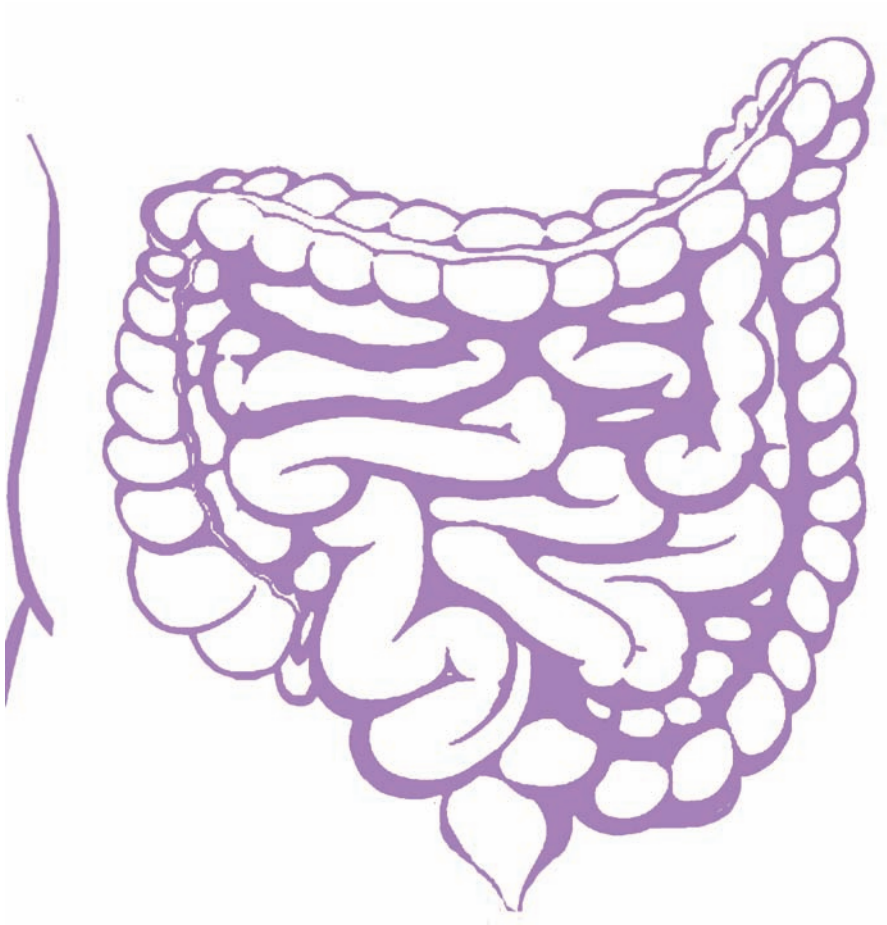


About Stoma Reversal



Freephone helpline:
0800 328 4257

About Stoma Reversal



Perhaps you are trying to decide whether to have a reversal...

Stomas are formed for a variety of medical reasons. Different people will have had different types of operations – how much and which part of the bowel has been removed will vary, some people have a loop stoma, others an end stoma.

