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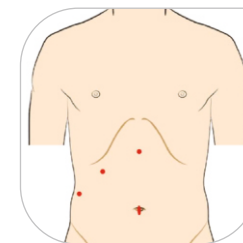
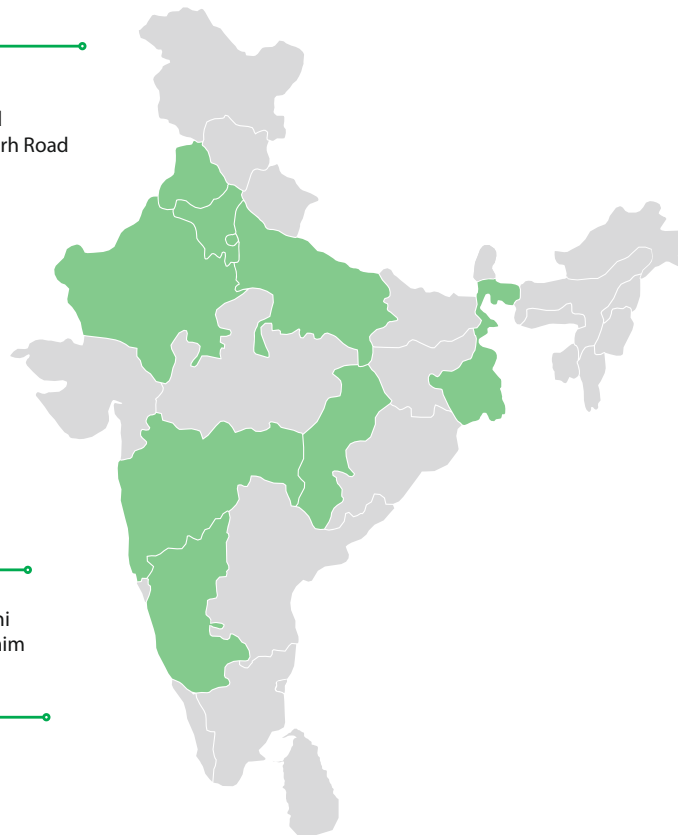
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## LAPAROSCOPIC GALL- BLADDER SURGERY & SILS



### Fortis Hospital

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Phone: 0120-4622244

**Emergency: +91 120 462 2222 | Ambulance: 92055 57406**

[www.fortishealthcare.com](http://www.fortishealthcare.com)



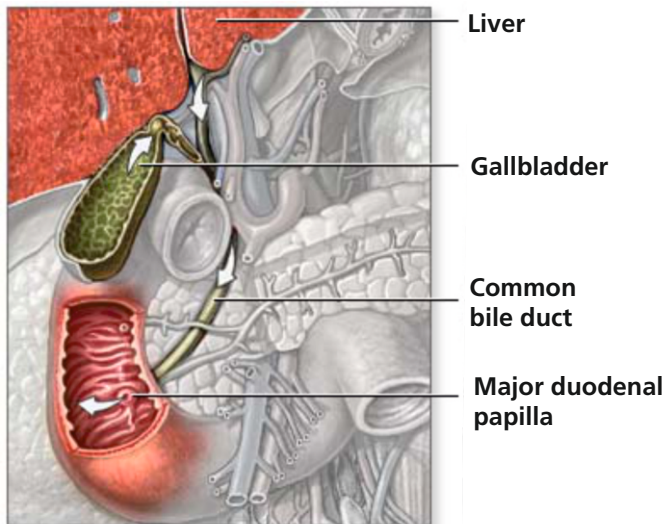
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# FREQUENTLY ASKED QUESTIONS?

## ? 1 WHAT IS GALLBLADDER?

Gallbladder is a small, pear shaped organ, tucked under the liver in the upper right part of the abdomen. Normal gallbladder stores a small portion of bile produced by the liver and concentrates bile by removing water. Liver produces about 1.5 litres of bile in 24 hours. Most of the bile flows to the first part of the small intestine (duodenum) directly. Gallbladder releases only about 150 ml bile into the small intestine when food is eaten and aids in the digestion of fatty food.



