GI DREAM | Gastrointestinal Dietitians for Research, Education, Advocacy and Mentoring

Anaemia in Inflammatory Bowel Disease (IBD)

This dietary resource provides general dietary information for people with IBD. To find an IBD DIETITIAN for personalised nutrition advice ask your IBD team or visit gidream.org.

- Anaemia is common in people with IBD
- Anaemia means you don't have enough healthy red blood cells to carry oxygen around your body
- Common causes of anaemia in IBD include losing blood, having chronic disease, and poor absorption or not eating enough iron, vitamin B12 or folate

If you have Crohn's disease or ulcerative colitis, your risk of developing anaemia is increased. Anaemia develops you do not have enough red blood cells in your blood, or when they do not work properly.

Common types of anaemia experienced by people with IBD

- Iron-deficiency anaemia
- Vitamin B12-deficiency anaemia
- Folic acid-deficiency anaemia
- Anaemia of chronic disease

Why are iron, vitamin B12 and folate important?

Iron helps to create red blood cells that carries oxygen around your body, folate helps make new red blood cells, and vitamin B12 helps to keep your blood and nerve cells healthy. Up to a quarter of people with IBD have iron deficiency anaemia.

Common causes of anaemia in people with IBD

- Chronic Inflammation
- Blood loss from ulcerated and inflamed bowel
- Decreased absorption of iron, vitamin B12 and folate in the gut caused by inflammation
- Surgery at the end of your small bowel (terminal ileum) where vitamin B12 is absorbed
- Not eating enough foods rich in iron, folate or vitamin B12 (see section below)

- Certain prescribed medications can decrease the absorption of iron and B12, and change the metabolism of folate

Signs and symptoms of anaemia

- Tiredness and fatigue
- Dizziness or headaches
- Pale skin
- Shortness of breath
- Irritability and poor concentration

How is anaemia managed in people with IBD?

Anaemia should always be managed by your doctor or gastroenterologist. It is important for your doctor to first review whether your anaemia is being caused by your IBD and to review all your medications.

If your iron is low, your doctor may recommend oral or intravenous iron supplementation. It is important to discuss the most suitable form of iron replacement with your doctor as oral iron supplements may cause nausea, abdominal pain, constipation, darker stools and for some may make inflammation worse.

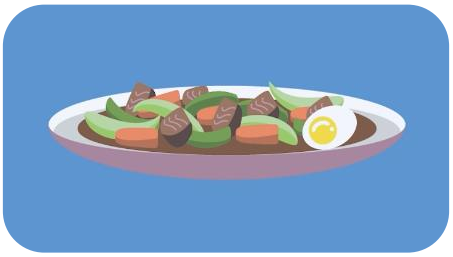
If your vitamin B12 is low, your doctor may recommend intramuscular injection of vitamin B12. B12 sprays and oral tablets are not always effective.

Folate deficiency is common if you are taking sulfasalazine and methotrexate medication. An oral folic acid supplement is usually required and will be prescribed by your doctor.

Can dietary strategies help with anaemia?

Your doctor may also suggest you speak to an IBD Dietitian to ensure you are eating enough iron, vitamin B12 and folate. An IBD Dietitian can assess your current diet and advise you on how to include more iron, vitamin B12-rich and folate rich foods in your diet. An IBD Dietitian can also advise on which foods can interfere with iron absorption.

How much iron, vitamin B12 and folate do I need?



The amount of iron, vitamin B12 and folate your body needs depends on your age, gender and whether there is frequent blood loss. In general, women of reproductive age who menstruate typically require more iron (up to twice as much) than women who do not regularly menstruate. An IBD Dietitian can advise on your individual iron, vitamin B12 and folate requirements.

Folate

Folate is present in fruits and vegetables, legumes, wholegrains and fortified cereals.

Iron

Iron naturally occurs in animal and plant-based foods. Iron-rich foods include from animal sources (red meats, chicken, eggs, sardines) and plant-based sources (lentils, legumes, wholegrains, tofu, green leafy vegetables). Animal sources contain haem-iron which is more efficiently absorbed than plant-based sources of iron (non-haem iron).

