

The Guide to a Healthy
GALLBLADDER

The Guide to a Healthy Gallbladder

Have you noticed that you feel tired after eating, can't seem to lose weight, or have to burp and feel a bit bloated after eating?

Do you struggle with dry itchy skin, migraines or skin rashes? Do you have chronic inflammation or an autoimmune disease? Have you ever been tested for poor bile flow and gallbladder health?

The answer is most likely "no," and that is because bile flow and gallbladder function is only considered in times of extreme symptoms in western medicine and it not given its proper appreciation as a cornerstone part of the digestive process.

In this E-booklet you will learn how poor gallbladder function and sluggish bile flow may be the major cause of a number of your health problems.

You will also learn how to optimize your bile flow and improve the health of your liver and gallbladder so you can reduce your microbial load, improve your digestion and nutrient absorption and live life with more energy and vitality.

Table of Contents:

Topic	Page Number
Introduction and Table of Contents	1
4 Major Functions of Bile	2-3
22 Symptoms of GallBladder Disease	4-6
Components of Bile	7-8
The Development of GallStones	11-14
27 Ways to Improve GallBladder Health	15-20
Functional Testing For GallBladder Health	21-24
Flushing Out GallStones	25-30
The GallBladder Function Quiz	31-32

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*This information is based on Peer Reviewed published studies and all references can be found on DrJockers.com

The Guide to a Healthy Gallbladder

Bile is an important digestive fluid that is produced by the liver and stored in a concentrated form within the gallbladder. Bile's main digestive responsibility is to emulsify fats and create fatty acids that can be readily absorbed and used by the body. When the body has metabolic problems that lead to poor bile production and utilization it can cause serious health disturbances.

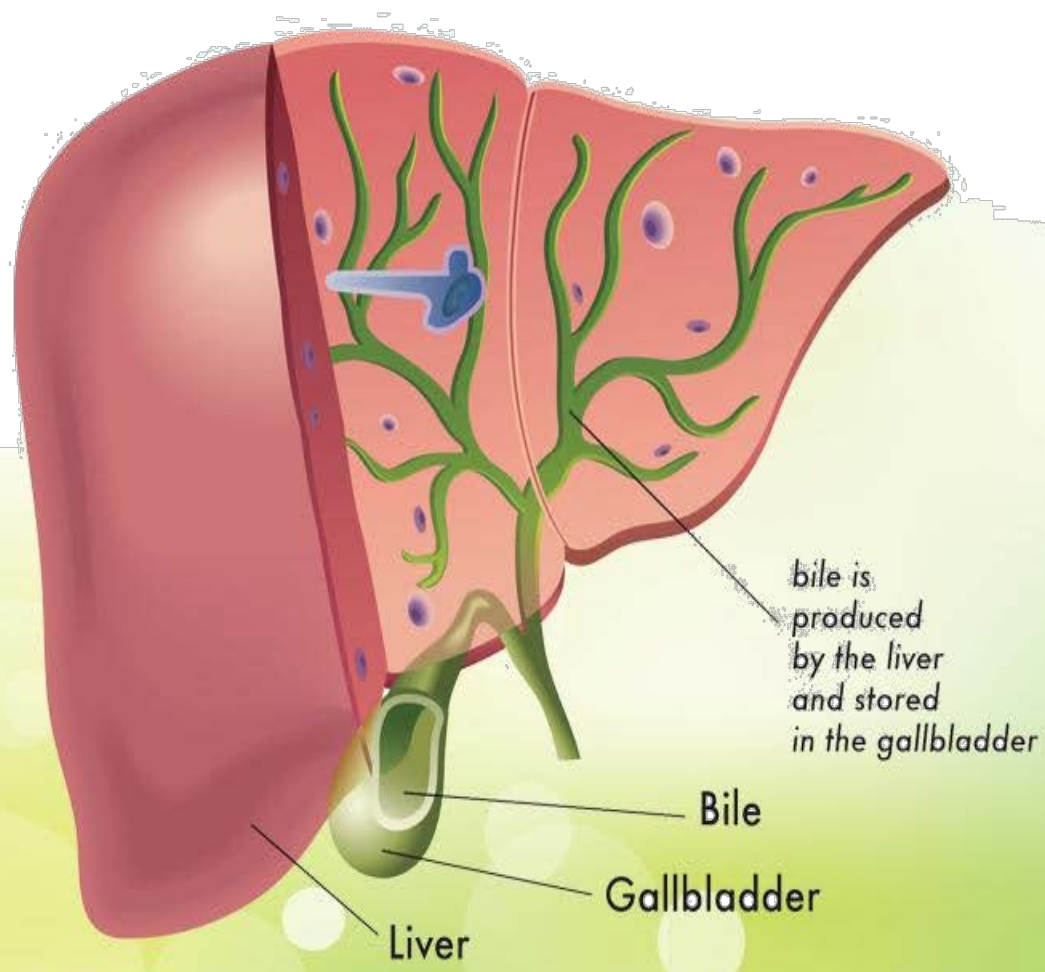
Unfortunately, the mainstream medical system has no solution for sluggish bile production which is also termed "biliary stasis." They just watch and wait until the gallbladder gets so log jammed with gall stones that it needs to be removed. This process takes years and is completely avoidable.

A review study in the British Medical Journal found that 50% of patients who had a gallbladder surgery didn't see improvement in their digestive health complaints (1). This article discusses the components and functions of bile so we can begin to create a plan to optimize our bile production and utilization throughout the course of our lives.'

4 Major Functions of Bile:

- 1) **Fatty Acid Metabolism:** Bile salts are critical for the emulsification of dietary fats into bioavailable fatty acids. Without adequate bile production and utilization, one will have trouble digesting fats and fat soluble vitamins such as vitamin A, E, K and D.
- 2) **The Excretion of Waste Products:** The liver's job is to metabolize and deactivate toxins and bile grabs the toxins and helps bring them through the digestive tract and out in the stool. Bile also helps to encourage the peristaltic action of the intestines which drives fecal matter through and out of the body.
- 3) **Kill off Bad Microbes:** The small intestine should normally not have a lot of bacteria in it and this is partly due to the presence of bile salts (2). Salts are a natural preserving agent that reduce bacterial fermentation. Poor bile production can lead to increased bacterial fermentation and the development of small intestinal bacterial overgrowth (SIBO), Candida or parasitic overgrowth.
- 4) **Blood Sugar Metabolism:** Bile is needed to break down fatty acids for good fat metabolism. Poor fat metabolism will cause blood sugar instability (3, 4). Additionally, bile receptors FXR and TGR5 help to regulate lipid (fat) and carbohydrate metabolism as well as the inflammatory response (5, 6). The bile acids then activate these receptors.