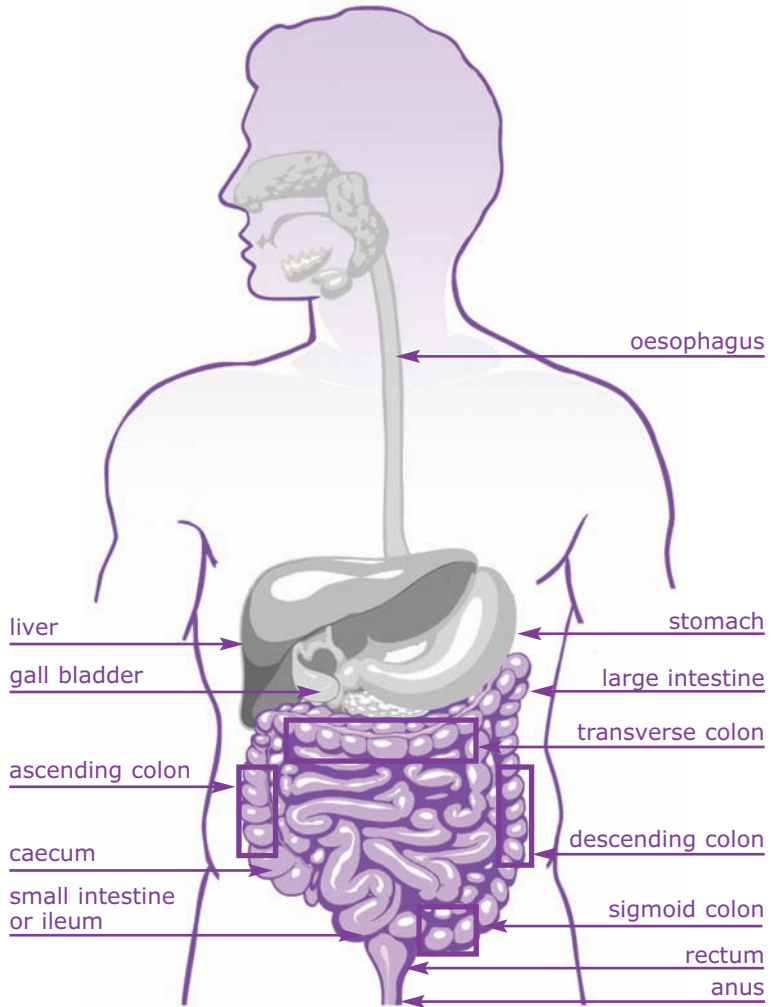
Although we can't provide the answer for individual cases...

We can give you information...

Oliver Shihab, Research Fellow at the **Pelican Cancer Foundation**, describes the different types of stoma and the surgical techniques involved in their reversal from a surgeon's point of view.

Shelley Biddles and **Diana Wilson**, who have many years experience as colorectal and stoma care nurses, consider the advantages and possible problems associated with a reversal and suggest a simple checklist to ensure you make the decision which is appropriate for you.

The Digestion System



About Stoma Reversal



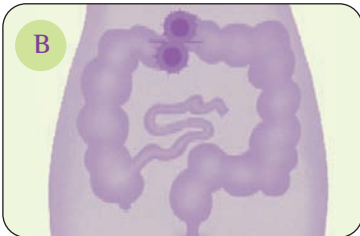
What you need to know about Stoma Reversal...

The main reasons that temporary stomas are formed are for cancer of the bowel, inflammatory bowel disease, diverticulitis (a condition where pockets in the bowel wall become inflamed and infected) and injuries to the bowel that mean it has to be rested, so that it may heal.

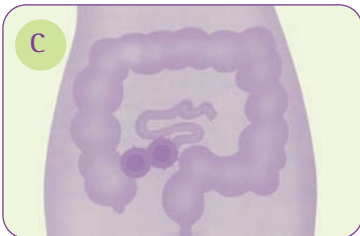
Stomas formed from the colon (large bowel) are called colostomies. Those formed from the ileum (small bowel) are called ileostomies. In each case they can be either a loop or an end stoma. Please see diagrams opposite.



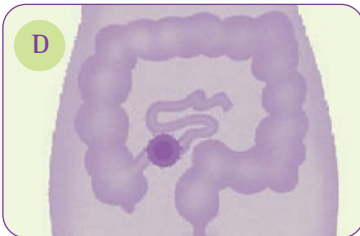
A End Colostomy This is usually sited in the left side of the abdomen. With this type of colostomy the colon (large bowel) is severed and the functioning end is brought to the skin. The distal end, which leads to the anus, is sealed and left inside the abdomen.



B Loop Colostomy To form a loop colostomy a loop of large bowel is brought out usually in the upper abdomen, and then opened and stitched to the skin. This gives two openings. The upper, or proximal, limb links up with the stomach and intestines higher up and produces stool, the other, distal, limb leads to the anus and only produces small amounts of mucus.



C Loop Ileostomy A loop ileostomy is formed from a loop of ileum (small bowel). Today they are more commonly used than the loop colostomy, if a temporary diversion of bowel contents is required, when a join in the bowel (e.g. after cancer surgery for the large bowel) needs to be rested and given time to heal.



D End Ileostomy The end ileostomy is usually sited on the right side of the abdomen. It is more commonly reserved for those who have had all or most of their colon removed, usually due to inflammatory bowel disease or multiple polyps of the large bowel.

About Stoma Reversal



Loop or end stoma?

