



Why are People Who Have had Bariatric Surgery at Risk for Iron Deficiency?

If you have had bariatric surgery to help control your weight, you may find yourself feeling exhausted day after day, weeks after you have recovered from the actual operation. One possible cause of this fatigue is iron deficiency.

What is bariatric surgery?

The term bariatric surgery covers many different operations that encourage weight loss and which are typically performed on people who are obese. Weight loss is achieved by modifying your stomach and/or intestines to restrict the type and amount of food that you can eat and, sometimes, the types of nutrients that can be absorbed from your food. Two common types of surgery are Roux-en-Y gastric bypass and the fitting of a gastric band. In 2011 there were over 340,000 bariatric surgeries worldwide.¹

Why are people who have had bariatric surgery at risk of iron deficiency?

If you have had any kind of bariatric surgery, it is possible that you could become iron deficient. You could have low iron levels for one or both of the following reasons.

- You could be eating less iron-rich foods, such as red meat, because you may now find them difficult to tolerate.²
- You may be absorbing less iron from your food. After bariatric surgery your stomach can produce less acid. This acid is needed to break down your food and release the iron it contains.²

Following a gastric bypass, such as a Roux-en-Y procedure, there are additional reasons why you may become iron deficient. You may be absorbing less iron from your diet, as your food will no longer be passing through the part of your intestines where iron is absorbed.² In addition you may have lost, or be losing, blood at the site of your surgery.³

Each type of gastric surgery has a different risk of iron deficiency. Generally speaking gastric bypass procedures are more likely to lead to iron deficiency than gastric bands.³ 50% of people who have had bariatric surgery are iron deficient within one year of the surgery. One study also found that between 20% and 62% of patients were iron deficient 4 to 12 years after surgery, depending on the type of procedure used.⁴

If you are a menstruating woman who has had bariatric surgery, the risks for iron deficiency are greater still, and iron deficiency can become a long-term problem.³ Similarly, if you are a vegetarian, or your weight-loss efforts have left you eating more of a vegetarian diet, you may be more at risk. This is because you could be eating less iron-rich foods.³

Following bariatric surgery it is important to treat any iron deficiency that develops. Your doctor can prescribe therapies that will help you to make the most of your weight loss and that have been shown to improve quality of life in some patients.⁵

Warning signs of iron deficiency following bariatric surgery

One of the main symptoms of iron deficiency is fatigue, a more extreme version of tiredness. If you are experiencing fatigue, you may feel physically and mentally exhausted and lack energy for a number of days each week, even if you have not been doing any physical activities that are particularly tiring.⁶ You may be too exhausted to complete normal daily tasks such as getting dressed or going shopping, and you may often feel too tired to spend time with friends or family.

There are also many other signs that may indicate that you have iron deficiency or iron deficiency anaemia. These include:

- Dizziness,⁷ irritability,⁸ and loss of concentration.⁹
- Looking pale.¹⁰
- Shortness of breath and a racing heart.¹¹
- Sore tongue or dry mouth.¹²
- Cold intolerance or cold hands and feet.¹³
- Headache.¹⁴

Iron deficiency is not the only cause of fatigue. For example, bariatric surgery can put you at risk of vitamin B12 deficiency, which can also cause exhaustion.³ It is therefore important that you talk to your doctor about your fatigue, and any other symptoms or health concerns that you may have, so that they can understand the likely cause of your symptoms. From this information they will also be able to suggest the best treatment options for you.

Talking to your doctor

If you have had gastric surgery it is likely that you will be having regular follow-up appointments with your doctor to monitor your weight loss and any side effects. The side effects when you are first recovering from your surgery may feel different from those that you experience later on, maybe years after you have had the procedure.

Your doctor should be aware of how you could become nutrient deficient and may have advised you to take vitamin and mineral supplements in the long-term.⁴ It is important to follow the advice from your doctor regarding your diet and diet supplements and talk to them if you are having any problems with this, or are experiencing unwanted symptoms, such as the symptoms of iron deficiency.

If you have been feeling fatigued or have any of the symptoms of iron deficiency such as paleness, faintness or a racing heart,



Use our Symptom Browser to see the complete list of symptoms that iron deficiency can cause and to understand what each of these symptoms involves.

you may want to make an extra appointment or speak to your doctor about your symptoms at your next scheduled visit. To get the most out of your visit, think in advance about the information that the doctor might need in order to work out what is causing your symptoms. You should also prepare any questions that you want to ask.

References

1. **Buchwald H, Oien DM.** Metabolic/bariatric surgery worldwide 2011. *Obes Surg.* 2013;23(4):427-36.
2. **Shah M, Simha V, Garg A.** Long-term impact of bariatric surgery on body weight, comorbidities, and nutritional status. *J Clin Endocrinol Metab.* 2006;91(11):4223-31. doi:10.1210/jc.2006-0557.
3. **Love AL, Billett HH.** Obesity, bariatric surgery, and iron deficiency: true, true, true and related. *Am J Hematol.* 2008;83(5):403-9. doi:10.1002/ajh.21106.
4. **Jáuregui-Lobera I.** Iron deficiency and bariatric surgery. *Nutrients.* 2013;5(5):1595-608. doi:10.3390/nu5051595.
5. **McDermid J, Lönnerdal B.** Iron. *Adv Nutr.* 2012;(1):532-533. doi:10.3945/an.112.002261.Table.
6. **Dittner AJ, Wessely SC, Brown RG.** The assessment of fatigue: a practical guide for clinicians and researchers. *J Psychosom Res.* 2004;56(2):157-70.
7. **Paterson JA, Davis J, Gregory M, et al.** A study on the effects of low haemoglobin on postnatal women. *Midwifery.* 1994;10(2):77-86.
8. **Radlowski EC, Johnson RW.** Perinatal iron deficiency and neuro-cognitive development. *Front Hum Neurosci.* 2013;7:1-11.
9. **Albacar G, Sans T, Martín-Santos R, et al.** An association between plasma ferritin concentrations measured 48 h after delivery and postpartum depression. *J Affect Disord.* 2011;131:136-42. doi:10.1016/j.jad.2010.11.006.
10. **Stoltzfus R, Edward-Raj A.** Clinical pallor is useful to detect severe anemia in populations where anemia is prevalent and severe. *J Nutr.* 1999;129(May):1675-1681.
11. **Milman N.** Postpartum anemia I: definition, prevalence, causes, and consequences. *Ann Hematol.* 2011;90(11):1247-53. doi:10.1007/s00277-011-1279-z.
12. **Osaki T, Ueta E, Arisawa K, Kitamura Y, Matsugi N.** The pathophysiology of glossal pain in patients with iron deficiency and anemia. *Am J Med Sci.* 1999;318(5):324-9.
13. **World Health Organization.** *Iron deficiency anaemia. Assessment, prevention and control: A guide for programme managers.*; 2001:1-114.
14. **Vukovi -Cvetkovi V, Plavec D, Lovrenci -Huzjan A, Galinovi I, Seri V, Demarin V.** Is iron deficiency anemia related to menstrual migraine? Post hoc analysis of an observational study evaluating clinical characteristics of patients with menstrual migraine. *Acta Clin Croat.* 2010;49(4):389-94.
15. **Buchwald H, Estok R, Fahrenbach K, Banel D, Sledge I.** Trends in mortality in bariatric surgery: a systematic review and meta-analysis. *Surgery.* 2007;142(4):621-32; discussion 632-5.

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