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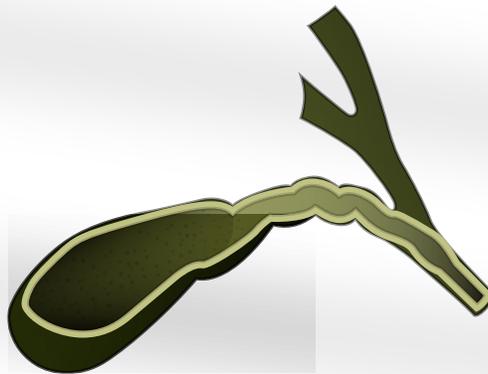
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RESTORE YOUR GALLBLADDER

ANN LOUISE GITTLEMAN, Ph.D, CNS





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Meet Ann Louise Gittleman



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ABOUT THE AUTHOR

As one of the world's foremost experts in functional and integrative medicine, Ann Louise holds an M.S. in Nutrition Education from Columbia University, has the title of Certified Nutrition Specialist (C.N.S.) from the American College of Nutrition and a Ph.D. in Holistic Nutrition. She has also served as the Chief Nutritionist of Pediatric Clinic at Bellevue Hospital and is the former Director of Nutrition at the Pritikin Longevity Center in Santa Monica, CA. She has won numerous awards, including The American Medical Writers Association Award for Excellence.

Continually breaking new ground in integrative and functional medicine, Ann Louise is a top nutritionist who was years before current trends like Paleo and Keto. She is internationally recognized as a pioneer in dietary, environmental, and women's health issues. She is an award-winning New York Times bestselling author of over 35 books on health and nutrition including diet, detox, women's health, men's health, perimenopause, menopause, beauty and the environment.

IN THIS GUIDEBOOK YOU'LL LEARN:

HOW BILE IS THE FORGOTTEN SWITCH FOR WEIGHT GAIN,
HORMONE HAVOC, DIGESTIVE PROBLEMS & BODY
TOXICITY

HOW SLUGGISH BILE MAY BE DERAILING YOUR THYROID

THE RADICAL IMPORTANCE OF YOUR GALLBLADDER, NO
MATTER WHAT YOUR DOCTOR SAYS

HOW TO KNOW IF YOUR BILE IS TOXIC AND CONGESTED

THE BEST FIXES FOR BUILDING HEALTHY BILE - EVEN IF
YOU NO LONGER HAVE YOUR GALLBLADDER

HOW BITTER FOODS JUMP-START SLIMMING & IMPROVE
OVERALL HEALTH

INTRODUCTION

If you have been on other high-fat diets (think Paleo, Paleo Plus, Ketogenic, GAPS, or FODMAPS) and are still overweight, your gallbladder or lack thereof may be the reason why. And if your thyroid is slowing down, then—amazingly—your gallbladder may be the culprit here, too.

If you're like most people, you don't spend much time thinking about your gallbladder or how it relates to your metabolic situation. We go along in our busy lives blissfully unaware of the hard work this organ is doing on our behalf . . . all day, every day. Many experts talk about the importance of the liver and write volumes about toxicity without giving the gallbladder—or bile—so much as a passing nod.

Bile is the forgotten switch. Bile, although not the sexiest of topics, has several essential functions: It's what helps your body break down all those fats you eat, which are so critical for healthy cell membranes. And bile carries away all the toxins and hormone metabolites from your body. You see, not only is bile the real key to your ability to digest and assimilate fats, but it is also a vehicle for removing toxins so they can be flushed out of your liver. Bile is one of your body's premier (albeit underrated) detox mechanisms. Therefore, the consequences of toxic bile go far beyond the inability to lose weight. If your liver can't clean fats, then it most likely cannot break down hormones or other metabolic waste products, either.

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In this guidebook, we will connect the dots between the gallbladder and liver, bile, metabolism, weight gain, and hormone dysfunction. In fact, the bile connection may very well be your first clue to a sluggish thyroid, as you will later discover!

Gallbladder disease and obesity are both occurring at epidemic rates. Problems with fat digestion have come into focus with today's higher-fat diets, such as Paleo and Ketogenic types. Americans are finally breaking up with sugar and starting a new love affair with fats—*and this is a good thing*. But for many this new romance has gotten off to a rocky start. Some of the folks who have trouble digesting fats simply quit these diets when they feel worse instead of better, not realizing that the real problem isn't the higher-fat diet, but instead compromised gallbladder function and sluggish bile. Bile is the missing link—you simply can't be healthy without it.

IS YOUR METABOLISM STUCK DUE TO TOXIC, SLUGGISH BILE?

Here's a little biochemistry 101 for you. Together, your liver and gallbladder make up your hepatic system. When your hepatic system is functioning well, you'll have good circulation, clean blood, and healthy cellular metabolism.

The liver is so essential that you could only survive for a day or two if it stopped functioning altogether. It is one of the largest organs in the body, weighing in around 3 pounds, and is situated on the right side of your upper abdomen, just below your diaphragm. As the body's prime detoxification organ, the liver takes an enormous beating from today's toxic world. Many foods and lifestyle factors, such as refined sugar and grains, unhealthy fats, too little fiber, too much alcohol and caffeine, medications, and emotional stress, are quite hard on the liver.

Your liver is the only organ that can rebuild itself—up to 75 percent of it can be damaged and it can still regenerate if given the proper nutritional support. The most prevalent liver disease today is nonalcoholic fatty liver disease (NAFLD), which is characterized by the accumulation of fat in the liver. This is really a sign that the liver has stopped processing fat and begun storing it. NAFLD rates have doubled since 1988 and are linked to obesity, diabetes, hypertension, and lipid imbalances. NAFLD often goes undetected and can progress into something even more serious, for which the end result can be complete liver failure.

If your liver is sluggish, every organ in your body is affected and your weight loss efforts will be stalled from multiple angles. A *fatty liver* is a toxic liver, as one of its responsibilities is to neutralize the myriad of toxins that assault our body every

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day. If you have a roll of belly fat, you may have a fatty liver. When your liver becomes clogged up with pollutants and metabolic waste, not only does fat accumulate in and around it, but also around your other organs and throughout the body. Cellulite, weight gain, and increased visceral fat are all signs your liver may be suffering from toxic overload, and this is really a downer for your metabolism. You will lose excess body fat only when your hepatic function is restored.

The same factors that have so stressed our liver have dealt equally devastating blows to our gallbladder and bile flow—and yet no one is giving you this important information.

