Post-Discharge Bariatric Information Leaflet For General Practitioners and Patients

British Obesity & Metabolic Surgery Society (BOMSS)

www.bomss.org.uk

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INTRODUCTION

Your patient has now been discharged from the Tier 4 Bariatric Surgery Pathway; the information provided in this leaflet is to assist General Practitioners in the ongoing management of patients following bariatric surgery.

Within this leaflet abstracts have been taken from the British Obesity & Metabolic Surgical Society website and Royal College of General Practitioners website highlighting the relevant guidelines required to safely monitor patients post bariatric surgery.

Hull University Teaching Hospital Trust's policy recommends that your patient will require the following supplementary medications for life:

- Calcium with Vitamin D
- Multivitamins with minerals
- Vitamin B12
- Iron (may or may not be required – we recommend monitoring ferritin level)

Your patient will require the following blood tests (bariatric blood profile) annually around the time of the month of their operation.

- Full Blood Count
- Biochemical Profile (U&E's and LFT's)
- Vitamin D
- Ferritin
- Folate
- B12
- HbA1c (if a patient had a history of diabetes)

For further information, please see guidelines and advice extracted from the Royal College of General Practitioners and British Obesity and Metabolic Surgery Society within this leaflet. For more in-depth information please access the internet links provided in the appendices at the end of this leaflet.

IMPACT OF SURGERY ON NUTRITION

"The main bariatric surgery procedures are the gastric band, gastric bypass and sleeve gastrectomy with the duodenal switch being less frequent. In the initial stages after surgery, patients are advised to start on a liquid diet, before progressing onto pureed food, soft food and then more normal textured food. At two years, the patient should be able to manage a wide range of textures of foods but may still report difficulties with some. It should not be assumed that all patients are eating a "well balanced" diet. Hopefully many will be however some may have maladaptive eating behaviours resulting in a poor nutritional intake."

Extract taken from British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery *(please see appendices for link)*

Surgical procedure	Impact on nutrition
Gastric band	No impact on absorption. Over tight gastric band affects nutritional quality of diet including protein and iron
Sleeve gastrectomy	May be some impact on absorption including iron and vitamin B12
Gastric bypass	Impacts on absorption of iron, vitamin B12, calcium and vitamin D Long limb bypasses may affect absorption of protein, fat, vitamin A and trace elements in addition
Duodenal switch	Impacts on absorption of protein, fat, calcium, fat soluble vitamins A, D, E and K, zinc

Table 1: *Extracted from* British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery *(please see appendices for link)*

POST-OPERATIVE NUTRITIONAL SUPPLEMENTATION (ROUTINE)

"As nutrition is compromised with bariatric surgery, it is recommended that patients take nutritional supplements lifelong in addition to having a balanced diet. It is important that compliance with supplements is checked regularly. Table 2 shows the usual recommended nutritional supplements, but it should be noted that patients may have different requirements. Although patients who have a gastric band should be able to eat a nutritionally balanced diet, many will be advised to routinely take a multivitamin and mineral supplement. The patient's bariatric centre should provide full details of the patient's nutritional requirements and supplements. For further information, please refer to the British Obesity and Metabolic Surgery Society (BOMSS) guidelines (O'Kane *et al* 2014)."

Extract taken from British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery *(please see appendices for link)*

	Surgical procedure		
Nutritional supplement	Sleeve Gastrectomy	Gastric bypass	Duodenal switch
Multivitamin and mineral	Yes	Yes	Yes
Iron	Yes	Yes	Yes
Folate	As part of multivitamin and mineral	As part of multivitamin and mineral	As part of multivitamin and mineral
Vitamin B12	Yes (1)	Yes	Yes (1)
Calcium and vitamin D	Yes	Yes	Yes
Zinc and copper	As part of multivitamin and mineral	As part of multivitamin and mineral	As part of multivitamin and mineral. Additional may be needed
Selenium	As part of multivitamin and mineral	As part of multivitamin and mineral	As part of multivitamin and mineral
Additional fat soluble vitamins	No	No	Yes

(1) May be variation between centres as to whether routine supplementation with vitamin B12 following the sleeve gastrectomy or duodenal switch

Table 2: *Extracted from* British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery *(please see appendices for link)*

Iron may or may not be required. We recommend monitoring ferritin

POST-OPERATIVE BLOOD MONITORING

"Continued nutritional monitoring is essential following bariatric surgery to ensure that patients do not develop nutritional problems in the longer term. It must be not assumed however that abnormal blood results are always directly related to the surgery itself. Table 3 shows the recommended blood tests which should be done annually as a minimum for the sleeve gastrectomy, gastric bypass and duodenal switch. Following the gastric band, if there is any suspicion that the patient is not adhering to a nutritionally balanced diet, appropriate blood tests should be done."

