



SCAN/CLICK for PODCAST

Understanding Bile Acid Malabsorption

Have you been experiencing frequent, watery diarrhea that seems to get worse after meals? You might be dealing with Bile Acid Malabsorption, or BAM for short. While not as well-known as other digestive disorders, BAM affects many people and can significantly impact daily life. The good news is that it can usually be controlled once correctly diagnosed. (It has also been called bile acid-induced diarrhea, choloretic enteropathy, or bile salt diarrhea.)

Bile Acids: like dish soap for your gut

Bile acids (also called bile salts) are interesting molecules made from cholesterol in the liver. Between meals, they are stored in the gallbladder and released into the small intestine when you eat. Here, they play a crucial role in helping you digest fats. Bile acids act like detergents, breaking down those large fat molecules into smaller ones that your body can absorb into your bloodstream. This process of digestion occurs inside the small intestine.



What's fascinating is that after they do their job, most of the bile acids, like 95%, get reabsorbed into the bloodstream and sent back to the liver for reuse. This reabsorption happens mainly in the ileum, the last part of your small intestine. Termed the “enterohepatic circulation,” this bile acid recycling system is very efficient, and so normally, only about 5% of the bile acids should ever reach the colon (large intestine).

What is Bile Acid Malabsorption?

So what happens when that recycling system gets disrupted? That's where BAM comes in. Bile acid malabsorption occurs when your body doesn't reabsorb those bile acids efficiently. So, instead of being recycled like they should, they spill over into the colon, where they are troublesome. When too many bile acids enter your colon, they act like a natural laxative, pulling water into your intestines and increasing muscular contractions of the colon. This leads to abdominal cramps and watery diarrhea and that urgent need to go often after a meal.

Signs and Symptoms

Thus, the hallmark of bile acid malabsorption is frequent watery diarrhea, particularly noticeable after eating. The impact of BAM on daily life can be significant. Most individuals experience an urgent need to use the bathroom, often so pressing that they need to know the

location of every public restroom in their area. Some patients describe feeling like they are “always tethered to a toilet” - never knowing when an urgent bathroom trip might strike. This urgency can be accompanied by bloating, stomach cramps, and excessive gas.

In some cases, people may experience accidents or leakage (fecal incontinence) if they cannot reach a bathroom quickly enough. Having chronic unpredictable diarrhea can be incredibly disruptive, impacting everything from work and social life to travel and even simple errands. People with BAM might avoid going out, eating certain foods, or engaging in activities they used to enjoy because they're afraid of having an accident. This explains the constant anxiety and uncertainty that can come with this condition.

Understanding the Different Types

Bile acid malabsorption (BAM) comes in several forms, each with distinct causes. From a clinical point of view, it's either due to a decreased ability to reabsorb the bile acids or an overproduction that overwhelms the system, allowing them to spill into the colon. Understanding which type of BAM you have helps guide appropriate treatment approaches.

Decreased absorption could be secondary to disease or damage to the ileum. This could be seen in Crohn's disease, intestinal surgery, or abdominal radiation. Other conditions affecting the digestive system may also cause BAM. These might include celiac disease, small intestinal bacterial overgrowth, or chronic pancreatitis.

Primary bile acid malabsorption happens when the liver produces too much bile acid. Population estimates suggest that 1% of adult Americans have primary bile acid malabsorption. While doctors don't fully understand the cause, this type typically responds well to treatment. As a gastroenterologist, a common scenario I see involves a patient who recently had a cholecystectomy or gallbladder removal and now has problems with urgent diarrhea, especially after eating. This is called post-cholecystectomy bile acid diarrhea, a form of BAM. When the gallbladder is removed, the normal flow of bile is disrupted. Instead of having that controlled release of bile, it becomes more of a continuous drip, which can overwhelm the ability to reabsorb all those bile acids, making BAM more likely.

Another common cause of BAM relates specifically to medication use, particularly metformin, a common diabetes treatment.

The Path to Diagnosis

Getting diagnosed can be challenging because BAM's symptoms mirror other digestive conditions, particularly Irritable Bowel Syndrome with diarrhea (IBS-D). In fact, research suggests that up to 25% of people diagnosed with IBS-D have unrecognized BAM. Doctors often suspect BAM when patients experience chronic diarrhea lasting more than four weeks, especially if symptoms worsen after meals. A history of gallbladder surgery or conditions like Crohn's disease may also point toward BAM.

