TEDS

NHS Salisbury NHS Foundation Trust

NHS Great Western Hospitals NHS Foundation Trust

NHS Royal United Hospitals Bath NHS Foundation Trust

NHS Oxford Health NHS Foundation Trust

Anorexia Nervosa within the Inpatient Paediatric setting: Protocol for Medical / Nursing management (including dietetic guidelines)

Royal United Hospital, Bath
Great Western Hospital, Swindon
Salisbury District Hospital, Salisbury

CONTENTS

INTRODUCTION 3

ROLES & RESPONSIBILITIES 3

CARE PLAN ON ADMISSION TO THE PAEDIATRIC WARD 3

GUIDELINES FOR BEHAVIOURAL MANAGEMENT OF MEALTIMES 5

HOW TO ENGAGE A YOUNG PERSON WITH ANOREXIA 6
THE YOUNG PERSON BEGINS TO REQUEST SPECIFIC STAFF TO LOOK AFTER THEM 6
DRAWING STAFF INTO DISCUSSIONS ABOUT OTHER STAFF AND THEIR LIKEABILITY (SPLITTING BEHAVIOUR) 6
BRINGING GIFTS IN FOR CERTAIN STAFF 6
INDICATING ONLY CERTAIN STAFF UNDERSTAND THEM 6
DEALING WITH SPECIFIC BEHAVIOURS 6
ATTEMPTS TO DRAW STAFF INTO NEGOTIATIONS / ARGUMENTS REGARDING FOOD CHOICES AND DISLIKES 6
USING CONVERSATIONS / TV / MUSIC / GAMES / PHONE TO AVOID EATING AT MEALTIMES 6
PARENTS ENGAGE IN NEGOTIATIONS WITH STAFF RE: FOOD CHOICES AND ARE ON THE WARD PRIOR TO MEALTIMES 6
RELUCTANCE TO BEGIN THE MEAL 7
WEARING OF BAGGY CLOTHES AND LONG SLEEVES, CONSTANTLY WIPING HANDS ON BEDCOVERS AND CLOTHES DURING MEALS, DROPPING FOOD ON THE FLOOR, CRUMBLING UP FOOD, LETTING FOOD DROP OFF THE SIDE OF THE PLATE. 7
SCREAMING / SHOUTING / THROWING FOOD OR OBJECTS 7
HELPFUL THINGS TO SAY AT MEALTIMES 7

GUIDELINES FOR MANAGING PHYSICAL ACTIVITY 9

NASOGASTRIC FEEDING 9

IMPLEMENTATION OF NASOGASTRIC FEEDING 10
GUIDELINES FOR NASOGASTRIC FEEDING 10

WEIGHT 10

OTHER ISSUES THAT MAY ARISE DURING ADMISSION 10

APPENDIX 1: GUIDANCE FOR MEDICAL STAFF (HISTORY TAKING/ CLERKING/PHYSICAL INVESTIGATIONS/MONITORING/REFEEDING SYNDROME) 11

CLERKING 11
ADMISSION BLOODS 11
ADMISSION ECG 11
SQUAT TEST / SIT-UP TEST 12
RECORD OBSERVATIONS 12

RE-FEEDING SYNDROME AND UNDERFEEDING SYNDROME 12

ALL PATIENTS CONSIDERED AT RISK OF RE-FEEDING SYNDROME SHOULD BE MONITORED FOR CLINICAL SIGNS OF THE RE-FEEDING SYNDROME: 12
PATIENTS SHOULD HAVE: 12
TREATMENT OF RE-FEEDING SYNDROME 13
CLINICAL SIGNS OF SIGNIFICANT RE-FEEDING SYNDROME 13
OTHER IMPORTANT CONSIDERATIONS WHEN TREATING RE-FEEDING SYNDROME: 14

APPENDIX 1: RE-FEEDING GUIDELINES FLOW CHART 15

REFEEDING VITAMINS AND MINERALS 16

REVIEW 16

APPENDIX 2 - NASOGASTRIC FEEDING PROCESS 17

APPENDIX 3 - DIETETIC GUIDELINES 18

NON-COMPLETION OF MEALS 18

APPENDIX 4: INFORMATION FOR YOUNG PEOPLE AND THEIR FAMILIES / CARERS 19

(ADMISSION PROCESS AND CARE PLAN) 19
CARE MANAGEMENT PLAN 19

APPENDIX 5: LIST OF ONS TO USE IN PLANS 20

APPENDIX 6: EATING DISORDER - RISK ASSESSMENT/JUNIOR MARSIPAN 22

INTRODUCTION

This protocol has been developed jointly between TEDS (CAMHS eating disorder service) and paediatric services at the above hospitals. The protocol is designed to support staff in the management of anorexia nervosa when a young person requires paediatric admission due to medical complications secondary to extreme weight loss and/or extreme dietary restriction.

Paediatric admission will only be arranged when a young person requires medical treatment due to complications arising from severe anorexia nervosa which cannot be safely managed on an outpatient basis. Complications include:

- Severe emaciation with high risk of refeeding syndrome
- Severe emaciation requiring nasogastric feeding
- Rapid uncontrolled weight loss
- Severe dehydration
- Severe hypotension / electrolyte imbalance / other medical sequelae of anorexia

The purpose of paediatric admission is medical treatment and stabilisation and initiation of weight gain. Nasogastric feeding may be required as a last resort.

The management of mealtimes on the paediatric ward will be the crucial part of the young person's medical treatment: it is essential staff recognise this and see it as equal in importance to any prescribed treatment. Mealtime management is often the only intervention that is likely to lead to improvement in weight, nutritional status and mental state thereby hastening early recovery and discharge.

The paediatric ward will not be used to manage a young person with anorexia nervosa as an alternative to a mental health unit due to lack of resources. Discharge will usually be to the patient's home with TEDS follow up, or occasionally onward referral to a mental health unit.

This protocol has been developed after working with paediatric ward staff over a number of years and are based on nursing staff feedback on the difficulties of managing the refeeding of young people with severe eating disorders on the ward.

ROLES & RESPONSIBILITIES

All staff have a responsibility to ensure the care provided to patients is safe and of a high standard of quality. It is the responsibility of all staff involved with the care and treatment of young people to ensure they are aware of this protocol and adhere to its contents.

CARE PLAN ON ADMISSION TO THE PAEDIATRIC WARD

When a young person with an eating disorder is admitted to the ward they, and their family, will be very anxious about what is going to happen. Emotions are often running high (the family will have been struggling with the eating disorder for weeks or months) and the young person may be in a dangerously malnourished state. Patients with anorexia rarely accept treatment willingly (due to their terror of weight gain) and may present as obstructive and non-compliant to the treatment plan being offered. An approach that has been shown to be effective in reducing non-compliance is clearly setting out the care plan on admission to the ward. The following plan should be clearly explained on admission:

1) Young people should, if possible, be admitted to a 5-bedded bay, not a single cubicle.

2) There will be two allowed dislikes during the admission (specific food, not food groups). Staff will not enter into any discussion or negotiation around this.

3) All food choices will be decided by the staff team based on the agreed dietetic plan.

4) On admission the young person will be offered 1/3 portions of their current meal plan (Appendix 4 or what they were eating pre-admission, **whichever is larger**), along with multi vitamins as per local hospital policy, pending the initial assessment by the ward dietician. The subsequent meal plan will be agreed by the dietician and will not be changed unless agreed by the dietician.