THE GALLBLADDER AND BILE

Believe it or not, bile plays a pivotal role in your body's ability to remain slim and trim. But first, you have to understand a little basic anatomy and physiology. Your gallbladder is your liver's best friend and vital to its operations. The liver secretes about a quart and a half of bile daily (also called gall), storing and concentrating it in your gallbladder. Bile breaks down dietary fats into smaller particles that are more digestible and absorbable. When you eat fats, bile is released from your gallbladder into your intestine via the bile duct.

Adequate, healthy bile is essential for your body to absorb those all-important fatty acids. It also helps you absorb fat-soluble vitamins, such as vitamin A (the infection fighter), vitamin E (the fertility vitamin), vitamin K (the bone healer), and vitamin D (the healing, hormone like vitamin that boosts immunity and wards off breast and colon cancers). Fats are precursors to every hormone, so not digesting them has major consequences. If undigested fat globules pass from your gut into your bloodstream, then your cells cannot incorporate them into cell membranes, and your body has no choice other than to store them on your derriere.

Decades of consuming processed foods and nutritionally impoverished low-fat and nonfat diets, compounded by unending toxic exposures, have quietly damaged our gallbladder function, leading to thick, overconcentrated, and congested bile – which I call toxic bile. Toxic bile is thick, sticky bile that has stopped flowing freely, so it's no longer able to perform its duties. Bile can turn toxic from excess cholesterol, high toxin load, clogged bile ducts, or insufficient intake of the specific nutrients that keep it thin and flowing (such as lecithin). Studies also link elevated blood sugar levels to thicker bile and gallstone formation.

Toxic bile and obesity feed off each other. In an animal study, obese subjects

Myth: You don't really need your gallbladder.

secreted and released only half as much bile as did their leaner counterparts.¹ One 2016 study published in the American Heart Association's journal *Arteriosclerosis, Thrombosis, and Vascular Biology* showed that gallstones come with a 23 percent increased risk of coronary artery disease.² When your bile is sick, you get sick—it's that simple.

In addition to fat digestion, bile plays a major role in detoxification—flushing out all the toxins your liver collects. Like a magnet, bile grabs onto all sorts of nasty stuff so it can be eliminated from your body in the feces. Bile is an unseemly brew of such things as heavy metals, drugs, foreign chemicals, food preservatives, contaminants (e.g., pesticides and flame retardants)—whatever the liver is getting rid of goes into the bile.

The problem is, if your bile is thick and congested and not flowing, all that sludge sticks around in your body! Those excess toxins get stored in your fat cells. Think about it—your body has to put them somewhere! This promotes cellulite by increasing deposition of body fat and reducing collagen formation.

As toxins accumulate, your health declines. Toxic overload is a big factor in much of the chronic disease we see today. The quantity and quality of your bile is directly proportional to the number of toxins it can eliminate. By the time people develop allergies, arthritis, and joint inflammation, they have a 75 percent bile deficiency, and by the time they develop a major chronic illness, such as cancer or heart disease, their bile production is compromised by a whopping 90 percent. Toxic bile is associated with numerous health problems, including obesity, hormone imbalance, hypothyroidism, autoimmune issues, and more.

GALLSTONES

If you begin experiencing nausea, vomiting, pain, fatigue, or a mélange of other problems, it could be your gallbladder sending out a major SOS.

When bile becomes sludgy, gallstones begin to form. Gallstones are hard masses that develop in the gallbladder or bile ducts. They are composed of cholesterol and calcium bilirubinate or calcium carbonate and can get quite large—up to the size of a golf ball.³ Most people with gallstones experience no overt symptoms because the stones accumulate in the gallbladder and don't move beyond there, but sometimes the gallbladder becomes inflamed (cholecystitis). Unresolved symptoms you may never have connected to your gallbladder or bile may include:

- Hypothyroidism (sign of deficient bile to stimulate active thyroid hormone in fat cells)
- Constipation (inadequate bile for lubrication)
- Nausea or vomiting (not enough bile)
- Pain that comes on suddenly and quickly worsens; pain is generally focused on the right side, just below the rib cage, between the shoulder blades, in the right shoulder, or up the right side of the neck
- Headache over the eyes
- Burping, gas, bloating, constant feeling of fullness
- Gastroesophageal reflux (GERD)
- Bitter taste in the mouth after meals (bile reflux)
- Light-colored or floating stools (lack of bile output)
- Hemorrhoids (congested liver)
- Inability to lose weight
- Fibromyalgia (liver and gallbladder toxicity)
- Mood changes such as irritability, depression, or anxiety
- Dry skin and hair (essential fatty acid deficiency)
- Varicose veins
- History of prescription or recreational drug use (need for more liver and gallbladder support)
- Easily intoxicated (need for more liver and gallbladder support)

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If gallstones go on the move, they sometimes get stuck in the gallbladder opening or in the bile duct, and cause severe upper abdominal pain in the center, or just right of center. Typically, the pain begins within an hour of eating, especially after a high-fat meal, and lasts a few hours before subsiding although it may continue longer in waves. If an obstruction is severe enough, it can cause a life-threatening gallbladder infection. This type of infection most often ends with hospitalization and gallbladder surgery. Pancreatitis is another complication when a gallstone passes through the bile duct and blocks the pancreatic duct. If bile seeps into the bloodstream, signs of jaundice (yellowing of the skin and whites of the eyes) may appear. Unfortunately, many people are unaware they have a gallbladder problem or gallstones until they experience a medical crisis, making prevention paramount.

Gallbladder removal is the most frequently performed abdominal surgery in the United States today.⁴ Unlike your liver, your gallbladder cannot regenerate itself. Those who lose their gallbladder experience increased risk for obesity, in addition to a number of serious health problems.⁵



Contrary to the fact that many physicians still tell their patients that losing their gallbladder is no big deal, not having one puts you at a serious disadvantage. Bile is not vile—bile is brilliant! Think of your gallbladder as the tank and bile as the oil. Your gallbladder was concentrating the bile it received from your liver and mixing it with salts and enzymes. Without the holding tank, bile has nowhere to go except straight into your small intestine in a continuous trickle, regardless of the presence or absence of dietary fat. The failure to match bile output with fat consumption compromises your ability to properly digest the fats you eat, resulting in nutritional deficiencies—and expanding belt loops.

