

Over 20 million Americans have gallbladder disease. About one million new cases of gallbladder disease are diagnosed annually. Gallstones cause more than 800,000 hospitalizations every year in the United States. Gallstone attacks frequently occur after eating meals high in fat content. The most common treatment for gallbladder disease is laparoscopic cholecystectomy. If you have been diagnosed with gallbladder disease or gallstones, or if you are wondering whether you may have them, here's a guide to everything you need to know about gallbladder disease and gallstones:

Gallbladder Disease Overview

What are Gallstones

Gallstones form when liquid stored in the gallbladder hardens into pieces of stone-like material. The liquid, called bile, is used to help the body digest fats. Bile is made in the liver, then stored in the gallbladder until the body needs to digest fat. At that time, the gallbladder contracts and pushes the bile into a tube called a duct that carries it to the small intestine, where it helps with digestion.

Bile contains water, cholesterol, fats, bile salts, and bilirubin. Bile salts break up fat, and bilirubin gives bile and stool a brownish color. If the liquid bile contains too much cholesterol, bile salts, or bilirubin, it can harden into stones.

The two types of gallstones are cholesterol stones and pigment stones. Cholesterol stones are usually yellow-green and are made primarily of hardened cholesterol. They account for about 80 percent of gallstones. Pigment stones are small, dark stones made of bilirubin. Gallstones can be as small as a grain of sand or as large as a golf ball. The gallbladder can develop just one large stone, hundreds of tiny stones, or almost any combination. The gallbladder and the ducts that carry bile and other digestive enzymes from the liver, gallbladder, and pancreas to the small intestine are called the **biliary system**.

Gallstones can block the normal flow of bile if they lodge in any of the ducts that carry bile from the liver to the small intestine. That includes the hepatic ducts, which carry bile out of the liver; the cystic duct, which takes bile to and from the gallbladder; and the common bile duct, which takes bile from the cystic and hepatic ducts to the small intestine. Bile trapped in these ducts can cause inflammation in the gallbladder, the ducts, or, rarely, the liver. Other ducts open into the common bile duct, including the pancreatic duct, which carries digestive enzymes out of the pancreas. If a gallstone blocks the opening to that duct, digestive enzymes can become trapped in the pancreas and cause an extremely painful inflammation called pancreatitis. If any of these ducts remain blocked for a significant period of time, severe possibly fatal damage can occur, affecting the gallbladder, liver, or pancreas. Warning signs of a serious problem are fever, jaundice, and persistent pain.

What causes gallstones?

Cholesterol Stones

Scientists believe cholesterol stones form when bile contains too much cholesterol, too much bilirubin, or not enough bile salts, or when the gallbladder does not empty as it should for some other reason.

Pigment Stones

- The cause of pigment stones is uncertain. They tend to develop in people who have cirrhosis, biliary tract infections, and hereditary blood disorders such as sickle cell anemia. Large clinical study showed that being even moderately overweight increases one's risk for Developing gallstones. The most likely reason is that obesity tends to reduce the amount of bile salts in bile, resulting in more cholesterol. Obesity also decreases gallbladder emptying.
- **Estrogen.** Excess estrogen from pregnancy, hormone replacement therapy, or birth control pills appears to increase cholesterol levels in bile and decrease gallbladder movement, both of which can lead to gallstones.

- **Ethnicity.** Native Americans have a genetic predisposition to secrete high levels of cholesterol in bile. In fact, they have the highest rates of gallstones in the United States. A majority of Native American men have gallstones by age 60. Among the Pima Indians of Arizona, 70 percent of women have gallstones by age 30. Mexican-American men and women of all ages also have high rates of gallstones.
- **Gender.** Women between 20 and 60 years of age are twice as likely to develop gallstones as men.
- **Age.** People over age 60 are more likely to develop gallstones than younger people.
- **Cholesterol-lowering drugs.** Drugs that lower cholesterol levels in blood actually increase the amount of cholesterol secreted in bile. This in turn can increase the risk of gallstones.
- **Diabetes.** People with diabetes generally have high levels of fatty acids called triglycerides. These fatty acids increase the risk of gallstones.
- **Rapid weight loss.** As the body metabolizes fat during rapid weight loss, it causes the liver to secrete extra cholesterol into bile, which can cause gallstones.
- **Fasting.** Fasting decreases gallbladder movement, causing the bile to become over concentrated with cholesterol, which can lead to gallstones.

Who Is at Risk for Gallstones?

