Nutritional management of patients with medically unstable Eating Disorders admitted for medical stabilisation

Please ensure ALL patients are referred to Dietetics. Adapted from MEED (RCP, 2022)

Aim of admission; To safely refeed the patient to avoid refeeding syndrome caused by too rapid refeeding. To avoid underfeeding syndrome caused by too cautious refeeding and manage fluid and electrolyte disturbances

Consider the employment of specialist Mental Health Nurses to support the admissions.

Medical team to assess medical risk prior to feeding

e.g. ECG (if very low BMI), HR, temperature, BP, Cardiac function, blood glucose levels, Assess and correct hydration

Medical team to monitor: FBC, U&Es, phosphate, magnesium, potassium, corrected calcium, LFTs, albumin, creatinine kinase daily for the first 10 days and act upon as appropriate

Medical and nursing team to initiate monitoring regular temperature, BP, pulse rate, bowel output (stool chart), and hydration status (fluid balance), plus blood glucose levels twice daily (to observe for signs of hypoglycaemia

Assess risk of refeeding syndrome (RFS)

Determine refeeding risk, **Check biochemistry** including Urea, Electrolytes, Magnesium, Phosphate and Calcium, FBC

Please note: Predictors for the development of refeeding hypophosphatemia include low white blood cell count and higher haemoglobin level. Adults with long-standing eating disorders can be very unwell on admission with severely depleted intracellular electrolyte levels, such as potassium, that are not reflected in serum levels. Blood parameters that fall within laboratory reference ranges are frequently seen in advanced uncomplicated malnutrition and should not be taken as cause for reassurance.
Patients with uncomplicated anorexia nervosa do not usually have an acute inflammatory response and typically have normal plasma albumin, urea and CRP.

Low or medium RFS risk	**High RFS risk**
Low risk BMI 15-17.5 kg/m^2 Medium risk BMI 13-15 kg/m^2 Do not reassure the patient that their risk is low. That will compound the dismissive nature of their eating disorder cognitions and increase perception that change is not necessary.	**Clinical features of RFS** (one or more of the following indicate high RFS risk): • BMI <13kg/m^2 • Little/no intake >4days • Weight loss of over 15% in the past 3 months • Low WBC <3.8 • Low electrolytes; potassium, phosphorus, magnesium, • Low Thiamine and other vitamins • Serious medical comorbidities e.g. pneumonia, sepsis, cardiac dysfunction or disease, liver damage (e.g. due to alcohol dependence)

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Patients with anorexia nervosa with evidence of an acute inflammatory response (i.e. raised CRP), low albumin, deranged electrolytes or raised WCC should be regarded as at high risk of RFS.

Suggested supplementation for patients at risk of refeeding syndrome. To be given for the first 10 days of refeeding;

- Thiamine 50mg four times daily, continue for 7-10 days
- **Or** Pabrinex Ampoules 1+2 by infusion over 30 minutes or Intramuscular administration

- Vitamin B Co-Strong 1–2 tablets, three times daily
- Balanced Multivitamin/Trace Element Preparation (e.g. Forceval/ Centrum Advance) - One capsule daily

- Phosphate 500mg twice daily orally/via NGT (can be provided prophylactically to support refeeding for the first few days, It may cause side effects).

Blood tests	**Blood tests**
1-2 weekly (including phosphate, potassium and Magnesium)	1-2 daily for first 7-10 days (including phosphate, potassium and Magnesium) Explain reasoning behind frequency of testing to patient

Abnormal electrolytes	Normal electrolytes
Correct electrolytes and start refeeding **(DO NOT delay refeeding**)	Start refeeding

Commence dietetic plan- Low Risk RFS	**Commence dietetic plan- High risk RFS** *Patients at high risk of refeeding syndrome should always be managed in an acute medical environment with high-dependency facilities available if needed*
Start refeeding at least 30-35Kcal/kg/day but **no less** than immediate pre admission intake	**Start refeeding at 20kcal/kg/day** but **no less** than immediate pre admission intake Build up calories swiftly **Avoid underfeeding**
Avoid underfeeding	**Extremely high risk**: If the patient has a BMI <13kg/m2 in addition to these clinical features detailed above (e.g. prolonged low intake, deranged electrolytes, Low WBC) **Start feeding at 10kcal/kg/day and** increase by 5kcal/kg daily.