It is very common to experience weight gain after gallbladder removal. Animal studies tell us that triglyceride levels increase in both the blood and liver, as does VLDL production. VLDL stands for “very low-density lipoproteins,” which are the most dangerous kind of LDL. Recirculation of bile acids also increases, which affects energy balance, body weight, glucose levels, insulin sensitivity, and cholesterol regulation. Research suggests the risk of metabolic syndrome, type 2 diabetes, heart disease, and fatty liver all rise substantially after gallbladder surgery.⁶

Even if you still have your gallbladder, if your bile is not flowing properly, you may experience many of the same problems as people who have had their gallbladder removed. Whether or not you still have your gallbladder, there are steps you can take to support your bile.

BILE ACIDS AND BILE SALTS? THINK: DISH SOAP

Don't let bile terminology bog you down! Bile is basically a degreasing agent—like dish soap. Thanks to bile acids and bile salts (which are essentially different forms of the same thing), bile is able to break down larger fat globules into smaller fat droplets (emulsification), so that your enzymes (lipases) can fully digest them.

Bile acids are made from cholesterol and represent about 80 percent of the organic compounds in bile. After their synthesis by the liver, they are combined with the amino acids taurine and glycine to form primary bile acids, which make them water-soluble and better able to emulsify fats. These combined forms are known as bile salts. In the small intestine, bile salts are converted by bacteria into secondary bile acids.

As large quantities of bile acids are flushed into your small intestine every day, 95 percent are absorbed back into your blood and returned to your liver. The remaining 5 percent are excreted in the stool. In your colon, bile acids draw in water and increase motility, preventing constipation. If bile acids are not properly reabsorbed from the colon, a condition called bile acid diarrhea can develop, characterized by chronic bloating, urgency, and watery diarrhea. Bile acid diarrhea is often misdiagnosed as irritable bowel syndrome (IBS) and is estimated to affect about 1 percent of the population.⁷

Bile acids are also closely tied to blood sugar and are typically deficient in individuals with type 2 diabetes or insulin resistance. Many studies show that proper bile release is important for balancing blood sugar.⁸

Because bile salts are derived from cholesterol, bile is also instrumental in regulating cholesterol levels in your body. Approximately 80 percent of your body's cholesterol is used by the liver to produce bile salts—roughly 500 milligrams every day. Since bile salts are a primary component of bile, adding more into the diet helps the liver to make more bile. This is especially helpful after gallbladder surgery. Examples of bile salt supplements are Ox Bile and Bile Builder.

THE #1 NUTRIENT FOR BETTER BILE

Let's think back to those cell membranes. Cell membranes are made of fats: phospholipids and cholesterol. Guess what? These same phospholipids are also a critical component of bile!

Choline is a very important nutrient in every cell in your body, first discovered in bile. The choline in bile helps with emulsification of fats, making them water-soluble. Choline is involved in tons of other processes as well, such as lipid transport, liver repair, nerve conductivity, brain development, and cognition.⁹ Choline helps control the deposition of fat in your organs, especially in the liver—so significantly that choline deficiency can directly cause fatty liver disease.¹⁰ Choline also helps keep homocysteine levels low, which is important because high levels of homocysteine raise your cardiovascular risk.

Choline deficiency is a deal-breaker for bile production and also leads to muscle damage. Up to 90 percent of women over age forty are choline deficient!

You can obtain choline from food sources, such as beef, almonds, cauliflower, navy beans, and amaranth. Although eggs are also a rich source of choline, I recommend avoiding them because they are the most highly allergic food for the gallbladder. The recommended daily allowance for choline is 425 milligrams for women and 550 for men, but I recommend 500 mg with each meal for both men and women, which is nearly triple the RDA—at least for a few weeks. After that, you can decrease the dose to twice a day (with meals). This amount is particularly helpful for those with fatty liver disease.

Lecithin contains choline in varying amounts, and has been shown to support bile flow, cholesterol balance and optimal lipid profiles, cell membranes, and overall brain and nervous system function.¹¹ My experience with patients, as well as myself, has been that lecithin supplements have offered some benefits, such as accelerating fat loss, improving digestion, and relieving constipation, gas, and bloating. However, newer studies have uncovered some concerns, so I am no longer recommending lecithin supplements. Of particular concern is a recent study suggesting lecithin is metabolized

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by some people's gut flora into a metabolite that shows up in high concentrations in those who suffer heart attack or stroke, a compound called trimethylamine N-oxide (TMAO).¹² This is a correlation—not a causation—so we still don't know whether this compound plays a causative role in those events. Nevertheless, it is enough for me to withdraw my recommendations about lecithin as there are safer options available for getting your choline.

CONDITIONS STEMMING FROM TOXIC BILE

No matter how balanced your diet, without healthy bile you simply can't get those fabulous fat-blasting, membrane-protecting, fuel-providing benefits. But beyond your metabolism, toxic bile and gallbladder dysfunction are now linked to a shocking laundry list of other diseases, including GERD, thyroid issues, autoimmune problems, hormone dysregulation—and the list goes on. This is quite concerning because the majority of individuals with bile and gallbladder disease are completely unaware they have a bile or gallbladder problem!

When it comes to people seeking help for digestive ailments, the last decade has brought hundreds if not thousands of books about leaky gut syndrome, small intestine bacterial overgrowth (SIBO), IBS, detox and cleansing, inflammation, autoimmunity, thyroid dysfunction, and the like—yet no one has addressed the importance of bile. Between 1 and 1.3 million Americans suffer from inflammatory bowel disease (IBD)¹³ and up to 80 percent of those also have SIBO.¹⁴ Leaky gut is occurring in epidemic numbers. Bile is a factor in all these conditions—if your gut is not healthy, no amount of intervention will fix the problem unless you also address the bile. I believe this is one of the major reasons so many people are sick today. The problem is even worse if you've had your gallbladder removed.

(continued on next page)

When you try to treat a condition without knowing the underlying cause, you get treatments that don't work but are just palliative measures that temporarily reduce symptoms without correcting the underlying problem. With this approach, symptoms tend to recur and even worsen because the causative factor has been ignored. Greater and greater stress is placed on your immune system.

Let's take a closer look at a few more common conditions associated with toxic bile.

WHEN CONSTIPATION COMES TO CALL

Believe it or not, constipation is a common symptom of toxic bile, and for good reason. Bile salts are responsible for lubricating the intestinal tract, so if you have bile insufficiency, constipation is the natural consequence. As you increase your bile flow, constipation may become no more than an unpleasant memory. Simply implementing the dietary strategies to incorporate bitter foods that you'll find later in this guide will go a long way toward eliminating constipation.