5) Meals will be plated up by the catering department, in line with the dietician advice. This will reduce the risk of nursing staff being drawn into discussions and negotiations about portion size. It is important that once plated up by the catering department, no changes are made to the meal at ward level.

6) The ideal rate of weight gain for recovery is 0.5kg – 1.0kg/week. The MDT will set an expectation for this admission and this is not open to discussion or negotiation.

7) The young person will be weighed twice per week - Monday and Thursday, prior to breakfast and in their nightwear (not in a dressing gown), an hour post morning wee. Ensure the same scale is used - sitting if possible. The first weight should be the morning after admission. The default, unless otherwise stated- to be discussed and agreed at MDT review, the young person should be informed of their weight (to avoid the distorted perception that their weight is rising at an uncontrolled rate).

8) Multi-vitamins should be given on admission and regularly as per local hospital policy.

9) The eating regime should be presented as the 'prescribed medicine' that the young person requires because their low weight is having such a severe impact on their physical state.

10) The following time-limits should be adhered to:

➢ Breakfast & lunch	30 minutes
➢ Evening meal (including dessert)	30 minutes
➢ Snack	20 minutes

At the end of these times, leftover food should be removed. Follow dietetic guidelines for non-completion of meals. If the meal has not been eaten at all, the young person should be given Oral Nutritional Supplement (ONS) (see ONS details in Appendix 5). This should always happen, even if the ONS is refused. The aim is to give a clear and consistent message that if they do not eat, the ONS needs to be drunk to ensure their medical condition does not deteriorate to the point where NG tube feeding will be required. The ONS should be presented once at the end of each meal that has not been completed. If the ONS is refused / thrown away that is the end of the nursing intervention for that meal / snack.

11) The young person should go to the toilet before their meal or snack. This ensures they have no reason to visit the toilet after eating and reduces the risk of them purging

after food has been consumed. The young person should not visit the toilet (or bath/shower) for 1 hour after each meal.

12) Fluids: Patients should have their fluid intake carefully monitored. Fluids (e.g. bottled water) should be dispensed by the nursing staff. Patients should not have access to fluids in bedside cupboards etc. due to the risk of water loading (either to manipulate weight or to fill stomach making eating more difficult). Patients should be restricted to maintenance fluids over 24hrs.

13) In order to minimise disruption to the refeeding programme, parents and carers should be advised to visit during the evening, or between the main mealtimes of the day. If they visit during meal or snack time, they should be advised at admission that they will need to leave the ward until the meal or snack is completed. Unless agreed at twice weekly MDT reviews for parents/ carers to support with meal times (as documented on care plan). (*By the time of admission, it is not uncommon for parents to have become entrenched in colluding with the anorexia and feel disempowered by the resistance they meet at mealtimes. It is therefore not unusual for parents to appear to support the young person in their attempts to avoid eating)*

14) On admission, the young person should be informed they will be on bed rest (resting on bed or sitting in chair). They will take a wheelchair to the toilet / bathroom. This arrangement can only be changed at formal care plan review meetings and is non-negotiable.

15) On admission, a date for an initial Care Plan Review meeting should be arranged. This meeting must include the named paediatric staff nurse, senior paediatrician, a senior member of the CAMHS TEDS team, the ward dietician, the young person and their family. This meeting should be held on the next working day following admission with subsequent meetings on a twice weekly basis throughout the admission. Changes to the care plan must only be made via this care plan review process. In the event of an urgent need to review the care plan, this should be done between the consultant paediatrician and senior member of the TEDS team.

It is essential for the successful implementation of the refeeding programme that staff on the unit are all consistent with this approach. The nature of anorexia means that the young person will use every opportunity to disempower staff through splitting and drawing them into negotiation. This behaviour is part of the illness and is a direct consequence of starvation.

GUIDELINES FOR BEHAVIOURAL MANAGEMENT OF MEALTIMES

Managing mealtimes is often a very difficult and emotionally exhausting experience for ward staff. The young person with anorexia may show high levels of distress and animosity towards staff. Their anorexic thinking will drive them to attempt to engage staff in negotiations about the food and to try to distract staff so they can dispose of food (some young people are very skilled at this). Staff will therefore need to be highly vigilant during meals. Staff should adopt a calm, but firm approach in their refusal to engage in negotiations around food.

Staff can use mealtimes to build rapport with the young person by engaging them in conversation. Staff must be careful that conversation is not used to avoid eating. The young person should be consistently reminded that conversation can continue as long as they are eating their food.

Staff should communicate a high expectation to the young person that they need to complete all meals and snacks plus drinks. This may be met with resistance and fierce protestations; continuing to give this message is very helpful in breaking down anorexic resistance.

HOW TO ENGAGE A YOUNG PERSON WITH ANOREXIA

A young person with anorexia can evoke very powerful responses within staff ranging from extreme anger to a sense of wanting to befriend them and make them better. Anorexia can be powerful in 'sucking' staff in to unhelpful alliances with the young person. Although at the time this feels like it is helping the young person, it is quite destructive to their management as it becomes harder to set firm boundaries and enforce the food prescription. The following behaviours may indicate this is happening:

THE YOUNG PERSON BEGINS TO REQUEST SPECIFIC STAFF TO LOOK AFTER THEM

- Do not make staff changes in response to this
- Make the young person aware that they cannot request this and that all staff are able to look after them

DRAWING STAFF INTO DISCUSSIONS ABOUT OTHER STAFF AND THEIR LIKEABILITY (SPLITTING BEHAVIOUR)

- Make the young person aware this is not an appropriate discussion and you cannot discuss other staff with them
- Encourage them to discuss their concerns with the staff member directly or with their keyworker

BRINGING GIFTS IN FOR CERTAIN STAFF

- Adhere to trust policy re: the receiving of gifts

INDICATING ONLY CERTAIN STAFF UNDERSTAND THEM

- Reinforce to the young person that all staff are there to support and understand them

DEALING WITH SPECIFIC BEHAVIOURS

ATTEMPTS TO DRAW STAFF INTO NEGOTIATIONS / ARGUMENTS REGARDING FOOD CHOICES AND DISLIKES

- Calmly and consistently remind the young person of the rules set out at admission: this is not open to discussion
- Attempt to direct the conversation away from the argument

USING CONVERSATIONS / TV / MUSIC / GAMES / PHONE TO AVOID EATING AT MEALTIMES

- Explain that you are concerned the conversation /TV etc are being used to avoid eating and that they will not be available during mealtimes

PARENTS ENGAGE IN NEGOTIATIONS WITH STAFF RE: FOOD CHOICES AND ARE ON THE WARD PRIOR TO MEALTIMES

- Staff to remind parents of the agreement at admission and support parents to disengage from the young person before and during mealtimes. Parents to be advised they can return to the ward once mealtimes are finished.

RELUCTANCE TO BEGIN THE MEAL

- The young person is to be firmly told that they need to pick up their cutlery and start eating. This may need to be firmly and calmly repeated. *(The resistance is driven by extreme anxiety and the longer the young person sits in front of the meal without eating, the more likely the anxiety will be reinforced).*

WEARING OF BAGGY CLOTHES AND LONG SLEEVES, CONSTANTLY WIPING HANDS ON BEDCOVERS AND CLOTHES DURING MEALS, DROPPING FOOD ON THE FLOOR, CRUMBLING UP FOOD, LETTING FOOD DROP OFF THE SIDE OF THE PLATE.

- Staff to supervise all meals and sit with the young person for the duration of the meal / snack.
- The young person is to be firmly told that if they dispose of food it will be replaced by staff
- Young person's sleeves to be rolled up if food is being hidden in them
- All crumbs on plate to be gathered together and eaten at the end of the meal

(The young person may not be aware they are doing these behaviours but may be very skilled at disposing of food. Staff need to be extra vigilant during mealtimes).