- Women.
- People over age 60.
- Native Americans.
- Mexican-Americans.
- Overweight men and women.
- People who fast or lose a lot of weight quickly.
- Pregnant women, women on hormone therapy, and women who use birth control pills.

Other Factors

It is believed that the mere presence of gallstones may cause more gallstones to develop. However, other factors that contribute to gallstones have been identified, especially for cholesterol stones.

- **Obesity.** Obesity is a major risk factor for gallstones, especially in women

Symptoms of gallstones

Symptoms of gallstones are often called a gallstone "attack" because they occur suddenly. A typical attack can cause

- Steady, severe pain in the upper abdomen that increases rapidly and lasts from 30 minutes to several hours.
- Pain in the back between the shoulder blades.
- Pain under the right shoulder.
- Nausea or vomiting.

Gallstone attacks often follow fatty meals, and they may occur during the night. Other gallstone symptoms include

- Abdominal bloating.
- Recurring intolerance of fatty foods.
- Colic.
- Belching.
- Gas.
- Indigestion.

People who also have the following symptoms should see a doctor right away:

- Sweating.
- Chills.
- Low-grade fever.
- Yellowish color of the skin or whites of the eyes.
- Clay-colored stools.

Many people with gallstones have no symptoms. These patients are said to be asymptomatic, and these stones are called "silent stones." They do not interfere in gallbladder, liver, or pancreas function and do not need treatment. Many gallstones, especially silent stones, are discovered by accident during tests for other problems. But when gallstones are suspected to be the cause of symptoms, the doctor is likely to do an ultrasound exam. Ultrasound uses sound waves to create images of organs. Sound waves are sent toward the gallbladder through a handheld device that a technician glides over the abdomen. The sound waves bounce off the gallbladder, liver, and other organs, and their echoes make electrical impulses that create a picture of the organ on a video monitor. If stones are present, the sound waves will bounce off them, too, showing their location.

Other tests used in diagnosis include

- **Cholecystogram or cholescintigraphy.**

- The patient is injected with a special iodine dye, and x-rays are taken of the gallbladder over a period of time. (Some people swallow iodine pills the night before the x-ray.) The test shows the movement of the gallbladder and any obstruction of the cystic duct.

- **Endoscopic retrograde cholangiopancreatography (ERCP).**

The patient swallows an endoscope a long, flexible, lighted tube connected to a computer and TV monitor. The doctor guides the endoscope through the stomach and into the small intestine. The doctor then injects a special dye that temporarily stains the ducts in the biliary system. ERCP is used to locate stones in the ducts.

- **Blood tests.**

Blood tests may be used to look for signs of infection, obstruction, pancreatitis, or jaundice. Gallstone symptoms are similar to those of heart attack, appendicitis, ulcers, irritable bowel syndrome, hiatal hernia, pancreatitis, and hepatitis. So accurate diagnosis is important.

What is the Treatment?

Surgery

Surgery to remove the gallbladder is the most common way to treat symptomatic gallstones. (Asymptomatic gallstones usually do not need treatment.) Each year more than 500,000 Americans have gallbladder surgery. The surgery is called cholecystectomy. The standard surgery is called laparoscopic cholecystectomy. For this operation, the surgeon makes several tiny incisions in the abdomen and inserts surgical instruments and a miniature video camera into the abdomen. The camera sends a magnified image from inside the body to a video monitor, giving the surgeon a closeup view of the organs and tissues. While watching the monitor, the surgeon uses the instruments to carefully separate the gallbladder from the liver, ducts, and other structures. Then the cystic duct is cut and the gallbladder removed through one of the small incisions. Because the abdominal muscles are not cut during laparoscopic surgery, patients have less pain and fewer complications than they would have had after surgery using a large incision across the abdomen.

Recovery usually involves only one night in the hospital, followed by several days of restricted activity at home. If the surgeon discovers any obstacles to the laparoscopic procedure, such as infection or scarring from other operations, the operating team may have to switch to open surgery. In some cases the obstacles are known before surgery, and an open surgery is planned. It is called "open" surgery because the surgeon has to make a 5- to 8-inch incision in the abdomen to remove the gallbladder. This is a major surgery and may require about a 2- to 7-day stay in the hospital and several more weeks at home to recover. Open surgery is required in about 5 percent of gallbladder operations.

