Bowel Resection Surgery

Minimally Invasive Surgery (MIS) /

Open Surgery

Patient Information Booklet

Please bring this book to your admission to the Hospital and to all of your appointments

For Information Call

613-721-2000 extension 2920

Between 8:00 a.m. and 4:00 p.m.

Monday to Friday

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Introduction

Welcome to the Queensway Carleton Hospital.

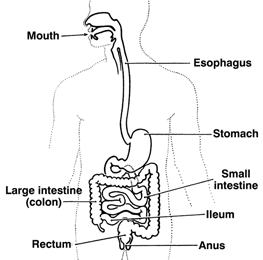
You are being admitted for bowel surgery. The length of your hospital stay depends on your surgery, for minimally invasive surgery 4-5 days and for open surgery 5-6 days.

This booklet is intended to provide you with information to prepare you for your hospital stay and discharge. Your safety and complete recovery is our priority following your surgery. For this reason, we ask you to follow these instructions.

**Please**

* Use this booklet as a reference tool for all dates and times
* Bring this booklet with you to all your appointments and on your day of surgery
* Ask questions if there is anything you don’t understand

Your Condition and Your Surgery



The Gastrointestinal Tract

The gastrointestinal (GI) tract extends from the mouth to the anus. The mouth is joined to the stomach by a tube called the esophagus. The GI tract continues down through the stomach and into the intestine (also called the bowel). The bowel is divided into 2 parts; the small and large bowel. The tract continues through the large bowel to the rectum and ends at the anus.

Large intestine (colon)

Stomach

Small intestine

Ileum

Mouth

Esophagus

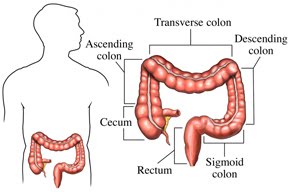
Anus

Rectum

The Small Bowel

The small bowel is 20-25 feet long and loosely coiled in your abdomen. It has 3 sections, the duodenum, the jejunum and the ileum. Food is swallowed in the esophagus, mixed with digestive juices in the stomach and is digested in the small bowel so that nutrients can be absorbed. From the small bowel, what is left of the food will travel further into the large bowel or colon.

The Large Bowel (Colon)

The large bowel is 6 feet long and is made up of 6 segments starting from where it connects to the end of the small bowel (the ileum). The segments starting from the right side of the body and going to the left side are the cecum, ascending colon, transverse colon, descending colon, sigmoid colon and rectum. The colon acts like a sponge and absorbs water from the liquid material as it passes through. The rectum acts as a holding area until the stool is passed out of the body through the anus.

Ascending colon

Cecum

Rectum

Sigmoid colon

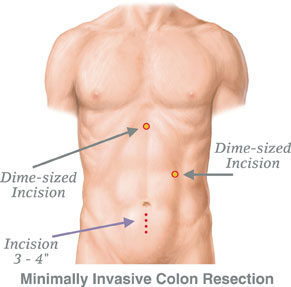
Transverse colon

Descending

colon

Bowel Resection Surgery

Minimally Invasive Surgery (MIS)

A minimally invasive bowel resection (laparoscopic colon resection) is performed to remove a diseased part of the bowel, usually the colon. Common reasons for elective colon surgery are cancer, Diverticulitis, Inflammatory Bowel Disease (such as Crohn’s disease or Ulcerative Colitis) and large pre-cancerous polyps.

Dime size incision

Dime size incision

Incision 3 - 4”

A segmental small bowel resection is the removal of a piece of small bowel. Removal of some, or all, of the colon is called a colectomy.

You will be given a general anesthetic. The procedure will be performed using a laparoscopic technique. Your Surgeon will make several small incisions in your abdomen, one near your belly button, and one in the upper and lower right- and left-hand sides of your abdomen.

Tube-like instruments (trochars) will be passed through the incisions. Your abdomen will be filled with air which helps your Surgeon view the abdominal cavity. A camera is passed through the tube that is placed in the incision near your belly button. This allows images to be displayed on a monitor in the operating room. In this manner, your Surgeon will be able to work inside your abdomen without making a larger incision. Your Surgeon will remove the diseased bowel. The two healthy ends of the bowel are sewn back together to form an anastomosis.