SCREAMING / SHOUTING / THROWING FOOD OR OBJECTS

- Be firm and persistent, calmly telling the young person that you understand their distress, but they need to eat their food
- Any thrown food is to be replaced either by food, or by an ONS as per dietetic feeding plan
- Seek support of colleagues if the level of distress is overwhelming and difficult to manage

(A young person's level of distress at mealtimes can be very high and the above behaviour is often driven by the sheer terror of having to eat. Staff can be left feeling powerless and distressed themselves).

HELPFUL THINGS TO SAY AT MEALTIMES

- "You need to pick up your knife / fork / spoon and begin to eat"
- "you need to eat as it is part of your prescribed treatment here"
- "I know you don't want to eat it but you have no choice as I am saying you have to eat it"
- "I am not prepared to get into any discussion with you about the food – I am telling you to eat it"
- "I cannot get into a discussion with you about how much of the meal you are to eat – you are expected to eat all the food"
- "I am reminding you that you have …..minutes left to eat your food. You need to put the food in your mouth and eat it"

Do not enter into discussions about number of calories taken of the total calories of the meal plan.

If behaviours persist discuss with the CAMHS MDT. Consideration may be given for use of anxiolytic medication e.g. olanzapine. This would be recommended by a CAMHS psychiatrist but would need to be prescribed by ward staff.

GUIDELINES FOR MANAGING PHYSICAL ACTIVITY

It is important to remember that any energy that the young person takes in through eating is reserved for restoring tissue in order to stabilise their medical health. Therefore, a young person being treated for anorexia on a paediatric ward should engage in minimal physical activity.

Young people with anorexia will be driven to exercise at every opportunity in order to reduce their weight. This can be done via quite subtle behaviours:

(1) **Constantly standing up**
Remind the young person that they are currently on bed rest due to the level of concern about their physical state

(2) **Constant arm and leg movement / walking up and down the ward / offering to help staff give out meals / delivering post / checking on other patients / finding odd jobs to do**
Remind the young person of the severity of their illness and firmly insist that they return to sitting down on their bed or a chair

(3) **Going to canteen / coffee shop with visitors / walking outside in the cold / wanting to sit outside in the cold / wanting to sit in the heat with large jumpers on (these are ways of expending energy)**
If the young person wishes to have fresh air, they must be taken out in a wheelchair with a clear instruction to whoever takes them out that they are not to walk anywhere. Trips out should be agreed at the MDT care plan review meetings, should be time-limited and only granted if the young person is co-operating with their treatment.

(4) **An eagerness to be very helpful around the ward**
Acknowledge the young person's wish to be helpful but remind them that because of their physical health they are not able to help in a physical way. They could be offered opportunities to engage in alternative activities such as making a card, playing a game (sitting down), reading, listening to music, watching TV.

NASOGASTRIC FEEDING

(Please see NG feeding flowchart: Appendix 2)

The first line in dietary management should always be with normal food in line with the dietetic 'mealtime prescription'. If this proves difficult the diet can be supplemented with ONS (See appendix 5).

Nasogastric feeding should always be seen as a very last resort in the dietary management of a young person with anorexia nervosa. It may be medically necessary in some cases, but it does not allow the patient to become engaged with the recovery process and is of very limited use when looking at longer term recovery outcomes.

If nasogastric feeding does need to be used due to the young person's medical needs, then **the aim is to use it for the shortest time possible and to continue to strongly encourage the young person to eat if they are physically able to tolerate it. The hospital guidelines must be adhered to when initiating enteral feeding.**

IMPLEMENTATION OF NASOGASTRIC FEEDING

Initiating nasogastric feeding should be based on a review of the young person's progress, considering their level of compliance with the prescribed meal plan and/or deterioration of their medical condition below the parameters set at admission. **Unless in an emergency situation (very rare), the decision to commence nasogastric feeding should be taken at the MDT care plan review meeting with TEDS and ward staff.** Hospital guidelines should always be followed. Progress should then be reviewed by the paediatric team and at the weekly review meetings. The paediatric dietician should oversee the NG feeding regime.

The decision to initiate NG feeding should be made following consultation with the young person and their family. If the young person refuses, the consent of those with parental responsibility can be sought. However, in these circumstances it is helpful to seek legal advice through the trust to ensure the rights of the young person are being met. Use of the Mental Health Act may need to be considered.

GUIDELINES FOR NASOGASTRIC FEEDING

- Pass the NG tube and leave in situ.
- Use bolus feeds unless otherwise indicated.
- Staff should continue to offer food as per the meal plan and communicate a high expectation that the food will be eaten. If food is refused or no attempt is made to eat or complete the meal in the time limit, then a bolus feed is given via the NG tube (guidance for managing partial meal completion will be set by the ward dietician).
- If the young person does eat, they need to comply fully with the daily meal plan until the next review day when a decision will be made as to whether the tube can be removed. The young person should be given a positive message that the tube will be removed if they fully comply with the prescribed meal plan.

WEIGHT

The ideal rate of weight gain, for recovery, is a weekly gain of **800g,** which is considered optimum as a psychiatric inpatient (NICE). The team will set an expectation for this at admission as weight gain may not initially happen in some patients and so the expectation will instead be agreed for the weight to be maintained and for a regular eating pattern to be established. There may be variations in the early stages of refeeding. Often once a young person starts building up their intake you may notice an initial weight gain followed by stabilisation or even slight weight loss. This can be due to unmatched nutritional requirement. Fluid retention and oedema can occur in the initial stages of refeeding; this should resolve in 7-10 days.

OTHER ISSUES THAT MAY ARISE DURING ADMISSION

1. **Running away from the ward**
   Staff to adhere to the Trust Missing Person Policy
2. **Self-harming behaviour**
   Staff to seek advice from the TEDS / CAMHS liaison service
3. **Young person refuses to consent to treatment interventions, including refeeding**
   Staff to discuss with TEDS consultant and consider legal framework for provision of treatment
4. **Young person exhibits obstructive or aggressive behaviour towards staff**
   The young person is to be given a clear message that this will not be tolerated. Staff to adhere to Trust policy on management of aggressive behaviour towards staff.

APPENDIX 1: GUIDANCE FOR MEDICAL STAFF (HISTORY TAKING/ CLERKING/PHYSICAL INVESTIGATIONS/MONITORING/REFEEDING SYNDROME)

CLERKING

Full clerking with attention to:

a) History of eating disorder (e.g. restriction, purging, exercising, laxative abuse) and other mental health problems

b) Past medical history including history of substance abuse or alcohol use

c) Comprehensive physical examination including cardiovascular, respiratory and abdominal. High risk findings include purpuric rash and dark blue/cold extremities. Look for signs of sepsis with low threshold for broad spectrum antibiotics, particularly with evidence of liver failure.