The most common complication in gallbladder surgery is injury to the bile ducts. An injured common bile duct can leak bile and cause a painful and potentially dangerous infection. Mild injuries can sometimes be treated nonsurgically. Major injury, however, is more serious and requires additional surgery. If gallstones are in the bile ducts, the surgeon may use ERCP in removing them before or during the gallbladder surgery. Once the endoscope is in the small

intestine, the surgeon locates the affected bile duct. An instrument on the endoscope is used to cut the duct, and the stone is captured in a tiny basket and removed with the endoscope. This two-step procedure is called ERCP with endoscopic sphincterotomy. Occasionally, a person who has had a cholecystectomy is diagnosed with a gallstone in the bile ducts weeks, months, or even years after the surgery. The two-step ERCP procedure is usually successful in removing the stone.

Nonsurgical Treatment

Nonsurgical approaches are used only in special situations such as when a patient's condition prevents using an anesthetic and only for cholesterol stones. Stones recur after nonsurgical treatment about half the time.

- **Oral dissolution therapy.** Drugs made from bile acid are used to dissolve the stones. The drugs, ursodiol (Actigall) and chenodiol (Chenix), work best for small cholesterol stones. Months or years of treatment may be necessary before all the stones dissolve. Both drugs cause mild diarrhea, and chenodiol may temporarily raise levels of blood cholesterol and the liver enzyme transaminase.

- **Contact dissolution therapy.** This experimental procedure involves injecting a drug directly into the gallbladder to dissolve stones. The drug methyl tert butyl can dissolve some stones in 1 to 3 days, but it must be used very carefully because it is a flammable anesthetic that can be toxic. The procedure is being tested in patients with symptomatic, noncalcified cholesterol stones.

- **Extracorporeal shockwave lithotripsy (ESWL).** This treatment uses shock waves to break up stones into tiny pieces that can pass through the bile ducts without causing blockages. Attacks of biliary colic (intense pain) are common after treatment, and ESWL's success rate is not very high. Remaining stones can sometimes be dissolved with medication.

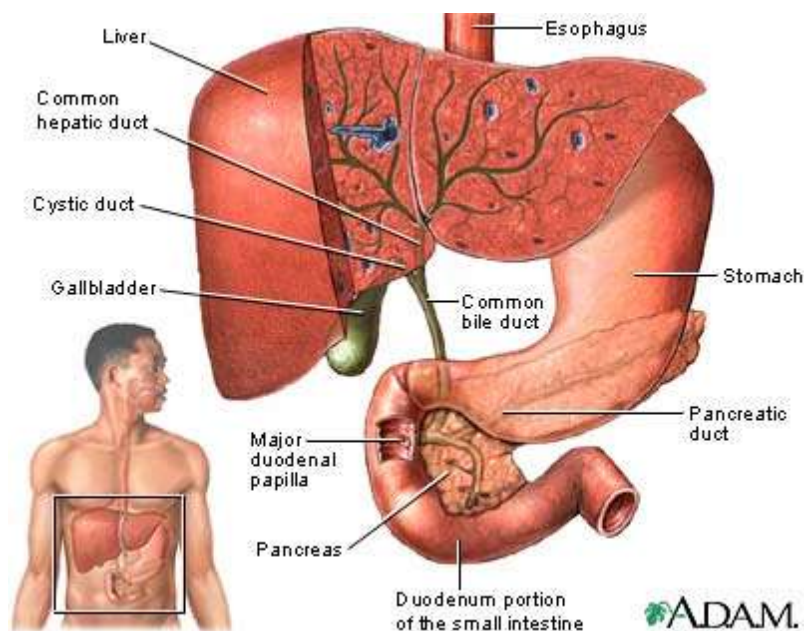
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Fortunately, the gallbladder is an organ that people can live without. Losing it won't even require a change in diet. Once the gallbladder is removed, bile flows out of the liver through the hepatic ducts into the common bile duct and goes directly into the small intestine, instead of being stored in the gallbladder. However, because the bile isn't stored in the gallbladder, it flows into the small intestine more frequently, causing diarrhea in some people. Also, some studies suggest that removing the gallbladder may cause higher blood cholesterol levels, so occasional cholesterol tests may be necessary

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This information is not intended to replace medical care; to diagnose, to treat or to cure.

According to Dr. Linda Rodriguez, If you have your gall bladder removed, you will need to be on a digestive enzyme for the rest of your life.



Gallbladder disease

Definition: Inflammation, infection, stones, or obstruction of the gallbladder.

