

Obesity is recognised as a major health and economic issue for the National Health Service. The rate of severe obesity with BMI >40 is increasing rapidly and these patients have a disproportionate increase in health and social care needs. NICE recognises bariatric surgery as an appropriate and cost-effective treatment for this group of patients and the number of surgical procedures is likely to increase. With a lack of commissioned local Tier 3 weight management services many of these patients may be lost to follow up and be at risk of nutritional deficiencies and metabolic complications. The RCGP Nutrition Group has developed these guidelines in response to this problem.

Patients who have had their procedure carried out under the NHS have specialist follow up for the first 1-2 years post surgery. These guidelines are aimed at all non-specialist clinicians, dietitians and nurses to aid management after discharge back to primary care and where follow up guidance by the surgical team was not issued. Note that patients who have moved area or who undergo a private procedure are likely to have had less specialist follow up and may need to be managed in primary care earlier post procedure.

Ten Top Tips – brief summary

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.

Any new concerns should always trigger referral to a Tier 3 weight management service (if available) or the local bariatric surgical team for further advice.

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Reviewing regular medications

Formulations may need adjusting to allow for changes in bio-availability post surgery, especially after gastric bypass and duodenal switch procedures. Other considerations include the following:

1. Review co-morbidity medications post surgery, such as anti-hypertensives, diabetes medications, etc.
Requirements are likely to fall with post-operative weight loss, but may increase later if weight loss is not maintained.
2. Use diuretics with caution due to the increased risk of hypokalaemia.
3. Replace extended release formulations with immediate release formulations.
4. Avoid NSAIDs, if no alternative use only with PPI.
5. Avoid bisphosphonates.
6. Consider pill size – patients may need liquid formulations or syrups in the short term in the immediate post-operative period. However, usual medication formulations should be tolerated by around 6 week post-op.
7. Monitor anticoagulants carefully.
8. Psychiatric medications may need increased or divided doses.
9. Avoid effervescent medications for patients with gastric bands.

Regular annual monitoring

LFTs, FBC, ferritin, folate, vitamin B12 (unless on injections), calcium, vitamin D, parathyroid hormone, zinc, copper, vitamin A (duodenal switch and possibly bypass only).

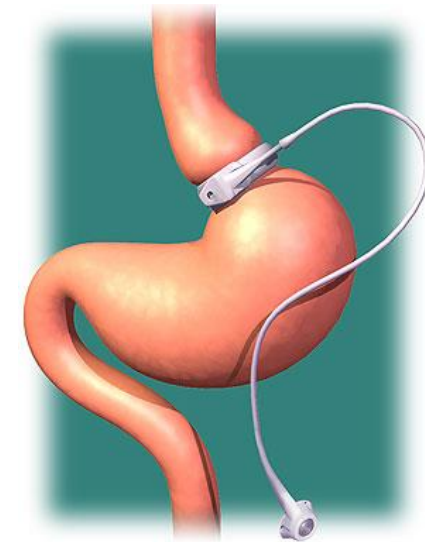
NB: Gastric band patients only require annual FBC, U&Es and LFTs, unless there are unexplained symptoms.

Consider risk of:

- Protein malnutrition – oedema,
- Anaemia – iron, folate and vitamin B12 (remember other potential causes such as blood loss).
- Calcium and vitamin D deficiency which may result in secondary hyperparathyroidism.
- Vitamin A deficiency – suspect in patients with changes in night vision, especially if steatorrhoea or those who have had a duodenal switch.
- Zinc, copper and selenium – unexplained anaemia, poor wound healing, hair loss, neutropenia, peripheral neuropathy and cardiomyopathy.
- Thiamine deficiency – suspect in patients with poor intake, persistent



Royal College of
General Practitioners



GP Ten Top Tips:

Managing patients post bariatric surgery in primary care