ADMISSION BLOODS

FBC, U&E, Cr, Mg, PO4, Ca, glucose, LFT, TFTs, haematinics, CRP if clinical concern, TTG (do not repeat TTG if previously negative)

ADMISSION ECG

a) Tachy/bradycardias, arrhythmias

b) Prolonged QTC

c) Non-specific T wave changes

d) Changes consistent with hypokalaemia

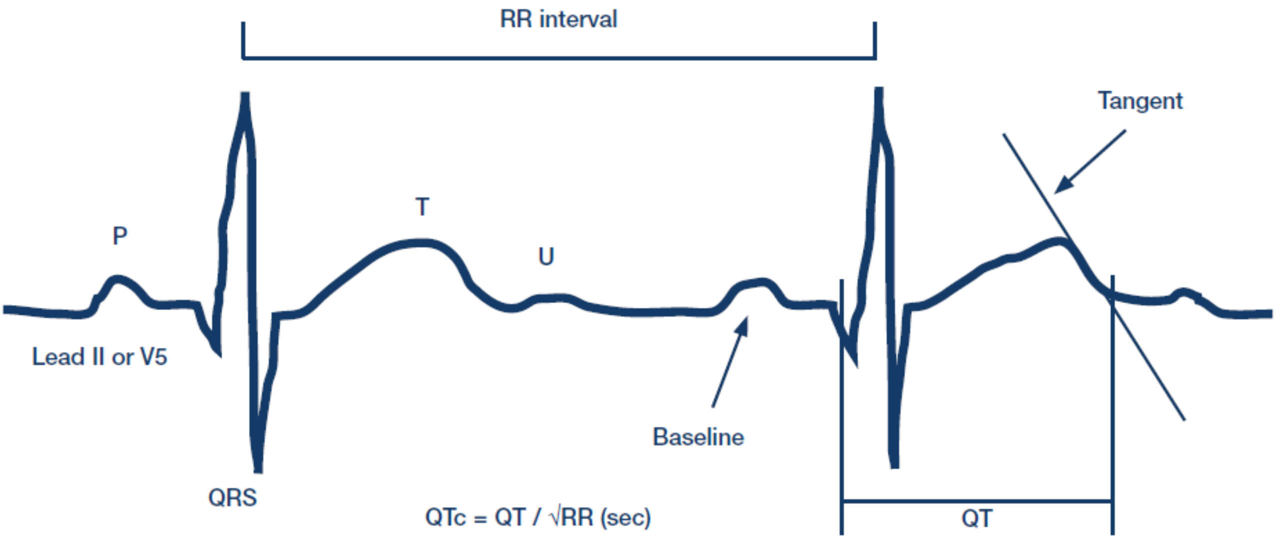
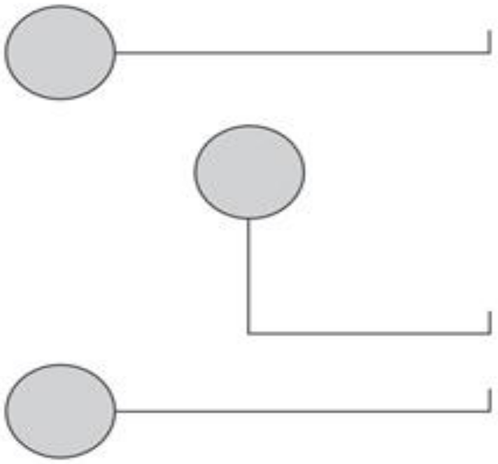


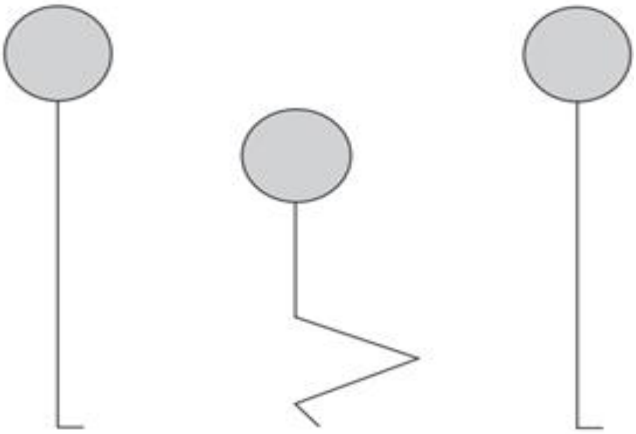
Fig. 1 Calculating the QTc interval. Reproduced with permission from Postema et al (2008).

Abnormal QTc: under 15 years of age (males and females) an abnormal QTc is >460ms. Over 15 years of age abnormal is >450ms; in females abnormal >460ms

SQUAT TEST / SIT-UP TEST



1. Sit-up: patient lies down flat on the floor and sits up without, if possible, using their hands.



2. Squat–Stand: patient squats down and rises without, if possible, using their hands.

Scoring (for Sit-up and Squat–Stand tests separately)
0: Unable
1: Able only using hands to help
2: Able with noticeable difficulty
3: Able with no difficulty

RECORD OBSERVATIONS

Pulse, blood pressure, temperature, and blood glucose monitoring (BM) on admission and 4 hourly unless PEWS changes

RE-FEEDING SYNDROME AND UNDERFEEDING SYNDROME

Sudden reversal of prolonged starvation leads to a sudden requirement for electrolytes involved in metabolism, known as re-feeding syndrome. Phosphate levels can fall rapidly, with neurological and cardiovascular consequences. Those most at risk of re-feeding syndrome are patients with very low BMI, minimal or no nutritional intake for more than a few days, rapid weight loss and those with abnormal electrolyte levels prior to re-feeding. A safe approach to re-feeding acknowledges the possibility of the rare, but potentially fatal, re-feeding syndrome while also recognising that an over-cautious approach (underfeeding syndrome) is equally risky.

ALL PATIENTS CONSIDERED AT RISK OF RE-FEEDING SYNDROME SHOULD BE MONITORED FOR CLINICAL SIGNS OF THE RE-FEEDING SYNDROME:

- Resting tachycardia (differential for this includes anxiety).
- Oedema or swelling, especially in the legs.
- Confusion or altered conscious state (always check glucose in this case).

PATIENTS SHOULD HAVE:

- Daily inspection for any signs of oedema (in particular, peripheral oedema) for first five days.
- Three times/day resting pulse and lying and standing blood pressure for first five days.
- Monitor for biochemical/blood parameters of the re-feeding syndrome:

- Daily urea, creatinine, sodium, potassium, phosphate, magnesium daily for five days. The drop in phosphate seen when re-feeding will normally occur within 48-72 hours.
- Blood sugars should not be measured routinely unless there is clinical evidence of hypoglycaemia (confusion, decrease in conscious level, acutely abnormal behaviours consistent with hypoglycaemia) or hyperglycaemia (positive dipstick on urine, passing urine frequently or excess thirst) (Rationale 16).
- Attention should be paid to other electrolytes such as Na, K, Mg and Ca. Ca will be low when albumin is low and should be corrected. Discussions about abnormalities in these blood parameters and how to treat them should be discussed with the attending consultant.

TREATMENT OF RE-FEEDING SYNDROME (Also see flow diagram in Appendix 1).
Re-feeding syndrome will usually present in on one of two clinical scenarios:

Low phosphate but no clinical signs of the re-feeding syndrome (this is the most common scenario).

- The responsible consultant and medical registrar should be informed.
- Keep feeding regime same, DO NOT INCREASE calories until phosphate is normalised (Rationale 17).
- Identify other electrolyte abnormalities (see below – note these are rare in this context).
- If phosphate in range (0.5-1.1):
    - If phosphate has not already been commenced prior to feeding prescribe two tablets of Sandoz phosphate to be given immediately, and commence TDS regime thereafter.
    - If phosphate has already been commenced increase dose orally or consider need for IV (Rationale 18).
- Recheck U&E in six to eight hours and monitor clinically (see above).
- If phosphate is significantly low (<0.5) or still low six to eight hours following correction then consider repeated double dose, or IV correction (Rationale 17). This is unusual. Discuss with consultant, registrar and CSP about need for transfer to medical ward – especially if phosphate remains low after an initial correction. Repeat ECG (Rationale 19).
- Patients with phosphates <0.3 in the context of the re-feeding syndrome should be transferred to a medical ward for ongoing management and cardiac monitoring (Rationale 20). Repeat ECG (Rationale 19).