Be sure to move your body and drink plenty of water every day. Exercise gets everything moving—blood, lymph, bile, and bowels. One study found that exercise reduced the risk of gallstones by one third.¹⁵ Something as simple as drinking a large glass of water first thing in the morning may help prevent gallstones. Drinking water has been shown to induce gallbladder contractions via vagal nerve stimulation, therefore causing the gallbladder to empty. Other beverages may have a similar effect. Chewing food slowly also gives the body time to produce more bile.

HEARTBURN AND ACID REFLUX

Do you experience acid reflux, heartburn, or GERD? Have you been told your symptoms are from overproduction of stomach acid? This brings us to another myth!

Almost everyone has been brainwashed into believing excess stomach acid is the root of their digestive issues, yet there is no evidence for this. In fact, studies show the opposite—GERD is more often associated with underproduction of stomach acid (hydrochloric acid, or HCl). GERD, commonly called acid indigestion, occurs when your stomach contents backflush into the esophagus and cause a burning sensation, or heartburn. GERD can also produce gas, bloating, or burping shortly after a meal. Individuals typically experience a 40 percent drop in stomach acid production by the time they reach their thirties, and another 50 percent decrease by age seventy. In one study, almost one third of individuals over age sixty produced little to no stomach acid.¹⁶ Over time, reflux can have some serious complications, such as esophageal inflammation, erosion, ulceration, bleeding, scarring, and even esophageal cancer, so you do not want to let this continue.

If heartburn is not caused by excess stomach acid, then what is the cause? GERD is almost always a muscle problem, specifically of the valve at the lower end of the esophagus called the lower esophageal sphincter (LES). This valve is supposed to keep gastric juices from backing up into your esophagus, except when you belch or vomit. However, in people with GERD, the LES fails to close properly, allowing stomach contents to pass through. Reflux produces symptoms regardless of how much or how little acid is in your stomach—the problem is not excess acid, but rather acid in the wrong place. Why does the LES malfunction? One reason is increased stomach pressure, such as from overeating. Another is gas related to poor digestion of certain carbohydrates or sugars that ferment in the stomach. Dairy is a major offender, due to lactose. Other foods can weaken the LES, such as alcoholic beverages, acidic foods, spicy foods, coffee, and chocolate, as well as certain medications.

The conventional treatment for GERD is to block normal stomach acid production, using antacids (Tums), H2 blockers (Zantac, Tagamet), and proton-pump inhibitors (PPIs; these include Prilosec, Prevacid, and Nexium). Millions of people have been popping PPIs on a daily basis to suppress their acid production—and the majority had a low-acid problem to begin with! Therefore, it's no surprise these drugs have created a boatload of side effects, ranging from digestive problems and nutritional deficiencies to impaired immunity.

You might be wondering what GERD and stomach acid have to do with your gallbladder. Well, low HCl and gallbladder problems go hand in hand. When you eat, hydrochloric acid is what triggers the release of bile (via the hormone cholecystokinin) as well as the release of pancreatic enzymes—so blocking HCl stops bile flow. Excess dietary carbohydrates and starches, as well as insufficient fats, can stifle HCl and impair bile production. Stress, overeating, eating too quickly, eating irregularly, not chewing your food thoroughly, and drinking large amounts of fluids with meals can all challenge your body's HCl production. Making matters worse, popping PPIs at the first sign of heartburn only further impairs the bile, so you're trading temporary relief for a far more serious problem that may eventually cost you your gallbladder—or worse.

Before looking at how you can increase stomach acid production, there is one more issue worth mentioning. The pylorus, also known as the pyloric valve—the valve between your stomach and small intestine—should be like a one-way door from your stomach into your intestine, but it can become spastic. A spastic pylorus can cause bile to flow backward, from your small intestine into your stomach (bile reflux), and this produces symptoms similar to acid reflux, such as bloating, pain, nausea, and vomiting.

Hydrochloric acid has many beneficial functions for your health. Besides triggering bile release, HCl also reduces gas by helping break down carbohydrates before they can be fermented and kills gas-producing bacteria in your small intestine. It also plays an important role in protein digestion, which we'll address in the next chapter. By making your stomach highly acidic, HCl also protects you from pathogenic bacteria and parasites that may have hitched a ride with your brunch.

How do you boost your hydrochloric acid levels? Many find relief taking a stomach acid replacement, such as apple cider vinegar before meals. However, if your esophageal lining is damaged or you have a hiatal hernia, you may not be able to tolerate more acid until those tissues are healed. The best solution is to correct the condition that's blocking normal acid production in the first place, instead of artificially raising it. Some of the causes have already been discussed, but also

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make sure you are getting plenty of HCl-supporting nutrients, such as sodium, iodine, and zinc—think: seafood and pumpkin seeds. Don't overdo protein, as this can overwhelm HCl production. Make sure you're getting plenty of vitamin C because low vitamin C will suppress conversion of cholesterol into bile.¹⁷ Other helpful treatments include papaya leaf, bromelain, and pine nut oil. For more about GERD and HCl, I highly recommend Dr. Jonathon Wright's book *Why Stomach Acid Is Good for You*.¹⁸

WITHOUT GOOD BILE, YOUR THYROID MAY CRASH

Few people realize that sluggish bile can actually drag down your thyroid. *If you're not absorbing fats, you can't make thyroid hormone. Period.*

Around 80 percent of women over the age of forty suffer from insufficient, poor-quality bile, and suboptimal bile flow and sluggish thyroid share many of the same symptoms, including fatigue, weight gain, digestive issues, constipation, leptin resistance, dry skin, and many more. According to the American Thyroid Association, more than 12 percent of Americans will develop a thyroid condition during their lifetime. Twenty million Americans have some form of thyroid disease, but up to 60 percent of them are unaware of their condition.¹⁹ Evidence is mounting that hypothyroidism is linked to congested bile.

