200ml ss milk + carton of juice	Yoghurt (non-diet) +150 ml ss milk	Full portion of cooked meal + dessert (not yoghurt)	Yoghurt (non-diet) & cheese & biscuits	Carton of juice + full portion of cooked meal (equal portions) + Dessert (not yoghurt)	Cheese & biscuits & 150ml ss milk	~2500

Additional notes –

1) Calorie containing drinks other than those factored into the meal plan should be avoided. This includes fruit juices, Lucozade, non-diet fizzy drinks, sugary tea/coffee (use sweetener if needed) and milky drinks/milkshakes.
2) The above chart is a guide only, staff may consider swapping a food item for an alternative food item of similar energy(calorific) value if a patient dislikes or is unable to eat the suggested item.

   Examples:
   - 2tbsp of cereal swap for ½ piece of toast with butter.
   - 1 apple/biscuit swap for satsuma or fruit pot or yogurt pot.
   - ½ sandwich swap for soup and roll with butter.
   - 1 carton of fruit juice swap for 1 banana.
   - Cheese and biscuits swap for 1 x piece of toast with butter and jam or rice pudding/custard pot.
3) The above meal plan may be adapted for dairy-free requirements by ordering soya/almond milks, soya-yogurts and dairy-free cheese from catering/facilities services, please email or ring your local facilities team.
   Vegan biscuits include Bourbons, McVities Ginger Nuts and Oreo Cookies.

Appendix 2 - Guidance on standard calorie-controlled meal plans for Dietitians (based upon MARSIPAN Guidance, RCPsych)

STAGE	BREAKFAST	AM SNACK	LUNCH	PM SNACK	DINNER	EVENING SNACK	KCAL TOTAL
A1	75ml	25ml	50ml	25ml	50ml	25ml	~500
A2	75ml	25ml	100ml	25ml	125ml	25ml	~750
A3	75ml	50ml	100ml	100ml	125ml	50ml	~1000
B1	75ml	50ml	100ml	100ml	250ml	50ml	~1250
C1	150ml	50ml	200ml	50ml	250ml	50ml	~1500
C2	150ml	50ml	300ml	50ml	275ml	50ml	~1750
C3	175ml	50ml	300ml	50ml	375ml	50ml	~2000
C4	200ml	60ml	350ml	50ml	375ml	90ml	~2250
C5	200ml	60ml	350ml	140ml	375ml	125ml	~2500

If a patient is consuming no oral food intake or is having food at times but is refusing some snacks and meals as suggested in Appendix 1; please offer a supplement drink of the equivalent energy(calorie) value as in table above. **See example below:**

- If the patient was on A3 meal plan, but misses lunch offer 100mls of Fortisip 2Kcal at lunchtime instead of missed lunch.

- If the patient was on C3 meal plan, but misses am snack offer 50mls of Fortisip 2Kcal at morning snack time instead of the food.

The Fortisip 2Kcals should be given in the quantities and at the times shown in the above chart which should coincide with the relevant daily stage of the patient's meal plan.

Additional fluids will need to be built in to prevent overloading and refeeding oedema (20-30ml/kg/day)* consisting of sugar free squash, tea (including herbal tea), coffee.

*Reference guidance taken from refeeding section of PENG (2018) as below:

Table 12.10. Fluid and sodium provision.

Recommendation	Rationale	Supporting evidence
Aim for fluid intake between 20-30ml/kg/day	Minimise the risk of fluid and sodium overload and refeeding oedema.	Brooks and Melnik, 1995 Kraft *et al.* 2015 Khan *et al.* 2011 Stanga *et al.* 2008
Aim for a sodium provision of <1mmol/kg/day		

Appendix 3 - Quick Guide to Refeeding Syndrome for Ward Staff

Quick Guide to Refeeding Syndrome (RFS)

Who is at risk?

Malnourished or starved individuals who have eaten very little or nothing for more than 5 consecutive days.

Patients may be malnourished as a result of reduced intake (for example, owing to dysphagia, anorexia nervosa, depression, alcoholism); reduced absorption of nutrition (for example, inflammatory bowel disease, coeliac disease); or increased metabolic demands (for example, in cancer, surgery).

Note that not all of those at risk will have a low BMI/bodyweight.

What happens?

The introduction of food (or calorie containing drinks) can cause changes in the body resulting in changes in body fluids, blood glucose levels and electrolytes (particularly Phosphorus, Magnesium and Potassium)

If these changes are not properly monitored and corrected, they can affect the proper functioning of the heart, respiratory system, liver, kidneys, bowels and cause neuro-muscular problems.

Prevention:

Early assessment and identification of RFS risk helps to prevent complications before they develop.

This may involve regular monitoring of blood electrolyte levels, blood glucose levels, fluid input/output and body weight.

It may also involve certain vitamins and minerals being prescribed

If you are concerned somebody may be at risk of RFS please discuss with the medical team

Symptoms to look out for include muscle weakness or tremors, palpitations, confusion, breathing difficulties, oedema, fits and reduced levels of consciousness.

It is important that calorie intake is increased slowly at first. Small, regular meals and snacks should be the aim, with any high calorie supplements avoided.

Appendix 4 – Dietetic Referral Form for Mental Health and Learning Disability Inpatient settings

Please click on this link to access the editable version of the Referral Form:
Gloucestershire Health and Care NHS Foundation Trust Dietetic Referral Form