## ? 2 HOW DO GALLSTONES FORM?

When the ratio of bile salts, cholesterol and fluid inside the gallbladder becomes unbalanced, some of the chemicals solidify and form gallstones (a kind of sediment). In majority of patients, cholesterol is the major solid component. While reasons for gallstone formation may be multiple and vary from one person to other, generally:

- (i) Gallstones, are four times more common in females than males.
  - (ii) Gallstones are more common in females who had pregnancies and are overweight.
  - (iii) Excess fat in the diet is one of the risk factor.
  - (iv) Long fasting hours, contraceptive pills, typhoid may be some contributing factors.
- However, the cause of gallstone formation may not be apparent. Also no age is exempt and gallstones may form even in a thin, teenager or a child. Our youngest patient was six years old.

## ? 3 WHAT ARE THE SYMPTOMS OF GALLSTONES?

While some gallstones may have no noticeable symptoms, most often they are the cause of pain and other problems.

### In the Gallbladder

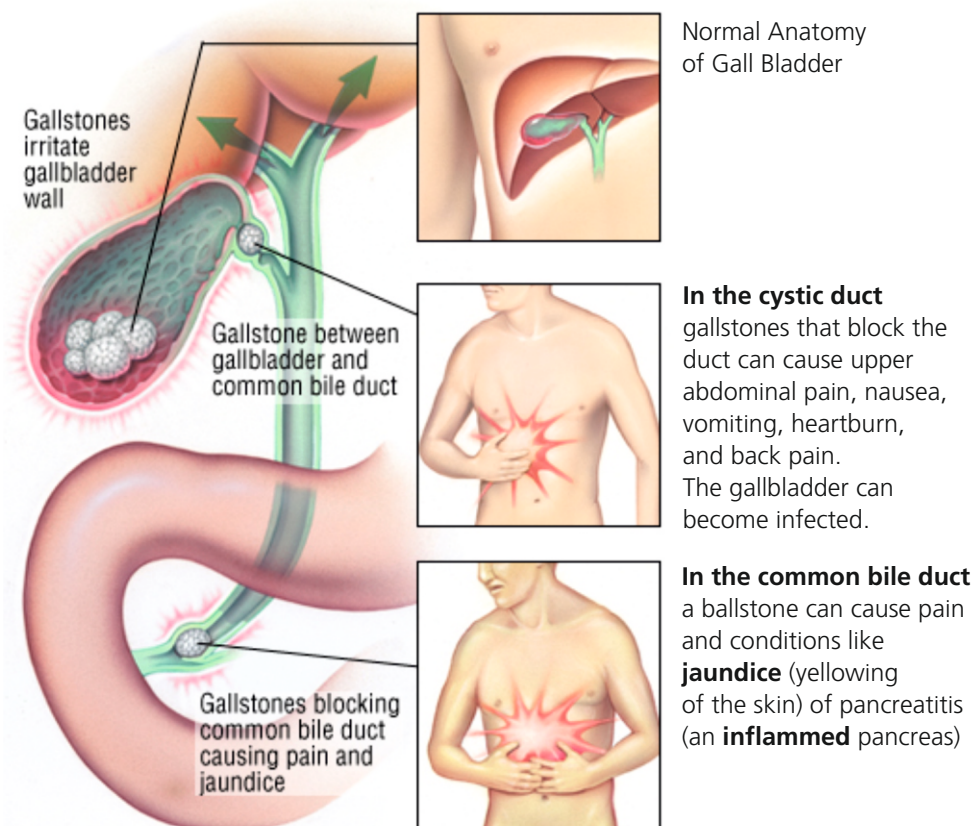
The stones may be silent, cause pain in upper abdomen lasting for a few hours (**biliary colic**) with nausea, vomiting, bloating, heartburn and back pain. After many years of irritation, stones may cause **cancer of the gallbladder**. **North India has the highest incidences of gallbladder cancer in the world.** Detection of cancer may be difficult in a gallbladder which has become small and contracted.

