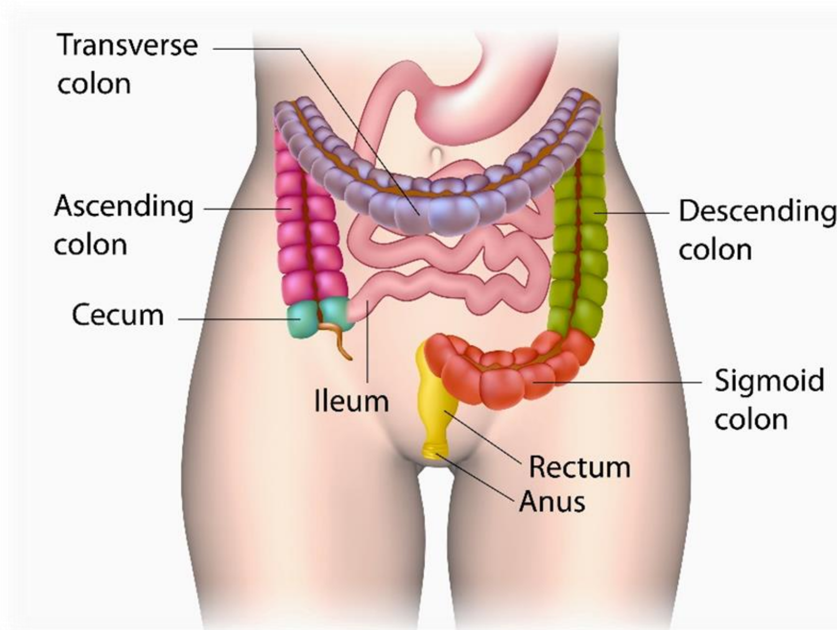
Low Anterior Resection of the Rectum

Colorectal Unit
Wits Donald Gordon Medical Centre

WHAT DO I NEED TO KNOW ABOUT COLORECTAL CANCER?

The large bowel (large intestine) is made up of the colon and rectum.This part of the digestive tract carries the remains of digested food from the small bowel/intestine and gets rid of it as stool through the opening to the back passage (anus). Cells that line the colon and rectum may begin to grow out of control, forming a tumour (a growth of cancer cells).

Diagram showing the parts of the bowel

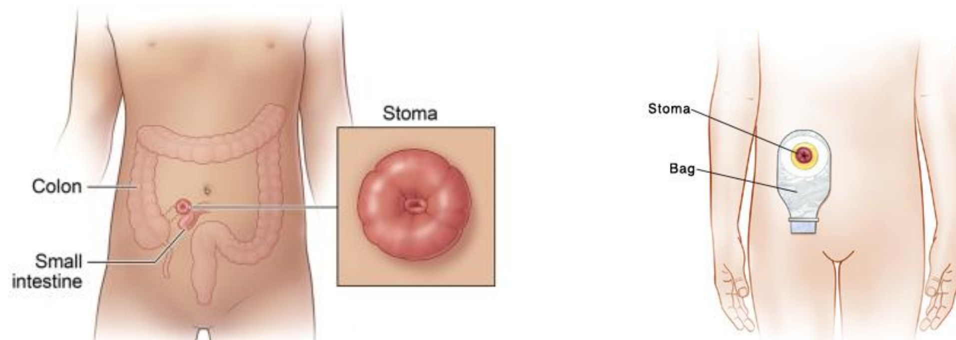


The large bowel has four sections: the ascending colon, the transverse colon, the descending colon and the sigmoid colon. Tumours can start in any of these areas or in the rectum. Tumours start on the innermost layer and can grow through some or all of the layers.
Surgery is the gold standard treatment for tumours of the bowel. Usually, the tumour and a length of normal bowel on either side of the tumour (as well as nearby lymph nodes) are removed. The healthy parts of the bowel are then stitched or stapled together (anastomosis).

WHAT DO I NEED TO KNOW ABOUT THE PROCEDURE?