Alternative Names: Biliary disease; Gallbladder attack

Causes, incidence, and risk factors:

The gallbladder is a sac located under the liver. It stores and concentrates the **bile** produced in the liver, which aids in the digestion of fats. Bile is released from the gallbladder in response to food, especially **fats**, in the upper small intestine (**duodenum**). Conditions which slow or obstruct the flow of bile out of the gallbladder result in gallbladder disease.

Types of gallbladder disease include:

☐ **Cholecystitis (inflammation of the gallbladder)**

Definition: Acute cholecystitis is a sudden inflammation of the gallbladder that causes severe **abdominal pain**.

Alternative Names: Cholecystitis - acute; Gallstones - acute cholecystitis

Causes, incidence, and risk factors: In 90% of cases, acute cholecystitis is caused by **gallstones** in the gallbladder, which obstruct the duct leading from the gallbladder to the common bile duct (which drains into the intestine). Severe illness, alcohol abuse and, rarely, tumors of the gallbladder can also cause cholecystitis.

The trapped **bile** becomes concentrated and causes irritation and pressure build-up in the gallbladder. This can lead to bacterial infection and perforation. The attack may follow a large or fatty meal.

Gallstones occur more frequently in women than men, and it becomes more common with age in both sexes. Native Americans have a higher incidence of gallstones.

☐ **Cholelithiasis (gall stones)**

Definition: Cholelithiasis is the presence of gallstones in the gallbladder without any associated symptoms

Doing **L**ife **I**ntentionally **T**ogether

Alternative Names: Gallstones

Causes, incidence, and risk factors: Cholelithiasis is usually incidentally discovered by routine **x-ray** study, surgery, or autopsy. Virtually all gallstones are formed within the gallbladder, an organ that normally functions to store **bile** excreted from the liver.

Bile is a solution composed of water, bile salts, lecithin, **cholesterol** and some other small solutes. Changes in the relative concentration of these components may cause precipitation from solution and formation of a nidus, or nest, around which gallstones are formed.

These stones may be as small as a grain of sand, or they may become as large as an inch in diameter, depending on how much time has elapsed from their initial formation. Depending on the main substance that initiated their formation (for instance, cholesterol), they may be yellow or otherwise pigmented in color.

Cholelithiasis is a common health problem worldwide, affecting approximately 1 out of 1,000 people. The prevalence is greater in women, Native Americans, and people over the age of 40. In general, risk factors include increasing age, ethnic and hereditary factors, female gender, obesity, diabetes, liver cirrhosis, long-term intravenous nutrition (total parenteral nutrition) and certain operations for peptic ulcers.

Symptoms:

- abdominal fullness, gaseous
- abdominal pain
 - severe
 - located on the right side (right upper quadrant) or in the upper middle of the abdomen (epigastric)
 - may subside over 12 to 18 hours in uncomplicated cases
 - recurrent or with similar pain in past
 - occurs following meals
 - worsens during deep inspiration
 - radiating to back or below the right shoulder blade (right scapular area)
 - worsens after eating or drinking greasy (high **fat**) foods or fluids
- fever
- nausea
- vomiting
- heartburn
- chills and shaking
- chest pain under the breastbone

Signs and tests:

Examination of the abdomen by touch (**palpation**) may reveal tenderness.

Tests that detect the presence of **gallstones** or inflammation include:

- abdominal ultrasound
- abdominal CT scan
- abdominal X-ray
- gall bladder radionuclide scan
- A **CBC** shows infection by an elevated **white blood cell count**

This disease may also alter the results of the following tests:

- lipase
- amylase
- amylase, urine
- chemistry panel (chem-20)

Prevention: In most cases, prevention is not possible. Reducing intake of fatty foods and **weight reduction** may reduce symptoms in people with gallbladder disease. From Dr Koop.com

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Hospital, Philadelphia, PA. Review provided by VeriMed Healthcare Network.

This information is not intended to replace medical care. This information is not intended to diagnose, treat or cure.

Testimony – Gallbladder

I have an interesting testimonial: After I had my gallbladder removed last year I still suffered from terrible stomach pain. I had an endoscopy which showed hyperacidity but no infection. My internist, who is also a gastroenterologist, told me that the condition was probably genetic. He prescribed a series of drugs -- Prilosec, Prevacid, Aciphex and Protonix, which either worked for a short period of time or not at all.