### In the Cystic Duct

Gallstones may block the cystic duct causing retention of fluid in the gallbladder (**mucocoele**) or super added infection (**acute cholecystitis**) resulting in prolonged pain, fever and loss of appetite. Patients having acute cholecystitis need hospitalisation and injectable antibiotics.

After treatment, the infection may resolve or lead to pus formation (**Empyema**).

Empyema is more common in patients with diabetes, who are also prone to perforation of gallbladder and leakage of pus (**pericholecystic abscess**).



#### In the common bile duct

The stone may move out of the gallbladder through the cystic duct and block the common bile duct. The flow of bile from liver into the intestine gets obstructed and bile gets back into the blood causing **jaundice**, fever and damage to the liver. Migrating stone may block opening of bile duct into the intestine with swelling of the pancreas (**acute pancreatitis**) which may require weeks of hospital treatment and may be fatal.

## ? 4 WHAT IS THE TREATMENT OF GALLSTONES?

### Cholecystectomy: The only effective cure for gallstones

Once stones have formed in the gallbladder, removal of stones with the gallbladder is the only acceptable and effective treatment for permanent cure. are formed due to fault in the gallbladder (infection, incomplete emptying, excess water absorption), therefore the gallbladder must be removed. Since the gallbladder is already infected, has decreased capacity (due to stones and shrinkage) and is often non-functioning, the digestion is not affected by Gallbladder removal. This also eliminates the risk of subsequent cancer. If only stones are removed, the gallbladder will form new stones in the majority of patients. This approach is therefore not accepted. There is no effective medicine to cure gall stones.

## ? 5 HOW IS DISEASED GALLBLADDER REMOVED?

The traditional way to remove the diseased gallbladder was through a 15 to 20 cm incision in the abdomen, cutting skin; fat, and three layers of muscles underneath, which were then stitched back in layers (open surgery). Now, the same surgery can be performed through tiny skin punctures, without damaging underlying muscles. The technique is called **Laparoscopic cholecystectomy**.

## ? 6 WHAT ARE THE BENEFIT OF LAPAROSCOPIC SURGERY?

The benefits of laparoscopic procedure over open surgery are impressive. By decreasing injury to skin and muscles, the resultant pain and discomfort are reduced. Oral intake can be started by the same evening. Most of the patients can be discharged from the hospital the next day as compared to three to five days after open surgery. **After laparoscopic cholecystectomy, recovery time (at home) is usually around five days as compared to three-six weeks for open surgery. Tiny punctures of laparoscopic surgery are cosmetically superior to long scar of conventional surgery.**

Once the diagnosis is made, the following facts should be kept in mind:

- (i) It is better to undergo the procedure before any complication (acute cholecystitis, jaundice) has occurred. Presence of complications increases hospital stay and may require additional investigations and procedures thereby adding to discomfort, morbidity and cost. Presence of complications also increases the operating time, chances of conversion to open surgery and prolongs hospital stay and recovery.
- (ii) Small/multiple stones have higher potential of slipping out of the gallbladder through the cystic duct into the common bile duct and producing serious complications like jaundice or pancreatitis. They should be treated early.
- (iii) **If you have diabetes, you live alone, travel frequently or have to travel abroad, it is better to get rid of the disease at the earliest.**
- (iv) After cholecystectomy, there is no risk of recurrence of gallbladder stones since the organ at fault has been removed.
- (v) **Removal of the gallbladder generally leads to no permanent disability or deficiency of the digestive system since in majority of patients, the gallbladder was already non-functioning. In others, the digestion, including that of fatty food, returns back to normal in four-six weeks after which one can enjoy all kinds of food.**
- (vi) In an otherwise healthy person, laparoscopic cholecystectomy is a safe and simple procedure. While most surgeons use 11 mm instruments for laparoscopic cholecystectomy, we use finer instruments with significantly smaller punctures of three to five mm for this procedure and no stitches are required (sutureless mini/micro laparoscopic cholecystectomy).

This saves you from apprehension and discomfort of suture/clip removal.