Usually the temporary form of stoma is the loop ileostomy (or less frequently the transverse loop colostomy). This is created when the bowel is obstructed, and needs to be relieved in an emergency or where another section further down the bowel has had to be removed.

Occasionally, however, there are situations in which an end colostomy will be created on a temporary basis, usually done as part of what is known as “Hartmann’s procedure”. In this operation an end colostomy is formed, and the remaining part of the bowel below this securely sealed and left in the abdomen. This is usually carried out for emergencies, such as a blocked bowel where there may have been perforation of the bowel or for complications of diverticular disease, where there has been infection in the abdomen and it is not safe to join the bowel up immediately.

Can it be joined up?

Ideally as many people as possible will be joined up, but there may be several reasons why the surgeon looking after you is reluctant to do so.

Firstly, to be operated on, no matter how minor the procedure, is never without risk so the doctors must be happy that you are fit enough for another operation.

Secondly, the bowel and the anal sphincters that control the flow from the bowels need to be working, so that incontinence will not develop as a result. To help in this assessment the surgeon is likely to perform a rectal examination, and possibly arrange some further tests of anal tone if there is any doubt.

Overall around 8% of those who have had a planned temporary stoma for cancer of the rectum end up keeping it as a permanent stoma.

How soon can it be joined up?

It is understandable that people want their normal bowel function restored as quickly as possible, and there have been several studies that have looked at the best time to do so. After any operation on the abdomen, there is an inflammatory response to this insult, which results in the formation of adhesions. These adhesions are band-like structures, which are essentially scar tissue. If they are very dense they can cause considerable problems for the surgeon, as they can make some parts of the bowel very hard to get to and operate on safely. These will be at their worst for the surgeon in the weeks following an operation, so it is advised that surgery be postponed until at least nine weeks after the previous operation. This time allows the adhesions to settle, the patient to recover from the previous operation and any swelling within the abdomen or stoma site to fully resolve.

Joining it all up

Closure of a loop colostomy or ileostomy is a relatively simple procedure, and in over 95% of cases does not require any further incisions to be made in the abdomen. A small rim of skin is cut around the stoma (about 2mm), and the incision is deepened until the abdominal cavity is reached. Once this has happened the bowel and abdominal cavity are checked, to ensure there is nothing still attached to the bowel, and the bowel is then closed - either stitched by hand or stapled together.

Reversal of an end colostomy or ileostomy is more difficult, however, as one end of the bowel that is to be rejoined is within the abdomen. This usually means that the surgeon will have to open the abdomen via the old scar to be able to safely access the bowel. As a result of the increased surgery, compared to the closure of a loop stoma, there will be a longer stay in hospital and a greater recovery time before normal activities can be resumed.

There will be some centres that will offer to attempt to reverse an end colostomy laparoscopically (by keyhole surgery), but this is dependent on the training of the surgeon. Even if this is attempted it may be necessary to convert to the open operation, as the aforementioned adhesions can cause severe problems laparoscopically. That said, if this type of surgery is carried out then it is likely there will be less post-operative pain and a shorter stay in hospital.

How long in hospital?

This will depend on the type of operation: for the closure of a loop colostomy it will be around three to five days and five to ten days for closure of an end colostomy. The surgeons looking after you will want to be sure that you can cope with your bowel movements once again, as it is fairly common to pass looser and more frequent stools than you may have been used to previously. They will also want to ensure that the area where the anastomosis (join) was formed has not narrowed (strictured) as a result of scarring, as this can lead to partial or full blockage of the bowel. If this is the case then it may be necessary to have the area stretched, which is normally carried out using a colonoscope.

What about afterwards?

When you get home, your return to normal activities will be determined by your physical condition before the operation and, again, on the type of operation that you have had. It could be at least ten weeks before you are able to lift heavy weights or fully use your abdominal muscles. Driving will be allowed only when you can perform an emergency stop without any pain, or fear of pain.

Your diet may well require readjustment initially, as the time after the reversal can be similar to the time the stoma was originally formed, with loose bowels and sudden urges to go. It is also possible that some people will have developed inflammation of the lower part of colon, which can occur if it is not used for some time. This can lead to loose stools, with some bleeding and mucus, but this usually settles down without need for treatment.



What can go wrong?

In any surgery there are risks, but fortunately life-threatening complications are rare. As with any surgery there will be those general complications that can result from undergoing any surgical procedure, which your surgeon will discuss with you before your operation.