In desperation I tried Shaklee Peppermint-Ginger Plus(now **Stomach Soothing Complex**). I knew that even if it didn't help, it wouldn't hurt me. Bingo! (You can guess what happened.) The discomfort was gone! It sometimes comes back (depending on what I eat), but not to the same degree I had. I suffered from extreme pain for two days a few weeks back and then realized that I had forgotten to take my Peppermint-Ginger Plus. I started taking it again and the pain subsided. I told my doctor and he told me to keep it up. I told him that I had been taking Shaklee **Alfalfa** Tabs for my bursitis and he said that if it works for me I should keep taking them....*Glenn H*

GALLSTONES DR BROUSE

Gallstones are hardened formations, composed primarily of cholesterol, that develop in the gallbladder.

Gallstones are commonly associated with bile that contains excessive cholesterol, a deficiency of other substances in bile (bile acids and lecithin), or a combination of these factors.

Checklist for Gallstones:

Rating Nutritional Supplements Herbs

Wheat bran

Betaine HCl with protein

Phosphatidylcholine (Lecithin)

Vitamin C (Vita C Plus)

Milk thistle (Liver DTX)

Peppermint oil (Stomach Soothing)

See also: Homeopathic Remedies for Gallstones

Reliable and relatively consistent scientific data showing a substantial health benefit.

Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

For an herb, supported by traditional use but minimal or no scientific evidence. For a supplement, little scientific support and/or minimal health benefit.

What are the symptoms of gallstones?

Gallstone attacks cause extreme pain in the upper-right quarter of the abdomen, often extending to the back. This pain can be accompanied by nausea and vomiting. Surgical intervention often resolves the presenting symptoms, however, complications and the risk of bile-flow reduced malabsorption and including colon cancer must be considered as a future possibility.

Medical treatments

Prescription medications are used in certain specific situations to dissolve gallstones; they include ursodiol (Actigall®) and monoctanoin (Moctanin®).

The most common medical treatment for gallstones is surgical removal of the gallbladder (cholecystectomy). Mechanical shock waves (lithotripsy) may also be applied to break up the stones. Unfortunately, gallstones commonly recur following non-surgical forms of treatment.

Dietary changes that may be helpful

Cholesterol is the primary ingredient in most gallstones. Some,¹ but not all,² research links dietary cholesterol to the risk of gallstones. Some doctors suggest avoiding eggs, either because of their high cholesterol content or because eggs may be allergenic. (See the discussion about gallstones and allergies below.) A recent study of residents of southern Italy found that a diet rich in sugars and animal fats and poor in vegetable fats and fibers was a significant risk factor for gallstone formation.³

Most studies report that vegetarians are at low risk for gallstones.⁴ In some trials, vegetarians had only half the gallstone risk compared with meat eaters.^{5, 6} Vegetarians often eat fewer calories and less cholesterol. They also tend to weigh less than meat eaters. All of these differences may reduce gallstone incidence. The specific factors in a vegetarian diet that account for a low risk of gallstone formation remain somewhat unclear and may only be present in certain vegetarian diets and not others. For example, some studies have found that vegetarians eating a high vegetable fat diet had elevated rather than reduced risks of gallstone formation.^{7 8}

Coffee increases bile flow and therefore might reduce the risk of gallstones. In a large study of men, those drinking two to three cups of regular coffee per day had a 40% lower risk of gallstones compared with men who did not drink coffee.⁹ In the same report, men drinking at least four cups per day had a 45% reduced risk. Caffeine appears to be the protective ingredient, as decaffeinated coffee consumption was not linked with any protection. People at risk for gallstones who wish to consider increasing coffee drinking to reduce risks should talk with a doctor beforehand. Caffeinated beverages can aggravate symptoms of insomnia, peptic ulcer, panic attacks, and a variety of other conditions.

Constipation has been linked to the risk of forming gallstones.¹⁰ When constipation is successfully resolved, it has reduced the risk of gallstone formation.¹¹ Wheat bran, commonly used to relieve constipation when combined with fluid, has been reported to reduce the relative amount of cholesterol in bile of a small group of people whose bile contained excessive cholesterol (a risk factor for gallstone formation).¹² The same effect has been reported in people who already have gallstones.¹³ Doctors sometimes recommend two tablespoons per day of unprocessed Miller's bran; an alternative is to consume commercial cereal products that contain wheat bran. Bran should always be accompanied by plenty of fluid. Adding more bran may cause gastrointestinal symptoms in some people. If this occurs, consult a doctor.

Gallbladder attacks (though not the stones themselves) have been reported to result from food allergies. The one study to examine this relationship found that all of the participants with gallbladder problems showed relief from gallbladder pain when allergyprovoking foods were identified and eliminated from the diet.¹⁴ Eggs, pork, and onions were reported to be the most common triggers. Pain returned when the problem foods were reintroduced into the diet. Doctors can help diagnose food allergies.