### Evaluating your condition

Detailed history and physical examination may help in identifying gallbladder problem and ruling out other causes of pain. Ultrasound has high accuracy (98%) for diagnosing gallstones and associated acute cholecystitis. It may reveal information if stone has passed into the bile duct. Blood tests may also suggest possibility of stone in the common bile duct. Occasionally MRCP, ERCP or CT scan may be required.

### Your Surgical Experience

Conventionally, the surgery is performed through four tiny punctures. Through the navel, the surgeon inserts a laparoscope which is attached to a lightweight, medical grade video camera. The camera sends images to a monitor, allowing the surgeon and his team to see inside the body.

Through other punctures, specially designed instruments are inserted. The gallbladder is disconnected from its attachments and removed through the highest incisions.

The procedure is performed under general anaesthesia. While each case has unique characteristics, It generally takes about 20 to 30 minutes for the procedure and only 24 hours hospital stay is required.

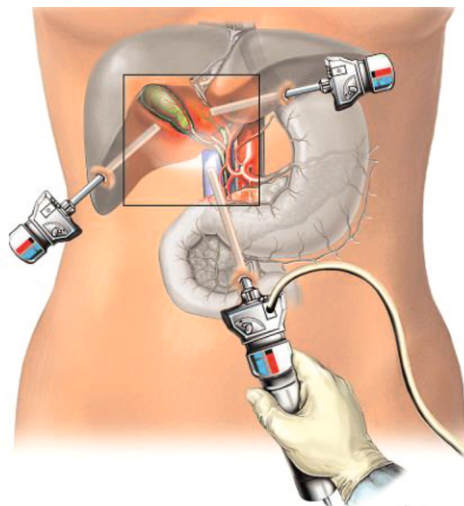
**Because of our extensive experience in laparoscopic surgery, number of stones, size of the stones, size of the gallbladder, presence of acute cholecystitis etc. do not influence the decision against laparoscopic cholecystectomy. Even excessive obesity, in our hands, does not go against laparoscopic procedure. Our specialisations include surgery for weight loss (Laparoscopic Sleeve Gastrectomy and bypass).**

In our hands, Laparoscopic cholecystectomy can be safely performed in a large number of patients despite previous (multiple) abdominal operations, second trimester of pregnancy and associated diabetes and heart conditions. With good hospital backup, today there are very few contraindications for laparoscopic surgery.

During laparoscopic cholecystectomy, if at any stage it is felt that it is not safe to continue, the procedure may be converted to open surgery.

The **conversion rate** to open surgery varies from centre to centre and surgeon to surgeon. Important factors influencing conversion rate are experience and skill of the surgeon and quality of the instruments.

Accepted conversion rate is about two or five percent. **Conversion in hands of our team is less than 0.1 percent** and is generally limited to patients having pus in the gallbladder, multiple previous surgeries or when lung/cardiac condition during surgery prompts conversion to open surgery. In case of conversion, gallbladder is removed through the smallest possible incision.



### Risks and Complications:

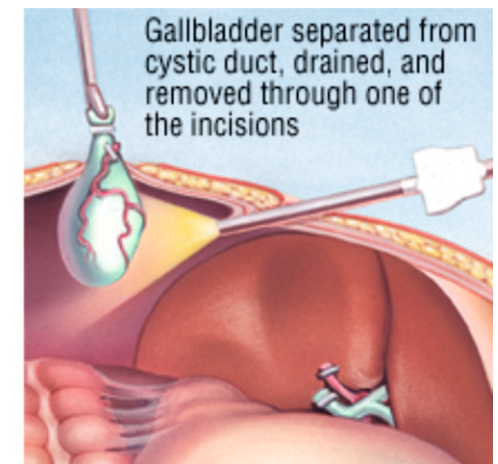
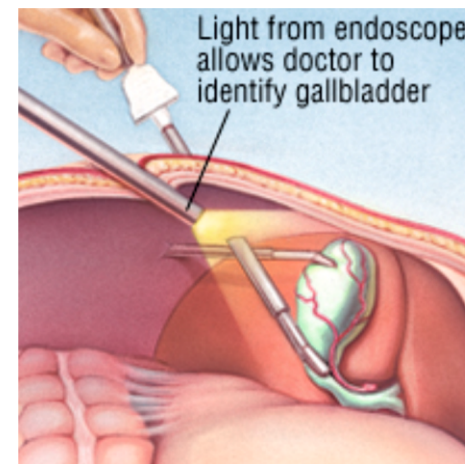
Any gallbladder surgery has risks and complications.