Scientists from Harvard and others overseas have discovered the missing link between thyroid and bile in several landmark studies—but the shocking truth is that no one is talking about it. A study at Tampere University Hospital in Finland found that hypothyroidism is seven times more likely in people with reduced bile flow.²⁰ A study at Tufts produced similar findings, showing greater rates of hypothyroidism among those with bile duct stones.²¹ Why would this be? The reason is that bile acids boost thyroid activity.²² According to thyroid specialist Dr. Antonio Bianco, bile release triggers the release of an enzyme that converts

T4 (the body's less active thyroid hormone) into T3 (the more active form), which fuels metabolism. Individuals who improved their bile experienced an enormous increase in metabolism.²³

Dietary fats supply your body with the raw materials needed to produce active thyroid hormones, so it follows that poor fat digestion lowers thyroid levels. Making matters worse, hypothyroidism slows emptying of the biliary tract, which increases your risk for stone formation.²⁴ Gut bacteria also play a role in helping your body convert T4 into T3—about 20 percent of your T4 is converted this way. Thyroid hormone also relaxes the sphincter of Oddi, which controls the flow of bile into the small intestine. If your thyroid hormone levels are low, this sphincter tenses up and less bile can pass, which increases the risk for gallstones.²⁵ Even now with all this groundbreaking science, more than 90 percent of physicians fail to recognize bile as a factor for their thyroid patients.

To provide overall support for your thyroid, consider Thyro-Key from UNI KEY Health. Thyro-Key is a nonherbal combination of glandular extracts designed for optimal thyroid function.

AUTOIMMUNE CONDITIONS

Rates of autoimmune disease have tripled over the last few decades, and it's no accident that autoimmune disorders can be associated with a 75 percent drop in bile production. Estimates are that between 24 and 50 million Americans now suffer from autoimmune conditions—typically more than one.²⁶ Autoimmunity affects more women than heart disease and breast cancer combined and is one of the top ten causes of death for girls and women in all age groups, up to sixty-four.²⁷ One of the main causes is toxicity, and as you know bile is integral to detoxification.

Of special concern is Hashimoto's thyroiditis (HT), which by some estimates accounts for 90 to 95 percent of hypothyroidism cases.²⁸ HT is the most prevalent autoimmune disorder and occurs when the immune system attacks thyroid tissue. Even the most astute Hashimoto's researchers are missing the bile connection. The prevalence of HT is reported to be about 5 percent of the population,²⁹ but this estimate is actually quite low because so many are asymptomatic in its early stages. HT is five to ten times more common in women than men, and its prevalence is on the rise.³⁰ Forty-three percent of those with Hashimoto's are estimated to have gluten sensitivity.³¹

There have been many helpful natural supplements for those with Hashimoto's, ranging from thiamine to HCL and selenium. But one recent discovery that shows promise for those with Hashimoto's thyroiditis is black seed (*Nigella sativa*). One study showed the condition can be improved by simply adding 2 grams of powdered black seed daily.³² Black seed is a rich source of those parent omega-6 EFAs that strengthen cell membranes and improve cellular communication—and autoimmune diseases are all about cellular communication! The body is not communicating well with itself.

FOOD ALLERGIES AND SENSITIVITIES

You have probably not heard food allergies and the gallbladder mentioned in the same sentence, but according to the late Dr. James C. Brenemen, former chairman of the Food Allergy Committee of the American College of Allergists, there is a significant correlation between gallbladder dysfunction and food allergies. Dr. Brenemen tracked allergies among gallbladder patients and identified the three top offenders: eggs (93 percent of individuals), pork (64 percent), and onions (52 percent).³³ When you have a sensitivity to these foods, consuming them produces edema in the bile ducts, which interferes with bile release. The good news is that removing the offending foods from the diet for as little as one week can bring relief from gallbladder pain and possibly prevent gallbladder surgery down the road.

TOXIC BILE, ESTROGEN DOMINANCE, AND “FALSE FAT”

Is perimenopause or menopause hitting you like a runaway train? Are you lying awake night after night with hot flashes, insomnia, and brain fog? Hormone imbalance among women is twice as common today as one hundred years ago. One of the ways to restore hormone balance is to build healthy bile. Bile is your ticket to detox. Toxic, sluggish bile, and hormone problems go hand in hand.

My hunch is that 80 percent of women over age forty have bile insufficiency. Women have an increased risk of bile problems and gallstones because estrogen stimulates the liver to remove more cholesterol from the blood and divert it into the bile, causing bile to thicken. Elevated blood sugars further complicate the problem.

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It's no surprise that 25 percent of American women have gallstones by the age of sixty, and 50 percent have them by age seventy-five.³⁴ And it's a vicious (and viscous) cycle—once your bile has thickened, it's less able to break down excess estrogen.

Most women are too high in estrogen producing a condition called estrogen dominance. Estrogen is present in everything from oral contraceptives to hormone replacement therapy (HRT) to xenoestrogens (synthetic estrogen-mimicking compounds in pesticides and food additives). Estrogen dominance leads to a wide range of issues, including decreased sex drive, irregular periods, PMS, breast tenderness or fibrocystic breasts, headaches, mood swings, fatigue, hypothyroidism, hair loss, foggy thinking—and more serious problems, such as autoimmunity, breast cancer, and infertility. Estrogen is necessary for serotonin production by affecting how the body metabolizes tryptophan, serotonin's precursor. Serotonin deficiency can lead to food cravings, weight gain, and depression.

In addition to contributing to body fat, estrogen dominance is notorious for causing something I refer to as “false fat.” False fat is fluid trapped in body tissues that contributes to bloating, puffiness, and cellulite. Many of us women carry an extra 10 to 15 pounds of it. Some of us—15 to 25 percent—are more salt sensitive than others, so be careful about the amount as well as the type of salt you consume. Choose natural sea salt as opposed to common table salt, as sea salt is lower in sodium and provides valuable trace minerals. Include more fresh vegetables and fruits in your diet, which tend to be rich in potassium. Potassium is an important mineral that helps balance out sodium in the body. Restaurant food is typically very high in sodium, so you might want to make better use of your own kitchen. In addition to high sodium and estrogen levels, fluid retention may also come from food sensitivities, adrenal stress, or dysregulated insulin.

HOW TO DIAGNOSE A GALLBLADDER PROBLEM

Do you think your gallbladder might be unhealthy? Are your symptoms suspicious but you want confirmation? There are some tests that can be helpful but you'll have to be proactive. I'm sorry to say, your health-care practitioner may not have you covered in this area—*less than 10 percent of physicians think to test for bile flow.*

BLOOD TESTS

Signs of a gallbladder problem can sometimes be picked up first on routine blood panels, so consider including a few basic blood tests in your routine preventative care. You can't assume your gallbladder is healthy just because you're not having symptoms. If you suspect a gallbladder problem, a variety of tests can be helpful or confirmatory. For example, sometimes an infection is identified in a complete blood count (CBC) if white blood cells are elevated. Other tests can reveal high bilirubin levels, which indicate jaundice, a complication of gallbladder problems. Liver function tests look for elevated enzymes that may reveal a biliary obstruction.

