

# LAPAROSCOPIC COLORECTAL SURGERY

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## Colorectal Surgery Services

### INTRODUCTION

Laparoscopic surgery is defined as surgery performed on the abdomen through small incisions. It has been called minimally invasive surgery or “keyhole” surgery as well due to the minimal trauma caused by the procedure and appearance of the incisions. Some refer to this surgery as laser surgery because surgeons used lasers to cut internal tissue when the procedure was first used for other types of diseases. However this is an incorrect term. Lasers are not used anymore.

Around the year 1986, laparoscopy was used to remove a gallbladder in a patient. Since then there has been a rapid revolution in surgery. More types of diseases are being treated by laparoscopy. This includes colon and rectal diseases.

The typical or traditional colon and rectal surgery requires abdominal incisions that can be 4 to 8 inches long. This traditional or “open” surgery can require a long recovery time partially due to long incisions and pain from the incision.

Laparoscopic colon resection or removal is a technique that has been introduced in the past 10 years. It has only become popular in the last 5 years. It has allowed new techniques to be used, which require smaller incisions to perform some of the same operations that are performed with open techniques. Studies have shown it to be safe.

Examples of diseases that can be treated laparoscopically include:

1. Diverticulitis or diverticular disease
2. Acute Appendicitis
3. Large bowel or colon cancer or polyps
4. Severe constipation which doesn't respond to medicine
5. Rectal prolapse
6. Inflammatory bowel disease (Crohn's or ulcerative colitis)

### DESCRIPTION

Laparoscopic colectomies involve using multiple ports or thin plastic tubes placed through small abdominal incisions usually less than 1cm long (less than ½ inch.) Carbon dioxide gas is then used to inflate the abdomen like a balloon to allow manipulation of the bowel & inspection of the organs. A thin laparoscope is placed through a port. This is a long, metal rod with a lens & light on one end. This end is inserted through one of the ports to see inside the abdomen. It is hooked-up by a wire to a specialized camera & television screen and lets the surgical team see inside the abdomen. Long instruments less than ¼ inch in diameter are placed through the other ports. These instruments have tips that resemble traditional instruments and handles like scissors. The operation is performed under direct camera visualization with these instruments.

Traditional surgery is performed using the surgeon's hands as an important “instrument”. One of the shortcomings of laparoscopic surgery is that surgeon can not feel the organs. Occasionally one of the

incisions is made longer (6 cm or about 4 inches) to remove the colon or other tissues. A hand can be placed through this incision to help with the surgery.

The procedure is performed under general anesthesia. An endotracheal tube (breathing tube) is used to deliver the anesthetic gases to keep patients asleep, pain-free, and comfortable.

## **ADVANTAGES OF LAPAROSCOPIC COLECTOMY SURGERY**

Results are different for each procedure and each patient. Some common advantages may include:

1. Shorter hospital stay & recovery time at home
2. Less pain from the incisions or need for pain medications
3. Faster return to normal bowel function or normal diet
4. Quicker return to work or normal activities
5. Better cosmetic healing & less scar tissue internally
6. Return to normal activities in elderly patients

## **COMPLICATIONS**

As with any surgery complications can occur. Your surgical team works to prevent these and if necessary treats them. Some common complications include but are not limited to the following:

1. Adverse reactions to anesthesia
2. Bleeding in the abdomen
3. Infection in the abdomen or wounds
4. Intestinal obstruction due to scar tissue
5. A leak if the bowel was resected or sewn back together
6. Heart attacks or pneumonia
7. Blood clots in the legs or lungs
8. Missed diseases
9. Injury to other organs

Sometimes the operation can not be completed laparoscopically. The surgeon then makes a traditional incision and completes the operation "open." Examples which would make the surgeon open the abdomen include scar tissue from previous surgery, bleeding or the inability to see well or identify the disease. This should not be considered a failure of the technique but a wise decision by the surgical team to safely complete the operation and treat the patient properly.

## **BEFORE SURGERY**

Before you go to surgery, your primary doctor and surgeon may evaluate you & order tests. You may need further tests such as a colonoscopy, barium enema, EKG (or heart tracing), chest X-ray, CT scan of the abdomen and blood work. Even though there are many advantages to laparoscopic surgery, some patients are not candidates. Conditions that may eliminate a patient as a candidate for laparoscopic colon or rectal surgery include previous operations, obesity, variations in anatomy or advanced vital organ diseases.

The day before surgery you may be directed to cleanse your colon by drinking a laxative. Only liquids will be allowed that day. Nothing should be taken by mouth eight hours before surgery.

You may be instructed to stop taking certain home medications. This may include blood thinners, warfarin, aspirin, ibuprofen or drugs that could lead to bleeding. **Patients should notify their surgeon of ALL their medications during their evaluation before surgery.**

Patients are usually admitted to the hospital the day of surgery. They meet with the anesthesia team and are checked over. At that time, the anesthesia team discusses pain management.

## **DURING SURGERY**

An intravenous catheter is typically placed in the arm to give fluids and medications. The patient is then given general anesthesia which means he or she is completely asleep. Other catheters may be placed near the neck. Monitors are used to check the patient during the surgery. While the patient is asleep, catheters are placed through the nose into the stomach and one through the urethra into the bladder. This decompresses those organs. The breathing tube is usually removed at the end of the operation and the patient taken to the recovery room. There will be nurses and assistants on the surgical team. The surgery can take around 2 – 3 hours.

## **AFTER SURGERY**

The patient is assisted out of bed to a chair the evening of surgery. Activity will be gradually increased each day. This helps decrease the length of time the patient experiences soreness, helps prevent pneumonia and prevents blood clots from forming in the legs which can be fatal.

The first day after surgery patients may feel sleepy & nauseated. Medications are given to control this. About a day after the gastric tube is removed if one was left in place, the patient may be offered liquids. The catheter in the bladder is removed when light activity can be tolerated. Pain medications are weaned as soon as possible. More liquids and next food are allowed as the patient is able to tolerate eating and drinking. The patient is urged to walk five times per day to decrease the recovery time. Walking frequently is the most important aspect of recovery after laparoscopic surgery.

This information **does not** replace a discussion with your physician or nurse. They may give you other information or instructions. Feel free to ask questions, come back for a visit or call if you are unclear about your diagnosis or treatment plan.