These include:

- Excessive bleeding
- Infection
- Injury to abdominal organs
- Injury to common bile duct
- General anaesthesia carries little more risk in patients with diseases of the heart, lungs, kidneys and other systemic problems.

Each Center and each surgeon has a complication rate different from others.

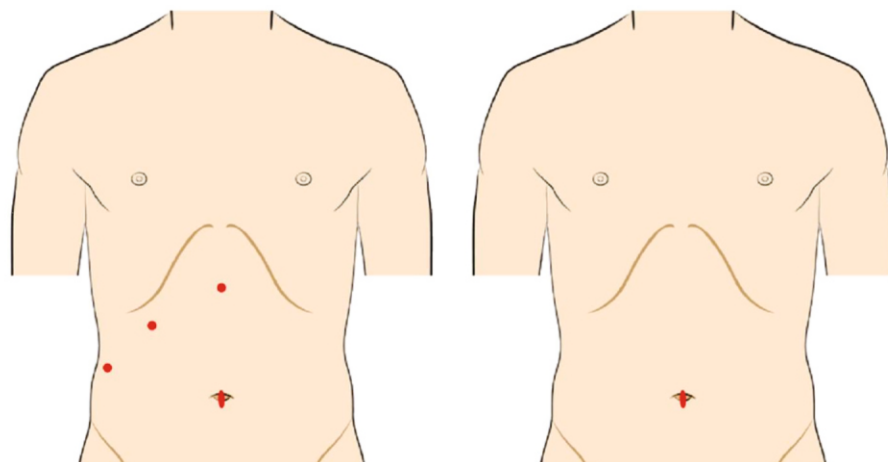
Our Doctors have large experience of laparoscopic surgery and excellent infrastructure of anaesthesia make the procedure safer and simpler in our setup. In around 12,000 laparoscopic cholecystectomies, technical complications have been encountered in only 0.1% of our patients. There has been no technical complication in our last 5000 patients. We have even removed gallbladder laparoscopically in patients on whom cholecystectomy was attempted elsewhere earlier and part or whole of the gallbladder was left behind due to technical difficulties.



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## WHAT IS SINGLE INCISION LAPAROSCOPIC SURGERY?

At Fortis Hospital, Greater Noida, the team is specially skilled and instead of making four cuts, the gallbladder is removed with one 12 mm cut through the belly button which is completely hidden (scarless). Ask your doctor for more information.



**Multi Port**

**Single Port**

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## WHAT ALL SHOULD I KNOW ABOUT THE SURGERY?

### • Before Surgery

Your general health will be checked with routine blood and other tests. Before admission, an Anaesthesiologist will go through your reports along with physical examination.

**Don't take aspirin or other blood thinning medication for five days before surgery. Smoking should be stopped before surgery.**

**Navel should be cleaned thoroughly with soap and water for two-three days before surgery to remove any dirt or concretions.**

The day before surgery, you can take normal dinner. Do not eat or drink anything after midnight. Oral Medicines for diabetes should be stopped on the

day of surgery. Medicines for blood pressure, heart disease or asthma can be taken at six am in the morning with a sip of water. If your surgery is scheduled in the afternoon, you will be given intravenous fluid after admission.

### **What to bring along**

- All investigation reports
- Doctors prescription
- Insurance details (receipt of bills)
- On going medications
- **Jewellery and other valuables to be left at home**

### **In the Hospital: On the day of surgery**

After the operation you will be kept in the recovery room for one to three hours and given oxygen by mask. The decision to shift you to the room is taken by the anaesthesiologist and depends on many factors. Oxygen may be continued in the room. You may experience nausea and may even vomit in the first few hours. This should not cause any worry. Sitting up in the bed and taking deep breaths will reduce the feeling of nausea. You will find small bandages covering your incisions. The drip inserted in your vein to give you fluid may stay overnight. You may also have some discomfort in your right shoulder. This is temporary and will go away by itself. Shoulder pain decreases on lying flat in the bed. In the room you can move and sit up in the bed and turn to any side. After a few hours you can walk to the washroom. Walking enhances blood circulation through your body, improves lung function and decreases pain.

