

Bile Acid Malabsorption & Inflammatory Bowel Disease

A practical guide to understanding and managing ongoing diarrhoea



What Is Bile Acid Malabsorption?

Bile Acid Malabsorption (BAM), also called Bile Salt Malabsorption or Bile Acid Diarrhoea (BAD), is estimated to affect 1 in 100 people.¹ It can happen when the normal circulation and absorption of bile acids in the body is disrupted. BAM is even more common in people with Crohn's disease affecting the small bowel or in people who have needed surgery to the small bowel.² It can also affect people with microscopic colitis.³

The symptoms can have a significant impact on daily life, making work, social activities, and travel more difficult to manage.

Important



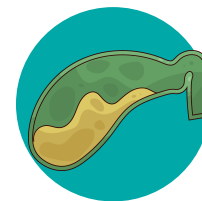
BAM is not only seen in Crohn's disease with ileal involvement or after surgery. It can also be present during remission and regardless of disease location^{2,4} and in ulcerative colitis^{5,6} (although less commonly).

Bile Acid Malabsorption & Inflammatory Bowel Disease

Unfortunately, BAM is an underdiagnosed and overlooked condition in inflammatory bowel disease (IBD).⁴ Research states that bile acid absorption is impaired in both preclinical studies and in human IBD studies.⁵

What Are Bile Acids and What Is Their Function?

Bile acids are made by the liver, stored in the gallbladder and released into the small intestine after eating any sort of fat and to a much lesser extent some forms of protein. They are vital in the digestion and absorption into the body of fats eaten in food.⁷



After helping with digestion, most bile acids travel to the end of the small bowel where they come back into the body, travel back to the liver and are reused approximately several times a day.⁸ Only a small amount passes into the large intestine and leaves the body in stool (poo).

In people with BAM, this recycling process does not work as it should. The body may not absorb bile acids properly, or it may produce more bile acids than normal. As a result, too many bile acids reach the large intestine.

When excess bile acids enter the large intestine, they cause extra water to remain in the stool.⁹

Bile acids also play an important role in keeping the gut healthy. They help maintain the protective lining of the intestine, support the balance of healthy gut bacteria, limit the growth of harmful bacteria, and help regulate immune activity in the colon (large bowel).¹⁰

Why BAM Matters in IBD

If BAM is not recognized:

- Disrupted bile acid balance can activate inflammation.¹¹ This may change how the lining of the bowel protects the body from infection and may make the treatment of IBD more difficult.
- IBD can disrupt the gut microbiome, affecting the bacteria involved in bile acid transformation.¹²
- The symptoms of BAM may be mistaken for irritable bowel syndrome (IBS)⁴ and the wrong treatment started.
- BAM symptoms can be similar to symptoms of active inflammation⁴, which may result in symptoms being attributed to active disease. This may also lead to unnecessary escalations in IBD treatment.
- Gastrointestinal symptoms can continue even when IBD is well controlled.^{4,13}

Recognising BAM can lead to more accurate diagnosis and appropriate treatment.

Symptoms of BAM^{9,13-15}

- Diarrhoea or loose stool (often watery)
- Urgency (sudden need to go)
- Frequent need to poo
- Abdominal pain or cramping
- Bloating
- Accidents controlling the bowel
- Fatigue and dizziness
- Diarrhoea that has a strong smell and may look yellow, oily, or greasy
- Worsening heartburn/indigestion/nausea
- Weight gain or loss
- Persistent gastrointestinal symptoms despite that your IBD is in remission



Diagnostic Tests^{9,14}

- **A trial of treatment with bile acid sequestrants (such as colestyramine or colesevelam):** This may be used to help determine whether BAM may be contributing to symptoms. It is important to note that a study found that some patients who did not respond to colestyramine improved with colesevelam, showing that trying an alternative bile acid sequestrant may still provide benefit.^{16,17}
- **SeHCAT (Selenium-75 Homocholic Acid Taurine) Scan:** The most recognized test for diagnosing BAM. The SeHCAT scan is considered the gold standard. While the test is not available in all countries, it is accessible in most European countries and Canada.
- **Serum C4 Test:** A blood test that measures the level of 7 α -OH-4-cholesten-3-one (C4), a marker of bile acid production. Elevated C4 levels suggest increased bile acid synthesis, which may indicate BAM. C4 can be a useful screening test, but its imperfect sensitivity means a normal result does not completely exclude BAM.
- **Faecal Bile Acid (BA) Test:** Measures the amount of bile acids excreted in the stool over a specified collection period. High faecal bile acid levels support a diagnosis of BAM. While it directly measures bile acids, this test is complex and not widely available. Current methods also have limitations in accuracy and may not detect all types of bile acids.