4 Major Functions of Bile

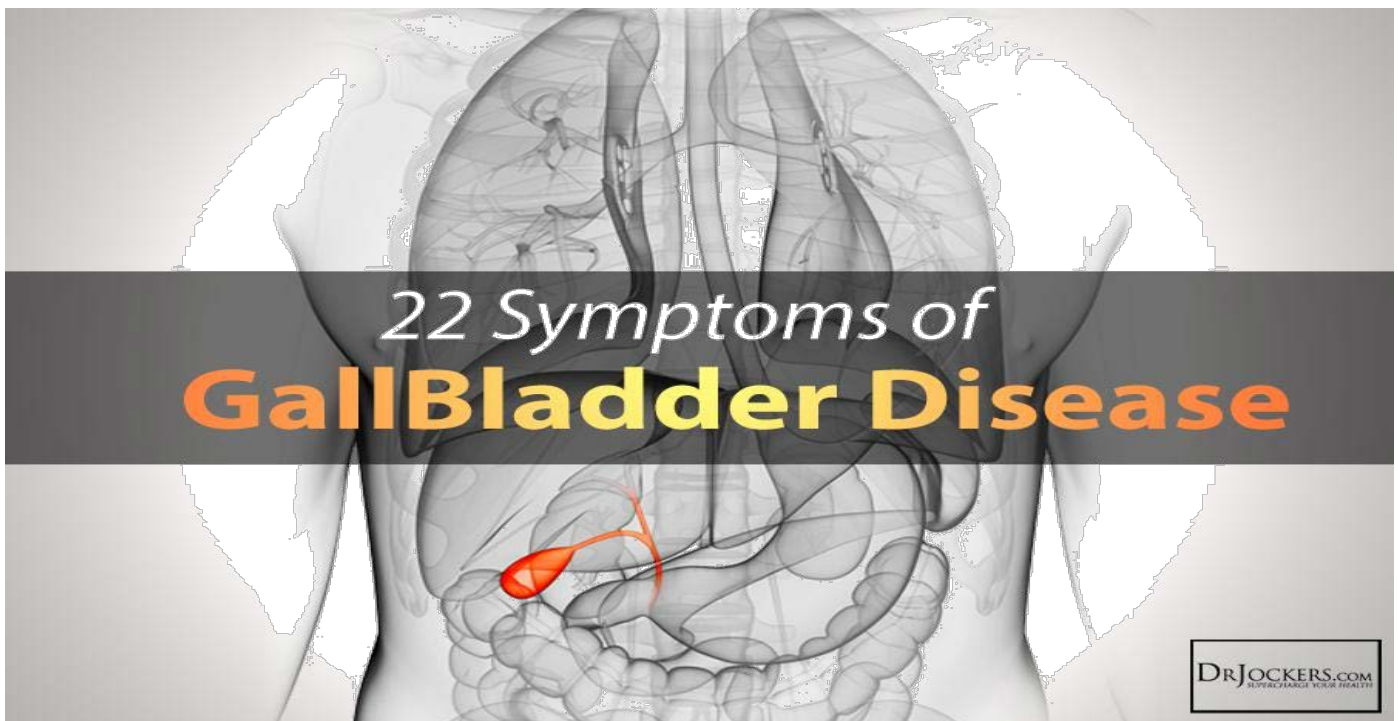


Fatty Acid Metabolism

The Excretion of Waste Products

Kill off Bad Microbes

Blood Sugar Metabolism



- 1) Nausea and Vomiting:** Any disruption in the digestive tract can result in a feeling of nausea and vomiting at times. This is a common issue with poor bile motility.
- 2) Fatty/Greasy Stools:** Poor bile release leads to a failure to effectively emulsify fats in the diet and leads to undigested fat being excreted in the stool.
- 3) Pain Between the Shoulder Blades:** The liver and gallbladder themselves do not feel pain, but the nerves that innervate them also go into the muscles in the back. In particular, the area just under the right shoulder blade.
- 4) Abdominal Pain:** When the liver and gallbladder are inflamed, it can cause swelling, distension and pain throughout the abdominal region. Sometimes the whole rib cage will feel sore or just “awkward,” due to the distension.
- 5) Chronic Gas and Bloating:** Poor bile production will lead to poor bowel motility and microbial overgrowth and fermentation. The fermentation process leads to gas production which can cause bloating and cramping.
- 6) Itchy Skin:** This is also called pruritis. When the gallbladder is obstructed it leads to a rise in a compound called autotaxin (ATX) and lysophosphatidic acid (LPA) which causes the characteristic itching ([7](#)).
- 7) Yellowing of the Skin:** Bilirubin is a yellow pigment and when the body is unable to metabolize bilirubin effectively, it ends up seeping into the tissues near the skin. This is a condition called jaundice.

8) Headaches and Migraines: Gall bladder congestion can cause stress on the body and more gut based inflammation. Both of these mechanisms can increase tension in the blood supply around the skull and brain and lead to headaches and migraines.

9) Constipation and Diarrhea: Poor bile motility will slow down the peristaltic action of the intestines resulting in a greater degree of constipation and often times alternating bouts of diarrhea and constipation.

10) Light Colored Stools: The bilirubin in bile helps to create the classic browning of the stool. If you are noticing lighter colored stools frequently it may be due to poor bile function.

11) Sexual Dysfunction: Sluggish biliary function can cause a decrease in overall sex hormone balance as the liver metabolizes the steroid hormones estrogen, testosterone and progesterone. As a result, the individual may have issues with menstrual function, sexual function & fertility.

12) Bitter Taste in Mouth: This will often happen after meals and is due to bile regurgitation.

13) Fibromyalgia: This condition of chronic pain is often due in part to a sluggish liver and gallbladder.

14) Hypothyroidism: Individuals with hypothyroidism will typically have a sluggish biliary system. It is hard to say what comes first, but they do feed into each other.

15) Loss of Hunger: A feeling of constant fullness is often a sign of a sluggish digestive system and that includes biliary stasis.

16) Dry Skin and Hair: Poor fatty acid absorption will result in poor fatty acid utilization and fat soluble vitamin deficiencies (A, E, D & K). This can lead to dry, scaly skin and hair thinning and dryness among other problems.

17) Chemical Sensitivities: Individuals who have a greater reaction to chemicals are often plagued by a sluggish liver and biliary system.

18) History of Prescription, Over The Counter or Illegal Drug Use: These can all place undue stress on the liver and cause it to be overburdened, which also leads into biliary stasis.

19) Weight Loss Resistance: If we cannot metabolize fatty acids well than we cannot use the calories they provide which will then cause our blood sugar to be unstable. Blood sugar instability will cause hormonal changes leading to weight loss resistance.

20) Skin Rashes: Sluggish bile leads to leaky gut syndrome. When the gut is insulted it releases substance P which can cause rash and eczema reactions in the skin.

21) Constant Runny Nose: This can indicate a need for bile salts.

22) IT Band Pain: The iliotibial (IT) band runs from the lateral side of the hip down to the lateral side of the knee. This band can often be very tight and painful in individuals with gallbladder dysfunction.

Additionally, sluggish bile can lead to microbial overgrowth and infection. If the gall bladder gets infected, one may notice pain in the right rib cage area and a fever. Many of these symptoms can be mistaken for other conditions like kidney stones, heart attack, and hepatitis.



22 Symptoms of GallBladder Disease

- Nausea and Vomiting
- Fatty/Greasy Stools
- Pain Between the Shoulder Blades
- Abdominal Pain
- Chronic Gas and Bloating
- Itchy Skin
- Yellowing of the Skin
- Headaches and Migraines
- Constipation and Diarrhea
- Light Colored Stools
- Sexual Dysfunction
- Bitter Taste in Mouth
- Fibromyalgia
- Hypothyroidism
- Loss of Hunger
- Dry Skin and Hair
- Chemical Sensitivities
- History of Prescription, Over The Counter or Illegal Drug Use
- Weight Loss Resistance
- Skin Rashes
- Constant Runny Nose
- IT Band Pain

Components of Bile:

Human adults produce between 400-800 ml of bile daily. Bile is primarily composed of 97% water, 0.2% bilirubin, 0.51% cholesterol/phospholipids and 0.7% bile salts. Additionally, there is a trace amount of inorganic salts (potassium and sodium bicarbonate).

Bilirubin: This is a toxic breakdown product of hemoglobin metabolism. It is a left over metabolite from the breakdown of red blood cells. It is the component that makes our stools brown and bile is the method for getting bilirubin out of the blood stream where it can create jaundice and excrete it through the stool.

Cholesterol: Bile is also a way the body removes cholesterol from the body. In humans, roughly 500 mg of cholesterol are converted to bile acids and eliminated through bile every day. Sluggish bile production and elimination can lead to elevated oxidized cholesterol levels in the blood.

Phospholipids: These are fatty acids or lipids with a phosphate group attached. Phospholipids are essential for good thin bile that flows effectively. If the cholesterol/phospholipid ratio increases than the bile will be thicker and have less motility.