Lifestyle changes that may be helpful

People with gallstones may consume too many calories¹⁵ and are often overweight.^{16, 17} Obese women have seven times the risk of forming gallstones compared with women who are not

overweight.¹⁸ Even slightly overweight women have significantly higher risks.¹⁹ Losing weight is likely to help,²⁰ but rapid weight loss might increase the risk of stone formation.²¹ Any weight-loss program to prevent or treat gallstones should be reviewed by a doctor. Weight-loss plans generally entail reducing dietary fat, a change that itself correlates with protection against gallstone formation and attacks.^{22, 23} In women, recreational exercise significantly reduces the risk of requiring gallbladder surgery due to gallstones. In a study of over 60,000 women, an average of two to three hours per week of recreational exercise (such as cycling, jogging, and swimming) reduced the risk of gallbladder surgery by about 20%.²⁴ Use of birth control pills significantly increases a woman's risk of developing gallstones.^{25, 26}

Nutritional supplements that may be helpful

Vitamin C is needed to convert cholesterol to bile acids. In theory, such a conversion should reduce gallstone risks. Women who have higher blood levels of vitamin C have a reduced risk of gallstones.²⁷ Although this does not prove that vitamin C supplements can prevent or treat gallstones, some researchers believe this is plausible.²⁸ One study reported that people who drink alcohol and take vitamin C supplements have only half the risk of gallstones compared with other drinkers, though the apparent protective effect of vitamin C did not appear in non-drinkers.²⁹ In another trial, supplementation with vitamin C (500 mg taken four times per day for two weeks before gallbladder surgery) led to improvement in one parameter of gallstone risk ("nucleation time"), though there was no change in the relative level of cholesterol found in bile.³⁰ While many doctors recommend vitamin C supplementation to people with a history of gallstones, supportive evidence remains preliminary. According to one older report, people with gallstones were likely to have insufficient stomach acid.³¹ Some doctors assess adequacy of stomach acid in people with gallstones and, if appropriate, recommend supplementation with betaine HCl. Nonetheless, no research has yet explored whether such supplementation reduces symptoms of gallstones.

Phosphatidylcholine (PC) — a purified extract from lecithin — is one of the components of bile that helps protect against gallstone formation. Some preliminary studies suggest that 300–2,000 mg per day of PC may help dissolve gallstones.^{32, 33} Some doctors suggest PC supplements as part of gallstone treatment, though the supporting research is weak.³⁴ Are there any side effects or interactions? Refer to the individual supplement for information about any side effects or interactions.

Herbs that may be helpful

Milk thistle extracts (Liver DTX Complex) may be beneficial in preventing gallstones. In one study, silymarin (the active component of milk thistle) reduced cholesterol levels in bile,³⁵ which is one important way to reduce gallstone formation. People in the study took 420 mg of silymarin per day.

According to preliminary research, a mixture of essential oils dissolved some gallstones when taken for several months.³⁶ The greatest benefits occurred when the oils were combined with chenodeoxycholic acid, which is available by prescription.³⁷ However, only about 10% of people with gallstones have shown significant dissolution as a result of taking essential oils. Peppermint oil is the closest available product to that used in the research described above. Use of peppermint or any other essential oil to dissolve gallstones should only be attempted with the close supervision of a doctor. Are there any side effects or interactions? Refer to the individual herb for information about any side effects or interactions.

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Dr. Richard Brouse founded the Health Education Corporation in 1990. The purpose was to provide a way to educate his patients on wellness and prevention related topics. This is done through a combination of lectures (available on CD & DVD), Books, Courses of Study and Live Seminars.

The Northwest Academy of Practical Nutrition was founded by Dr. Richard Brouse in 2003 to meet the need for a certification

program in practical nutrition. Dr. Brouse was asked by his patients and other healthcare providers to design a streamlined course

of study which taught philosophy and practical concepts beyond the curriculum taught at the college level. Through measurable

objectives and examination, students may become certified at three levels of competency. The curriculum is updated on a

continuous basis. An important feature of the academy is the development of a collaborative alumni who function collectively

through forums and a nutritional wiki-pedia. The academy is staffed by Chiropractic Physicians also trained in Nutrition, Bio-

Chemistry, and who serve as Professional Educators in various educational institutions.