There are also those that are specific to the reversal of the stoma:

- **Ileus** - temporary paralysis of the bowel: Sometimes the bowel is slow to start working after surgery, particularly if it has been handled by the surgeon. Disturbances in the salt balance in your body and some pain medications can also increase the risk of this occurring. If this happens the bowel will need to be rested, which involves stopping food, and taking minimal water. Fluid given via a vein (a drip) is used to replace fluids, and you may need a tube down your nose to your stomach (nasogastric tube) which decompresses the bowel, and helps it to start up again.
- **Bowel obstruction**: If there is a physical blockage or problems with adhesions causing a blockage another operation may be required. Fortunately this type of physical blockage is rare immediately after an operation.
- **Anastomotic leak** - breakdown of the join in your bowel: If this is suspected you will be started on antibiotics, and it is likely that another operation will be required. However, this can take a controlled form, whereby an abscess forms. If this is the case there may not be the need for an operation, as it may be possible to control it with antibiotics and drainage under X-ray guidance.
- **Urinary and sexual function** may be affected temporarily but the risk of this being permanent is higher in surgery to reconnect an end colostomy, as the nerves controlling these functions lie in this region.

Hopefully this has given a clearer picture of the types of temporary stoma used, and the processes involved in their closure. Before the operation the surgeon looking after you has a duty to inform you about the potential risks involved. This is not designed to create doubt and fear, but rather to allow you to make a fully informed decision about your treatment. However, it should not be forgotten that over 6,000 stoma reversals are carried out in England every year, and that the vast majority are successful.

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Research Registrar
The Pelican Cancer Foundation

Readers' Writes on Stoma Reversal...

Here are some extracts from letters published in the original article on Stoma Reversal, first featured in Issue 7 of Tidings Magazine 2007 (for more information about Tidings Magazine and the Colostomy Association please visit our website: www.colostomyassociation.org.uk).

Some letters mention the possible problems which our colorectal surgeon and specialist nurses refer to in their articles. However, more than half told of successful reversals. We would like to thank everyone who wrote to tell us of their experience of stoma reversal.



I am happy to be able to tell you that my husband, Antonio, recently had a completely successful reversal operation. Also we are hoping to move over to Spain within the next six to eight weeks so we will not require any further mailings of Tidings.

Antonio was given a stoma in September 2005. He went into hospital for repair of an anal fissure and a colonoscopy. A fairly large polyp was found on the bowel and removed. Unfortunately two days later Antonio was re-admitted to hospital suffering from peritonitis as his bowel had been perforated when the polyp was removed.

He was promised a reversal but because of his heart attack in 1990 the surgeon was quite wary of performing such a big operation. However, after many

visits to the cardiologist and anaesthetist and various tests, it was decided he was fit enough for the operation and this went ahead at the end of November 2006. It took six and a half hours as there were many adhesions in the abdomen and the surgeon decided to give Antonio a loop ileostomy to allow the colon to heal properly.

He recovered very well from this operation and the ileostomy was closed on 16th May, Antonio's sixty-fifth birthday!

Apart from suffering from diarrhoea for a couple of days after the loop stoma was closed, everything rapidly settled down and he has not had to take any medication. He is absolutely delighted with the quality of his life.

B.R.S. (Mrs)



I would personally advise against a reversal operation.

I was diagnosed with bowel cancer in October 1996. I then had radiotherapy from 5th to 9th December 1996. On the 18th December, I had my bowel operation and my colostomy was formed. I was coping really well and feeling fine. Then on 15th May 1997, I had a reversal.


That was when the trouble started: my bottom was raw and bleeding, I had diarrhoea, then constipation and problems with sitting and walking. No one seemed to understand. Then finally I went back into hospital to have my colostomy reformed on the 15th May 1999. I was told afterwards it was the radiotherapy that had damaged my insides.

About Stoma Reversal



Since then, with help from my local stoma care nurses, I have never looked back.

Jenny


 I was rushed into hospital in severe pain on New Year's Eve 2002. They weren't sure what was causing the pain, and operated on New Year's Day. Imagine my utter shock when four days later coming out of intensive care I was told I had a colostomy. I found it very hard to live with and was overjoyed when the surgeon said I could consider a reversal in six months time.