Bile Salts: These help to create something called micelles which are amphipathic molecules that are both water and fat soluble. These are necessary for the digestion and absorption of fatty acids. Bile salts also help to reduce microbial growth in the small intestine.

Bile Physiology:

The primary bile acids cholic and chenodeoxycholic acids are produced by the cytochrome P450 cells in the liver and conjugated in the liver with the amino acids taurine and glycine to form bile salts. They are called bile salts because they have an acid-base properties.

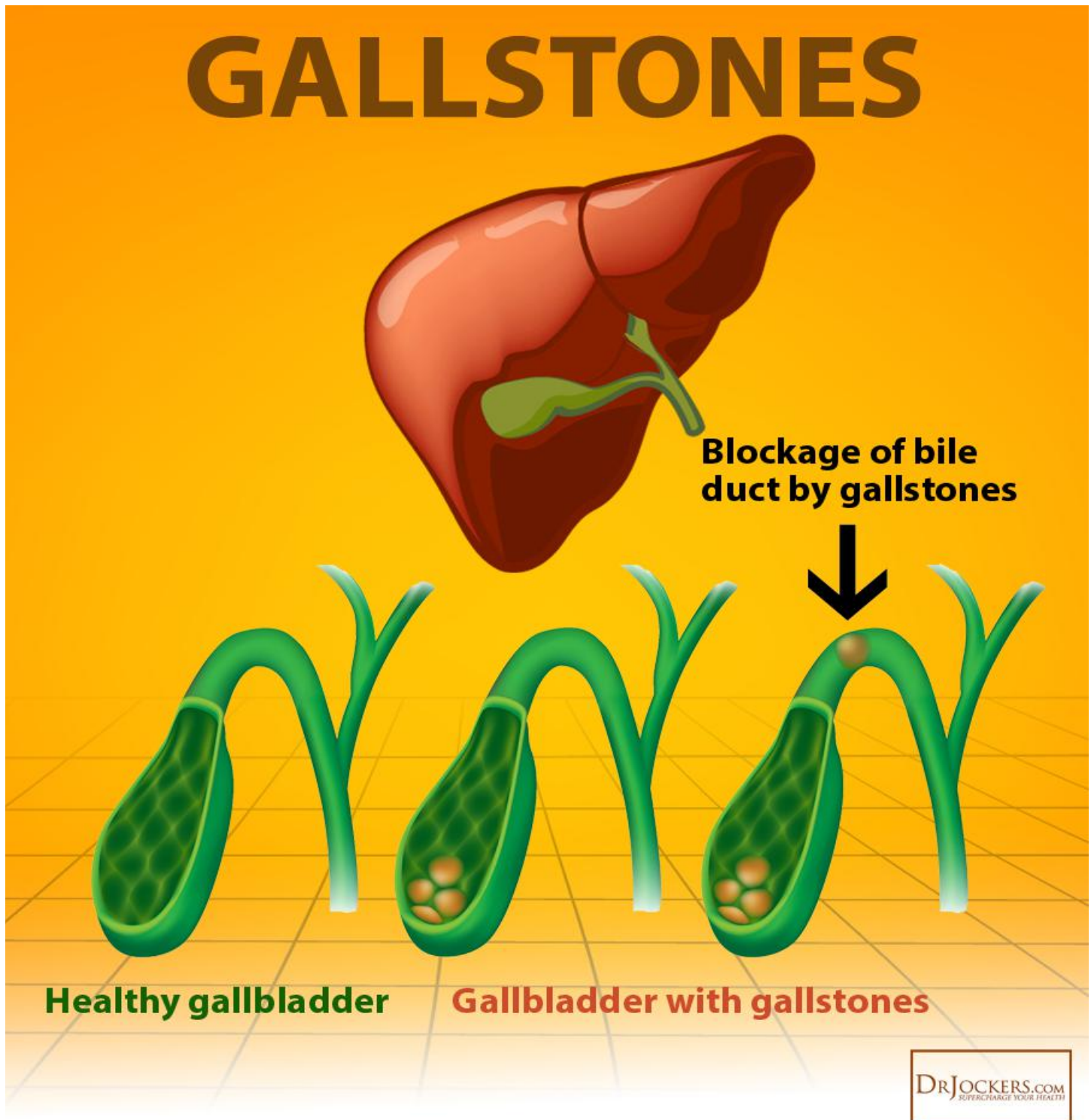
The bile salts are later secreted into the lumen of the intestine and there they can be metabolized by bacteria and lose their bases and form into secondary bile acids (deoxycholic acid, chenodeoxycholic and lithocholic acid). 5% of these bile acids end up in the stool while 95% are taken back up into the blood stream and brought back to the liver for reuse in a process called enterohepatic circulation.

Secretion of Bile From the GallBladder:

Bile flow into the small intestine is at its lowest point during fasting between meals. During this period, bile is concentrated into the gallbladder. When a meal enters the small intestine, the stomach acid and the partially digested fats stimulate the secretion of two key hormones named cholecystokinin and secretin.

Cholecystokinin (CCK): The name describes its action, “cholecysto” means gallbladder and “kinin” means movement. This hormone is released when fat enters the first portion of the small intestine called the duodenum. Its job is to stimulate the contractions of the gallbladder and common bile duct to deliver bile into the duodenum.

Secretin: This hormone is made in response to acids in the duodenum. Secretin stimulates the gall bladder to secrete bicarbonate and water, which acts to expand the volume of bile and increases its flow into the intestine.



The Development of Gallstones:

Problems occur when the gallbladder doesn't effectively get the signal to squeeze out bile. This is a condition known as stasis where bile sits in the gallbladder for long periods of time and moves slowly when it finally gets going.

Additionally, if the gallbladder is filled with thick bile that has more cholesterol and less phospholipids and bile salts, it can become a supersaturated sludge. This sludge allows for the development of crystal-like compounds to form that precipitate out of the solution.

We call these structures gallstones and they can irritate the gallbladder. If the stones become large enough, they may even lodge into the bile duct and cause a physical obstruction that would be extremely painful and possibly life threatening. Reports show that 25% of women and 20% of men develop problems with an overproduction of gall stones.

GallBladder Surgeries:

Research shows that 42 million Americans suffer from gallstones but most are unaware of it. Gallbladder removals are one of the most commonly performed surgical procedures with over 500,000 being performed every year. A review study in the British Medical Journal found that 50% of patients who had a gallbladder surgery didn't see improvement in their digestive health complaints.

The individual may experience sharp pain in their abdomen, radiating into their back. Sometimes it just feels like right shoulder blade pain. This may be accompanied by gas and indigestion.

If gallstones block the bile duct, the risk of infection goes up. If the individual has the pain but is also experiencing fever, chills, nausea and vomiting than an infection has most likely begun. If nothing is done, it can spread to the liver where it can cause jaundice, or a yellowing of the skin and the eyes.

Another condition, called gallbladder ileus happens when a gallstone slips into the small intestine and blocks the entry of bile to the small intestine. This can only be corrected by surgery, but nutritional support should still be used.

Signs To Look for If You Have Gallstones

Classic Symptoms - Top Indicators

- 
- ✓ Dull or sharp pain on right side and /or upper middle abdomen
 - ✓ Referred pain at the top or the right shoulder blade
 - ✓ Referred pain between the shoulder blades
 - ✓ Digestive disorders/ indigestion
 - ✓ Gas
 - ✓ Clay-colored stool
 - ✓ Nausea and vomiting
 - ✓ Pain with a breath
 - ✓ Above symptoms after meals
 - ✓ Above symptoms at night



Causes of Gallstones:

- 1. Blood Sugar Imbalances:** When we have poor blood sugar regulation, it causes stress and inflammation in the liver increases the production of cholesterol which concentrates in the bile. This causes a thicker, slower moving bile. Poor blood sugar regulation will lead too higher LDL cholesterol, higher triglyceride levels and lower HDL cholesterol. This triad is not only a risk for heart disease, but also gallstones ([6](#)).
- 2. Estrogen Dominance:** When we have an overabundance of natural estrogen production or a buildup of artificial estrogen substances within our body it leads to

increases in cholesterol that create thicker, sluggish bile. Women who have used birth control pills, hormone replacement therapy (HRT) or have an IUD are at a higher risk for gallstone formation. Several studies have shown that the use of HRT doubles or even triples the risk of developing gallbladder disease.

