

## GALLSTONES

Gallstones are very common in most western countries. About 10% of adults have gallstones. Gallstones do not always cause symptoms but, if they do, then surgical removal is the best treatment currently available.

### WHAT CAUSES GALLSTONES?

Most gallstones are formed from cholesterol in the bile crystallising in the gallbladder. This is more likely to happen in women and in people eating a high fat, high calorie diet.

Some people develop "pigment" gallstones, which are the result of the breakdown of the red cells in the blood.

### WHAT ARE THE SYMPTOMS OF GALLSTONES?

Gallstones may cause no symptoms at all. The most common complication is cramping pain usually felt in the upper right abdomen or in the back on that side. Vomiting often occurs and fatty foods may trigger an attack. If the gallstone passes out of the gallbladder into the duct draining the liver, obstruction can occur resulting in jaundice (yellow discolouration).

### HOW DO I KNOW IF I HAVE GALLSTONES?

If the symptoms suggest gallstones than an ultrasound scan will confirm the diagnosis. Blood tests to check on the function of the liver are usually needed and sometimes a special test called a MRCP is used to ensure no stones are present in the bile ducts. Stones that have escaped from the gallbladder into the bile ducts can usually be removed before surgery.

### WHAT ARE THE TREATMENT OPTIONS FOR GALLSTONES?

If gallstones are not causing any problems then they can be left alone. If they are causing pain then surgical removal is the safety way to ensure cure of the symptoms.

Traditionally gallstones were removed through a large incision (wound) which was painful for some weeks. Modern technology has made it possible to remove the gallbladder through much smaller incisions using a special video camera called a laparoscope. This operation is called a **laparoscopic cholecystectomy** (keyhole surgery) and patients are now able to return home after only one night in hospital.

Occasionally for safety reasons a surgeon will decide to use the traditional (open) method to remove the gallbladder. This is not a complication of surgery but is an accepted method still widely used if needed.

### WHAT ABOUT SHOCK WAVE TREATMENT?

This method, using ultrasound waves (lithotripsy) has been very successful for treating kidney stones which are calcified (contain calcium) and very hard. The technique allows the stones to be removed while preserving the kidney, which is very important.

Gallstones are not often calcified and, as a result, do not shatter as easily with ultrasound waves. There is also a danger that if the stones are shattered the small pieces will block the duct draining the liver, resulting in jaundice or inflammation of the pancreas gland.

If the gallbladder is not removed then further stones are likely to form so shock wave treatment is not considered a permanent cure for gallstones. For all of these reasons, shock wave treatment is usually only used for people unfit for surgery.

### CAN GALLSTONES BE DISSOLVED?

Gallstones can be dissolved but the chemicals used are toxic and gallstones usually recur when treatment stops.

### **HOW IS THE OPERATION PERFORMED?**

In most cases, general anaesthesia is used with the patient asleep. Two cuts of 1cm and two of 5cm in length are made. Carbon dioxide gas is used to distend the abdomen to allow room for operating.

The gallbladder is separated from the liver and the blood vessels supplying it are divided. The duct draining the gallbladder is clipped and then cut. The gallbladder is normally removed through the cut at the belly button (umbilicus).

If there is a suspicion that there are gallstones in the bile duct draining the liver, then an X-ray, called a cholangiogram, can be taken during the operation. Following surgery most patients can drink fluids that day and eat a light diet the next day.

*\*\*also see [MRCP information sheet](#)*

### **CAN I LIVE WITHOUT A GALLBLADDER?**

The gallbladder's main focus is to store bile until it is needed to help digest fat in the diet. After the gallbladder is removed the bile ducts usually increase slightly in size and store some of the bile. A gallbladder that has stones in it does not usually function normally anyway and so it is not missed.

### **WHAT ARE THE RISKS OF SURGERY?**

The following risks are common to all operations,

Heart and lung problems

Blood clots (thrombosis) in the leg veins

Wound infections

Bleeding

Excessive scar formation

### **SPECIFIC RISKS OF LAPAROSCOPIC CHOLECYSTECTOMY**

The biggest danger is injury to the main bile duct, which drains the liver into the bowel. Division or injury to this duct will result in liver failure if untreated and for this reason surgeons will often convert to the "open" method (see above) if the gallbladder is too inflamed to allow safe identification of the bile duct.

Other rare complications include injury to the digestive tract, injury of a major blood vessel, leakage of bile from a bile duct and injury of other organs near the gallbladder.

### **AFTER SURGERY**

If you develop a fever, chills, drainage from a wound for more than one day or abdominal pain it is important that you surgeon is contacted.

### **WHAT CAN I EAT AFTER SURGERY?**

After a few days it is usually possible to eat a normal diet again. For general health reasons though, it is still advisable to avoid fatty foods.

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