While specific tests for BAM aren't widely available in the United States, doctors can often diagnose it through a comprehensive approach. This includes reviewing symptoms and medical history, performing physical examinations, and conducting blood and stool tests to rule out other conditions. Often, doctors may prescribe a trial of bile acid-binding medication to see if symptoms improve, using the response to treatment as a diagnostic tool.

Treatment Approaches That Work

The cornerstone of BAM treatment involves medications called bile acid sequestrants. These remarkable medications work like microscopic sponges in your digestive system, binding to excess bile acids before they can cause diarrhea. It's kind of like using sawdust to control an oil spill. The most commonly prescribed option is **cholestyramine powder**, which can be mixed with water or juice. This mixture is somewhat unpalatable, so taking it quickly and not sipping it is best.



Another option would be **Colestid** (colestipol HCl) or **Welchol** (colesevelam) tablets instead. However, some patients feel the tablets are quite large and less effective than cholestyramine powder. Most people notice significant improvement within a few weeks of starting these medications, though finding the correct dosage might take some time and patience. Of course, you should not take these medications if constipated. Also, since they can affect other drug absorption, you should not take any essential oral medications within several hours before or after taking a bile acid sequestrant.

Dietary modifications play a supportive role in managing BAM symptoms. Most doctors recommend a balanced diet rather than a strict elimination diet. Reducing fat intake can help, especially during symptom flares, since fat triggers bile acid release. Many patients succeed in eating smaller, more frequent meals throughout the day instead of three large meals. Identifying personal trigger foods takes time but is invaluable for long-term management.

Nutritional Considerations for Long-term Health

Since BAM affects how your body processes certain nutrients, paying attention to overall nutrition becomes crucial. The condition can impact the absorption of fat-soluble vitamins, including vitamins A, D, E, and K. Your doctor might recommend regular vitamin D monitoring and suggest taking a daily multivitamin to ensure adequate nutrition. Some patients also need additional vitamin B12 supplementation. Maintaining proper calcium intake becomes especially important since BAM can affect its absorption.

Living Well with BAM

While BAM typically requires lifelong management, it shouldn't dominate your life. Successful management involves developing practical strategies for daily living. Many people find that timing their meals around their daily activities helps reduce anxiety about symptoms. Taking medications as prescribed, maintaining open communication with healthcare providers, and staying well-hydrated become natural parts of the daily routine. With proper diagnosis, treatment, and support, people with BAM can lead full, active lives. While the journey might have challenges, remember that you're not alone, and effective management strategies exist to help you maintain your quality of life.

When to Seek Medical Care

Maintaining regular communication with your healthcare provider helps ensure optimal management of BAM. Any significant changes in symptoms warrant medical attention. This includes new or worsening diarrhea, unexplained weight loss, or the appearance of blood in stools. Sometimes, symptoms might suggest a need to adjust medication dosages or timing. Regular check-ups allow your healthcare team to monitor your progress and adjust your treatment plan.

Looking Toward the Future

BAM research continues to evolve, offering hope for improved treatments and understanding. Scientists are particularly interested in the role of gut bacteria in BAM development and management. New research explores the connection between the gut microbiome and bile acid metabolism, potentially leading to more targeted treatments. Researchers are also working on developing better diagnostic tests that could make identifying BAM easier and more accurate.

Moving Forward with Confidence

Understanding and managing BAM takes time, but most people achieve reasonable symptom control with proper medical care and support. Remember that each person's experience with BAM differs, and what works best for one person might need adjustment for another. The key lies in working closely with your healthcare team, staying consistent with treatment, and maintaining a positive outlook while managing this chronic condition.

Robert Fusco MD
December 2024



Center For Digestive Health & Nutrition

725 Cherrington Parkway • Moon Township, PA 15108

412.262.1000 • www.gihealth.com • IG: @thedigestivetract

DISCLAIMER: The content provided on this website is for general informational purposes only. It is not intended as definitive medical advice, and self-diagnosis should not be based on online information. If you experience any symptoms or health concerns, it is crucial to consult a physician for a thorough examination and professional evaluation. Only a qualified healthcare provider can provide an accurate diagnosis and develop an appropriate treatment plan to rule out serious medical conditions.

Normal Bile Acid Recycling

The liver produces bile acid, which is stored in the gallbladder between meals. The bile then enters the small intestine, where it helps digest fats in our diet. At the end of the small intestine (ileum), it is reabsorbed and carried back to the liver to be used again. Normally, only 5% of bile acid escapes into the colon (large intestine)