- 3. Food Allergies and Sensitivities:** Food allergies and sensitivities cause a stress response in the body and cause the liver to work harder. Additionally, food sensitivities dehydrate us as our body uses water to deal with increased stress. This hampers proper bile production and leads to the development of a thicker, sluggish bile.

In 1968, Dr J.C. Breneman published a paper in the Journal Annals of Allergy (6). He was remarkably able to relieve the symptoms associated with gallstones in 100% of the subjects with a one week elimination diet. Once he added the foods back into the diet, the symptoms returned.

The most common foods these individuals were reacting too included eggs (93% of the time), pork (64%) and onion (52%). By removing these foods, people saw relief from their symptoms.

- 4. Chronic Stress:** Chronic stress reduces digestive juice production and dehydrates the body. We also use key electrolytes at a higher rate under stress. This all leads to a thicker, sluggish bile production.
- 5. Low Fiber Diet:** Fiber is critical for the elimination of cholesterol and estrogenic molecules in the body. Additionally, fiber helps to feed good bacteria that enhance the detoxification processes of the body. A low fiber diet has been shown to cause that same thick sluggish bile production.
- 6. Low Stomach Acid Production:** Stomach acid is necessary to sterilize the gut environment, metabolize proteins and stimulating all the digestive juices – including bile production in the liver and its release from the gall bladder.
- 7. Obesity:** Individuals who are overweight or obese produce more cholesterol which thickens the bile and causes sluggish movement through the bile duct. This processes increases the production of gall stones.
- 8. Rapid Weight Loss:** Weight loss in one who is overweight or obese is a great thing, however, if it happens too quickly it can increase the risk of gall stone formation. The

most common example of this is a bariatric surgery where the individual's stomach is shortened. Additionally, yo-yo dieting increases cholesterol production in the liver creating a super saturated, slow moving bile. Healthy weight loss would be no more than 3 lbs per week over a period of time. Getting the weight off is key, but doing it in a gradual way and keeping it off long-term is important.

9. Low Fat Diets: A low-fat diet for a long-period of time reduces the overall secretions of bile, which can cause the bile to become stagnant. The stagnancy of the bile increases the risk of bile stone production.

10. Cholesterol Lowering Medications: Certain types of cholesterol lowering medications increase the amount of cholesterol being bound into the bile. This will cause more concentrated bile that is sluggish and at greater risk for forming stones.

11. Leaky Gut Syndrome: When we have damage to the intestinal lining, it reduces CCK and secretin levels. This inhibits the ability of the gall bladder to contract effectively and can lead to biliary stasis.

It is important to remember that the environment (sluggish bile motility) that creates the production of gall stones has been causing issues with poor digestion and sterilization of the small intestine for many years before a stone would develop.

It is important to focus on optimizing bile in advance of developing gall stone like symptoms.

Causes of Gallstones

The infographic features a central illustration of a green gallbladder containing several yellowish-brown gallstones. It is surrounded by 11 numbered red callout boxes, each containing a cause of gallstones. The background is a light red gradient.

- 1 Blood Sugar Imbalances
- 2 Estrogen Dominance
- 3 Food Allergies and Sensitivities
- 4 Chronic Stress
- 5 Low Fiber Diet
- 6 Low Stomach Acid Production
- 7 Obesity
- 8 Rapid Weight Loss
- 9 Low Fat Diets
- 10 Cholesterol Lowering Medications
- 11 Leaky Gut Syndrome

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25 Strategies to Improve GallBladder Function:

These strategies help to strengthen liver function and bile flow formation while they improve gallbladder health and bile duct motility. If you have had your gallbladder surgically removed than it is even more imperative to follow these action steps in order to strengthen the liver and the formation process of the bile.

There are several keys to improving bile flow from the gallbladder and into the intestines.

1. **Anti-Inflammatory Diet:** A healthy diet that is high in good fats is critical for cholesterol production, bile production and secretion. Good fats that should be staple parts of the diet include avocados, olive oil, grass-fed butter or ghee, wild fish, coconut oil and grass-fed beef.
2. **Super Hydration:** Water is extremely critical for bile production and dehydration will create thicker bile that moves very sluggishly. Drink a minimum of half your body weight in ounces of clean, purified water. I recommend drinking 16-32oz of water within the first 30-60 minutes of waking in the morning and then drinking at least 8oz of water between each meal (starting an hour after eating)

3. **Lose Weight:** People who are overweight or obese have a significantly higher rate of gallstones. You want to get to an optimal weight, but not too quickly. People who undergo rapid weight loss are at a higher risk of developing gall stones.
4. **Strengthen Stomach acid Production:** Stomach acid is a major stimulator for the secretion of bile into the small intestine. Daily practices to improve stomach acid production are also important for bile production and utilization. You may also consider supplementing with betaine hydrochloric acid.
5. **Use Lemon Water:** Both of these help to improve both stomach acid and bile activity. Squeeze fresh lemon in water, on salads and meats. You can also use lemon essential oil in water. Put a tbsp. or 2 of apple cider vinegar in 8oz of water and drink throughout the day. This will help to thin the bile.



6. **Eat Bile Healthy Foods:** Some of the best things for bile flow include beets, radishes, artichoke, asparagus, celery, lemon, lime, grapefruit, cucumbers and carrots. Juicing these veggies or have a big salad with fresh squeezed lemon everyday.
7. **Use Bitter Herbs:** A common saying in natural health is that “bitter is good for the liver.” Anything good for the liver is good for the gall bladder. This includes ginger, arugula, endive, cilantro, turmeric, dandelion, cumin, fennel, mint, milk thistle, yarrow, leeks and parsley.

Many cultures around the world have bitter foods to begin their meal. They may drink ginger or peppermint tea, have pickled ginger, have a salad with arugula, dandelion and

cilantro, etc. These all act to stimulate digestive juices and give the bile flow a boost for optimal digestion.

8. **Use Fermented Veggies:** Fermented foods such as sauerkraut, kimchi, pickles, pickled ginger, etc. all contain organic acids, enzymes and probiotics which help to improve digestive juice secretions. I recommend using one of these with all of your heavier meals and especially any meal with protein and/or fat.
9. **Use Fermented Drinks:** Fermented drinks such as ACV, coconut water kefir and lemon water (not fermented) contain organic acids that have an anti-microbial effect. So these help to reduce the bacterial load and stimulate the production of digestive juices.
10. **Practice Intermittent Fasting:** Fasting from food (but drinking lots of water and herbal teas) is extremely beneficial for the liver and gall bladder. I recommend beginning with 12 hours from your last meal to your first morning meal. Then working your way up to where you can do a 16 hour liquid fast from your last meal to your first meal the next day. Consume lots of herbal teas like ginger, dandelion root, lemon detox tea, etc. and you can have green juices during your fasting period.
11. **Eat Small Meals:** If you have a sluggish gall bladder or have had your gall bladder removed, you should never eat large meals. You will be unable to emulsify the fats and will cause tremendous digestive stress. Consume 3-4 small meals during your eating period for the day. Shakes and smoothies are great for the liver and gall bladder.
12. **Eat Your Largest Meal When You Are Most Relaxed:** In order to have good bile flow, your body needs to activate the parasympathetic nervous system. If you are busy and on the go, you will be in fight or flight sympathetic mode. If you struggle with low stomach acid, this is not going to allow you to produce anywhere near enough.
13. **Discover Your Food Sensitivities:** Most people with gall bladder problems struggle to digest certain foods including eggs, pork, onions, dairy, gluten, coffee, corn and nuts. You can get lab work done or do biofeedback testing to see how you tolerate these foods.

