

counseling following many types of loss, current research argues against any program that requires graphic recounting of trauma details or explicitly labels certain reactions as normal or pathological.

Preventive medication is also under consideration. Working on the understanding that adrenaline acts on the amygdala to strengthen memories, Dr. Pitman and other researchers at Massachusetts General Hospital are testing whether an adrenaline-reducing medication, the hypertension drug propranolol, might help block abnormal memory formation and prevent PTSD. In a 2002 pilot study, people who received a 10-day course of propranolol, starting within hours of a trauma, were less likely than those who received a placebo to develop PTSD symptoms. They were also less likely to show physical signs of stress (such as a rapid heart beat) when the traumatic incident was recounted three months later. A large-scale trial is now under way.

### What you can do

Social support is one of the most important factors that distinguish those who recover from trauma from those who develop PTSD. But providing support to a friend or relative doesn't mean you have to become an amateur therapist.

"Just be a good listener," says Ellen Blumenthal, M.D., a psychiatrist at Massachusetts General Hospital. "Help them

process the event in their own way. Don't insist that they talk about the event or tell them to put it out of their mind."

Just as you don't necessarily expect someone to function well in the first few months after a death in the family, recognize that people may not act like themselves after a serious trauma. On the other hand, don't regard traumatized persons solely as victims. Encourage them and give them opportunities to re-engage in enjoyable activities.

If a person becomes increasingly withdrawn, it's likely that professional help is needed. Warning signs include increasing efforts to avoid people, places, or activities associated with the trauma; detachment from family and friends; drinking or using drugs to feel better; out-of-control anger; and constantly being on the lookout for danger. If a friend shows any of these behaviors or seems to be getting worse rather than better, encourage her to consult a mental health professional. ♥

### Selected resources

International Society for Traumatic Stress Studies  
847-480-9028  
[www.istss.org](http://www.istss.org)

National Center for PTSD  
(a program of U.S. Department of Veterans Affairs)  
802-296-6300  
[www.ncptsd.org](http://www.ncptsd.org)

National Institute of Mental Health  
866-615-6464 (toll free)  
[www.nimh.nih.gov/HealthInformation/ptsdmenu.cfm](http://www.nimh.nih.gov/HealthInformation/ptsdmenu.cfm)

PTSD Alliance  
877-507-7873 (toll free)  
[www.ptsdalliance.org](http://www.ptsdalliance.org)

## digestive diseases

# What to do about gallstones

*Gallstones are one of the most common digestive problems treated in women.*

**M**ore than 25 million people in the United States have gallstones; women are twice as likely as men to develop them. The good news is that most of the time, gallstones cause no major symptoms. For those that do, removing the gallbladder cures the problem.

### What are gallstones?

The gallstone story begins with the liver's production of bile, a substance used by the small intestine to digest fatty foods and aid in the absorption of certain vitamins. Bile is made in a network of tiny ducts in the liver and carried by a larger duct to the gallbladder, a small, pear-shaped organ that concentrates and stores it. When we eat, the fat in food triggers the release of a hormone that causes the gallbladder to contract and release bile into the intestine.

Problems arise when the stored bile crystallizes and forms solid lumps, or gallstones. Their size can range from as small as a grain of sand to as large as a golf ball. About 80% of gallstones are made primarily from cholesterol. The other 20% — known as pigment stones — are made of calcium salts and a substance called bilirubin, which is a breakdown product of red blood cells.

Cholesterol stones form when the liquid bile becomes su-

persaturated, containing more cholesterol than bile salts can dissolve. They may also develop if the gallbladder doesn't contract and empty as it should. Pigment stones are associated with certain medical conditions, including liver disease, some types of anemia, and infection of the bile ducts.

### Who's at risk?

Women are at a much higher risk for developing gallstone disease than men, because the female hormone estrogen increases cholesterol in the bile. As we age, the development of gallstones slows somewhat in women and increases in men. Under age 40, women are diagnosed with gallstones almost three times more often — pregnancies, for example, increase the risk — but by age 60, they have only a slightly higher incidence. The drop-off in estrogen at menopause may be one reason. Estrogen therapy increases the risk, although the patch form of the hormone appears to cause fewer problems than oral estrogen.

Obesity, especially in women, is another risk factor for gallstones, because fat tissue influences the amount of estrogen produced in the body. Paradoxically, rapid weight loss also increases risk. The reason? Very low-calorie diets interfere with bile production, causing more crystallization

of cholesterol. Gallstones are so common after weight-loss surgery that patients are often advised to have their gallbladders removed at the time of surgery.

There's some evidence that genetic factors may contribute to gallstone formation. Finally, gallstones are more likely to occur in people with diabetes, high triglycerides, or any condition that decreases gallbladder contractions and intestinal motility, such as a spinal cord injury.

### What are the symptoms?

Most people who have gallstones don't know it. Symptoms arise only when stones pass through a bile duct or obstruct it, causing biliary colic — more commonly known as a gallbladder attack. An attack begins with pain, usually in the right upper or middle abdomen, that builds to its greatest intensity within an hour and persists for up to several hours. Pain sometimes radiates to the back or the right shoulder. It may be either sharp and knife-like or a deep ache.

A stone lodged in a duct can also cause more serious problems, including acute cholecystitis (inflammation of the gallbladder), pancreatitis (inflammation of the pancreas), or cholangitis (inflammation of the bile ducts in the liver). Any of these conditions can cause severe pain and other symptoms, including jaundice, high fever, chills, nausea, and vomiting. They usually require intravenous antibiotics and often removal of the stone, either surgically or using an endoscope inserted through a tiny incision.