The drip can be temporarily discontinued for walking to the washroom.

You are generally allowed to have liquids by mouth five hours after the procedure. You should first sit up, take deep breaths and have a few sips of water. Gradually you can increase the amount and later can have tea or clear soup. Do not refuse any medication/injection. Each medicine has more than one purpose and is given to hasten your recovery.

### **The day after surgery**

You can have normal breakfast in the morning and semi-solid food in the day (khichri, porridge, bread, toast, biscuits, cookies). Some bloating of abdomen may be present which will decrease after passage of wind and stool. Since nothing much was taken by mouth the day before, one generally does not pass stools and hence should not strain.

You will be generally discharged on the next day of operation unless there is some medical/social reason. **You can walk normally and can climb stairs slowly.**

### **At Home**

Take soft diet for two days. Normal, home cooked food with less cooking oil can be started three days after surgery. During first week avoid whatever does not suit your stomach. It is helpful to take small frequent meals. **Milk, Coffee and citrus juices should be avoided for a week. Soft fruits can be easily digested.** Prescribed medication also helps in decreasing gas and acidity. Some patients may have loose stools during this period.

Your dressings are water proof. You can take a bath 48 hours after surgery.

Do not rub over the dressings. The skin punctures are sealed with glue and there is no stitch or clip on the skin. Do not worry if bandages come out. They need not be replaced. Water can flow over bandages. One can start going outdoors after three days and return to normal activity in five to seven days. If you do not pass stool 48 hrs after surgery, push two dulcolax suppositories through the rectum to help you evacuate.

### **Medication**

- If you have not passed motion despite laxatives three days after surgery, use enema. 'Proctoclys enema' is available in all medical stores and is easy to use. You also need to increase roughage in the diet, take plenty of water and increase activity.
- If you feel colicky abdominal pain add Tab Eldicet 1 Tab three times a day 30 mins before meal for three days. If pain is not relieved take cap. Spasmo-proxyvon twice a day for two days.
- If you feel bloated add Tab Festal-N one Tab three times a day with meal for one week.
- If you feel acidity, add Tab Razo 20mgs. twice a day in the morning empty stomach and 30 mins before dinner for seven days.
- If you have loose stools omit night laxative. You may also take Tab Norflox 400 mgs. twice daily for three days if stools are watery or more than four to five times a day, take electrol powder in water and drink plenty of fluids to avoid dehydration.

### **Your Clinic Appointment**

You should fix up an appointment with your surgeon seven to ten days after surgery.

Call earlier if you have any significant symptom like fever, vomiting etc.

### **Collect your histopathology report of the gallbladder before meeting your surgeon.**

The bandages will be removed on your visit if they have not come out earlier. After removing the dressing, apply some skin cream on the cuts twice a day for five to seven days. Some patients may have minor serum discharge from one of the wounds. Do not worry and just mop it dry with clean cloth and apply antiseptic ointment neosporin.

### **Back to Normal**

One can start driving and join work five to seven days after lap chole. It is better to avoid long working hours during the initial days.

Your body should decide how much to work. It is advisable to avoid fatigue during first few days. Outstation patients can leave Delhi after four to five days.

Business Traveling can be resumed after seven to ten days.

One can gradually increase fat content in the diet and after five to six weeks there is hardly any restriction in diet or activity.