You can also try an elimination diet for 30 days where you remove these foods and see how your respond.
14. **Use Chlorophyll Rich Foods:** These help to purify the blood stream and improve bile secretions. Any dark green leafy vegetable will work along with things like wheat grass, oat grass and microalgae such as chlorella and spirulina.

15. **Use Broccoli and Kale Sprouts:** The key nutrients that are the most powerful estrogen detoxifying agents are called glucosinolates. These include DIM, I3C and Sulforaphane. The best natural source of these compounds can be found in broccoli and kale sprouts. Put these on salads and meat dishes. In addition, it is good to consume cruciferous veggies everyday such as cabbage, broccoli, cauliflower, kale, collards, Brussel sprouts, etc. for more of these glucosinolate compounds.
16. **Consume a Lot of Fiber:** Soluble Fiber helps to grab up old bile and bad estrogen compounds and escorts these toxins out of the body. The best sources of soluble fiber include chia, flax, hemp and pumpkin seeds. Insoluble fiber is found in fruits and veggies and acts like a broom to sweep feces and toxins out through the bowels.
17. **Go To Sleep Early:** In Chinese medicine the most active time period for gallbladder healing is between 11pm-1am. The liver is between 1am – 3am. You want to be sound asleep by 11pm in order to maximize liver and gallbladder healing and repair.
18. **Deal With Your Anger:** According to traditional Chinese medicine, the liver and gall bladder are areas that hold anger. People who are angry and frustrated have a greater propensity for liver and gall bladder issues. Deal with any anger, frustration and bitterness and focus your energy on gratitude and love. Begin meditating and praying more and surround yourself with individuals who carry positive attitudes.
19. **What Decisions Are You Struggling With?** The liver and gallbladder are emotional seats for decision making and taking action. Are you living in regret from past decisions or struggling to make a new decision or take action on it? Examine these areas and meditate and pray through them to help release the stress on these organs.
20. **Use More Lecithin:** Lecithin is one of the key emulsifying agents in bile. It breaks down fat and makes them easier to digest and helps keep cholesterol moving through the blood stream. Raw eggs are a natural source of lecithin but since so many people with gallbladder problems have sensitivities to eggs, I recommend non-GMO soy or even better, sunflower lecithin. You can find these in many products and purchase them and put the contents in smoothies.

21. **Use Ox Bile:** If you do not have a gall bladder or have very sluggish bile motility than you will need supplemental bile. The best form is Ox Bile as it is most similar to our own. You can try taking a single 500 mg pill shortly before you eat meals or take any fatty supplements (like cod liver oil) or other fat-soluble vitamins. I like this [Nutricology Ox Bile](#).

If you're still uncomfortable, take more. The goal should be to completely eliminate your symptoms of digestive distress. You will have to experiment to find the right amount for you.

22. **Use Magnesium:** Magnesium helps with contractile activity within the body. A magnesium deficiency, which is extremely common, would reduce contractile activity of the bile ducts. Taking 250-500 mg of supplemental magnesium can be very helpful for bile release and gallbladder health.

23. **Massage Your IT Bands:** This area is related to the gallbladder meridian and often gets very tight in individuals dealing with gallbladder stress. Especially the right side. Try stretching these and using a foam roller to loosen them up and through a reflex arc it can have a positive effect on bile flow.

24. **Massage the Web Between Right Thumb and Forefinger:** This is the reflexology center for the gallbladder. By massaging this region, it can positively effect the gallbladder and improve bile flow.

25. **Chiropractic Care:** Have a chiropractic examination, looking at the upper neck region, the atlas, which influences the vagus nerve. The vagus helps to innervate the digestive organs and plays a role in the formation of bile and the contractile activity of the bile duct. Additionally, the mid-thoracic region, especially T4 – T6 innervates the liver and gallbladder and is very important in the activity of the region. Be sure to have a chiropractor check and adjust both of these regions as necessary.

26. **Fresh Vegetable Juices:** Juicing fresh veggies such as kale, spinach, parsley, cilantro, watercress, bok choy, beets, carrots, mustard greens, cucumbers, celery, etc. is highly advised. The phytonutrients are highly bioavailable in fresh juice and they will help to cleanse the liver and gallbladder.

If you are dealing with gallbladder problems than it would be wise to drink 16-32 oz of vegetable juice daily. No more than 4-8 oz of it should be with beets and carrots due to

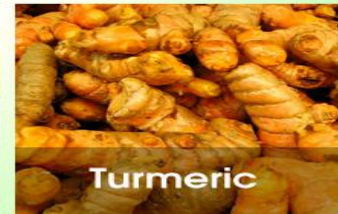
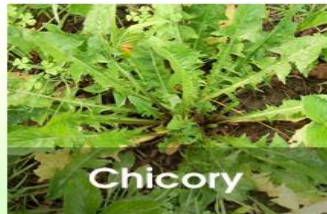
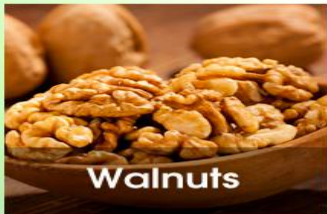
the sugar. Be sure to get most of it from the greens, using bok choy, celery or cucumber as the main juicing base. However, the beets and carrots are extraordinary for the gallbladder and liver.

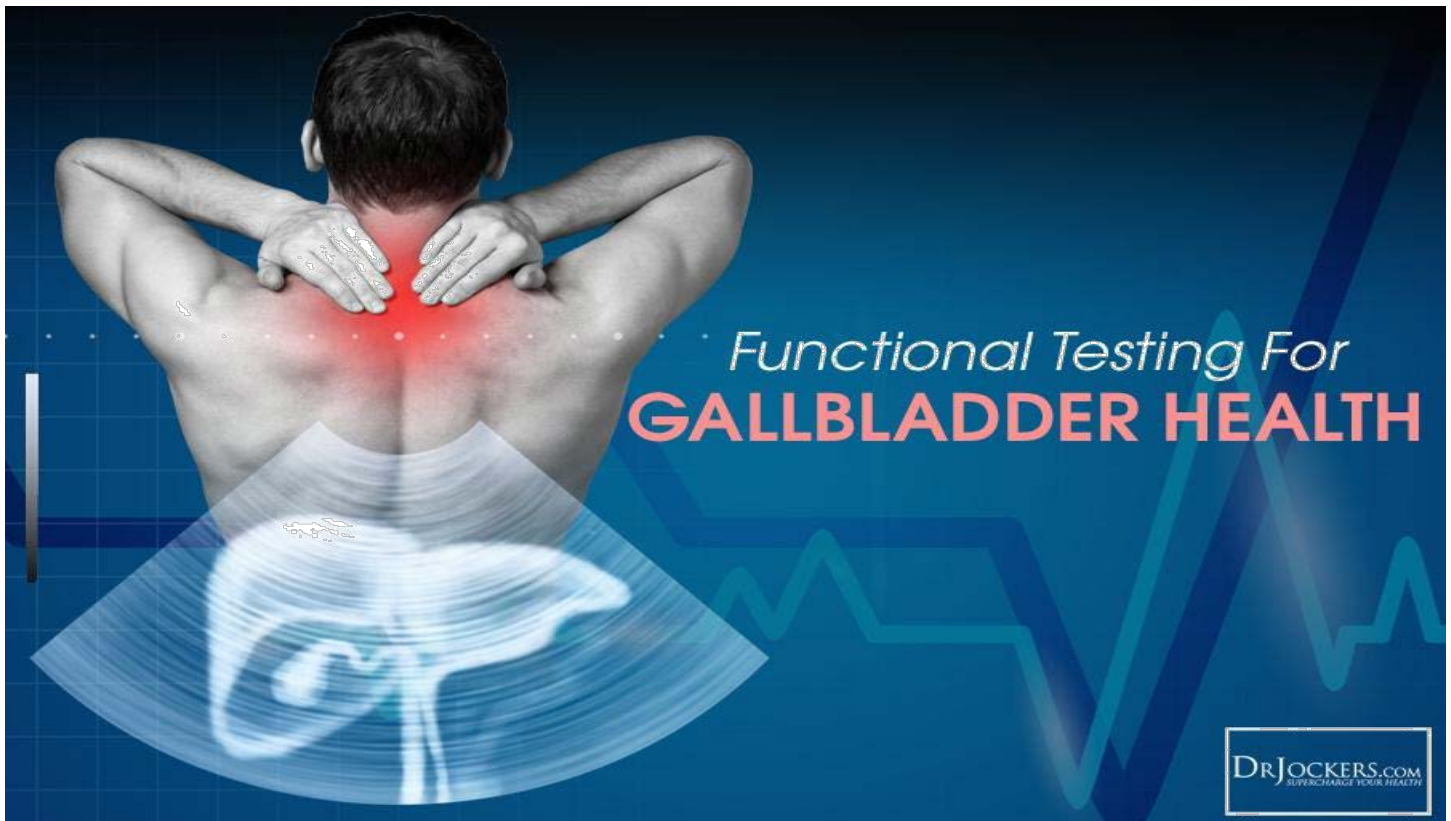
27. Taurine Supplementation: Taurine is an essential amino acid involved in a number of key physiological functions. This includes bile acid conjugation and cell membrane stabilization. Taurine supplements help improve bile flow and reduce the formation of gallstones. The most common recommendation is 250 mg once or twice daily to help balance and utilize calcium and magnesium and produce bile.