Dr. Richard Brouse founded the Sunnyside Health Center and Chiropractic Clinic in 1977. Since that time, many thousands of

people in the United States, Canada, South America and Europe have regained a greater quality of life through health while

following his recommendations. In the 30 years Dr. Brouse has been advising and treating patients, the Build A Better You

Wellness Evaluation (B.A.B.Y.) soon to be available online as the Advanced Bionutritional Laboratory Evaluation (A.B.L.E.)

evolved. This is a method of testing, which identifies the weaknesses and strengths of ten body systems through blood, urine, diet,

lifestyle and symptomology. A written report of findings is produced by Dr. Brouse, based on nutritional laboratory test data and

patient lifestyle characteristics and symptoms which guides the individual to make wise health choices. This evaluation serves as a

benchmark in the journey towards health restoration and disease prevention.

***The Shaklee Difference** - The principle of "Products in Harmony with Nature and Good Health" guides Shaklee science. Experts in nutrition, public health, food science, analytical chemistry, biochemistry, herbology, microbiology and engineering staff the 52,000 square feet Forrest C. Shaklee Research Center in Hayward, California. They continue the important research and development that makes each product the world stand for quality.*

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PANCREATITIS AND GALLSTONES

Dear Dr. Brouse:

I am a RN and have a friend who had several bouts of pancreatitis and recently elevated liver enzymes. They found she had a stone the size of a golfball in her bile duct that due to the large size was undiagnosed with ERCP. She recently underwent surgery to remove the stone. Her concern is what supplements can she safely start on to rebuild her health. Her doctors want her to take Actigall now and for the rest of her life. It causes loss of appetite for her and diarrhea. I suggested the Basics + soy for her after a week or two of Optiflora. She would like to know if

there would be alternative tx in place of the Actigall. I would greatly appreciate any suggestions you could give me. Jeanne F

From Dr. Richard Brouse

Here is the protocol I use, and customize, for treating Gallstones in adults who have had attacks. Good luck.

Gallstones - Protocol Summary

Nutritional Supplements and Botanicals

- Shaklee Lecithin which contains Phosphatidyl Choline
- 1/4 cup of Wheat bran
- Shaklee Peppermint Ginger
- Therapeutic Betaine HCl with protein
- Shaklee Vita C - 500 to 1,500 mg tid.
- Shaklee DTX which contains Artichoke, Turmeric, Dandelion (root) & Milk Thistle- 1 to 3 tablets with meals

Occasionally I use therapeutic amounts of the following

- Fumitory
- Fringe tree
- Greater celandine
- Oregon grape

The following is very important to understand. Please notice the references at the end.

Dietary Modification ---

Cholesterol is the primary ingredient in most gallstones. Some,¹ but not all,² research links dietary cholesterol to the risk of gallstones. Some doctors of natural medicine suggest avoiding eggs, either due to their high cholesterol content or because eggs may be allergenic. (See the discussion about gallstones and allergies below.) Most studies report that vegetarians are at low risk for gallstones.³ In some trials, vegetarians have had only half the risk compared with gallstone risk in meat eaters.^{4 5} Vegetarians often eat fewer calories and less cholesterol. They also tend to weigh less than meat eaters. All of these differences may reduce gallstone incidence. The specific factors in a vegetarian diet that associate with a low risk of gallstone formation remain

somewhat unclear and may occur only in certain vegetarian diets and not others. For example, research from India found that vegetarians eating a high vegetable fat diet have been reported to have elevated rather than reduced risks of gallstone formation.^{6 7} Constipation has been linked to the risk of forming gallstones.⁸ When constipation is successfully resolved, it has reduced the risk of gallstone formation.⁹ Wheat bran, commonly used to relieve constipation when combined with fluid, has been reported to reduce the relative amount of cholesterol in bile of a small group of people whose bile contained excessive cholesterol.¹⁰ The same effect has been reported in people who already have gallstones.¹¹ Such a change in the relative constituents of bile should reduce the risk of gallstone formation. Nutritionally oriented doctors sometimes recommend starting with a quarter cup of bran per day, often eaten with cereal in the morning. Bran should always be accompanied by fluid. Adding more bran may cause gastrointestinal symptoms and should only be done with the guidance of a nutritionally oriented doctor.

Gallbladder attacks (though not the stones themselves) have been reported to result from food allergies. The one study to examine this relationship found that all sixty-nine of the subjects with

gallbladder problems showed relief from gallbladder pain when allergy provoking foods were identified¹² and eliminated from the diet. Egg, pork, and onions were reported to be the most common triggers. Pain returned when the problem foods were reintroduced into the diet. Nutritionally oriented doctors can help diagnose food allergies.