## आपके शीघ्र स्वास्थ्य लाभ के लिए सामान्य जानकारी

ऑपरेशन से पहले

ऑपरेशन के लिए आपकी खून की जाँच, एक्स-रे व ई. सी. जी. होंगे। दाखिले से पहले एनेस्थेसिस्ट आपको सारी रिपोर्ट के साथ देखेंगे।

यदि आप डिस्प्रेन/इकोस्प्रेन ले रहे हों तो ऑपरेशन के पाँच दिन पहले उसे बंद कर दें। ऑपरेशन के पहले धूम्रपान बंद कर देना चाहिए।

ऑपरेशन के 2–3 दिन पहले से अपनी नाभि को नहाते समय अच्छे से साफ करें ताकि वहाँ कोई कचरा या कंकड़ न रहें।

ऑपरेशन से एक रात पहले तक आप सामान्य भोजन ले सकते हैं। आधी रात के बाद कुछ न खाएँ पीएँ। डायबिटीज की गोली सर्जरी वाले दिन नहीं लेनी है व अगर आप ब्लड प्रेशर, दमा या हार्ट की कोई दवाईयाँ ले रहे हैं तो सुबह 6 बजे एक घूंट पानी के साथ दवाईयाँ ले लें। अगर आपकी सर्जरी दोपहर के लिए तय है तो आपको भर्ती होने के बाद ड्रिप दिया जायेगा।

आपको अपने साथ क्या लाना है?

- सभी जाँच की रिपोर्टें और डॉक्टर का निर्देश
- बीमा का विवरण / बिलों की रसीद
- वर्तमान में चल रही दवाएँ
- ज्वेलरी और कीमती सामान घर छोड़ कर आएँ

हॉस्पिटल में: सर्जरी के दिन

सर्जरी के बाद आपको 1 से 3 घंटे तक रिकवरी रूम में रखा जाएगा व मास्क के जरिये ऑक्सीजन दी जायेगी। वहाँ से आपके कमरे में भेजने का निर्णय एनेस्थेसिस्ट कई बातों को ध्यान में रखकर लेते हैं।

शुरु के कुछ घंटों में आपको उल्टी का आभास हो सकता है या उल्टी हो भी सकती है। यह एक सामान्य बात है व इसकी चिंता न करें। बिस्तर में बैठकर लंबी साँसें लें, इससे आप बेहतर महसूस करेंगे।

ऑपरेशन के बाद आपको चार जगहों पर छोटी-छोटी पट्टियाँ लगी होंगी। आपको नसों में ग्लूकोज व सेलाइन अक्सर रात 10–11 बजे तक चलता रहेगा। आपके दाहिने कंधे में कुछ दर्द हो सकता है। अगर ऐसा हो तो लेटे रहें। यह दर्द सुबह तक चला जाएगा।

कमरे में आने के बाद आप बिस्तर में उठकर बैठ सकते हैं व करवट ले सकते हैं। कुछ घंटे बाद आप चलकर शौचालय तक जा सकते हैं। चलने से फेफड़े व हार्ट बेहतर काम करते हैं व दर्द में राहत मिलती है। शौचालय जाने के लिए ग्लूकोज ड्रिप को थोड़ी देर के लिए हटाया जा सकता है।

आप ऑपरेशन के 5 घंटे बाद तरल पदार्थ ले सकते हैं। पहले आप बिस्तर में उठकर बैठें व लंबी-लंबी साँसें लें। फिर कुछ घूंट पानी पी कर देखें। आधे घंटे बाद आप चाय या सूप ले सकते हैं।

हर दवाई आपके सुधार में मदद करती है। किसी भी दवाई के लिए मना न करें।

सर्जरी के दूसरे दिन

सुबह आप सामान्य नाश्ता ले सकते हैं। दोपहर में हल्का खाना लिया जा सकता है (खिचड़ी, दलिया, ब्रेड, टोस्ट,

बिस्किट इत्यादि)। पेट में आपको कुछ फूलापन महसूस हो सकता है। गैस निकलने के बाद इसमें राहत महसूस होगी। सामान्यतः ऑपरेशन के दूसरे दिन शौच नहीं होता इसलिए जोर न लगाए।

ऑपरेशन के दूसरे दिन साधारणतः अस्पताल से आपकी छुट्टी हो जाएगी व आप धीरे-धीरे 2–3 मंजिल सीढ़ियाँ चढ़ सकते हैं।