LIVER

CLEANSING FOODS





Testing For Poor Bile Motility:

HIDA Scan: The Gold Standard

A Hepatobiliary Imino Diacetic Acid (HIDA) scan is a nuclear imaging test that shows pictures of the liver, gallbladder, bile ducts and duodenum. It uses a radioactive tracer to enhance the bile ducts in order to see how well the bile is moving into the small intestine.

An ultrasound scan is most commonly used tool for imaging gallstones in the medical world. Unfortunately, an ultrasound scan will not show how well the bile ducts and gallbladder are functioning. One can have a normal result on an ultrasound scan but the bile ducts and gallbladder may still be functioning very poorly.

The HIDA scan gives an overall percentage of the bile ejection from the gallbladder. A normal ejection fraction is between 33-40%.

The radiation is a risk, but very small compared to an undiagnosed and poorly functioning gallbladder. There is a small radioactive tracer that is injected for this scan, it gives off radiation for a few hours and then becomes inactive. The gamma camera used in this does not give off any radiation.

Comprehensive Metabolic Panel:

You can get some routine lab work that is typically done as part of a comprehensive metabolic panel that most medical professionals are familiar with and is often covered by standard insurance.

Alkaline Phosphatase: This is a liver enzyme that is made by the mucosal cells that line the bile system of the liver. The free flow of bile through the liver and down into the biliary tract to the gallbladder is what is responsible for maintaining the proper blood levels of this enzyme.

High Alk Phos is one of the most sensitive markers for sluggish gall bladder or gall stones.

Normal Levels: For an adult the optimal level should be between 50-75 mg/dl (44-90 is functionally normal) Children or individuals who are recovering from broken bones will always be higher because their bones are in active growth stages.

High Bilirubin Levels: This is the byproduct of hemolysis (RBC destruction) and the result of the breakdown of hemoglobin. It is excreted in bile and urine, and elevated levels may indicate certain diseases. It is responsible for the yellow color of bruises and the yellow discoloration in jaundice and the brown color of feces.

Increased levels typically indicate liver, gallbladder or spleen dysfunction. High levels can be broken down into conjugated and unconjugated with additional testing to determine cause. High conjugated bilirubin and elevated liver enzymes are signs of gall bladder problems. High unconjugated bilirubin is a spleen disorder or hemolytic anemia.

Elevated bilirubin with normal liver enzymes is a genetic disorder called Gilbert's syndrome which is a harmless condition where liver has poor bilirubin processing and a mild state of jaundice.

Normal Range: 0-1.2 mg/dL

GGTP: Gamma-Glutamyl Transpeptidase is an enzyme in the liver, pancreas and kidneys. It is elevated in all forms of liver disease. It is functionally increased due to alcoholism and/or sluggish gallbladder or gallstone obstruction.

Normal Range: 10-60 IU/L

High AST: Aspartate transaminase is an enzyme present in the liver. It spills out during times of increased liver stress. Someone with a sluggish gall bladder may present with elevated AST levels.

Normal Range: 10-21 IU/L

High ALT: Alanine aminotransferase is a liver enzyme. When the liver is stressed these enzymes go up. Someone with a sluggish gall bladder may present with elevated AST levels.

Normal Range: 10-21 IU/L

Additional Testing:

Certain types of parasites like to house in the bile ducts. This usually takes place after the bile is already sluggish and it allows them to get in and nest. The primary parasites include flatworm flukes and ascarides which can inadvertently migrate into the bile ducts and cause biliary obstruction. Additionally, protozoa such as giardia, blastocystis hominis and Entamoeba histolytica can all effect gallbladder function.

One can get a full comprehensive stool analysis if concerned about these possible parasites.

Reflexology and Meridian Centers:

Chinese medicine has the body mapped into specific zones called meridians. These meridians are used as the foundation for therapies such as reflexology and acupuncture. Pain and stiffness can occur when energy in the body is stuck and not flowing properly. The gall bladder points include the following:

Pain in Web Between Right Thumb and Forefinger: This is the reflexology center for the gallbladder. If you non-trauma or overuse related pain when you press in this area, you may have issues with your gallbladder.

Pain in the Iliac Tibial Band: This is another part of the gall bladder channel, from the buttock area all the way down to the foot and into the 4th toe, although it is often most painful on the outer side of the thigh.