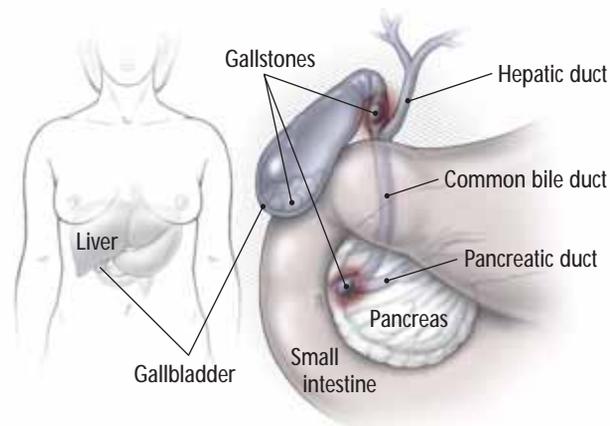
If you think you're having a gallbladder attack, your clinician will probably order several blood tests and an abdominal ultrasound exam to check for stones. An ultrasound is particularly helpful in diagnosing acute cholecystitis, because it also picks up any thickening of the gallbladder wall and shows the presence of fluid, which can indicate inflammation. Other techniques used to diagnose gallbladder disease include cholescintigraphy, a radioactive injection used to view a possible blockage of the cystic duct; magnetic resonance imaging of the bile ducts; and endoscopic retrograde cholangiopancreatography, which uses a scope to view the biliary ducts. An advantage of this last technique is that stones can sometimes be removed during the procedure.

### How are gallstones treated?

Gallstones should be treated only if they cause symptoms. For recurrent gallbladder attacks, the most effective treatment is surgical removal of the gallbladder, or cholecystectomy. The traditional procedure is a major surgery requiring a five-inch incision and a hospital stay of up to a week. Fortunately, it has been largely replaced by laparoscopic cholecystectomy, in which the surgeon removes the gallbladder with instruments inserted through small incisions in the skin, below the liver. This procedure requires only an overnight hospital stay and a week of recovery at home.

There is a slight risk of injuring the bile ducts during laparoscopic cholecystectomy. Also, in 5%–10% of cases, the

## Gallstone trouble



Gallstones cause problems when they block any of the ducts carrying bile from the liver or gallbladder (or digestive enzymes from the pancreas) to the small intestine.

surgeon may have to switch to an open surgery because of complications such as bleeding or old scarring.

There are few downsides to living without a gallbladder. When it is removed, bile simply flows directly into the small intestine through the common bile duct. Bile in the intestine when no food is present may cause loose stools, but that problem can be treated with a bile acid-binding medication.

### Medical options

If you are unable or unwilling to undergo surgery and your gallstones are relatively small, one nonsurgical option is to take ursodiol, a naturally occurring bile acid that helps dissolve cholesterol. Ursodiol can take up to two years to work and will dissolve only those gallstones made of cholesterol. Other medications are under investigation.

Drug therapy is occasionally combined with lithotripsy, which uses sound waves from outside the body to break gallstones into pieces that dissolve more easily or are small enough to safely pass through the bile duct. Unfortunately, stones are likely to recur after medical treatment.

### What can I do to avoid gallstones?

There's no proven way to prevent gallstones, but research suggests some possibilities. Several studies have linked moderate alcohol consumption to a lower risk of symptom-causing gallstones. The Nurses' Health Study also found that women who ate several one-ounce servings per week of peanuts or other nuts were less likely to require gallbladder surgery, as were women with more fiber in their diets. Gallbladder surgery was also less common in regular exercisers.

If you undergo rapid weight loss through surgery or a very low-calorie diet, you can reduce your risk of developing gallstones by taking ursodiol. Avoiding fatty foods will not get rid of gallstones, but it may reduce the frequency of attacks. ♥

Source: from Harvard Medical School Health, Harvard Health Publications, Copyright 2005 by President and Fellows of Harvard College. All rights reserved.

Harvard authorizes you to view or download a single copy of the Harvard Content on the EBSCOhost solely for your personal, noncommercial use if you include the following copyright notice: "Copyright, President and Fellows of Harvard College. All rights reserved" and other copyright and proprietary rights notices which were contained in the Harvard Content. Reproduction and/or redistribution of the Harvard Content is expressly prohibited. Any special rules for the use of other items provided on the EBSCOhost \_\_\_\_\_ may be included elsewhere within the site and are incorporated into these Terms and Conditions.

The Harvard Content is protected by copyright under both United States and foreign laws. Title to the Harvard Content remains with President and Fellows, Harvard College. Any use of the Harvard Content not expressly permitted by these Terms and Conditions is a breach of these Terms and Conditions and may violate copyright, trademark, and other laws. Harvard Content and features are subject to change or termination without notice in the editorial discretion of Harvard. All rights not expressly granted herein are reserved to President and Fellows, Harvard College.

If you violate any of these Terms and Conditions, your permission to use the Harvard Content automatically terminates and you must immediately destroy any copies you have made of any portion of the Harvard Content.

## MEDICAL DISCLAIMER

The information contained in this online site is intended to provide accurate and helpful health information for the general public. It is made available with the understanding that the author and publisher are not engaged in rendering medical, health, psychological, or any other kind of personal professional services on this site. The information should not be considered complete and does not cover all diseases, ailments, physical conditions or their treatment. It should not be used in place of a call or visit to a medical, health or other competent professional, who should be consulted before adopting any of the suggestions in this site or drawing inferences from it.

The information about drugs contained on this site is general in nature. It does not cover all possible uses, actions, precautions, side effects, or interactions of the medicines mentioned, nor is the information intended as medical advice for individual problems or for making an evaluation as to the risks and benefits of taking a particular drug.

The operator(s) of this site and the publisher specifically disclaim all responsibility for any liability, loss or risk, personal or otherwise, which is incurred as a consequence, directly or indirectly, of the use and application of any of the material on this site.