I was very afraid, as I had been so ill with the first operation, but the thought of continuing as I was made me determined to go ahead. When I saw the surgeon regarding the operation he explained the failures that can occur and I was worried. My family didn't want me to have the operation but I was determined to go through with it whatever the cost. The operation was not easy, but very successful and worth everything I went through.

It is now five years since my two operations and I feel wonderful. I'm seventy-two but feel more like thirty-two. You need to think carefully before you decide, but if you really want a reversal my

advice is go ahead with it. It has certainly worked for me and, given the same circumstances, I would do it over again. Believe me, it's worth it.

D.B. (Mrs)


 I had a Hartmann's procedure done in 1997 after peritonitis from a ruptured bowel caused by diverticular disease. When I awoke from anesthesia my first question was: "Have I got a bag?" My world appeared to end and I went back to sleep. However, with the kind and encouraging words from my stoma nurse I realized it wasn't such a bad thing.

In fact I've opted to keep my stoma instead of having it reversed. My quality of life is so much better now than previously when I frequently had an urgent need to find a toilet. I wasn't able to go to functions or travel without planning the toilet stops. In fact now I can visit a toilet in much less time than someone with natural functions, and, barring accidents, do so in MY time, when it suits me.

I developed a large parastomal hernia and in June last year had surgery to repair it with mesh reinforcement. After a long recovery period I am now quite well and looking better than I have for years. So,

anyone having a colostomy, if I can overcome the "horror" so can you. It really isn't so bad after all.

Fiona

 My husband's problems started when he was sixty-seven with a little bleeding from his back passage. A small polyp was found in the wall of the bowel and it was decided to operate before it grew any bigger. He had an anterior resection and part of the sigmoid colon and rectum was removed and he was given an ileostomy. They found some cancer had spread through the wall to the lymph nodes, Duke Stage 'C', so he had a course of chemotherapy. A CT scan in October 2005 showed that everything was OK. We had ups and downs with the ileostomy but on the whole began to manage quite well. My husband could still enjoy his hobby of walking.

We tried to find out about reversals and went to the library, even looked on the internet - but nothing. In March 2006 he had a sigmoidoscopy and everything was clear. So a date in June was arranged for the reversal - twenty-one months after the ileostomy was formed. After the reversal, my husband suffered from diarrhoea. Then in September he needed an

emergency operation because of a blockage and a “transverse colostomy” was formed. This temporary loop colostomy has been hard to deal with, because it is retracted and we have to use paste to prevent leakage.

The consultant does not know why the reversal failed. I wondered if it was the length of time before reversal but he said ‘no’. He offered to do another reversal but my husband doesn’t want to risk the same thing happening again. He could have a permanent end colostomy lower down but this is another major op. The third option, which we have decided to go ahead with, is to refashion the transverse colostomy.

It has been a traumatic three years. We wish he had his ileostomy back but you can’t go back in time. He wanted the reversal to be back to normal.

R S. (Mrs)



In November 2005, without any symptoms or warning, I became very seriously ill. Seven days after the initial pain, a CT scan showed that a diverticular abscess had burst and perforated my bowel. I then had emergency life-saving surgery which resulted in about a foot of bowel being

removed and a Hartmann’s procedure to form an end colostomy. I remember saying: ‘but I’m a swimmer!’ I was assured that I would still be able to go swimming with a colostomy.

I was in hospital for nearly a month, but I gradually made a full recovery and, yes, I did get back to swimming, also cycling and walking. My consultant mentioned reversal when I saw her two months after my surgery, but told me to think about it and we would talk about it again in six months time. I wrote to the Colostomy Association for information and also read a lot of negative things about it and heard stories from people who regretted having the reversal. Someone did write a very positive article about his reversal in “Tidings”, so that helped. I did feel reluctant about going ahead with the operation as I felt so well and was coping very well with my stoma.

When I saw my consultant six months later she spent a long time talking it through with me and said that she felt sure all the negative things and problems that were written about would not apply in my case. However, she did stress that it was a major operation and told me all the things that could go wrong! Anyway, I decided to go on the waiting

list which turned out to be seven months.

I had my operation in February this year. I am sixty-three years old and, as the consultant said, I was fit and well going into this operation, so my recovery would be much quicker than my previous emergency surgery. The operation was very successful and I said ‘Goodbye’ to my stoma after having it for fifteen months. I was in hospital for eleven days. There were some days after the operation when I didn’t feel well and I felt a bit low, but only a few.

