



## *X-Plain* *Colon Cancer Surgery* **Reference Summary**

### **Introduction**

Colon cancer is a life-threatening condition that affects thousands of people. Doctors usually recommend surgery for the removal of colon cancer.

If your doctor recommends surgery, the decision whether or not to have this surgery is also yours.

This patient education reference summary will help you better understand the benefits and risks of the different colon operations.

### **Anatomy**

The colon is the last part of the intestines and is known as the large intestines.

Swallowed food goes through the 'esophagus', the feeding tube. It then passes through the stomach where it is digested.

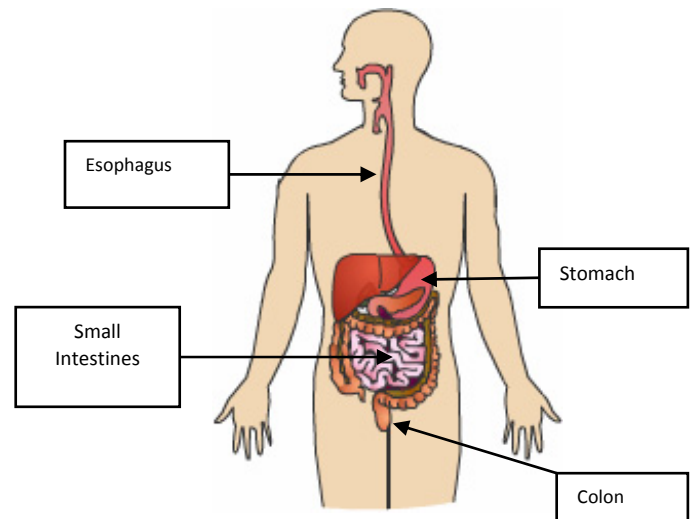
Digested food goes from the stomach to the small intestines where nutrients are digested and partially absorbed.

Fibers and digested food finally reach the colon. In the colon, the rest of the nutrients get absorbed and stools are formed. Stools are then stored in the last part of the colon, the 'sigmoid' and 'rectum', before being excreted.

Arteries provide blood to the colon, and veins take the blood back toward the heart.

Lymphatic tissue and lymph nodes drain the excess fluid to the blood stream.

Lymph nodes help fight infections. However, cancer may spread to the rest of the body through the lymph nodes.



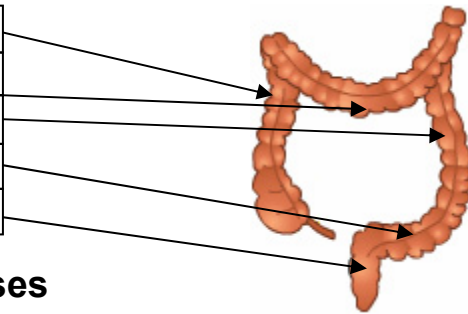
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The liver, small intestines, and other organs could get involved with cancer in this way.

The colon has multiple components:

- Ascending colon,
- Transverse colon,
- Descending colon,
- Sigmoid colon,
- Rectum and the anus.



## Symptoms and Their Causes

Colon cancer is fairly common. It occurs in approximately one in every 14 to 15 people.

There are several ways colon cancer is found:

- It can be discovered in a routine medical exam, including rectal exam and scope exam through the rectum.
- Blood in the stools can be an indication of colon cancer.
- Abdominal pain, weight loss, general discomfort and fatigue are also some of the symptoms of colon cancer.

When colon cancer is found, surgery is usually necessary to remove the cancer and check the lymph nodes of the abdomen for evidence of cancer spread.

## Other Treatments

Once colon cancer is diagnosed, the best chance of a cure is through surgery.

Radiation therapy and chemotherapy may be needed afterwards to help prevent the cancer from spreading or coming back.

## Surgical Treatment

Prior to the surgery, the colon is cleaned thoroughly to decrease the chances of infection. This is done using strong laxatives and enemas, or by the patient drinking a gallon of a special cleansing solution on the night before the surgery to “flush out” the colon.

This surgery is done under general anesthesia with the patient asleep. An incision is made in the abdomen. The abdomen is then entered.

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The part of the colon that is involved with cancer is taken out surgically and the remaining colon is connected, or *anastomosed*.

When the cancer involves the lower rectum or anus, another incision may be done near the rectum. There may be no colon left to attach the remaining colon to, after taking out the cancer. At that point, the colon is rerouted to the outside of the abdomen through another incision. This surgery is called *colostomy*.