Clinical signs of significant re-feeding syndrome (a combination of oedema, confusion, resting tachycardia) and (usually) low phosphate (usually low but may be normal).

- If this clinical scenario is suspected, then discussion should occur with the consultant and CSPs about transfer to a medical ward (or HDU/PICU depending on severity of clinical findings).
- Note the finding of resting tachycardia alone should prompt a medical review, check of electrolytes, ECG and careful monitoring in the first instance with consideration of other causes for tachycardia (e.g. anxiety). DO NOT INCREASE FEEDS UNTIL RE-FEEDING SYNDROME has been excluded (Rationale 17).

- Management of clinically evident re-feeding syndrome:
    - Should be transferred (when stable) for ongoing management on a medical ward (or HDU/PICU) (Rationale 20).
    - Reduce calories to starting dosage (see section above) (Rationale 17).
    - Immediately check: FBC, U&E (including Magnesium, phosphate, calcium), LFT; check blood gas for measurement of acid-base and more immediate measurement of sodium and potassium.
    - Check blood sugar and treat hypoglycaemia (Rationale 16).
    - Patient should be put on a cardiac monitor, especially those with cardiac arrhythmia and electrolyte abnormalities (Rationale 19).
    - Patients with an arrhythmia should be discussed with the duty cardiology registrar ASAP.
    - Replace electrolyte disturbances – this should generally be done intravenously in a medical setting (Rationale 20).
    - Oedema will usually complicate fluid management, albumin is often low – senior support and advice is required.
    - Initiate neuro-observations.
    - **CONSIDER DIFFERENTIAL DIAGNOSIS OF THE PRESENTATION – INCLUDING SEPSIS AND OTHER CAUSES OF ACUTE DETERIORATION IN CONSCIOUS STATE**.

OTHER IMPORTANT CONSIDERATIONS WHEN TREATING RE-FEEDING SYNDROME:

In all cases of hypophosphataemia, other causes of low phosphate should be excluded – in particular, Vitamin D deficiency and hypoparathyroidism: check PTH and Vitamin D with next set of bloods (if hasn't already been checked). These bloods should not delay feeding commencing once phosphate is normalised.

- If phosphate is significantly low (<0.5) consider IV replacement – this will generally mean transfer to a medical ward environment (Rationale 18 and Rationale 20).
- Phosphates that are potentially dangerously low (<0.3) should be managed on a medical ward/PICU and discussions should occur with the consultant and CSPs about transfer (Rationale 20).
- Check U&E (in particular phosphate) six hours later. Usually, phosphate will have corrected after the administration of phosphate.
- If clinical features develop then follow clinical scenario two below.

Important consideration for ongoing phosphate management – how to wean.

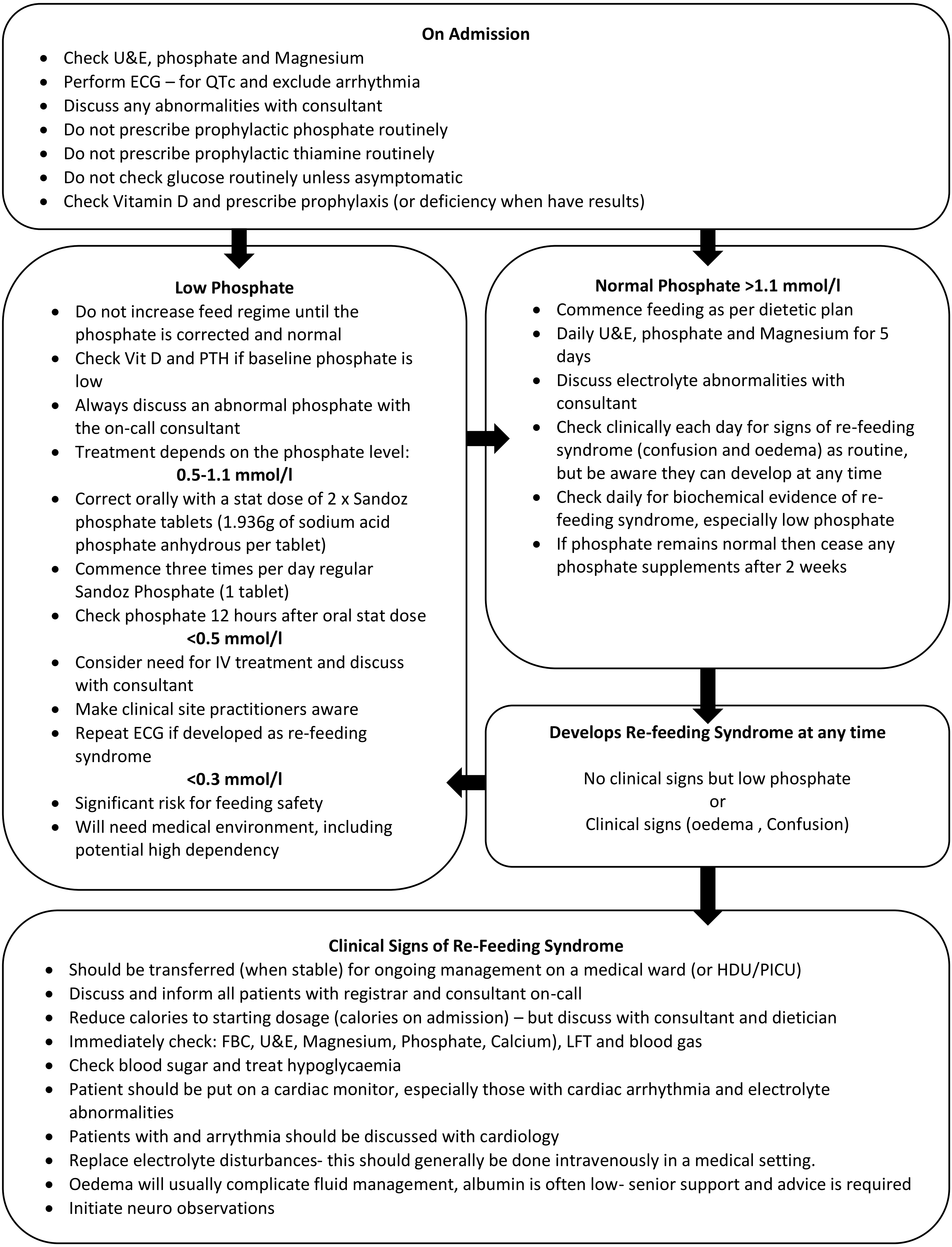
- Check phosphate at day 10, 14.
- Phosphate should normally be weaned off after two weeks of treatment if phosphate remains stable as long-term phosphate can lead to paradoxical hypophosphataemia (Rationale 10). This should be done by reducing the dose by one Sandoz phosphate tablet every two days with serial measurement of phosphate.
- Side effects of phosphate treatment include diarrhoea and abdominal pain – consider reducing the dose if phosphate is stabilised or the delivering phosphate via an IV route instead of oral.

Other considerations and complications during re-feeding:

- Severe central abdominal pain during re-feeding. Consider pancreatitis or superior mesenteric artery syndrome.
- Adherence with plan.