Low Risk	High risk
1. The patient should be offered food and / or prescribed dietary supplements in the first instance. 2. If full meals as per meal plan not adhered to, prescribed volume of nutritional supplement to be taken 3. If the patient is unable to achieve sufficient intake after 2 meals (as outlined in dietetic plan), NGT feeding to be considered in collaboration with the patient	It will be safer to provide continuous NG feeding from the outset. NGT feeding should be considered if: • The patient is unable to achieve sufficient oral fluid and nutritional intake from food and/or sip feeds to stabilise and restore physical health, or • The patient is unable to eat at all but is accepting of NGT feeding, or • There is life-threatening weight loss / physical deterioration or BMI < 13kg/m^2 • Clinical or biochemical instability / refeeding syndrome Some patients may opt for nasogastric tube (NGT) feeding because they may feel less responsible for the weight gain, rendering it more acceptable. Most patients will accept an NGT if it is calmly explained why it is necessary.
Standard Meal and NGT feeding plans available to Dietitian. **Overnight NGT feeding is discouraged**	*Commence continuous NGT feeding; Standard Enteral feeding plans available to Dietitian.*
If patient does not consent to treatment; obtain psychiatric opinion regarding compulsory treatment and consideration of the Mental Health Act.	

Ongoing dietetic reviews
Increase dietetic plan by 5kcal/kg/day every 1-2 days until intake ~ 60kcal/kg/day AND weight gain >0.5kg / week. • *Increase by 5kcal/kg daily for very high risk patients* • *And every 2 days for low to high risk patients* Aim to reach full nutritional requirements for steady weight restoration at 5–7 days. Total fluid intake can easily exceed safe levels. Recommended maximum total fluid input from all sources 30-35mls/kg body weight to avoid refeeding oedema. Refer to appendix 4 for future guidance.

Low RFS risk	High RFS risk
Continue to monitor bloods 1-2 weekly. If electrolytes abnormal, correct and consider slowing refeeding **DO NOT stop feeding**	Continue to monitor bloods 1-2 daily If electrolytes abnormal, correct and slow refeeding **DO NOT stop feeding**
Please refer to the Appendices for monitoring guidance and managing the behavioural manifestations of eating disorders for further information. **Please follow Monitoring plan (appendix 1) and care plan (appendix 3) for all patients.** Please consider discharge planning from the outset.	

APPENDICIES

Appendix 1: Recommended Monitoring Plan

Recommended Monitoring Plan

Weight

- Weigh on admission as a baseline measurement and twice weekly thereafter.
- Preferably before breakfast, after toilet and in light clothing, without shoes.
- Remain vigilant about water-loading and other concealed weights, all of which can explain unexpected changes in weight.
- Weight trends are more important than individual weight measurements.
- Restrict access to scales to decrease the likelihood of frequent weighing by the patient.
- Keeping documentation of weight away from the patient bedside and to avoid openly discussing a patient's weight near the patient.
- It should be decided by the clinical team whether the weight is shared with a patient.
- When a patient refuses to be weighed, this should be documented and highlighted.
- If rapid weight changes are evident (e.g. >1.5Kg), frequency of monitoring will need to be increased

Physical observations:

- Blood Pressure 4 x daily
- Blood glucose levels before meals (depending on severity)
  Diabetic patients may differ. Please check with the diabetes team
- TPR

Blood tests> Na, K, Cl, $HC0_3$, P, Mg, Ca	• Correct abnormalities- repeat 1-2 per day for first 7-10 days • Do not delay feeding • Repeating blood electrolytes after 7–10 days is recommended because of the risk of late refeeding syndrome
CK	Increase may suggest dysfunctional exercise
Transaminase Bilirubin levels	Specialist medical review
ECG	Any abnormality consider cardiac monitoring, Do not delay feeding

Clinical and laboratory features of refeeding syndrome

Note: Not all features need to be present.