I am really glad that I had the reversal operation and have made a really good recovery. Everything is functioning normally again. And, yes, I am back to swimming, cycling and walking!

J.W. (Mrs)



People with stomas can lead full and active lives. However, for many, who have been told that their stoma is temporary, a stoma reversal cannot come quickly enough. Stoma closure is a very safe and successful surgical procedure for the majority of ostomates. Following a period of rehabilitation, bowel action returns to normal or at least an acceptable level of function. However, unfortunately, for some the reality of stoma closure may not be as problem-free as they would have hoped.

In this article we intend to discuss the issues which need to be taken into consideration and how they may affect post-operative recovery and bowel function, as well as passing on some hints and tips that may be useful following a reversal. We will focus on the two most common types of stoma reversal procedures i.e. loop stoma closure and reversal of Hartmann's procedure.

Undergoing another operation!

All stoma closure is performed as a planned operation and this does minimise the risk of post-operative complications. The surgical team (including the anaesthetist) will assess all possible risks before the operation and put measures in place to try and prevent any problems occurring.

Sometimes it can be quite nerve racking going for further surgery when the last occasion may have been an emergency or, for whatever reason, it may be an unpleasant memory.

Loop stoma closure

This is considered a relatively straightforward procedure compared to the original stoma operation and therefore there is less likelihood of complications arising, although no surgery is without risks. It involves freeing up the stoma by cutting around where it joins the skin and rejoining the ends of the bowel, thus restoring bowel continuity. As this is performed through the stoma site it does not usually require the abdomen to be re-opened.

Reversal of Hartmann's procedure

This is a major operation as it involves opening up the abdomen to reach the portion of bowel that was left inside. There are several aspects that must be considered:

- The surgeon will open the same abdominal incision as before. The initial operation may have been performed as an emergency and although, generally speaking, recovery from any planned surgery is better nevertheless the consequences of the procedure i.e. hospital stay and recovery will be comparable with that of the previous surgery.
- Undertaking surgery does not guarantee that the stoma will actually be reversed. If the remaining redundant colon/rectum is too short to successfully join the ends of bowel together or if the viability of the redundant section of bowel is suspect i.e. the blood supply is too poor to ensure a healthy join, the attempt to reverse the stoma will be abandoned.
- It is possible that during the reversal operation a further stoma may need to be formed. If the remaining redundant bowel is very short or there are adhesions from previous surgery making the re-joining

procedure difficult, it may be necessary to form another temporary loop stoma to protect the new join. This means another period of time as an ostomate and then yet another operation to complete bowel continuity.

Recovery Time

Inpatient hospital stay is getting shorter and shorter with enhanced recovery programmes in place; stoma reversals are even being performed as day-cases in some centres. However, for most it does mean a further stay in hospital. This can range from one or two days for some procedures to one or two weeks, even when no post-operative complications have occurred.

A period of recovery is also necessary. This may vary from a couple of weeks with a loop stoma or laparoscopic (keyhole) reversal up to a couple of months after reversal where the abdominal muscles have been cut again. Time off work may be a concern for some when contemplating more surgery.

Whilst hospital stay and recovery are imprecise, the most variable aspect of rehabilitation is the attainment of acceptable bowel function. This may make getting back to “normality” unpredictable.

Function following stoma closure

It will take time for bowel function to settle into some sort of pattern. This time period will vary from person to person as will the perception of what is a satisfactory function. During the first few weeks following stoma reversal, bowel function can be erratic.

The following are quite common at first:

- Loose motions (which can swing to constipation).
- Going to the toilet to pass faeces more frequently.
- Having some degree of urgency when going to the toilet.
- Difficulty determining wind from motion.
- Sore skin around the back passage (anus).

It is often difficult to predict exactly how problematic bowel function will be. It is not usually due to the type of temporary stoma which was formed but more likely due to:

1. The amount of colon and/or rectum removed.
2. Treatments and the health of the remaining colon and/or rectum.
3. Other previous pelvic surgery

and/or any previous or co-existing pelvic disease.

4. The distance of the join in the colon/rectum from the back passage.
5. Capability of anal sphincters.
6. Personal satisfaction.

