

## GALLSTONES

The Gall bladder is an organ which lies just below the liver. It is a side pouch lying to the right of the main channel which carries bile from the liver to the intestine. This channel is called the Common Bile Duct (CBD). The Gall Bladder stores bile that is secreted by the liver. In the gall bladder bile is concentrated. When food is taken and reaches the duodenum, (the first part of the small intestine), it contracts and the bile reaches the duodenum to mix with food and enhance digestion.

A number of patients develop stones in the gall bladder.

Why do gall stones develop?

- **Gender:** Females are twice as likely as males to develop gallstones. Hormonal variations either natural or ingested appears to increase the level of cholesterol. Gallbladder movement, is decreased in pregnancy, which can lead to gallstones.
- **Genetics:** Gallstones often run in families, pointing to a possible genetic link.
- **Weight.** Overweight people have an increased risk for developing gallstones. The most likely reason is that the amount of bile salts in bile is reduced. Bile salts act almost like soap and dissolves cholesterol. The result of this is that cholesterol starts to drop out of solution. Obesity is a major risk factor for gallstones, especially in women.
- **Diet.** Diets rich in fat and cholesterol and poor in fiber increase the risk of gallstones due to a relative increase in cholesterol compared to bile salts and reduced gallbladder emptying.
- **Rapid weight loss.** "Crash diets and crash weight losing courses"— causes gall stones as the body metabolizes fat during this period—the liver excretes extra cholesterol into bile, which can cause gallstones. In addition, the gallbladder does not empty properly.
- **Age.** People older than age 60 are more likely to develop gallstones than younger people. As people age, the body tends to secrete more cholesterol into bile.
- **Geography.** People from Northern and Eastern Indian States are more prone to Gall stone formation. This is probably due to differences in diet.
- **Cholesterol-lowering drugs.** Some medicines that lower cholesterol levels in the blood actually do so by increasing the amount of cholesterol excreted into bile. In turn, the risk of gallstones increases.
- **Conditions in which Red Blood Cells break down rapidly.** The increasing load of pigment to the gall bladder causes stones to fall from solution. These stones are pigment stones.
- **Diabetes** Diabetics generally have high levels of triglycerides. These type of fatty acids may increase the risk of gallstones.

## WHY HAVE SURGERY?

The types of gall stones are,

1. Cholesterol
2. Pigment
3. Mixed

Of these, cholesterol stones are the vast majority.

Stones can stay **asymptomatic** but can cause a number of diseases.

**Gall stone colic** – pain as a result of stones blocking the neck of the gall bladder (1)

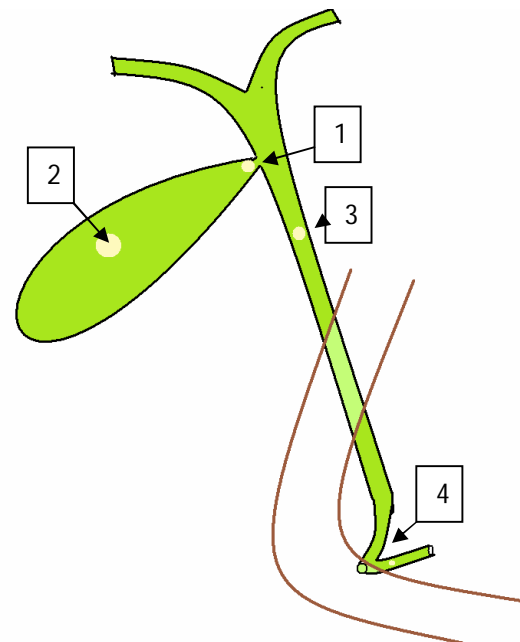
**Acute Cholecystitis and Empyema** – as a result of infection in a blocked gall bladder.

**Chronic Cholecystitis** – chronic infection as a result of stones causing inflammation or infection in the gall bladder (2).

**Obstructive Jaundice** – as a result of the stone travelling down the bile duct. (3)

**Acute pancreatitis** – a deadly disease. The stone may block the mouth of the pancreatic duct. There is sometimes a common channel between the pancreatic and the common bile duct. (4)

**Gall bladder Cancer** – there is an increased incidence in the North Indian states of Gall Bladder cancer a deadly disease. While the relationship with gallstones is not established most studies say that the highest incidence is in women with a single large stone from the Gangetic plain.



## SURGERY

The gold-standard of Gall Bladder surgery, where the Gall Bladder has to be removed, is by the Laparoscopic procedure. However, some local conditions prevent this and a small percentage will still need Open Surgery. The decision to convert to open surgery is most often an indication of maturity on the part of the Surgeon.