Sometimes a colostomy is necessary if the surgeon thinks that an anastomosis reconnecting the colon will not be successful. This may be the case if the colon is not clean enough at the time of surgery.

If you have a colostomy, a bag is then placed over the opening of the colon to the outside to collect the stools. Bowel control is lost. If it is feasible, the colon could be put back together at a later date (usually 3-6 months later). Your surgeon will let you know if this is a possibility.

The lymph nodes are then dissected to determine whether or not the cancer has spread beyond the colon.

The rest of the organs in the abdomen are very carefully examined.

If suspicious lumps are found, they could also be taken out from surrounding structures such as the liver, small intestines, kidneys, or uterus to determine if they are cancerous.



## **Risks and Complications**

This surgery is very safe. There are, however, several possible risks and complications. These are unlikely but possible. You need to know about them just in case they happen. By being informed, you may be able to help your doctor detect complications early.

The risks and complications include those related to anesthesia and those related to any type of surgery.

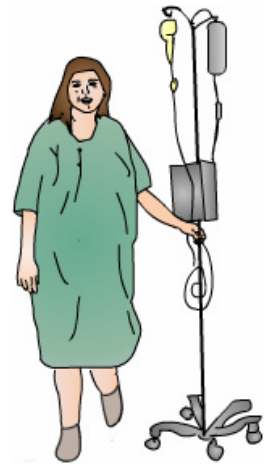
Risks of general anesthesia include nausea, vomiting, urinary retention, cut lips, chipped teeth, sore throat and headache. More serious risks of general anesthesia include heart attacks, strokes and pneumonia. Your anesthesiologist will discuss these risks with you and ask you if you are allergic to certain medications.

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Blood clots in the legs can occur due to inactivity during and after the surgery. These usually show up a few days after surgery. They cause the leg to swell and hurt. Blood clots can become dislodged from the leg and go to the lungs where they will cause shortness of breath, chest pain and possibly death.

It is extremely important to let your doctors know if any of these symptoms occur. Sometimes the shortness of breath can happen without warning. Getting out of bed shortly after surgery may help decrease the risks of this complication.



Some of the risks are seen in any type of surgery. These include:

- Infection, deep or at the skin level. Infections can involve the abdomen incision. Deep infections may involve the abdominal cavity itself. This is known as 'peritonitis'. Treating deep infections may require long-term antibiotics and possibly surgery.
- Bleeding, either during or after the operation. This may necessitate a blood transfusion or another operation.
- Skin scars that may be painful or ugly.

Other risks and complications are related specifically to this surgery. Again, these are very rare. However, it is important to know about them. Structures in the abdomen could be damaged, especially if involved with cancer.

Such problems can include the following:

- Spleen,
- Stomach and intestines could be perforated,
- Urinary bladder and the connecting tubes could be injured,
- Internal female organs, such as the uterus and ovaries, could be injured.
- Unexpected difficulties may require an unplanned temporary or permanent colostomy,
- Abdominal wall disruption or breakdown that would require another operation.

Damage to these structures could lead to permanent damage and the necessity to proceed with other operations. Again, these are very rare.

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Hernias through the incision or incisions are possible. This happens when the internal wall of the abdomen is weak and intestines push under the skin. This may need another operation.

Another possible complication is the breakdown of the anastomosis, or the area where the two ends of the colon are attached. This usually leads to an infection inside the abdomen requiring another operation and a colostomy to reroute the colon.

## **After The Surgery**

After the operation is done, the patient is transferred to the recovery room and then to a regular room.

You will not be allowed to eat or drink for a few days to allow the anastomosis to heal. A tube going to the stomach through the nose may be placed for a few days. It sucks out the air and the juices of the stomach. This is to prevent you from getting bloated and nauseated while the anastomosis heals. You will gradually be allowed to eat food. You will go home in a few days, depending on how you are doing.

Depending on the pathology reports from the surgery as well as other tests, further treatment may be needed. This could include radiation therapy. It could also include chemotherapy.

Make sure to contact your doctor in case of any new symptoms, such as fever, wound drainage, severe pain, weakness, swelling, or infection.

## **Summary**

Colon cancer is a common condition that affects about seven percent of people.

Surgery to remove colon cancer is usually recommended and usually successful in removing the cancer.

Colon surgery is very safe. Risks and complications are very rare. Knowing about them will help you detect and treat them early if they happen.



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