1. Severely low electrolyte concentrations:
   Potassium <2.5mmol/l
   Phosphate < 0.32mmol/l
   Magnesium < 0.5mmol/l
2. Peripheral oedema or acute circulatory fluid overload
3. Disturbance to organ function including respiratory failure, cardiac failure or pulmonary oedema, raised liver transaminases

Due to the nature of eating disorder cognitions and associated distress, a patient's fear of weight restoration may limit their capacity to provide an accurate account of their presentation. This can falsely reassure the clinician about the assessment of risk.

Although the risk of refeeding syndrome is greatest in the first few days of refeeding, the syndrome may develop later and biochemical monitoring should continue until electrolyte parameters are stable and extend to 2 weeks to detect late developing RFS.

Appendix 2: Recommended guidance on managing Eating disorder behaviours during acute admissions

TROUBLE SHOOTING GUIDE: MANAGING EATING DISORDER BEHAVIOURS Individuals with eating disorders may present with many challenging behaviours. On occasions patients may require increased levels of observation to manage behaviours that are increasing medical risks/hindering progress	
Problem	**Consider**
All acute admissions	Employment of 1:1 Specialist nurse
Suspected fluid loading (if weight is rapidly increasing)	• Random weight checks • Consider 24-hour supervision or support for patient • Consider assisting and supervising washes and showers • Liaise with Eating Disorder team **Tel: 01792 545780.** • Hyponatraemia Suggests water loading -Check urine osmolality
Suspected self-induced vomiting (particularly if weight is not increasing despite compliance with feeding plan)	• Ensure patient is being supervised post meals • Consider 24-hour supervision or support for patient • Liaise with Eating Disorder team **Tel: 01792 545780** • May require supervision to toilet, Assist if weak • Discourage visits to the toilet one-hour post meals • Hypokalaemia may suggests vomiting/laxatives or refeeding syndrome
Patients wishing to negotiate food or fluid intake	• Food and fluid intake is non-negotiable, especially during first 10 days of refeeding • Boundaries should be maintained at all times • Once the patient is medically stable and consistently gaining weight some aspects of diet plan can be re-negotiated **with the Dietitian** only. • There is likely to be anxiety surrounding meal times and they may need considerable reassurance to eat.
Patient wanting laxatives	• Check history of laxative misuse • Physical examination and review stool chart- to assess and confirm symptoms and need • ED team to offer education about altered gut function in starvation, and support in tolerating some GI symptoms
Patient is over-active (e.g. pacing or standing up all day)	• Consider 24-hour supervision/support for patient • Restrict exercise/movement- To be encouraged and prompted to sit down and rest if standing or pacing/walking. • Bed rest and/or wheelchair use • Provide distraction and alternative activities to reduce distress • In an attempt to increase activity levels patients may present as helpful to staff/patients, e.g. taking meal plates back to trolley / walking other patients to the toilet- This should be discouraged • Liaise with Eating Disorder team **Tel: 01792 545780**