NB trust refeeding guideline (https://viewer.microguide.global/guide/1000000308#content,d6576e2a-0616-465e-987d-876edec13152) suggests currently available electrolyte supplements but please check dose with BNFc as this is a generic guideline, not paediatric.

APPENDIX 1: RE-FEEDING GUIDELINES FLOW CHART



On Admission

- Check U&E, phosphate and Magnesium
- Perform ECG – for QTc and exclude arrhythmia
- Discuss any abnormalities with consultant
- Do not prescribe prophylactic phosphate routinely
- Do not prescribe prophylactic thiamine routinely
- Do not check glucose routinely unless asymptomatic
- Check Vitamin D and prescribe prophylaxis (or deficiency when have results)

Low Phosphate

- Do not increase feed regime until the phosphate is corrected and normal
- Check Vit D and PTH if baseline phosphate is low
- Always discuss an abnormal phosphate with the on-call consultant
- Treatment depends on the phosphate level:

0.5-1.1 mmol/l

- Correct orally with a stat dose of 2 x Sandoz phosphate tablets (1.936g of sodium acid phosphate anhydrous per tablet)
- Commence three times per day regular Sandoz Phosphate (1 tablet)
- Check phosphate 12 hours after oral stat dose

<0.5 mmol/l

- Consider need for IV treatment and discuss with consultant
- Make clinical site practitioners aware
- Repeat ECG if developed as re-feeding syndrome

<0.3 mmol/l

- Significant risk for feeding safety
- Will need medical environment, including potential high dependency

Normal Phosphate >1.1 mmol/l

- Commence feeding as per dietetic plan
- Daily U&E, phosphate and Magnesium for 5 days
- Discuss electrolyte abnormalities with consultant
- Check clinically each day for signs of re-feeding syndrome (confusion and oedema) as routine, but be aware they can develop at any time
- Check daily for biochemical evidence of re-feeding syndrome, especially low phosphate
- If phosphate remains normal then cease any phosphate supplements after 2 weeks

Develops Re-feeding Syndrome at any time

No clinical signs but low phosphate
or
Clinical signs (oedema , Confusion)

Clinical Signs of Re-Feeding Syndrome

- Should be transferred (when stable) for ongoing management on a medical ward (or HDU/PICU)
- Discuss and inform all patients with registrar and consultant on-call
- Reduce calories to starting dosage (calories on admission) – but discuss with consultant and dietician
- Immediately check: FBC, U&E, Magnesium, Phosphate, Calcium), LFT and blood gas
- Check blood sugar and treat hypoglycaemia
- Patient should be put on a cardiac monitor, especially those with cardiac arrhythmia and electrolyte abnormalities
- Patients with and arrythmia should be discussed with cardiology
- Replace electrolyte disturbances- this should generally be done intravenously in a medical setting.
- Oedema will usually complicate fluid management, albumin is often low- senior support and advice is required
- Initiate neuro observations

REFEEDING VITAMINS AND MINERALS

This is a guide – please see local policies

Refeeding vitamin protocol for over 14 year olds

This patient has been identified as being **at risk of refeeding syndrome**. Please monitor **Nutrition Bloods** (PO4, Mg+, K+, Ca²+) **DAILY** and supplement electrolytes as required.

Please prescribe the following for 10 days:

- **Thiamine –** 100mg TDS (with the first dose administered 30 minutes before initiating feeding) either orally or crushed and flushed via feeding tube
- **Vitamin B Compound Strong** 1 tablet TDS **OR Vitamin B Syrup/ Vigranon B** 5ml TDS
- **1 Sanatogen A-Z** tablet OD **OR 1 Forceval Soluble (**dissolved in 50ml water via feeding tube) OD

If enteral route not available,

- Administer intravenous **Pabrinex®** (ampoules 1 and 2 = one pair) OD 30 minutes before initiating feeding and then OD for 3 days. If after 3 days it is not possible to revert to oral or enteral route, further supplementation should be discussed with the Nutrition team.

Refeeding vitamin protocol for under 14 year olds

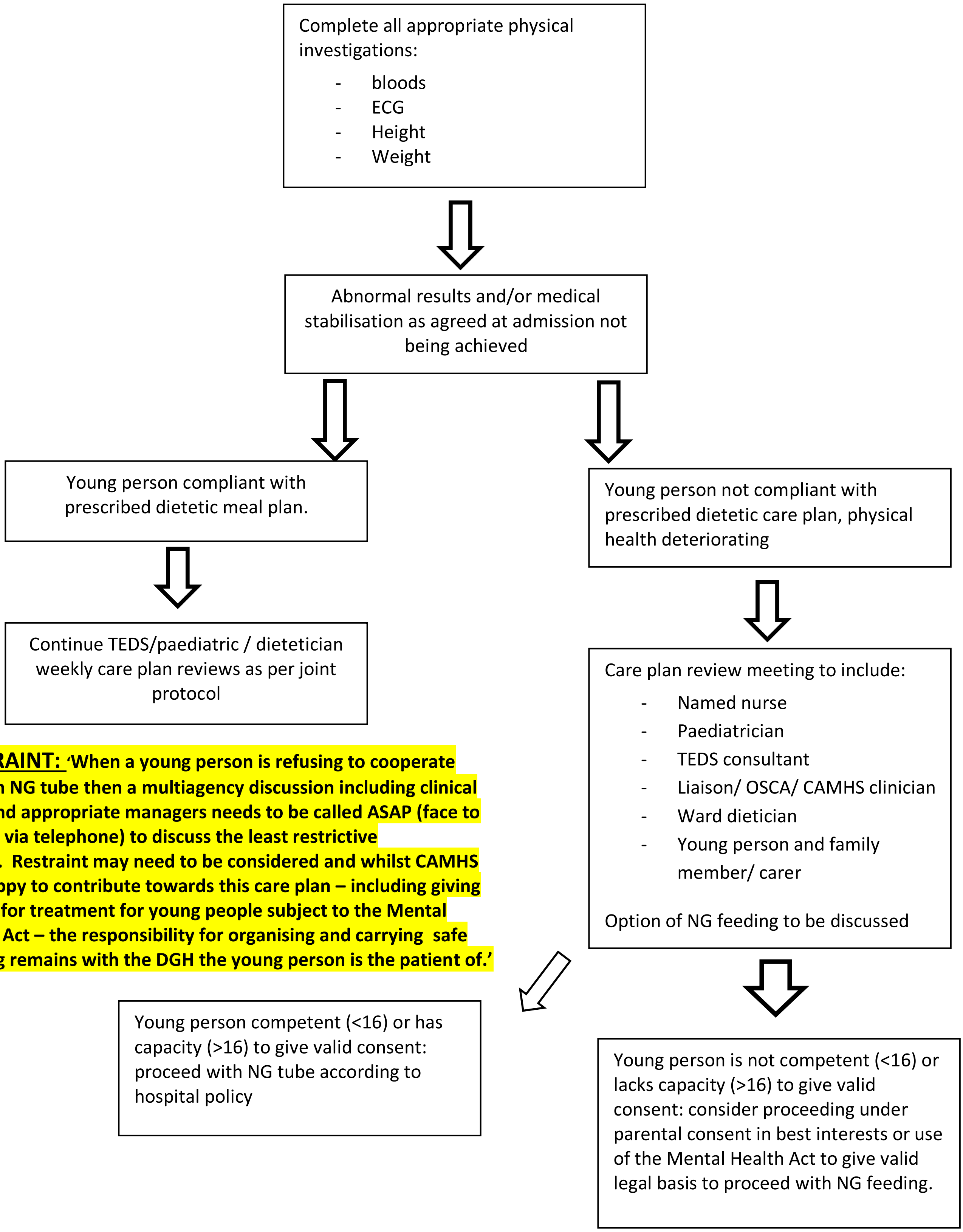
1 x A-Z tablet OD or 1 x Forceval Junior Soluble (dissolved in 50 ml water via feeding tube) OD.