A Low Anterior Resection (LAR) operation is an operation to remove the rectum unless the tumour is very close to the anal muscles (sphincters). The bowel and the rectum are joined together so that some of the rectum is spared. A temporary small bowel stoma (ileostomy) is usually created during this operation where an opening is made on the outside of the body allowing stool to pass out of the intestine into a bag stuck onto the skin of the abdomen.

This stoma is created because the anastamosis (join) in the rectum is fragile and if bowel content/ stool leaks into the abdomen you will become very sick. The stoma therefore diverts the stool temporarily away from the join allowing it to heal.



Another surgery will be required to close the temporary stoma. This is usually done 6-12 weeks after the initial surgery, but may be done much later.

This procedure can be done in two ways, either open surgery/laparotomy (a large incision down your abdomen) or via keyhole/laparoscopic surgery (multiple small incisions on your abdomen with the use of a laparoscope or camera to guide the surgeon). Your surgeon will discuss with you which option is suitable for you.

WHAT DO I NEED TO DO TO PREPARE FOR THIS PROCEDURE?

Before surgery, the bowel must be prepared to lower the risk of developing an infection post operatively. You will be on a clear fluid diet and given a medicated drink (Moviprep) as well as an antibiotic to help clean and sterilise the large bowel. This will cause diarrhoea and some cramps, and may be taxing on the body. This will all be explained to you and you will be given an instruction sheet explaining what needs to be taken and when.

The medicated drink will completely empty your bowel of stool. You need to stop clear fluids 2-4 hours before your surgery. If you are having a stoma, the surgeon or a stoma nurse will discuss with you the best site for your stoma and will mark the area on your abdomen with a marker pen before your surgery. It is usually placed below your belt line, away from any other scars you may have and at least 8 - 10 cm away from your wound, depending on your size and shape of your abdomen.

MY ANAESTHETIC

This procedure will require a general anaesthetic. You will be seen by the anaethetist in the ward prior to your operation. They will discuss all risks and complications regarding the anaesthetic with you. They will also discuss which drips will be placed while you are sleeping and what forms of pain control they will administer before and during the anaesthetic. If you have had any issues with previous anesthetics please let them know.

WHAT ARE THE BENEFITS OF HAVING THE PROCEDURE?

Surgical removal of the diseased bowel is the gold standard of treatment for a tumour of the bowel or rectum. The goal of the surgery is to give you the best chance of cure by removing the entire tumour.

Surgery can also be used as a method to ease symptoms such as pain, bleeding and obstruction/blockage.

WHAT ARE THE RISKS OF NOT HAVING THE PROCEDURE?

Symptoms including pain and bleeding may become worse and your bowel may completely block or burst. Without surgery, the disease may spread to other areas of your body.

WHAT ARE THE ALTERNATIVE TREATMENTS?

Radiation therapy or chemotherapy will be used for some people as the first line of treatment for rectal tumours. Radiation therapy/chemotherapy is not as effective as surgery and is often used in conjunction with surgery to try and shrink the tumour beforehand. However, there are many new trials exploring treating the tumour entirely with chemotherapy and radiation. This is not the current standard of care, and we do not have long term results from this kind of treatment. Your surgeon will discuss this further with you if you are a candidate.

Chemotherapy (use of drugs to treat tumour) is usually used together with radiation or after surgical removal of the tumour and may be offered as the only treatment if the tumour has spread to other organs such as the liver or the lungs.

WHAT ARE THE GENERAL AND SPECIFIC RISKS OF HAVING A PROCEDURE?

There are risks and complications with this procedure. They include but are not limited to the following.