	• No unaccompanied ward leave
Patient is tampering with feed, hiding food or pulling feeding tube out	• Consider 24-hour supervision/support for patient • Liaise with Eating disorder Team **Tel: 01792 545780** • Be aware of any attempts to hide food and avoid eating it (spitting out food into tissues, putting items in the bin and attempts to discard the feed) • Failure to gain weight suggests hiding or disposing of food/feed or excessive exercise • Intensive nursing support may be necessary at mealtimes to help manage the distress and completion of meal
Self-Harm / Other Mental Health symptoms	• Consult with designated psychiatric staff **(Psych Liaison 01792 703312)** • Consider discharge to community care/mental Health setting if medically safe
Not consenting or lacks capacity to consent	• Assume capacity unless reason to doubt. • Expert nursing support and distraction strategies can be helpful to reduce anxiety relating to eating or fear of weight restoration. • Help the patient understand the need for nutrition, offering choice about the type of foods or supplements / method of feeding. • Psychiatric assessment of consent and capacity. • To consider utilising Section 5(2) holding powers under the Mental Health Act (1983) until Mental Health Act Assessment can be utilised. • Restraint is a last resort- to discuss with psychiatric staff. Consider following full MHA Assessment, and consideration of the risks as a MDT only (Comprehensive risk assessment).
Not tolerating oral food and/ supplements	• Pass NG tube • If not consenting to NGT obtain psychiatric opinion regarding compulsory treatment

Appendix 3: Care Plan for the acute management of individuals with medically unstable eating disorders

Care Plan for the acute management of individuals with medically unstable eating disorders		
	Intervention	**Rationale**
Activity	• Bed rest until medically stable • Risk assessment for Tissue Viability (e.g. Purpose T risk assessment) • Ensure pressure mattress.	Required in view of compromised state
Fluids	• Input and output to be measured- via All wales fluid balance chart • Consider limiting access to water supply e.g. turn off water supply in room if possible • Be aware of the potential to fluid overload during some aspects of personal care e.g. Teeth brushing, hand washing, going to the toilet. • Hyponatraemia suggests water loading- check urine osmolality	Often patients drink large amounts of fluid causing dangerous fluid overload and electrolyte disturbances
Personal Care	• Supervised washes/showers only within the bedroom area recommended until medically stable. • Consider the use of a commode. • Assist to toilet if weak • May require supervision if risk of self-induced vomiting or exercise	Due to patient's compromised physical state e.g. Low BP and temperature. Also to monitor for abnormal behaviours. A commode will assist in monitoring fluid balance.
Nutrition	• Consider post-meal supervision for 60 minutes • Complete the Food and Fluid balance chart. • Patients/Family are not to complete their own food record chart, please ensure the Food and fluid charts are kept away from the end of the bed, and are completed at the time of mealtime for accuracy. Please document volume of foods and fluids taken, as supervised to allow for an accurate dietetic assessments • Discourage family/friends bringing in food, particularly low calorie foods/snacks	Supervision required if vomiting and/or other compensatory behaviours are suspected Hypokalaemia suggests vomiting/laxatives or refeeding syndrome

	• Keep any regimens/care plans/ weight charts etc in treatment room/nursing station	
Leave	• All leave to be agreed between the medical team and Eating Disorder Team	Due to patient's compromised physical state close medical supervision is needed.
Communication	• Consider placing the patient in the bed next to the nursing station • Do not leave care plans/weight charts within easy patient access • Ensure regular feedback and MDT liaison • Ensure consistency of the nursing boundaries between shifts/care givers.	Observe any abnormal behaviour. Ensure patients feel safe and approaches are consistent.