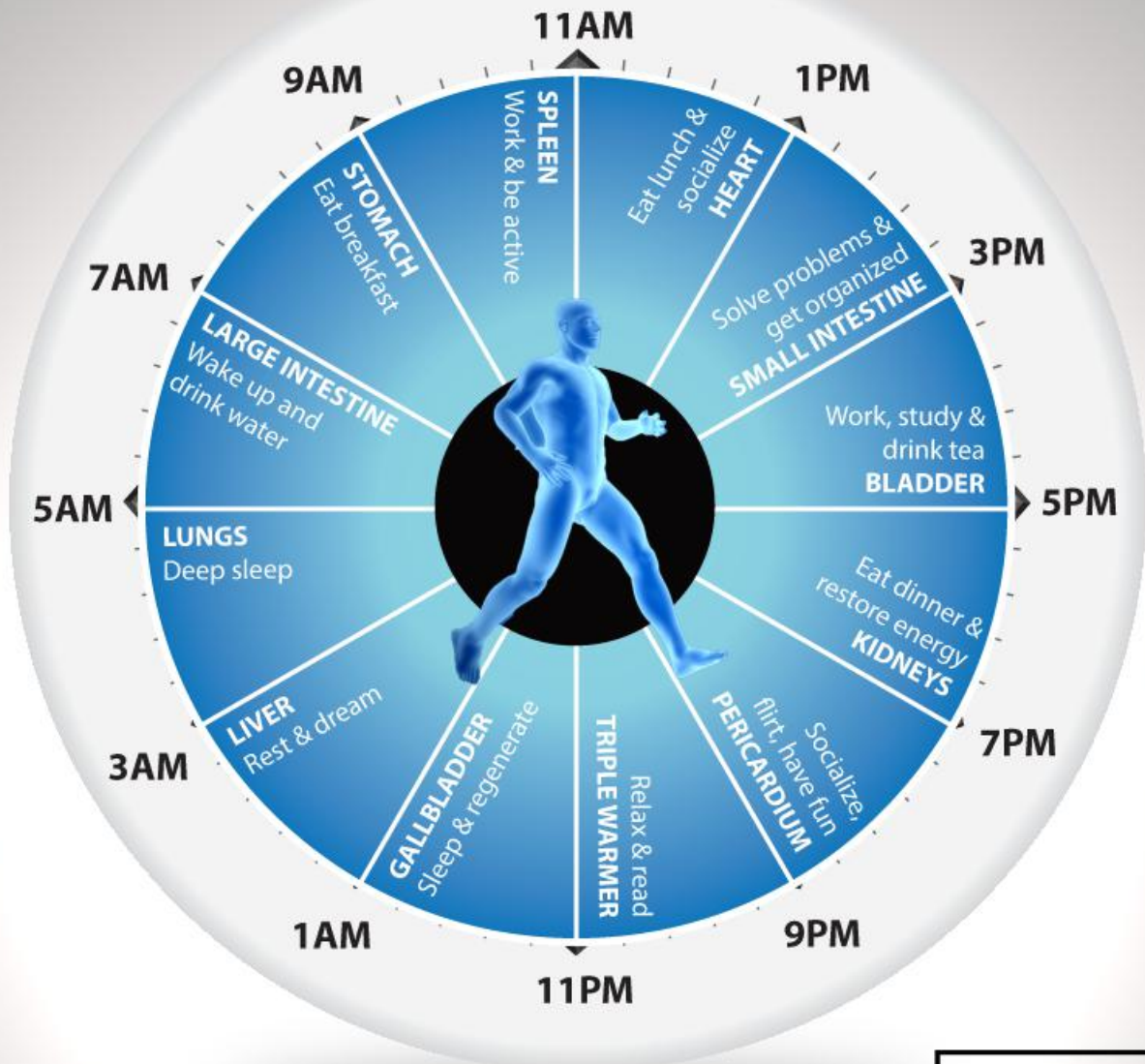
Pain Between Shoulder Blades: This is a referral pain based on the nerves that innervate the gall bladder. Especially under the right shoulder blade region.

Cramping in 4th Toe, Knees and Thighs: One may have unique cramping patterns that affect the 4th toe along with the knees and thighs.

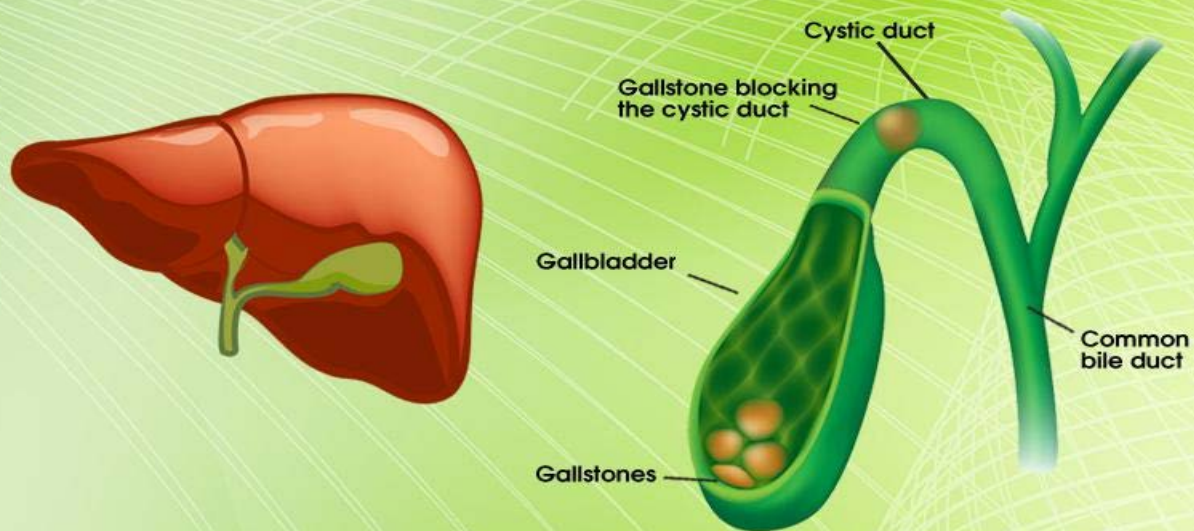
GallBladder Meridian Time: In traditional Chinese medicine, every organ has a specific 2 hour period of time where it is most active. The gallbladder is most active between 11pm – 1am and the liver is between 1am – 3am. Consistently waking during these periods are signs of poor gallbladder and/or liver function.

The GallBladder Emotion: In Chinese medicine the gall bladder can be a seat where the body can hold onto anger, frustration and bottled up resentment.

Emotional Responsibilities: Decision making, determination and action. The liver is the emotional seat of our drive to plan our life while the gallbladder is the emotional seat for our capacity to make decisions.



How To Get Rid Of Gallstones Naturally



Beetroot and Carrot Juice



Apple Cider Vinegar & Apple Juice



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Flushing Out Gallstones

This is a great cleanse and one of the best ways to flush out gallstones. Be sure to get medical help if you are dealing with intense pain and any feverish type of symptoms. If you decide to do this cleanse, be sure to have guidance with a natural health practitioner familiar with the protocol.

Completing the kidney cleanse before cleansing the liver is **highly recommended**. You want your kidneys, bladder and urinary tract in top working condition so they can efficiently remove

any undesirable substances incidentally absorbed from the intestine as the bile is being excreted. This will also soften the bile duct to help it relax, so when we do stimulate contractions it will have the best chance to expel the stones.

Green Juice - get a good juicer and try your best to get organic ingredients.



GREEN JUICE

⚡ 1 full lemon or lime

⚡ 1 handful of dandelion

⚡ 1 handful of spinach

⚡ 1 inch of ginger root

⚡ 1 handful of kale

⚡ 1 inch of turmeric root

⚡ 1 handful of parsley

⚡ 1 organic apple

⚡ 1 handful of cilantro

GallStone Flush Instructions:

Drink as many of these as you can - like 5-6 per day for 3 days and then do Gall Bladder flush. You can add a bit of pink salt to the juice or your water, especially if feeling dehydrated and light headed going through the process.

You can also do beetroot and carrot juice which are powerful tonics to improve gallbladder and liver function. Do 3 of these each day for the 3 day period. Drink 3 - 8 oz glasses of water with 2 tbsps of apple cider vinegar each day as well.

So the protocol is as follows:

3-Day liquid Diet consisting of:

5-6 Green Juices per day

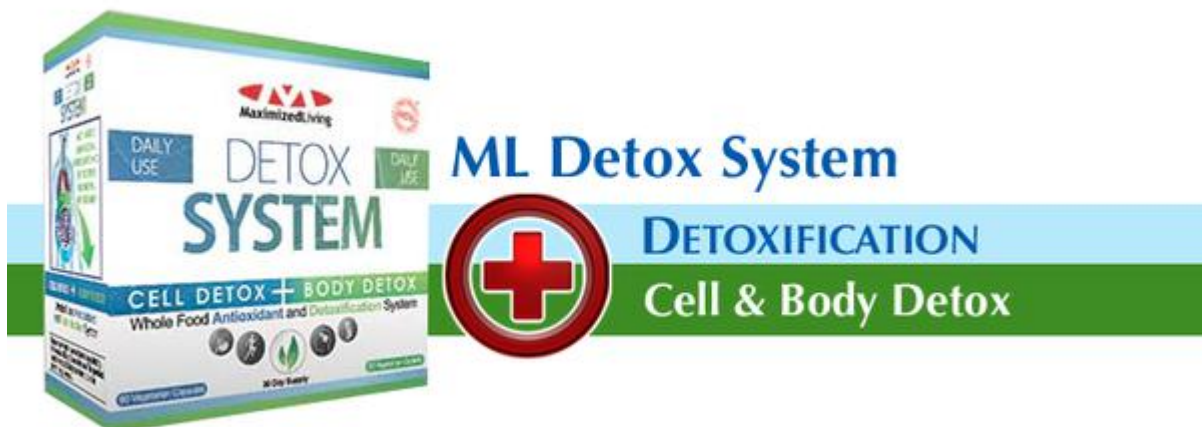
I would also recommend Traditional Medicinals – Smooth Move Tea to help with bowel movements and Nighty Night tea and/or [ornithine](#) to help you get good sleep which is key for healing and detoxifying.