Iron rich foods		Serving size
High iron foods	Kangaroo fillet or mince,	100g
	Beef steak	125g
	Lamb, lean	150g
	Green lentils	1 cup
	Kidney beans, canned	1 cup
	Weetbix	30g
Medium iron foods	Sardines, tinned	110g
	Tuna, tinned	180g
	Eggs	2 medium
	Chickpeas, canned	2/3 cup
	Wholemeal pasta, cooked	3/4 cup
	Tofu	100g
	Raw spinach	1 1/2 cups
	Quinoa, cooked	1 cup
	Rolled oats	60g
	Peanut paste/ tahini	40g

What affects iron absorption?

Vitamin C (from fruit and vegetables) can help non-haem iron to be more efficiently absorbed. Some foods and drinks such as caffeinated beverages (tea, coffee, cola, energy drinks), wine and dairy products can reduce the efficiency of absorbing non-haem iron.

Dietary tips for increasing iron absorption

- Add fruit or fruit juice to a breakfast-style meal (rich in vitamin C)
- Add dark green leafy veggies to your meals or smoothies
- Avoid large amounts of dairy at main meals (e.g. glasses/mugs of milk)
- Have coffee / tea / wine between meals rather than with meals

Vitamin B12

Vitamin B12 naturally occurs in animal-based foods. Vitamin B12-rich foods include those with haem-iron (red meat, chicken, seafood, eggs) as well as milk and dairy products. Vitamin B12 does not naturally occur in plant-based foods except yeast-extracts (brewers yeast, vegemite). For this reason, people who do not eat animal products are likely to require an oral B12 supplement.

If you have inflammation or have had surgery to remove the last part of the small bowel (terminal ileum) where vitamin B12 is absorbed may require regular vitamin B12 intramuscular injections. Your doctor can advise on this and monitor your vitamin B12 levels.

Tips to include more iron and B12-rich foods

Breakfast	Lunch	Dinner	Snacks
▪ Add nuts and berries to breakfast cereals ▪ Include a glass of juice or fortified soy milk ▪ Use toast toppers like nut butters, eggs, spinach, tinned fish ▪ Scrambled eggs / tofu or omelette with veggies ▪ Breakfast cereals with added iron e.g. Weetbix™ ▪ Overnight oats/quinoa with yoghurt and berries ▪ Grilled halloumi with hummus and flatbread ▪ Congee with chicken, egg and onion ▪ Labneh, za'atar, olives, flatbread, tomato/capsicum ▪ Egg paratha with tomato chutney or raita ▪ Chana dal or moong dal with roti and fruit	▪ Add lean roasted meats, chicken, eggs, sardines, or falafel to sandwiches or wraps ▪ Add lentils, beans and legumes to soups or salad ▪ Add meats, beans, fish, eggs to hot meals ▪ Top toast with sardines, anchovies, mackerel ▪ Add quinoa to salads ▪ Mujaddara (lentils + rice + caramelised onions) + boiled egg ▪ Akara (black-eyed pea fritters) ▪ Include a piece of fruit after lunch	▪ Add lentils, chickpeas, split peas, kidney beans to curries, casseroles, dhal, salads, soups ▪ Add nuts (if tolerated), tofu, meats, eggs to stir frys ▪ Add nuts and seeds to salads ▪ Add kofta, shawarma, chicken, felafel to flat breads and salads ▪ Add beef, goat, lamb to injera or lentil stews ▪ Palak paneer (spinach + Indian cheese) with brown rice ▪ Egg fried rice with bok choy and tofu	▪ Hommus with crackers or veggie sticks or pita ▪ Roast edamame / chickpeas ▪ Handful of dried fruits, nuts, seeds ▪ Mini meatballs ▪ Boiled eggs ▪ Mini quiche / frittata ▪ Roasted chickpeas ▪ Yoghurt ▪ Lassi with mango ▪ Smoked mussels on toast ▪ Baked samosa ▪ Tuna & avocado sushi roll ▪ Nut butter or vegemite™/ marmite™ on toast ▪ Quesadillas with black beans ▪ Fortified milks e.g. Sustagen™, Milo™, Up&Go™

An IBD dietitian can make personalised dietary recommendations if certain iron and B12-rich foods are not well tolerated.

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