Faeces enters the colon as a liquid and one of the main functions of the colon is to re-absorb water back into the body. When a significant section of colon is removed, the natural consistency of the waste matter will become more liquid. This may result in more frequent visits to the toilet and for some may cause concern regarding control. Exercises which build up and strengthen the anal sphincter muscles may prove helpful in preventing leakage of gas and stool from the back passage.

Treatments such as chemotherapy and radiotherapy to the pelvis can delay the return to acceptable bowel function. In some cases the damage may make function more unpredictable and for some it may be painful.

Previous pelvic disease or abdominal surgery may make stoma closure more difficult and may also affect long-term function.

About Stoma Reversal



The use of stapling guns for rejoining bowel has allowed the surgeon to make a lower join (anastomosis) in the rectum reducing the necessity to remove the back passage and form a permanent colostomy. However, this may have an impact on bowel function and control. The rectum acts as a reservoir or “holding area” for faeces and when a significant portion is removed, coupled with a low scar line close to the sphincter muscles, the effect can be quite debilitating for some. This is commonly known as anterior resection syndrome which is characterised by the following symptoms:

- Increased frequency.
- Urgency and a feeling of the need to defaecate.
- Fragmentation of the motion (a feeling of not having completed passing faeces.)
- Inability to distinguish ‘wind’ from motion resulting in soiling or possible incontinence.

This will settle down for most but can take quite a significant time to do so.

Childbirth, age and trauma are just some of the processes that may have a detrimental effect on sphincter control in general. If the initial surgery causes a

looser output or reduces the “holding” capacity, control of bowel function can become more difficult. Pelvic floor and sphincter exercises to aid bowel control may help.

Advice following a reversal

What is acceptable to one may be intolerable to another. Some may expect bowel function to return exactly to how this was prior to any disease process and surgery. This will often be unrealistic and unachievable. Also, time to heal must be taken into consideration.

Medication

Anti-diarrhoea medication, softeners, or bulking agents may be required to regulate bowel action and may help to improve the consistency.

Dietary Advice

Following stoma closure it may take time to get back to eating a normal, healthy diet. The digestive system may be quite upset and temperamental. This will mean a “settling-in” period for both the stomach and the bowel. During this period it is sensible to limit foods which can irritate the gut for example:

- Acidic/citrus fruits e.g.

grapefruit, oranges, strawberries, grapes.

- Highly spiced foods e.g. curry, chilli con carne.
- Big fatty meals.
- Vegetables with a high “flatulence factor” i.e. cabbage, Brussel sprouts, onions.
- Large amounts of beer or lager.

Skin care

When bowel movement is loose or if problems occur with soiling in the area around the back passage, irritation or soreness may occur. To prevent skin excoriation, diligent skin care is essential. Washing thoroughly with warm water and “patting” dry with a soft cloth after each bowel movement is necessary. Applying a protective cream will help to minimise any skin problems. However, if this is not adequate contact your stoma care nurse for specialist advice.

Stoma Closure - Your choice

There are an appreciable number of stomas where the intention was that they would be temporary, where in fact a reversal is not performed. This

may be due to the patient's personal decision or to advice given by the surgical consultant in charge.

You will hear stories from patients who have had problems following a reversal or where stomas have had to be reformed and there will be always be those for whom the outcome wasn't what they desired. However, for the majority of people who have had stoma reversal, this is a very worthwhile procedure, resulting in a very successful outcome. The surgical team will assess in depth your surgical complication risks, the potential success of stoma closure and the likelihood of acceptable function before offering you a reversal. These facts must be outlined and discussed with you, prior to surgery. This is called informed consent.

Our article may have focused somewhat on the negative side; however, our intention is to ensure that people are aware of all the implications of further surgery.

We would like all reversals to have a successful outcome and have therefore produced a simple checklist:

- Make sure you understand why your stoma was formed in the first place.

- Ask your consultant or nurse specialist to provide you with detailed information regarding the proposed surgery and the realistic outcome you can expect in relation to hospital stay, length of recovery and expected bowel function – both in the short-term and long-term.
- Consider what your quality of life is like with a stoma.
- Consider what your quality of life would be like without a stoma, taking into account all the surgery and treatment that you have had.
- Speak to similar people who have undergone the procedure.
- Ask for a written summary of your consultant's plan.

We hope this helps to ensure that you make the most appropriate “informed” decision for yourself.

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