There are three primary liver enzymes that can be measured in the blood: ALT (alanine aminotransferase), AST (aspartate aminotransferase), and GGT (gamma-glutamyl transferase). All three are found predominantly in the liver but to a lesser extent in other organs (muscles, heart, kidneys, pancreas, spleen, brain, testes, etc.). Normally these enzyme levels are low, but when your liver is diseased or damaged, they release them into your bloodstream and cause levels to rise. Diagnostics are tricky, therefore liver function tests are only helpful when considered as part of the overall picture.

In healthy individuals, ALT and AST levels can vary from 10 to 45 percent in a single day, as well as differing by race and ethnicity. Your highest ALT levels typically occur in the afternoon and the lowest at night. Besides biliary obstruction, elevated ALT and AST can be caused by many things, such as cirrhosis, heart attack, strenuous exercise, certain viral infections, tobacco, alcohol, and certain medications. Moderate exercise can increase AST to almost three times the normal limit for up to 24 hours. If only AST is elevated, it relates to the heart, but if both AST and GGT are up, then it could be your gallbladder.

Your GGT level is not a standard test—you'll probably have to request it. GGT among African Americans tends to be twice as high as Caucasians, and 25 to 50 percent higher in obese individuals. Low GGT may indicate hypothyroidism or magnesium deficiency. All these variables can make liver enzyme interpretation somewhat challenging, so you'll need an astute health-care practitioner to help you sort it all out.

DIAGNOSTIC IMAGING TESTS

Your physician may need to see a visual of your liver and gallbladder to make a diagnosis. Imaging procedures all have their strengths and weaknesses.

Abdominal X-rays can spot some calcium-containing gallstones, but not all types.

Computed tomography (CT) scans are not the best way to look for gallstones but

can detect a rupture or infection in the gallbladder or bile ducts. Ultrasound is the

most commonly used imaging test for detecting all sizes of gallstones, but it tells

you nothing about inflammation. Magnetic resonance imaging (MRI) is sometimes

helpful for seeing stones in the bile ducts but can miss tiny stones or infections.

There are other tests as well, but these are the most commonly used.

RESTORE YOUR GALLBLADDER - & GIVE GALLSTONES THE BOOT!

Now that you understand the importance of bile and why your gallbladder is anything but a throwaway organ, let's turn our focus to what you can do to improve bile production and gallbladder tone. This is a substantial part of creating a radical metabolism, and as usual diet is key. If you have symptoms of impaired fat digestion, such as nausea, bloating, constipation, or pale stools, or if you've had your gallbladder removed, then it's wise—I might even say critical—to increase your intake of bile-building foods and consider supplements to improve bile flow. Laying some love on your liver and gallbladder will add years to your life and life to your years. There are simple, effective strategies, even if you've had your gallbladder removed.

If you are living with an intermittently unhappy gallbladder, please be familiar with the danger signs that indicate a need for immediate medical attention:

- Upper-right quadrant pain that does not go away within 5 hours
- Fever or vomiting
- Changes in bowel movement and urine

If you have the above, then you should get evaluated ASAP. Chances are, however, that if you're reading this guide your symptoms are less severe and more chronic in nature. There are a number of natural treatments you can do at home to reduce inflammation and restore healthy bile flow, whether you have a gallbladder or not. If you could do only one thing to improve the situation, it would be to incorporate more bitter foods into your diet—so this is our first strategy.

THE BEAUTY OF BITTERS

Many plant foods qualify as bitters. Studies suggest bitters “get your juices flowing” (literally) by stimulating the release of bile, as well as saliva, HCl, pepsin, gastrin, and pancreatic enzymes. Bitters may also increase the tone of your lower esophageal sphincter (LES). It is unclear if we even need to swallow the bitters—some research suggests we only need to taste them for them to be effective, which makes bitters effective in relatively small doses.

A good starting point is to wean yourself off sweet tastes and develop a new love of bitter. We have lost our natural affinity for bitter foods and traded it in for a pervasive and ultimately dangerous sugar addiction. This addiction to sweets has sabotaged any semblance of a “balanced diet” and opened a Pandora’s box of health problems. Americans are consuming between 77 and 152 pounds of sugar every year—and that’s just table sugar and does not include other refined carbohydrates. 35 years of processed food and low-fat diets, high in sugar and refined carbohydrates, have contributed to sluggish gallbladders and congested bile, among other things. We didn’t have this problem when we were eating off the farm!

The antidote to “sweet addiction” is the development of other tastes. Your tongue has sensors for sweet, salty, sour, and bitter tastes—and the more you cut back on the sweet, the better you’ll develop the other three. Bitter greens, such as watercress, arugula, endive, dandelion, and radicchio, offer wonderful benefits, as does horseradish, which also has cancer-fighting properties. The following table lists a wide variety of bitter foods to incorporate in your diet—and many may surprise you!

BITTER FOODS

BITTER FOODS: VEGETABLES & FRUITS

Alfalfa	Arugula (rocket)	Artichoke
Asparagus	Beet greens	Bitter gourd
Bitter melon	Broccoli and broccoli rabe	Brussels sprouts
Buffaloberries	Cabbage	Cauliflower
Collards	Cucumbers	Daikon radish
Dandelion greens	Endive (escarole)	Frisée
Grapefruit	Indian lettuce	Japanese eggplant
Jerusalem artichokes	Jicama	Kale
Lemon and lemon rind	Lime and lime rind	Lotus leaf
Mizuna	Mustard greens	Nettles
Olives (uncured)	Orange peel	Puntarelle
Radicchio	Radish	Rapini
Red leaf lettuce	Rhubarb root	Romaine lettuce
Sandcherries	Spinach	Swiss chard
Tatsoi	Thistles	Turnips and turnip greens
Watercress or cress	Wild lettuce	

