

# **Is Your Gallbladder Causing Digestive Issues?**

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### **STORY AT-A-GLANCE**

- Your gallbladder is an abdominal organ that stores and concentrates bile produced by your liver. The bile helps your body break down and absorb the fat that you eat. When you eat a fatty meal, your gallbladder will contract and squeeze more concentrated bile into the small intestine to aid in the breakdown of the fat
- Since your gallbladder is involved in the breakdown of dietary fats, digestive problems especially when eating fatty foods – can be indicative of a problem, even if you have no other symptoms. Digestive symptoms include frequent abdominal bloating, gas, nausea and/or diarrhea shortly after eating
- > Gallstones are one of the most common types of gallbladder problems that can occur, affecting an estimated 15% of the U.S. population. Women are twice as likely as men to develop them, especially during pregnancy or if using birth control pills or hormone replacement therapy
- > One of the reasons for this gender difference is because the extra estrogen increases cholesterol while simultaneously slowing down gallbladder emptying. Obesity, diabetes, Crohn's disease, liver cirrhosis, sickle cell disease, intravenous feeding, a family history of gallstones, use of cholesterol-lowering drugs, high-fat/low-fiber diets and fasting are also risk factors
- > While your gallbladder performs an important function, you can live without it. Your liver still produces and sends bile into your duodenum, so you can still break down fats to a certain degree. But it's not as efficient, so people who have had their gallbladder removed are advised to limit the amount of fat in their diets and take digestive aids such as ox bile and digestive enzymes

Your gallbladder is a 3- to 4-inch long pear-shaped sack in your abdominal cavity located beneath your liver. It stores and concentrates bile produced by your liver. The bile helps your body break down and absorb the fat you eat.

When you eat fat, your liver sends bile directly into the duodenum (small intestine). Your gallbladder will also spring into action, contracting and squeezing more concentrated bile through the common bile duct into the small intestine to aid in the breakdown of the fat. Carbs and proteins are more easily digested and don't need this extra bile.

Bile is made up of water, cholesterol, lecithin, bile salts (which break fats into smaller droplets that are easier for digestive enzymes to process) and bile pigments. The primary bile pigment is bilirubin, made from red blood cells that are broken down in the liver. This pigment is responsible for making urine yellow and stool brown.

Your pancreas also plays an important role in the digestive process. It produces and sends enzymes into the common bile duct via the pancreatic duct. Together, the digestive juices from your liver and pancreatic enzymes break down the food you eat into liquid form so that your body can absorb the nutrients from it.

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### **Risk Factors and Symptoms of Gallstones**

Gallstones are one of the most common types of gallbladder problems that can occur, affecting an estimated 15% of the U.S. population.<sup>1</sup> Women are twice as likely as men to develop them, especially during pregnancy or if using birth control pills or hormone replacement therapy.

One of the reasons for this gender difference is because the extra estrogen increases cholesterol while simultaneously slowing down gallbladder emptying. Obesity, diabetes, Crohn's disease, liver cirrhosis, sickle cell disease, intravenous feeding, a family history of gallstones, use of cholesterol-lowering drugs, high-fat/low-fiber diets and fasting are also risk factors.<sup>2,3</sup>

Gallstones typically consist of crystallized bile, and if large enough to block a biliary duct, can cause varying degrees of pain. Left untreated, the blockage can lead to cholecystitis, or inflammation of the gallbladder. Common symptoms of cholecystitis include:

Sudden onset of severe pain in the center or upper right quadrant of your abdomen, under your ribcage. Pain that radiates to your right shoulder or back, between the shoulder blades

The pain is proportional to the pressure inside the gallbladder caused by the blockage and/or swelling due to infection

A tender abdomen	Fever and chills
Nausea and/or vomiting	Light or chalky colored stools

A gallbladder infection needs to be treated to avoid gallbladder rupture, which can be life-threatening, gangrene, or a gallbladder abscess. Abscesses occur when a pocket of pus forms inside the gallbladder. In severe cases of cholecystitis, the gallbladder is removed, but milder cases may be treated with anti-inflammatory drugs.

This is why you want to be really careful with your gallbladder and at the first sign of symptoms treat it as if you didn't have a gallbladder so you can reverse the process and not have it surgically removed as so many people do. Not much you can do after a surgeon removes it for you as no way are you getting a gallbladder transplant.

# **Other Types of Gallbladder Disease**

Cholecystitis can also develop in the absence of stones, although it's far rarer. Only 5% of acute cholecystitis cases are so-called acalculous, meaning there are no stones

#### present.4

Acalculous gallbladder disease is thought to be caused by bile build-up due to a lack of oxygen to the gallbladder. In these cases, the gallbladder is typically removed. Other potential gallbladder problems include:<sup>5,6</sup>

**Choledocholithiasis** — This is when a gallstone blocks the common bile duct, causing bile to back up into the liver. In addition to pain in the upper right quadrant of your abdomen, other symptoms include jaundice (yellowing of the skin or eyes), dark urine, clay-colored stool, nausea and/or vomiting. Treatment typically involves removing the stone with an endoscope. In severe and/or recurring cases, the gallbladder may be removed.