	Surgical procedure		
Blood tests	Sleeve Gastrectomy	Gastric bypass	Duodenal switch
Liver function tests	Yes	Yes	Yes
Full Blood Count	Yes	Yes	Yes
Ferritin	Yes	Yes	Yes
Folate	Yes	Yes	Yes
Vitamin B12	Yes (1)	Yes (1)	Yes (1)
Calcium	Yes	Yes	Yes
Vitamin D	Yes	Yes	Yes
Parathyroid hormone	Yes	Yes	Yes
Vitamin A	No	Possibly (2)	Yes
Zinc, copper	Possibly (3)	Yes (3)	Yes (3)
Selenium	No (3, 4)	No (3, 4)	No (3, 4)

(1) If patient is having three monthly intramuscular injections of vitamin B12, there may be no need for annual checks

(2) If the patient has a long limbed bypass, symptoms of steatorrhoea or night blindness

(3) Measure when concerns for example, if screening for iron deficiency anaemia is negative, hair loss, pica, neutropaenia

(4) Measure when concerns for example, cardiomyopathy, chronic diarrhoea

Table 3: *Extracted from* British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery *(please see appendices for link)*

Alternatively oral Cyanocobalamin 1mg once daily can be prescribed as an alternative to Vitamin B12 injections.

The Bariatric Service recommends annual Vitamin B12 blood tests

EMERGENCY DEPARTMENT MANAGEMENT OF BARIATRIC PATIENTS

"The following poster has been developed as an aid for initial assessment and management of a bariatric surgery patient presenting to the emergency department or acute assessment unit."

Operation types: Gastric Band, Gastric Bypass, Sleeve Gastrectomy

Presentation	This may signify	Action
Total Dysphagia	Acute band slippage (herniation) – may require emergency surgery for gastric ischaemia even in apparently well patients	A
GI Bleed	Anastomotic bleed, marginal ulcer. May not be accessible at endoscopy post bypass procedures – may need surgery	A
Intestinal Obstruction	Anastomotic stricture, internal hernia or port site hernia	A
Chest pain, Tachycardia, Breathlessness	Pulmonary embolus, myocardial infarction, gastric pouch problems, anastomotic leak	B
Abdominal pain	Sub-acute obstruction from internal hernia, anastomotic leak	B
Reflux symptoms, no dysphagia to fluids	Band slip, gastrojejunal stenosis	C
Port site infection in band patient	Gastric band erosion/infected band	C

Action

A	Urgent Referral for band deflation and surgery if appropriate
B	Initial investigations as appropriate. CT may be impossible or misleading. Early discussion with surgical team advisable
C	Treat appropriately, urgent bariatric appointment

Remember

- Bariatric patients have non-bariatric problems
- Abdominal peritonism may be less apparent in obese patients
- Do **NOT** insert a nasogastric tube
- Basic surgical principles apply regardless of patient size
- Gastric Bypass patients – with prolonged vomiting, thiamine deficiency may develop in a few days. Please prescribe Pabrinex and Vitamin B complex to prevent potentially irreversible neurological deficit

If your patient has any further complications they can be re-referred back to the Bariatric Service.

Table 4: *Extracted from* British Obesity & Metabolic Surgical Society Guidelines *(please see appendices for link)*

TOP 10 TIPS FOR GENERAL PRACTITIONERS

Please see below the ten top tips for the management of patients post bariatric surgery in primary care extracted from the Royal College of General Practitioners for further information please access the internet link provided in the appendices.

"Ten top tips for the management of patients post bariatric surgery in primary care

1. Keep a register of bariatric surgery patients and record the type of procedure in the register. Please note that follow up varies according to the type of surgery.

2. Encourage patients to check their own weight regularly and to attend an annual BMI and diet review with a health professional.

3. Symptoms of continuous vomiting, dysphagia, intestinal obstruction (gastric bypass) or severe abdominal pain require emergency admission under the local surgical team.

4. Continue to review co-morbidities post surgery such as diabetes mellitus, hypertension, hypercholesterolaemia and sleep apnoea, as well as mental health.