BITTER FOODS: HERBS & SPICES

Angelica	Angostura bark	Anise
Barberry bark	Basil	Bergamot
Burdock root	Caraway	Cardamom
Chamomile	Chicory root	Cilantro
Cinnamon	Coriander	Dill
Fennel	Fenugreek seeds	Garlic
Gentian root	Ginger	Goldenseal root
Hops flowers	Horehound	Horseradish
Milk thistle	Mint	Parsley
Rue	Saffron	Scutellaria
Sorrel	Thyme	Turmeric
Wormwood leaf	Yarrow flower	Yellow dock

BITTER FOODS: OTHER

Aloe vera	Apricot seeds and seed oil	Angostura bark
Bitter orange	Bittersweet chocolate	Cacao
Coffee	Peach pits	Plum pits
Seaweed (dulse, arame, nori, kombu, wakame, etc.)	Sesame	Vinegar

HERBAL BITTERS

Bitter foods as well as bitter herbs can significantly boost digestion, which is how digestive bitters came about, and today there are many formulas from which to choose. According to Dr. Wright in *Why Stomach Acid Is Good for You*, the most commonly used herbs in Western herbal medicine are the following:

- Barberry bark
- Caraway
- Dandelion
- Fennel
- Gentian root
- Ginger
- Globe artichoke
- Goldenseal root
- Hops flowers
- Milk thistle
- Peppermint
- Wormwood
- Yellow dock

Herbal bitters formulas are available in just about any natural food store and usually are tinctures of several bitter herbs. Digestive bitters are completely plant-based, therefore accessible if you're vegan or vegetarian. Dr. Shade's Bitters No. 9 by Quicksilver Scientific is an excellent choice. I recommend taking the recommended dose (typically 5 to 10 drops) in as little water as possible about 15 minutes before a meal, and after a meal as needed for heartburn, indigestion, or bloating. Be careful if you have severe GERD, and go lightly if your stomach lining is compromised. If you get nauseous, back off on the dose. You can even make your own digestive bitters! Mountain Rose Herbs offers a simple recipe calling for dandelion root, fennel seed, ginger, and orange peel.³⁶ Stay away from Swedish bitters, as they typically contain herbal laxatives, such as rhubarb and senna.

Ever heard of Angostura bitters? A very popular brand of cocktail bitters, these were named after a Venezuelan town formerly named Angostura, but now called Ciudad Bolivar. Legend has it that this secret formula contains an extract from the bark of the angostura plant, a shrublike citrus tree native to that region. A bitter chemical in the bark called angosturin is a quinolone that's regarded as a good digestive and antibacterial. (You might recognize another variety of quinolone

RESTORE YOUR GALLBLADDER

found in tonic water and some types of vermouth: quinine, an antimalarial.) The principle ingredient in Angostura bitters is listed as gentian root, but the formula is a well-kept secret—whether or not it actually contains angostura bark extract is anyone’s guess, but it makes for entertaining culinary lore.³⁷

An alternative to digestive bitters is the juice of naturally fermented sauerkraut, which is acidic and loaded with gut-friendly microbes. Start with one teaspoon and work your way up to an ounce or two before each meal.

BRILLIANT BILE BUILDERS

In addition to bitter greens and such, other foods and supplements are especially good for bile and gallbladder support:

Bile Builder (UNI KEY Health): Contains every one of the “superstar six” for building bile: choline, taurine, beet root, pancreatic lipase, ox bile, and collinsonia root.

Full disclosure: I am a nutritional consultant and spokesperson for UNI KEY Health Systems; I formulated Bile Builder because I could not find a supplement with all of the critical bile builders in one formula.

Beets: Beets contain betaine, a rich source of HCl that thins the bile and helps prevent gallstones. (Contained in Bile Builder)

Choline: A major component of bile that helps emulsify fats; a vitamin-like nutrient present in every cell in your body. (Contained in Bile Builder)

Taurine: A key component of bile acids, this essential amino acid helps bile excrete chemicals detoxed by the liver, increases bile acid production and thins the bile, and reduces cholesterol levels in the blood and liver. Many people are deficient, especially vegans and vegetarians, because taurine is derived from organ meats and other animal tissues. Taurine also improves lipid profile and lowers obesity risk.³⁸ (Contained in Bile Builder and Liver-Lovin Formula)

Pancreatic lipase: An enzyme for breaking down fats; take 30 minutes before a meal. When taken on an empty stomach, it helps fight cancer by stripping cancer cells of fibrin, an outer coating that shields them from your immune system.³⁹ (Contained in Bile Builder)

Ox bile: Essential bile salts for those with low bile production or without a gallbladder. (Contained in Bile Builder)

Collinsonia root (stone root): An herb used for centuries to remove gallstones and prevent constipation related to bile salt supplementation. (Contained in Bile Builder)

Liver-Lovin Formula (UNI KEY Health): A terrific trio for overall liver support: artichoke, taurine, and chlorophyll. Humans and animals are photoheterotrophs, meaning we are able to use light for energy. Chlorophyll goes into the mitochondria as a metabolite and energizes the Krebs cycle to produce more ATP (hence more energy), without increasing oxidative stress.

Artichokes: Artichokes are a fabulous bile-producing food and liver protectant. Leaves from the artichoke plant contain caffeoylquinic acid, which promotes bile flow. Artichokes may boost glutathione levels as much as 50 percent. (Contained in Liver-Lovin Formula)

Hydrochloric acid equivalents: Apple cider vinegar, lemon juice, or betaine HCl will boost stomach acid and simulate bile and other digestive juices.

Dandelion root: Helps decrease liver congestion and increases bile flow due to a compound called taraxacin.

Vitamin C: A German study found that taking vitamin C daily can cut your risk of gallstones by nearly half.⁴⁰ Liposomal vitamin C is the most absorbable form; 1,000 to 5,000 milligrams per day is recommended.

Orthophosphoric acid (OPA, or H₃PO₄) (from Standard Process or Biotics): A type of phosphoric acid, OPA can be used to dissolve gallstones. Use with care as it can etch the teeth.

THE BENEFITS OF INTERMITTENT FASTING

Overeating is the number one cause of gallbladder attacks, regardless of the type of food ingested. The stomach needs to be able to churn to mix your food with digestive juices—bile, stomach acid, and digestive enzymes. If your stomach is stuffed to the gills, it's like an overloaded washing machine—the clothes can't get clean. Food will be incompletely broken down, which means the nutrients will not be fully extracted and larger food particles pass into the bloodstream (leaky gut), setting you up for inflammation. Try this: for one week, reduce your portion sizes by half and see how you feel. If you're a habitual snacker, try eliminating snacks to allow your digestive system to rest and recover between workouts—you may be surprised at how much better you feel!