Treatment



Medication

Bile acid sequestrants

Medical treatment consists of bile acid sequestrants that are known to work as a bile acid binder in the small bowel. Bile acid sequestrants include colestyramine, colesevelam, and colestipol, although colestipol's availability is limited.⁹

- The dose and timing of bile acid sequestrant intake may need to be adjusted for BAM.^{1,18} Some patients find that adjusting the timing of their medication can improve their experience with treatment, for example taking colestyramine at night.¹⁹ Medication schedules should however always be discussed with a healthcare professional to ensure effectiveness and avoid interactions with other medicines.
- Bile acid sequestrants are 'binders'. This means they can bind other medications or supplements taken at the same time. It is generally advised to take other medicines at least 1 hour before or 4–6 hours after taking a bile acid sequestrant,¹ unless your healthcare team advises otherwise. Always ask your healthcare team about timing and contraindications.
- These medicines may reduce the absorption of the fat-soluble vitamins A, D, E and K¹ and can increase blood triglyceride levels²⁰ (part of your lipids blood test). Talk with your healthcare team about periodic tests to monitor your triglyceride levels, especially if they are already raised. You might also need to check your vitamin levels. These tests are not always routinely available.

Anti-diarrhoeal medications

Loperamide (also called Imodium) is an anti-diarrhoeal medication. This may be considered as an alternative or additional treatment option for symptom control, particularly when bile acid sequestrants are not tolerated or do not provide sufficient relief.²¹ The medicine works by slowing down the bowel and making the stool more solid.

GLP1-receptor agonists

Some studies suggest that liraglutide, a medication originally used for diabetes and obesity, may improve symptoms.^{22,23} It may work by slowing intestinal transit, allowing better absorption of bile acids. However, more research is needed to understand its mechanisms and confirm its effectiveness, meaning its routine use in BAM remains uncertain and it cannot currently be considered standard treatment.⁹

Untreated BAM can reduce quality of life and worsen symptoms. Always work with your healthcare team to find the right treatment.

Diet and Lifestyle



Nutrition is individualized and depends on your specific health needs, symptoms, and goals. Factors such as anatomy, inflammation, strictures, and stool consistency can be important. **Work with a registered dietitian to create a personalized plan that suits your needs while avoiding unnecessary restrictions and helping you enjoy food.**

Although nutrition research in IBD is evolving, the following guidance may be beneficial:

- **Lower-fat diet:** While there is limited research on the role of a lower-fat diet in IBD²⁴, some studies in people without IBD suggest that reducing fat intake can help ease certain digestive symptoms.^{25–28} High-fat foods can increase bile acid production and potentially make diarrhoea worse, so a lower-fat approach is often considered a practical strategy. Some foods also naturally contain more fat, including avocados, nuts, and oily fish.

Lean proteins like poultry, fish, and tofu, and using low-fat dairy products may help support symptom management. Dietary fats are still an important part of a balanced diet. A dietitian can help you find the right balance while making sure your diet stays healthy and nutritious.

- **Some people may find that the following high-fat foods worsen their symptoms:** fried foods, cream, butter, pastries, and high-fat snacks.
- **Fibre-friendly choices:** Talk with your dietitian about which types of fibre you tolerate best. Soluble fibre is generally known to bind excess bile acids²⁹ and can be found in foods such as oats, carrots, and bananas. Soluble fibre types may help reduce diarrhoea^{30–32} and make stools firmer. Potatoes and white rice may also be helpful. For people with IBD, food texture can matter.³³ Options like cooked and pureed foods may be easier to tolerate.
- **Keep a food and symptom tracker:** Tracking what you eat and how you feel can help you and your healthcare team understand your symptoms and make informed choices.

A Message of Support



You are not alone in experiencing these symptoms. Your symptoms are real, valid, and not something you just have to live with. Many people with IBD experience bowel changes, and importantly, there are clear, practical ways to improve them.

Talking openly with your healthcare team can help you:

- **Get the right diagnosis**
- **Access the right treatment**
- **Feel more confident in your body again**

Psychological Support



Living with ongoing bowel symptoms can be both physically and emotionally challenging. Frequent diarrhoea, urgency, and discomfort can make daily activities, work, and social situations more difficult. You may also worry about access to toilets or feel anxious about leaving home.

Research shows that these symptoms can have a significant impact on daily life and emotional well-being, with people reporting embarrassment, anxiety about leaving home, and low self-esteem.³⁴ Treatment with bile acid sequestrants has been associated with improvements in these symptoms and overall quality of life, while further research is needed to identify additional treatment options.³⁴

Connecting with mental healthcare professionals, trusted support groups, or friends and family may also help reduce feelings of isolation, support overall well-being, and remind you that you don't have to go through it alone.

What Can I Ask and Tell My Doctor

You might say:

Could my symptoms be bile acid malabsorption?

Would a trial of bile acid binders be appropriate?

I have urgency, especially after eating.

Can I be tested with a SeHCAT scan or blood tests?

My diarrhoea is ongoing even when my IBD is controlled.

Could I be referred to a dietitian?

Tips



- Plan ahead (know toilet access)
- Have a “safe meal” routine before going out
- Carry spare clothing or supplies if needed
- Use relaxation or breathing techniques
- Speak openly with your healthcare team
- Stay properly hydrated
- Use emergency key and toilet card schemes

Helpful Resources



- **BAD UK:** A national charity located in the UK providing awareness and support for people living with bile acid diarrhoea
- **GUTS UK:** Downloadable BAD guide

Abbreviations

- BAM: bile acid malabsorption
- BAD: bile acid diarrhoea
- IBD: inflammatory bowel disease
- IBS: irritable bowel syndrome

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The information provided is for general informational and educational purposes only. It is not intended to replace professional medical advice, diagnosis, or treatment. Always consult a qualified healthcare professional regarding any medical condition and before making decisions about your health or treatment.

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