General risks:

- Infection can occur, which would require antibiotics and further treatment such as drains. These drains are usually placed under image guided ultrasound in the radiology department.
- Bleeding may occur and may require a return to the operating room. Bleeding is more common if you have been taking blood thinning drugs such as Warfarin, Asprin, Clopidogrel (Plavix or Clopiwin) or St Johns Wort.
- Small areas of the lung can collapse, increasing the risk of chest infection (pneumonia). This may need antibiotics and physiotherapy.
- There is an increased risk in obese people to develop wound infection, chest infection (pneumonia), heart and lung complications and thrombosis.
- A heart attack or a stroke could occur due to the strain on the heart.
- A blood clot may form in the leg (DVT) causing pain and swelling. In rare cases part of the clot may break off and go to the lungs (pulmonary embolus or PE).
- Death as a result of this procedure is possible, however very uncommon.

For specific risks of this procedure please refer to the tables in this information sheet.

The Risk	What Happens	What can be done about it
Leakage of bowel content into the abdomen	Leakage of bowel content at the site where the bowel was stitched or stapled back together. The risk is about 5-10%	Further surgery may be required.
Ileus	The bowel is paralysed leading to abdominal bloating and vomiting. The risk is about 15%	Treatment is to deflate the bowel with suction, using a tube, (naso-gastric tube or NGT) inserted through the nose, along the back of the throat and into the stomach. You will be fed via your drip during this time.
Wound Infection	The wound may become infected. The risk is about 10%	This may be treated with antibiotics. These may be given by a drip into a vein or by mouth. The wound may need to be opened to drain.
Urinary Tract Infection	Germs enter the tube leading to the bladder and cause inflammation and infection. The risk is about 10%.	Mild cases may clear up without treatment. Usually antibiotics are used to treat the infection. The urinary catheter will be removed if it is still in.
Post-operative bleeding	Bleeding inside the abdomen. The wound drain may measure this. The risk is about 5%	A blood transfusion may be needed to replace lost blood. Sometimes more surgery is needed to stop the bleeding.
Damage to the ureter (tube from kidney to bladder)	Rarely, during surgery, the ureter, which brings urine from the kidney to the bladder, may be damaged.	This may need more surgery, and a urologist may be asked to assist
Bladder may not empty properly or may empty without warning	A urinary bladder problem where there is abnormal emptying of the bladder. It may empty without warning or may not empty at all.	A tube (catheter) inserted into the bladder may be used to drain the urine away.

Possible stoma problems: • Loss of blood supply • Stoma Prolapse • Parastomal Hernia & Local Skin Irritation	• The blood supply to the stoma may fail and cause damage to the bowel. • Stomal prolapse when some of the bowel sticks out too far past the skin. • Parastomal hernia when the bowel pushes through a weak point in the muscle wall and causes pain and bulging of the skin near the stoma. • Local skin irritation including reddening of the skin and a rash in reaction to the glue used to stick the stoma bag.	• This may need further surgery. • For minor prolapses, no treatment is needed. For more serious cases, more surgery may be required. • Minor hernias may need no treatment. Larger hernias may need more surgery. • Changing the type of stoma bag usually treats this.
Sexual problems	Men may be unable to get an erection or keep an erection. It may also mean that they cannot ejaculate. In women it may cause pain during or after intercourse.	For both men and women, time may improve the condition. Treatment for men may include counselling and medication. For women, counselling and use of water-soluble lubricants during intercourse may help.
Bowel blockage	Adhesions (bands of scar tissue) may develop inside the abdomen and the bowel may develop a blockage. This is a short and a long-term complication.	This may need more surgery.
Change in bowel habits	Bowel habits will change. Stools may be looser, smaller and more frequent. There may be some leakage of stools particularly at night depending on the type of surgery.	In most people, this improves with time, without further treatment.
Increased risk in smokers	An increased risk of wound infection, chest infection, heart and lung complications and thrombosis.	Giving up smoking before the operation will help reduce the risk.

WHAT HAPPENS AFTER THE PROCEDURE?

After the operation the nursing staff will closely monitor you until you have recovered from the anaesthetic in the theatre recovery room. You will be cared for in the surgical intensive care unit (SICU) immediately following your surgery.