If you want to go a step further, intermittent fasting is another good strategy because it takes stress off your digestive system (including your liver and gallbladder), allowing it to rest and rejuvenate. When fasting, your body relearns how to burn fat as a primary fuel, as opposed to sugars. When fats are used for fuel, your liver manufactures water-soluble fats called ketones that burn more efficiently than carbohydrates. Burning ketones creates fewer free radicals that damage your cellular and mitochondrial cell membranes, proteins, and DNA. Training your body to efficiently burn fats improves glucose metabolism, reduces inflammation, and improves just about every aspect of your health. Intermittent fasting even protects the brain. This is the reason Ketogenic diets are often very successful—as long as you can digest fats, that is.

Science shows intermittent fasting lowers blood sugar and insulin levels and decreases insulin resistance, which facilitates loss of body fat—especially belly fat.⁴¹ Intermittent fasting optimizes mitochondrial function and enhances important cellular repair processes, such as purging cellular waste,⁴² which reduces oxidative stress and lowers inflammation.

One type of intermittent fasting is alternate day fasting, where you eat without restrictions one day, then consume about 500 calories the next. In one study, women practicing this style of fasting for eight weeks lost an average of 13 pounds. Science also indicates those who exercise in the morning on an empty stomach burn 20 percent more fat.⁴³ Kris Gunnars has a helpful beginner's guide to intermittent fasting.⁴⁴

COFFEE ENEMAS & THE TRADITIONAL GALLBLADDER FLUSH

Coffee enemas can be a powerful way to reduce your body's toxicity. Their benefits come from stimulation of the liver, more than the intestine—but they really have benefits for the entire body. Coffee enemas can help heal your digestive tract, relieve chronic pain, boost energy and mood, help eliminate parasites, and increase your liver's glutathione production. For further information, read *Achieve Maximum Health* by my friend and colleague David Webster, about the importance of colon hydrotherapy to overall health.

I would be remiss if I didn't mention the traditional gallbladder flush. The flush is a way to dissolve and flush out gallstones by using a combination of natural agents. Several liver/gallbladder flushes (sometimes called purges) are circulating on the Internet. I recommend avoiding these flushes because they can precipitate a life-threatening gallstone crisis. A stone that is blocked and unable to pass can create a medical emergency—which is exactly what you are trying to prevent!

IF YOU MUST PART WITH YOUR GALLBLADDER

I have seen many cases of serious gallbladder disease – including gallstones –being reversed using the strategies in this guidebook. There is no downside to trying! Healing doesn't happen overnight, but many experience a relatively rapid abatement of symptoms. Everyone is different, but you can expect complete healing to take at least three to six months.

With proper support, many ailing gallbladders can heal, but sometimes the damage is too great and surgery is necessary—particularly in the case of a life-threatening infection. Whether you've had gallbladder surgery or not, the great news is that you don't have to shun fats for the rest of your life! A combination of bitters, bile salts, and the other supplements listed in this guidebook will accelerate your healing. If you do require surgery, you will probably need bile salts for a while (unless you have diarrhea or dumping syndrome). Even better is to supplement with both bile salts and bitters. Bile salts are more of a bile replacement, whereas bitters get your liver producing more bile so that in time you won't need to take bile salt replacements. Be mindful that, after you've healed, if you return to the same diet and lifestyle that produced the problem in the first place, then you'll be heading for trouble again, so in this respect it is a lifelong program. Bitter foods and bile-building foods should be permanent additions to your diet.

LET'S REVIEW

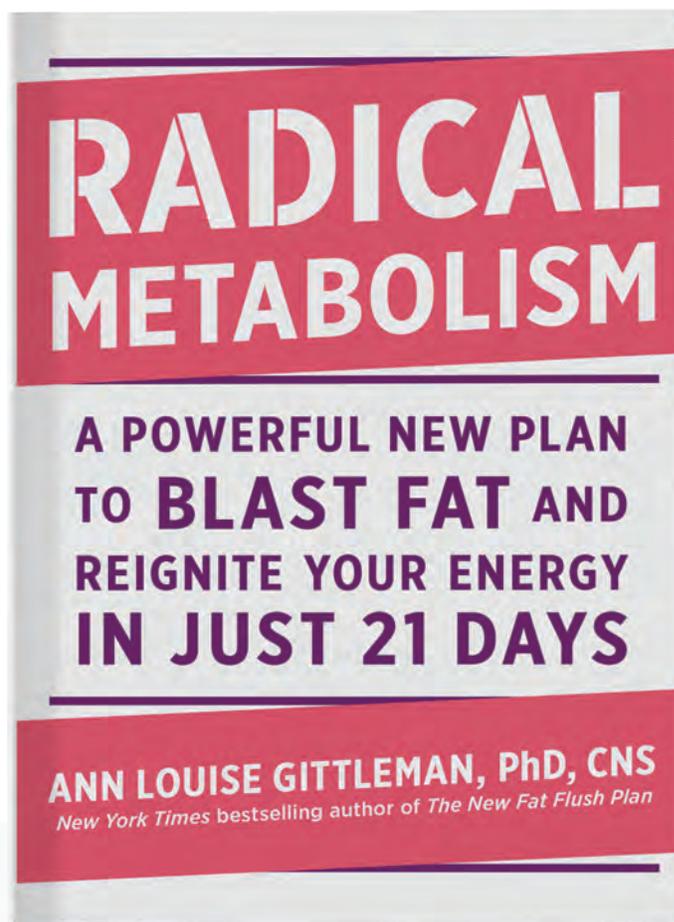
This guide is really loaded with information, so let's connect a few dots. Your gallbladder and bile are essential for fat digestion and absorption. And as you have learned, fats are vital to your health in every imaginable way. Bile is critical for preparing those life-sustaining omega-6 and omega-3 fats for incorporation into your cell membranes. If you give your gallbladder a little love by keeping your bile thin and free-flowing, your body will reward you by keeping your metabolism high and your toxin levels low, and by making sure your hormones play nicely together. On the other hand, if your bile becomes toxic, you increase your risk of a host of health problems from weight gain to low thyroid, estrogen dominance, body toxicity, and rampant inflammation.

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A photograph of Ann Louise Gittleman, a woman with short, styled reddish-brown hair, wearing a denim jacket over a floral top. She is smiling and looking towards the camera. The background is a blurred indoor setting, possibly a kitchen or office.

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