Appendix 4: Supportive information and guidance for acute Dietitians

DIETETIC GUIDANCE
Nutritional Assessment
Nutritional status to be reassessed regularly, assessment to include: - Weight (on admission and twice weekly thereafter, weights to be taken on the same scales) - BMI, (weekly), trends in biochemistry (daily if at risk of refeeding syndrome) -Nutritional requirements, nutritional intake, compliance (behavioural issues), hydration, and bowels - The feeding regimen must be reviewed frequently (e.g. every 12 hours) and the regimen increased as soon as there is no clinical reason to continue the lower-calorie intake. - It is usually unwise for staff to discuss specific calorie provision with patients - For most patients, the aim is to reach full nutritional requirements for steady weight restoration to begin in 5–7 days. Patients should be made aware that re-feeding plans are non-negotiable for the first 10 days of admission -**Energy requirements**; It is difficult to predict the amount of energy required to achieve a specific rate of weight gain as basal metabolic rate (BMR) and total energy expenditure (TEE) change during re-feeding process. All equations for estimating energy requirements are inaccurate when calculated for individuals with AN as most overestimate requirements in the acute phase of re-feeding. -Once the patient is medically stable and weight gain is the focus, it is not unusual for an individual within this group of patients to require 70-100Kcals/Kg body weight in order to achieve this. Nonetheless, it is important to remain curious about possible compensatory behaviors. -Protein and fat requirements are at the same level as recommended for general population **-Fluid:** Total fluid intake can easily exceed safe levels; patients may attempt to drink large volumes of fluid which can result in dangerous fluid overloading and electrolyte disturbances. Fluid intake and output should be monitored daily using an all Wales fluid balance chart. Consideration should be given to how patients may achieve their fluid requirements during initial refeeding phase as requirements may not be fully achieved. Intra-venous (IV) fluids may be required. Carbohydrate content of the IV fluid used needs to be considered alongside the volume required (1000mls 5% dextrose contains 200Kcal).

Oral diet

When looking at a meal plan for the patients the following points need to be considered:

- A balanced, wide variety of foods needs to be encouraged within regular meals and snacks
- Regular carbohydrate intake during the day is essential to prevent hypoglycemia. An evening carbohydrate and protein snack will prevent early morning asymptomatic hypoglycemia
- Delayed gastric emptying can make eating food uncomfortable. Amounts of food should be gradually increased and adequate time allowed for meals
- Include high phosphate foods initially to help prevent hypophosphatemia associated with RFS
- Close monitoring of dietary intake will be required and accurately recorded on the All Wales Food and Fluid Chart. Any food or fluid not taken must also be recorded
- Level of mealtime supervision will be decided and documented on the patients care plan. Patients should be strongly encouraged to avoid going to the toilet or into the bathroom for at least 30mins and ideally 1 hour after eating, to reduce the risk of vomiting.
- Patents detained under the Mental Health Act should generally be observed in the bathroom if they insist on going during this time period.

Standard meal plans are available, but may require revising by the Acute Managing Dietitian.

Oral nutritional supplements (ONS)

ONS can be used alone or as an adjunct to food intake or NG feeding. The type and volume of ONS will be decided by the managing Dietitian. The volume of ONS taken must be recorded on the All Wales Food and Fluid Charts.

If snack or parts of meal are missed, they will need to be replaced with an ONS
As a guide:

- Introductory meal – 1 x ONS
- Normal meal – 2 x ONS
- Puddings – 1 x ONS
- Snacks – 1 x ONS

Standard ONS plans are available, but may require revising by the Acute Managing Dietitian.

Nasogastric feeding

If patients are unable to achieve adequate oral intake and are medically at risk, NG feeding will need to be considered.

Where NG feeding has been deemed appropriate, it will be expected that the NG tube is placed and position confirmed in line with NG Policy. The NG bundle needs to be commenced and completed on a daily basis.
Staff should ensure that the constituents of the enteral feed used are acceptable to the patient in terms of long standing dietary practice e.g. vegetarianism.
Planning for the restoration of eating should begin as soon as enteral feeding is established. A gradual decrease in enteral feeding is advisable to avoid sharp decreases in weight and enable the patient to compensate with increases in food intake.

During working hours, a NG feeding regimen will be devised by the managing Acute Dietitian. An out of hours NG feeding regimen is available for use by nursing staff during evenings or weekends to prevent a delay in initiation of nutrition.

If the patient requires sedation to manage their distress/anxiety, then this should be discussed with the responsible mental health Psychiatrist or if out of hours with Psychiatric Liaison.

Total Parenteral Nutrition (TPN)

TPN should not be used, unless there is significant gastrointestinal (GI) dysfunction