**Polyps** – Gallbladder polyps are abnormal growths on the interior wall of the gallbladder. Most people have no symptoms, and the polyps are usually only discovered during routine ultrasound or CT scans. Small asymptomatic polyps are usually left alone and monitored. Large symptomatic polyps, however, may require gallbladder removal.

Gallbladder cancer – This is a rare condition and little is known about its causes.

**Porcelain gallbladder** – This is another rare condition in which calcium builds up on the interior wall of the gallbladder, causing symptoms similar to those of gallstones.

**Biliary dyskinesia** — This is a functional disorder where your gallbladder's ability to move bile into the bile duct is impaired. As a result, bile is backed up in your gallbladder, causing chronic inflammation.

**Cholangiopathy** — This term covers all diseases involving the bile ducts. Chronic inflammation of the bile ducts can scar the ducts, causing them to become narrow. This in turn can cause bile to build up either in the liver, gallbladder or both.

**Liver cirrhosis** — The buildup of bile in your liver can also result in liver inflammation and scarring (cirrhosis).

**Pancreatitis** – If the gallstone makes its way into the pancreatic duct, which intersects with the common bile duct, then inflammation of the pancreas can occur.

### **Can You Live Without a Gallbladder?**

While your gallbladder performs an important function, you can live without it. In fact, many do, as gallbladder removal is one of the most commonly performed surgeries in the U.S.<sup>7</sup>

<sup>66</sup> While you can live without your gallbladder, your digestion will not be as efficient, so people who have had their gallbladder removed are advised to limit the amount of fat in their diets and take digestive aids such as ox bile and digestive enzymes.<sup>99</sup>

Your liver still produces and sends bile into your duodenum, so you can still break down fats to a certain degree. But it's not as efficient, as the bile from your liver is less concentrated. This is why people who have had their gallbladder removed are advised to limit the amount of fat in their diets and take digestive aids such as ox bile and digestive enzymes.

Fat malabsorption is also common among people with functioning gallbladders. Symptoms such as sticky stools, stools that float, frequent diarrhea, digestive upset, gas and/or soft foul-smelling stools right after meals, chronic dry skin and hair loss are common symptoms suggesting you may not be digesting fats properly.<sup>8</sup>

### How to Improve Digestion of Fats

Whether you've had your gallbladder removed or not, you can improve your digestion of fats using:

- Bitters Bitters help stimulate the production of bile to boost the digestive process. The first signals for bile production come from your tongue, so taking a tablespoon of bitters right before eating can get the flow of bile going.
- Betaine hydrochloride (HCI) Betaine HCI not to be confused with betaine or trimethylglycine (TMG) — increases the concentration of stomach acid, which is required for digestion of food. It also signals your pancreas to release digestive enzymes. If your stomach acid is too low, some of the food you will remain largely undigested.
- Digestive enzymes In many people, the pancreas doesn't produce enough digestive enzymes. In this case, taking a digestive enzyme supplement with each meal can help. There are five primary digestive enzymes, each designed to help break down different types of food:
  - Protease breaks down protein
  - Amylase breaks down carbohydrates, sugars and starches
  - Lipase breaks down fats. If you have IBS, cystic fibrosis, celiac disease, no gallbladder or gallbladder dysfunction, you may benefit from higher levels of lipase
  - Lactase breaks down milk sugar (lactose) in dairy products
  - Sucrase breaks down sucrose sugars

Taking a blend of enzymes is usually ideal, as no single enzyme can perform all the necessary functions throughout your digestive tract. That said, if you have irritable bowel syndrome (IBS), cystic fibrosis, celiac disease, no gallbladder or gallbladder dysfunction, you may benefit from higher levels of lipase in particular.

 Ox bile — Ox bile, which is most similar to that of humans, is particularly important after you've had your gallbladder removed. Ideally, take one tablet along with a lipase-containing digestive enzyme shortly before meals. As noted by biohacker Dave Asprey, you can also improve your digestion of fats by eating the right fats:<sup>9</sup>

"C8 MCTs (caprylic acid) ... skips a few steps in digestion. You don't need bile for your cells to use it. Having a little bit of caprylic acid every day will help your body replenish the fats it's been missing out while you haven't been digesting fats.

Eating more fats will stimulate your liver to produce more bile, which will mix with stagnant bile and thin it out. Eating high quality fats like avocados, salmon and coconut oil to get things flowing."

### **How to Avoid Gallstones**

While it's still unclear why gallstones form, a number of lifestyle strategies are known to lower your risk, including the following:

- Get regular exercise
- Clean up your diet Avoid processed foods and grains, keep hydrated, opt for healthy high-quality fats and eat more high-fiber foods such as fruits and vegetables
- Lose weight gradually Rapid weight loss may raise your risk of gallstones
- Avoid extended fasting, not only will it help your gallbladder, but it will increase your health as fasting is not as healthy as I previously believed as it increases your stress hormones and worsens mitochondrial function

### **Sources and References**

- <sup>1, 3, 5</sup> Cleveland Clinic Gallbladder Disease
- <sup>2</sup> Sante Chiropractic October 24, 2013
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- <sup>7</sup> My Health The Digestive Process
- <sup>8, 9</sup> DaveAsprey.com How to Digest Fats Better