REVIEW

A sick child with an eating disorder needs Registrar/consultant paediatric review on admission and at least daily if there are paediatric (medical) issues.

APPENDIX 2 - NASOGASTRIC FEEDING PROCESS

LOCAL HOSPITAL ENTERAL FEEDING POLICY MUST BE ADHERED TO



Complete all appropriate physical investigations:

- bloods
- ECG
- Height
- Weight

Abnormal results and/or medical stabilisation as agreed at admission not being achieved

Young person compliant with prescribed dietetic meal plan.

Continue TEDS/paediatric / dietetician weekly care plan reviews as per joint protocol

Young person not compliant with prescribed dietetic care plan, physical health deteriorating

Care plan review meeting to include:

- Named nurse
- Paediatrician
- TEDS consultant
- Liaison/ OSCA/ CAMHS clinician
- Ward dietician
- Young person and family member/ carer

Option of NG feeding to be discussed

RESTRAINT: **'When a young person is refusing to cooperate with an NG tube then a multiagency discussion including clinical staff and appropriate managers needs to be called ASAP (face to face or via telephone) to discuss the least restrictive option. Restraint may need to be considered and whilst CAMHS are happy to contribute towards this care plan – including giving advice for treatment for young people subject to the Mental Health Act – the responsibility for organising and carrying safe holding remains with the DGH the young person is the patient of.'**

Young person competent (<16) or has capacity (>16) to give valid consent: proceed with NG tube according to hospital policy

Young person is not competent (<16) or lacks capacity (>16) to give valid consent: consider proceeding under parental consent in best interests or use of the Mental Health Act to give valid legal basis to proceed with NG feeding.

Please refer to joint ED protocol for guidance re: Initiation of NG feeding and process of review

APPENDIX 3 - DIETETIC GUIDELINES

“Food is medicine to a young person with anorexia nervosa”

A young person with anorexia nervosa has surprisingly high energy needs. Firstly, they need to eat enough to support day-to-day activities, secondly a surplus amount to induce a sustained weight gain. For most young people under 45kg, in the absence of excessive exercise, approximately 1400 kcal will achieve this. An intake of approximately 2200 – 2500kcal/day should promote a weight gain of 0.5 – 1.0kg/week. If this energy is provided from ‘normal’ food, what would this look like?

Breakfast
Cereal (2 x Weetabix or cup of flakes / krispies) + milk **plus** 2 x slice toast with spread **plus** glass fruit juice

Morning snack
Snack from list (see below) + 150ml milk

Lunch
Soup + sandwich **or**)
Baked potato + beans + cheese **or**) **plus** dessert (e.g. sponge + custard) + 200ml drink
Pasta bake)

Afternoon snack
Snack from list (see below) + 150ml milk

Evening meal
e.g. potatoes + fish fingers + peas **or**)
spaghetti Bolognese **or**) **plus** dessert (e.g. fruit + ice cream) + 200ml drink
pizza + salad)

Supper
Snack from list (see below) + 150ml milk

SNACK LIST (examples)
Piece of cake
Flapjack
Muffin
Scone
Yoghurt
Chocolate bar
Large cookie
2 x biscuits (plain or cream-filled or chocolate)
Croissant
2 x scotch pancakes / crumpets
packet of nuts
cereal bar
1 x slice toast with spread and jam
packet of crisps

NON-COMPLETION OF MEALS

If any of the main meal or dessert is left (e.g. if one mouthful is left) then an ONS (See Appendix 5) must be given. If a young person would rather have a second attempt to finish their meal rather than an ONS, they should be allowed to do so. 10 minutes should be allowed for this. If the meal is not completed in this time, an ONS should be offered as before.

It is reasonable for a young person to finish the ONS in 10 minutes. If the main meal is not completed in full, provide the ONS, then offer dessert. If dessert not eaten in full, then offer another ONS.

APPENDIX 4: INFORMATION FOR YOUNG PEOPLE AND THEIR FAMILIES / CARERS

(ADMISSION PROCESS AND CARE PLAN)

You have been admitted to the paediatric ward for treatment due to medical concerns relating to your anorexia nervosa. The paediatric ward team, paediatric dietitian and TEDS (the CAMHS eating disorder service) have worked together to develop a plan for your care. This plan is aimed at stabilising your medical condition. An important part of your treatment with us will involve ensuring that you have adequate daily amounts of food and drink.

We understand that this can be a very distressing time both for yourself and your family / carers. We are aware that you may not be happy about coming into hospital. We believe that it is best if you are fully informed of your treatment plan on admission: the nature of your illness means that you may feel a strong need to resist treatment.

The following plan may appear very strict and rigid: the aim of this is to reduce any confusion and to ensure that you, your family, and the ward staff are all very clear about what will happen during your admission.

CARE MANAGEMENT PLAN

1) There will be two food choices or dislikes (specific food, not food groups) allowed during your admission. Staff will not enter into any discussion or negotiation regarding this. The only exception to this is where there is an identified medical reason for a particular food not to be given.

2) All food choices will be decided by the staff team based on the dietetic plan devised to ensure weight gain. Staff will not enter into any negotiation regarding food choices: the staff are aware that because of your anorexia you will wish to reduce food choices wherever possible.

3) The expected rate of weight gain is 800g/week. The aim is to gradually increase your weight to within the normal range for your age and height.

4) On the morning after your admission you will be weighed. In the following weeks you will be weighed twice weekly before breakfast in your nightwear (without your dressing gown) an hour post wee. Staff will show you your weight chart after each weighing. Although this may be upsetting it is also important to show you that your weight is not getting out of control now that you are eating more.

5) It is helpful to think about the eating plan you are being expected to follow as being your prescribed medicine or treatment. The staff need to adhere strictly to the prescribed meal plan because your low weight is having such a serious impact on your physical health.

6) All meals and snacks will be supervised by staff. The following time limits will be followed:
    - 30 minutes per main meal
    - 20 minutes per snack

At the end of these times any leftover food will be removed and if the meal has not been completely eaten you will be given an ONS (See Appendix 5).
Staff do understand that eating can be an extremely distressing experience for a young person with anorexia. In our experience we have found the best approach to be supportive, but very firm in our expectation that you will eat all of the food given to you. The aim of this approach is to get control over the fear you have about eating.

7) You will be expected to go to the toilet prior to your meal or snack and to not visit the toilet or bathroom for at least 1 hour after meals. This is to help you resist the urge to exercise or do other things that may place you in danger given the worries about your physical health.

8) It is likely in the weeks leading up to your admission that your parents / carers have been extremely worried about you. You may also have shown high levels of distress and anger at mealtimes: your parents / carers may have found themselves backing down for fear of making you worse. Therefore, while you are on the ward, parents / carers are asked to visit during the evening or between the main mealtimes of the day. If they visit during mealtime / snack time, then they will be asked to leave the ward until the meal / snack has been completed.

9) You have been admitted to a medical ward because of serious concerns about your physical state. Consequently, you will be on bed rest (resting on a bed or in a chair and using a wheelchair to visit the toilet / bathroom). This is non-negotiable. Minimal physical activity (e.g. walking short distances around the ward) will be planned into your treatment once your physical state is improving and you are co-operating with the prescribed meal plan.