घर पर

पहले 2 दिन नरम भोजन लीजिए। ऑपरेशन के 3 दिन बाद आप कम तेल वाला घर का भोजन ले सकते हैं। जब तक आपका पाचन तंत्र सामान्य रूप से काम करे, आपको कुछ दिन गैस महसूस हो सकती है। इन दिनों वही कुछ खाएँ जो आप ऑपरेशन के पहले आसानी से पचा सकते थे। इस दौरान थोड़ा-थोड़ा भोजन बार बार करने से आप बेहतर महसूस करेंगे। दूध, कॉफी व जूस एक सप्ताह तक न लें। आप कोई भी नरम फल खा सकते हैं। दवाईयाँ भी आपके पाचन में मदद करेंगी। कुछ लोगों को इन दिनों दस्त हो सकते हैं।

आप ऑपरेशन के दो दिन बाद स्नान कर सकते हैं। घाव के ऊपर रगड़िये नहीं। इस पर कोई टांका नहीं होता वह मेडीकल गलु से जुड़ी होती है। पट्टी निकल जाए तो कोई चिंता मत कीजिए। उन्हें बदलने की जरूरत नहीं है।

3 दिन बाद आप घर से बाहर निकलना प्रारम्भ कर सकते हैं एवं 5–7 दिन में अपने कार्य पर वापस जा सकते हैं।

दवाएँ

- यदि आपको सर्जरी के तीन दिनों तक शौच नहीं हुआ है, तब एनीमा मेडिकल स्टोर्स पर उपलब्ध होता है उसका उपयोग कर सकते हैं। आपको अपने खाने में हरी सब्जियों और फलों की मात्रा बढ़ानी होगी और पानी ज्यादा पीना होगा।
- यदि आपको (मरोड़ के साथ पेट में दर्द) हो तब एल्डीसेट की गोली दिन में तीन बार, खाने के 1½ घंटे पहले तीन दिन तक ले लें। यदि इससे भी दर्द में आराम न आए तो अपने डॉक्टर को सेपक करे।
- यदि पेट में सूजन (फूलना) लगता हो तो फेसटाल – एन की गोली दिन में तीन बार खाने के साथ लेने से आराम मिलेगा।
- यदि आपको दस्त लग रहें हो तो रात को क्रीमाफीन की गोली खाना बंद कर दें। यदि दस्त दिन में 4–5 बार हो रहे हों तो इलेक्ट्रॉल पाउडर लेना शुरू कर दें और पानी की मात्रा को दीहायड्रेशन से बचने के लिए बढ़ा दें।

आपकी हॉस्पिटल विजिट

ऑपरेशन के 7–10 दिन बाद आप अपाइन्टमेंट ले लीजिए। अगर बुखार या उल्टी जैसी कोई तकलीफ हो तो पहले दिखाएँ। दिखाने से पहले गालब्लैडर की पैथालॉजी रिपोर्ट लेकर आएँ।

साधारणतः इस ऑपरेशन के बाद कोई टांके नहीं लगते। अगर पट्टी पहले ही न निकल गई हो तो इसे आप निकाल देंगे। अगर किसी घाव से पानी आए तो चिंता न करें। उसे साफ कपड़े से साफ कर एंटीसेप्टिक ट्यूब लगा लें।

वापस सामान्य अवस्था में

आप ऑपरेशन के लगभग 5 से 7 दिन बाद अपने काम पर जाना प्रारंभ कर सकते हैं। शुरु में कुछ दिन आप अपने घर पर काम का ज्यादा बोझ न डालें व लंबे समय तक काम न करें।

आपका शरीर स्वयं तय करेगा कि प्रारंभ के दिनों में आप कितना काम बिना थके कर सकते हैं। दिल्ली से बाहर के मरीज 4 दिनों बाद वापस जा सकते हैं। बिजनेस टूर आप 7 से 10 दिन बाद शुरू कर सकते हैं।

भोजन में चर्बी धीरे-धीरे बढ़ाएं व 5 से 6 सप्ताह बाद आप सभी तरह के व्यंजन खा सकते हैं व सारे क्रिया कलापों में हिस्सा ले सकते हैं।