Lifestyle Modification ---

People with gallstones may consume too many calories¹³ and are often overweight.¹⁴ Obese women have seven times the risk of forming gallstones compared with women who are not overweight.¹⁵ Even slightly overweight women have significantly higher risks.¹⁶ Losing weight is likely to help,¹⁷ but rapid weight loss might increase the risk of stone formation.¹⁸ Any weight-loss program should be reviewed by a doctor. Weight loss plans generally entail reducing dietary fat, a change that itself correlates with protection against gallstone formation and attacks.¹⁹ **20** Nutritional Supplement Treatment Options ---

□ **Vitamin C:** Vitamin C is needed to convert cholesterol to bile acids. In theory, such a conversion should reduce gallstone risks. Vitamin C deficient animals have a high incidence of gallstones. Vegetarians, who have a reduced risk of gallstones in most research, usually consume more vitamin C than do meat eaters. As a result of these pieces of evidence, some researchers speculate that vitamin C might help prevent gallstones.²¹ One group of researchers reported that people who drink alcohol and take vitamin C supplements had only half the risk of gallstones when compared with other drinkers, though the apparent protective effect of vitamin C did not appear in non-drinkers.²² In another trial, supplementation with vitamin C (500 mg QID for two weeks before gallbladder surgery) led to improvement in one parameter of gallstone risk ("nucleation time"), though there was no change in the relative level of cholesterol found in bile.²³ While many nutritionally oriented doctors recommend vitamin C supplementation to people with a history of gallstones, supportive evidence remains preliminary.

□ **Betaine HCl:** According to one older report, people with gallstones were likely to have insufficient stomach acid.²⁴ Some nutritionally oriented doctors assess adequacy of stomach acid in people with gallstones and, if appropriate, supplement with betaine HCl. Nonetheless, no research has yet explored

whether such supplementation reduces symptoms of gallbladder disease.

□ **Phosphatidyl Choline: Phosphatidyl choline, or PC-a purified extract from lecithin- is one of the components of bile that helps protect against gallstone formation. Some preliminary studies suggest that 300-2,000 mg per day of PC is helpful.**²⁵ ²⁶ Although not every study reports success,²⁷ some nutritionally oriented doctors suggest PC supplements as part of gallstone treatment. Contraindications Refer to the individual supplement for information about any side effects or interactions.

Botanical Treatment Options ---

□ **Milk Thistle (Silybum marianum)** Milk thistle extracts in capsules or tablets may be beneficial in preventing gallstones. In one study, silymarin (the active component of milk thistle) reduced cholesterol levels in bile,²⁸ which is one important way to avoid gallstones formation. The recommended amount to use is 600 mg of milk thistle extract (standardized to 70-80% silymarin) per day, which equates to 420 mg of silymarin per day.

□ **Peppermint Oil (Mentha piperita)** A mixture of essential oils has been shown to occasionally dissolve gallstones when taken for several months in uncontrolled studies.²⁹ The greatest benefits occurred when the oils were combined with chenodeoxycholic acid, a prescription drug.³⁰ However, only about 10% of people with gallstones have shown significant dissolution as a result of taking essential oils. The closest available product to that which was used by these researchers is peppermint oil. Use of peppermint or any other essential oil to dissolve gallstones should only be attempted with close supervision of a doctor of natural medicine.

□ Artichoke (*Cynara scolymus*), Turmeric (*Curcuma longa*), Dandelion (*Taraxacum officinale*), Barberry (*Berberis vulgaris*), and Oregon Grape (*Berberis aquifolium*) Numerous herbs known variously as cholagogues and cholaretics have a reputation for helping prevent gallstones in traditional herbalism. Cholagogues are herbs that stimulate the gall bladder to contract, while cholaretics stimulate the liver to secrete more bile. Both of these actions could potentially help reduce the risk of developing gallstones. No modern studies have been done to test these hypotheses. Artichoke, turmeric, fumitory (*Fumaria officinalis*), fringe tree (*Chionanthus virginica*), greater celandine (*Chelidonium majus*), dandelion root, barberry, and Oregon grape are cholagogues and cholaretics. Greater celandine should only be used on the advice of a doctor of natural medicine. With the exception of fumitory, all of these herbs should be avoided during acute gallbladder attacks.

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This information is not intended to replace medical care. This information is not intended to diagnose, treat or cure.