10) Your medical team will discuss which tests are necessary and how often (these will include heart traces (ECGs), blood pressure checks, temperature checks, blood tests and physical examinations. These tests and checks are essential because when people are at very low weights, there is a much higher risk of sudden death due to heart / circulation problems.

11) During your admission, there will be weekly review meetings including your paediatric team (usually a nurse and a doctor), dietitian, CAMHS eating disorder team member, yourself and your parents / carers. This is to ensure everyone is aware of the plan and that your care is consistent. Any changes to your care plan will be made at these review meetings. No changes will be made between meetings by individual staff members, unless there is an urgent medical reason to do so.

It is understandable that the above plan may seem unreasonable to you; staff are there to support you with this. The aim of this plan is to ensure you recover and can be discharged as soon as possible.

Prior to discharge, the ward staff will consult with the service which referred you to ensure there are plans in place to support your recovery from anorexia nervosa after you leave the ward.

A copy of this plan has been given to your parents / carers so they are fully aware of your treatment.

APPENDIX 5: LIST OF ONS TO USE IN PLANS

All of these are equal ONS = 300kcal

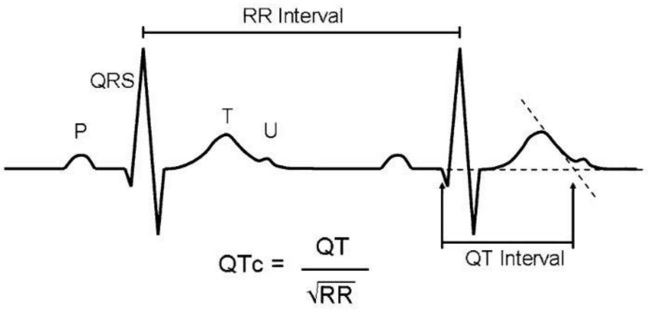
Fortisip 200ml
Fortisip Compact 125ml
Fresubin 200ml
Ensure Plus 200ml

APPENDIX 6: EATING DISORDER - RISK ASSESSMENT/JUNIOR MARSIPAN

Name:

Weight	kg	Date
Height	m	
BMI	kg/m²	
%BMI		
Heart Rate	bpm	
Sitting BP /		
Standing BP /		
QTc	ms	
Temp	°C	

$$\% \text{ BMI} = \frac{\text{Actual BMI} \times 100}{\text{Median BMI } (50^{th} \text{ centile})}$$



$$\text{QTc} = \frac{\text{QT}}{\sqrt{\text{RR}}}$$

Latest Blood Tests- Date______________

Hb	g/dl	CK	mmol/l
WCC		Total Ca^{2+}	mmol/l
Neut		Alb	mmol/l
Platelets		PO_4	mmol/l
Na	mmol/l	Alk Phos	mmol/l
K	mmol/l	Mg	mmol/l
Urea	mmol/l	Bilirubin	mmol/l
Creat	µmol/l	ALP	mmol/l
Glucose	mmol/l		

TFT Normal / Abnormal
Coeliac Screen Negative / Positive
} Once since diagnosis

	Red high risk	Amber alert to high concern	Green moderate risk	Blue low risk
BMI and Weight	%BMI <70 ☐	%BMI 70–80% ☐	%BMI 80–85% ☐	%BMI >85% ☐
	Recent loss of weight of 1 kg or more/week for 2 weeks ☐	Recent loss of weight of 500– 999 g/week for 2 weeks ☐	Recent weight loss of up to 500 g/week for 2 weeks ☐	No weight loss over past 2 weeks ☐
Heart	HR<40 bpm ☐	HR 40–50 bpm ☐	HR 50– 60 bpm ☐	HR >60 bpm ☐
		Sitting BP: systolic or diastolic <0.4th centile	Sitting BP: systolic or diastolic < 2nd centile	Sitting BP: systolic or diastolic >2nd centile

	☐	☐	☐	☐
	Recurrent syncope or fall in systolic blood pressure of 20 mmHg or increase in heart rate of >30 bpm ☐	Occasional syncope or fall in systolic blood pressure of 15 mmHg or more, or diastolic blood pressure fall of 10 mmHg or more within 3 min standing, or increase in heart rate of up to 30 bpm ☐	Pre-syncopal symptoms but normal orthostatic cardiovascular changes ☐	Normal orthostatic cardiovascular changes ☐
	Irregular heart rhythm (does not include sinus arrhythmia) ☐			Normal heart rhythm ☐
ECG	QTc>460 ms (girls) or 400 ms (boys) with evidence of arrhythmia ☐	QTc>460 ms (girls) or 400 ms (boys) ☐	QTc<460 ms (girls) or 400 ms (boys) and taking medication known to prolong QTc interval, family history of prolonged QTc or sensorineural deafness ☐	QTc<460 ms (girls) or 400 ms (boys) ☐
Hydration status	Fluid refusal 10% dehydration ☐	Severe fluid restriction 5–10% dehydration ☐	Fluid restriction <5% dehydration ☐	Not clinically dehydrated ☐
Temperature	35.0°C axillary ☐	<36°C ☐		
Biochemical abnormalities	↓ PO_4 ↓ K ↓ Albumin ↓ Glc ↓ Na ↓ Ca ☐	↓ PO_4 ↓ K ↓ Na ↓ Ca ☐		
Disordered eating behaviours	Acute food refusal or estimated calorie intake 400–600 kcal per day ☐	Severe restriction (less than 50% of required intake), vomiting, purging with laxatives ☐	Moderate restriction, bingeing ☐	

Engagement with management plan	Violent when parents try to limit behaviour or encourage food/fluid intake, parental violence in relation to feeding (hitting, force feeding) ☐	Poor insight into eating problems, lacks motivation to tackle eating problems, resistance to changes required to gain weight, parents unable to implement meal plan advice given by healthcare providers ☐	Some insight into eating problems, some motivation to tackle eating problems, ambivalent towards changes required to gain weight but not actively resisting ☐	Some insight into eating problems, motivated to tackle eating problems, ambivalence towards changes required to gain weight not apparent in behaviour ☐
Activity and exercise	High levels of uncontrolled exercise (>2 h/day) ☐	Moderate levels of uncontrolled (>1 h/day) ☐	Mild levels of uncontrolled (<1 h/day) ☐	No uncontrolled exercise ☐
Self-harm and suicide	Self-poisoning, suicidal ideas with moderate to high risk of completed suicide ☐	Cutting or similar behaviours, suicidal ideas with low risk of completed suicide ☐		
Other mental health diagnoses		Other major psychiatric co-diagnosis, ☐		
Sit up from lying flat	Unable to sit up at all from lying flat ☐	Unable to sit up without using upper limbs ☐	Unable to sit up without noticeable difficulty ☐	Sits up from lying flat without any difficulty ☐
Stand up from squat	Unable to get up at all from squatting ☐	Unable to get up without using upper limbs ☐	Unable to get up without noticeable difficulty ☐	Stands up from squat without any difficulty ☐
Other	Confusion and delirium, acute pancreatitis, gastric or oesophageal rupture ☐	Mallory–Weiss tear, GOR or gastritis, pressure sores ☐	Poor attention and concentration ☐	

Summary	Total ticks ☐ out of 17	Total ticks ☐ out of 17	Total ticks ☐ out of 13	Total ticks ☐ out of 12

Any red boxes consider admission for further assessment

Any orange boxes needs discussion with paediatric consultant

Conclusions

Signature, name & grade