The recovery period after colon and rectum surgery varies. It usually involves a stay in the hospital from 5-10 days in uncomplicated cases.

During your surgery you will have a catheter (plastic tube) placed into the bladder or inserted into your lower abdomen to measure and drain your urine. This will be removed in 1-3 days after the surgery.

After surgery you will be given intravenous fluids via a drip in your neck, antibiotics may also be given via this drip. The drip will remain in place until you are able to drink enough fluids.

DIET

You will begin to take liquids by mouth immediately after surgery and then will slowly be introduced onto more solid food when your bowel begins to work. You will know the bowels are starting to work again when you pass wind and or stool into the bag.

If you have a temporary ileostomy (which most patients will have) the ileostomy will drain the stool from the small bowel into the stoma bag. Most ileostomy stool is more liquid than normal stool; and as such you may require medication to thicken the stool and prevent dehydration. You will be councelled extensively by one of dieticians and advised on how to eat and drink to ensure your ilesotomy output is not too high.

You will be taught how to clean around the stoma and change the stoma bag by the nursing staff and the stoma nurse. The stoma bag sticks to the skin around the stoma with special glue, and can be thrown away when dirty. This bag does not show under clothing, and most people learn to take care of these bags themselves.

If there is a complication after the surgery you may not be able to eat for a while, should this happen you will receive TPN (total parentral nutrition) or special intravenous food via the drip in your arm or neck to keep you nourished.

WOUND

Your wound will have stitches and/ or staples and is usually covered with a dressing, which may be adhesive plaster or a spray-on plastic covering.

DRAIN

You may also have a small tube that drains into a bag or a bottle from near your wound or through your anus. The wound drain removes fluid from your wound and helps in the healing process. It is taken out when the drainage has dried up.
You may have 2 small drains on either side of you wound, these are called rectus sheath catherters and allow the nursing staff to inject local anaesthetic into your wounds to help with pain control.

YOUR LUNGS AND BLOOD SUPPLY

It is likely that on your return from surgery you will be wearing pumps on your legs, these inflate and deflate intermittently, and are used to reduce the risk of blood clots forming in your legs (DVT).
It is very important after surgery that you start moving as soon as possible. This helps to prevent blood clots forming in your legs and possibly going to your lungs which can be fatal.
Also, you need to do your deep breathing exercises. Take ten deep breaths every hour to prevent secretions in the lungs from collecting. If this happens, you may develop a chest infection or pneumonia. You will be given an incentive spirometer (a small device with balls) that you need to suck and blow on to exercise the lungs.

At all costs, avoid smoking after surgery as this increases your risk of chest infection. Coughing can be very painful after abdominal surgery. You will be shown how to hold a pillow over your abdomen to help manage the pain, it is important that you do cough to clear the secretions from your chest.

EXERCISE

Expect to feel tired for some time after surgery. You need to take things easy and gradually return to normal duties, as you feel able to. It usually takes at least 6 months to get over the operation. You should not drive during the first 2-3 weeks.

Do not lift heavy weights for at least six weeks after surgery. This is to prevent a rupture where the cuts were made and allow healing to take place inside.

TELL YOUR DOCTOR IF YOU HAVE:

- Large amounts of bloody leakage from the wound.
- Blood in the stool.
- Fever and chills.
- Pain that is not relieved by prescribed pain killers.
- Swollen abdomen.
- Swelling, tenderness, redness at or around the cut.

WHAT SHOULD YOU DO IF A PROBLEM DEVELOPS?

If you develop these problems post operatively please contact your surgeon's rooms to make an appointment for review. If it is out of hours then go to your local casualty. Please do not come to the Wits Donald Gordon Medical Centre out of hours as there is no casualty at this hospital and there will be no doctors on site to attend to you. Alternatively you can call the Wits Donald Gordon Medical Centre on (011) 356 6000 and ask to speak to the colorectal surgeon on call. The on call colorectal surgeon, even if this is not your doctor, will be able to readmit you if necessary.

© CRU 2021