5. Review the patient's regular medications. The formulations may need adjusting post-surgery to allow for changes in bio-availability post surgery.

6. Bariatric surgery patients require lifelong annual monitoring blood tests, including micronutrients. Encourage patients to attend for their annual blood tests.

7. Be aware of potential nutritional deficiencies that may occur and their signs and symptoms. In particular, patients are at risk from anaemia and vitamin D deficiency, as well as protein malnutrition and other vitamin and micronutrient deficiencies. If a patient is deficient in one nutrient, then screen for other deficiencies too.

8. Ensure the patient is taking the appropriate lifelong nutritional supplements required post surgery as recommended by the bariatric centre. Ensure guidance regarding vitamin supplementation has been issued by the bariatric surgery team. Request a copy for the patient's GP records if this has not been included in the discharge information.

9. Discuss contraception – ideally pregnancy should be avoided for at least 12-18 months post surgery.

10. If a patient should plan or wish to become pregnant after bariatric surgery, alter their nutritional supplements to one suitable during pregnancy. Inform the local bariatric unit of patient's pregnancy and the obstetric team of the patient's history of bariatric surgery."

Extract 5: Royal College of General Practitioners
Ten top tips for the management of patients post bariatric surgery in primary care (September 2014)

HEALTHY EATING LONG TERM AFTER WEIGHT LOSS SURGERY

Healthy diet and lifestyle is key to long term weight loss success. Without continuing a balanced diet and being active weight regain can occur.
The following ideas should help you achieve weight loss and help you keep your weight stable long term.

1. Eat 3 meals per day.

   Missing meals can lead to you over eating later in the day. It can also increase the chances of snacking, grazing and making unhealthy food choices. Try to spread meals out evenly across the day to avoid the feeling of hunger or cravings.

   Missing meals can also lead to low levels of vitamins, minerals and proteins in your body. This can impact on how well your body functions and cause ill health. Use a side plate to help keep portion sizes small.

2. Make sure all meals are balanced

   Include fruits or vegetables, proteins and starchy carbohydrates with each meal.

   Protein rich foods include: meat, fish, eggs, beans, pulses and lentils, dairy and meat alternatives. These foods keep you full for a long time, help keep muscles strong and are important for growth and healing.

   Starchy carbohydrates include: bread, rice, pasta, potatoes and cereals. Choose whole grain/ brown options as able as these contain fibre which is important for bowel health and will keep you fuller for longer.
   Fruits and vegetables can be fresh, tinned or frozen. You should include a wide range of different fruits and vegetables in your diet as these contain vitamins and minerals. They are also a good source of fibre to help you feel fuller for longer.

3. Make sure you drink plenty of fluid

   Aim for 2-3 litres of water a day. You can add no added sugar squash. Teas and coffees are also included but try to drink plenty of fluids that do not contain caffeine. Avoid fizzy drinks.

4. Stop drinking 30 minutes before a meal and start drinking 1 hour after.

5. Don’t drink too much alcohol

See the NHS choices website for more information alcohol. Speak with you GP about alcohol if you fell you would like support with reducing how much you drink. Be aware alcohol contains lots of calories that can lead to weight re-gain

If you would like more support with healthy eating, weight loss or making dietary changes, speak with your GP about referral to a community dietitian or local weight management services.

If your patient has any further complications they can be re-referred back to the Hull University Teaching Hospital Trust’s Bariatric Service using the electronic referral system (eRS).

APPENDICES

Extract and Table 1: British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery
http://www.bomss.org.uk/wp-content/uploads/2014/09/GP_Guidance-Final-version-1Oct141.pdf

Extract and Table 2: British Obesity & Metabolic Surgical Society GP Guidance: Management of nutrition following bariatric surgery
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http://www.bomss.org.uk/wp-content/uploads/2014/09/GP_Guidance-Final-version-1Oct141.pdf

Table 4: British Obesity & Metabolic Surgical Society (2014)
https://www.bomss.org.uk/wp-content/uploads/2014/04/ED_Poster_Complications_Version_6.pdf

Extra 5: Royal College of General Practitioners
Ten top tips for the management of patients post bariatric surgery in primary care (September 2014)
https://www.rcgp.org.uk/-/media/Files/CIRC/Nutrition/Obesity/RCGP-Top-ten-tips-for-post-bariatric-surgery-patients-in-primary-care-Nov-2014.ashx?la=en

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