I also recommend doing a double – quadruple dosage of the Maximized Living [Daily Detox](#) product while going through this. That would be

2-4 caps of Cell Detox – 2x daily

caps of Body Detox 2x daily

You can do the Daily Detox on the days leading up to the Liver cleanse and while doing the 3-day green juice cleanse.



GallBladder Flush Ingredients:

Epsom Salts	4 tablespoons
Extra Virgin Olive Oil	½ cup
Fresh pink grapefruit	1 large or 2 small, enough to squeeze 2/3 to ¾ cup juice
Ornithine	4 to 8, to be sure you can sleep. Don't skip this or you may have the worst night of your life!
Pint jar with lid	

Choose a day like Saturday for the cleanse, since you will be able to rest the next day.

Take no medicines or pills that you can do without; they could prevent success.

2:00 PM on The Last Day of Your Kidney Fast:

Do not eat or drink after 2 o'clock. If you break this rule you could feel quite ill later. Get your Epsom salts ready. Mix 4 tbs. In 3 cups water and pour this into a jar. This makes four servings, ¾ cup each. Set the jar in the refrigerator to get ice cold (this is for convenience and taste only).

6:00 PM

Drink one serving (¾ cup) of the ice cold Epsom salts. If you did not prepare this ahead of time, mix 1 tbs. In ¾ cup water now. You may add 1/8 tsp. Vitamin C powder to improve the taste. You may also drink a few mouthfuls of water afterwards or rinse your mouth. Get the olive oil and grapefruit out to warm up.

8:00 PM

Repeat by drinking another ¾ cup of Epsom salts. You haven't eaten since two o'clock, but you won't feel hungry. Get your bedtime chores done. The timing is critical for success, don't be more than 10 minutes early or late.

9:45 PM

Pour ½ cup (measured) olive oil into the pint jar. Squeeze the grapefruit by hand into the measuring cup. Remove pulp with fork. You should have at least ½ cup, more (up to ¾ cup) is best. You may top it up with lemonade (lemon/water/stevia). Add this to the olive oil. Close the jar tightly with the lid and shake hard until watery (only fresh grapefruit juice does this).

Visit the bathroom one or more times, even if it makes you late for your ten o'clock drink. Don't be more than 15 minutes late.

10:00 PM

Drink the potion you have made. Take 4 [ornithine](#) capsules with the first sips to make sure you will sleep through the night. Take 8 if you already suffer from insomnia.

Take it to your bedside if you want, but drink it standing up. Get it down within 5 minutes (fifteen minutes for very elderly or weak persons).

Lie Down Immediately:

You might fail to get stones out if you don't. The sooner you lie down, the more stones you will get out. Be ready for bed ahead of time. Don't clean up the kitchen. As soon as the drink is down, walk to your bed and lie down on your back with your head up high on a pillow. Try to think about what is happening in the liver. Try to keep perfectly still for at least 20 minutes.

You may feel a train of stones traveling along the bile ducts like marbles. There is no pain because the bile ducts valves are open (thank you Epsom salts!). **Go to sleep**, you may fail to get stones out if you don't.

Next Morning

Upon awakening, take your third dose of Epsom salts. If you have indigestion or nausea, wait until it is gone before drinking the Epsom salts. You may go back to bed. Don't take the Epsom salts before 6:00 a.m.

2 Hours Later.

Take your fourth (the last) dose of Epsom salts. Drink $\frac{3}{4}$ cup of the mixture. You may go back to bed.

After 2 more hours you may eat.

Start with fruit juice. Half an hour later eat fruit. One hour later you may eat regular food, but keep it light. By supper you should feel recovered.

How Well Did You Do?

Expect diarrhea in the morning. Use a flashlight to look for gallstones in the toilet with the bowel movement. Look for the green kind, since this is **proof** that they are genuine gallstones, not food residue. Only bile from the liver is pea green. The bowel movement sinks, but gallstones float because of the cholesterol inside.

Count them all roughly, whether tan or green. You will need to total 2000 stones before the liver is clean enough to rid you of allergies or bursitis or upper back pains permanently. The first cleanse may rid you of them for a few days, but as the stones from the rear travel forward, they give you the same symptoms again. You may repeat cleanses at two week intervals. Never cleanse when you are ill.

Sometimes the bile ducts are full of cholesterol crystals that did not form into round stones. They appear as a “chaff” floating on top of the toilet bowl water. It may be tan colored, harboring millions of tiny white crystals. Cleansing this chaff is just as important as purging stones.

How safe is the gallbladder cleanse? It is very safe. According to renowned physician, Huda Clark, who has implemented this with over 500 cases, including many persons in their seventies and eighties. None went to the hospital; none even reported pain. However, it can make you feel quite ill for one or two days.

The GallBladder Quiz:

1. Do you have bouts of nausea and/or vomiting?

Yes

No

2. Do you have pain on the upper right side of your abdomen?

Yes

No

3. Do you have a personal or family history of gallstones or gallbladder removal?

Yes

No

4. Do you frequently have gas and/or bloating?

Yes

No

5. Do fatty or greasy foods upset you?

Yes

No

6. Do you burp or belch frequently?

Yes

No

7. Do you experience constipation on a regular basis?

Yes

No

8. Do you have chronic indigestion or do you use antacids often?

Yes

No

9. Do you have symptoms of a low functioning thyroid such as fatigue, weight gain, hair loss, cold often, constipation, thinning eye brows, etc.?

Yes

No

10. Do you have mid-back pain, especially around the right shoulder blade region?

Yes

No

11. Do you suffer from dry skin or hair or any sort of skin rashes?

Yes

No

12. Do you have reactions to artificial chemicals?

Yes

No

13. Do you have issues with sexual dysfunction?

Yes

No

14. Are you overweight and struggle with weight loss?

Yes

No

15. Do you often experience a runny nose?

Yes

No

Results:

Scores: 0-2: Most likely have good bile and healthy gallbladder function 3-

5: You are at risk sluggish bile and poor gallbladder function

6+: You most likely are struggling with sluggish bile and poor gallbladder function

About Dr David Jockers DC, MS, CSCS

Dr. David Jockers is a functional nutritionist, corrective care chiropractor, exercise physiologist and certified strength & conditioning specialist.

He currently owns and operates Exodus Health Center in Kennesaw, Georgia and runs one of the hottest natural health websites in DrJockers.com

His experience working with thousands of individuals has given him a level of expertise in the field. He has had the privilege of traveling to London with the Maximized Living wellness advisory council to help the USA athletes win the gold in 2012.



He is the author of “**SuperCharge Your Brain: The Complete Guide to Radically Improve Your Mood, Memory and Mindset,**” and the **SuperCharged Recipe book** with over 180 full-color recipes to help you take back control of your health.

He has developed 6 revolutionary online programs with thousands of participants. These programs include E-guides, recipe guides, meal plans and video instructions including “The Sugar Detox,” “The Cancer Cleanse,” “Navigating the Ketogenic Diet,” and “The Digestive Health Restoration Program” and “The AutoImmune Elimination Program” and the “Super Brain program.”

He is a sought after speaker around the country on such topics as weight loss, brain health, functional medicine, natural detoxification and disease prevention. Dr Jockers does local and long-distance consultations to help customize specific lifestyle plans to improve performance and beat chronic disease.

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