A small drainage tube may be inserted at the surgical site and brought out through the skin in your abdomen called a Jackson Pratt. It removes blood or fluid that can collect around the surgery site. Not all surgical procedures require a drain. If you have a drain, it will be removed by the Nurse during the post-operative period. Your Surgeon may use stitches or surgical clips to close the incisions.

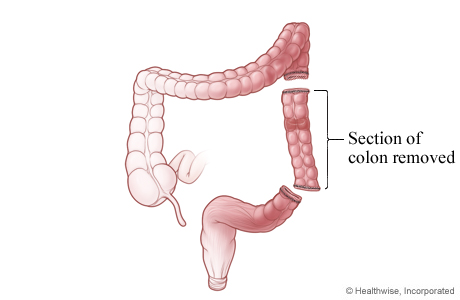
**Open Surgery**

When it is not possible to use the minimally invasive technique, an open bowel resection is done through a longer incision in the middle of the abdomen. This may be due to previous surgeries on your abdomen, which may have resulted in scar tissue forming at the location. It may also depend on the location of the diseased part in your bowel or other factors. Due to these factors your Surgeon will decide which technique to use during the surgery. You will be given a general anesthetic.

Your Surgeon will remove the diseased part of the bowel. The amount of bowel removed depends on the reason for the surgery. For example, a partial colectomy is performed to remove a section of diseased bowel. A right hemicolectomy, a left hemicolectomy or transverse colectomy may be performed to remove part of your colon. A low anterior resection may be necessary to remove the sigmoid colon and upper part of the rectum. The two healthy ends of bowel are reconnected, and the incision is closed. A small drainage tube may be inserted at the surgical site and brought out through the skin in your abdomen. It removes blood or fluid that can collect around the surgery site and will be removed by your Nurse during the postoperative period. Your Surgeon may select surgical staples or sutures that dissolve, to close the incision.

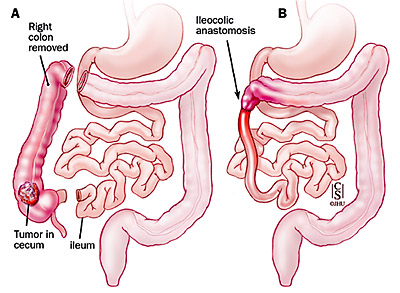
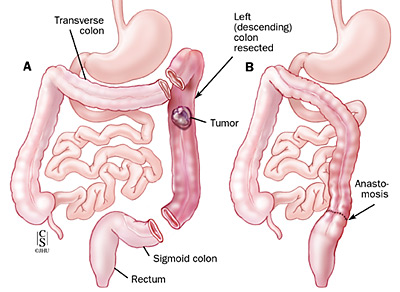
The following diagrams illustrate these procedures:

**Partial Colectomy**



Section of colon to be removed

**Right Hemicolectomy** **Left Hemicolectomy**

**Your date of surgery is \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Call the Queensway Carleton Hospital Operating Room Scheduling Department the weekday (Monday to Friday) before surgery to determine the time of admission.

Call for your admission time on \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (date)

The number to call is 613-721-4840 between 11:00 a.m. and 3:00 p.m.

**What if I’m on a special diet?**

Tell your Nurse if you have special dietary restrictions and if necessary, your Nurse will contact the Dietitian.

MRSA (Methicillin - Resistant Staph Aureus)

Today, many hospitals in Canada and around the world are dealing with bacterium which no longer responds to many antibiotics. Queensway Carleton Hospital is taking steps to prevent and control antibiotic resistant bacterium. This bacterium does not cause problems in healthy people, but it can cause infections in people who have weakened immune systems or have had major surgery. If you have stayed overnight in a health care facility within the last year, you will be screened for this at the time of your POAC visit.

Family contact

Please discuss and decide with your family who will be the primary contact person. This should be the only person to phone the hospital staff regarding your condition. This person can further contact the rest of your family and/or friends. This name will be written on the chart. Please let your family and friends know who this person is.

**My family contact is: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

Phone numbers: Home: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Work: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Cell: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Patient recovery can be enhanced by visits from family members, please remember your recovery is also aided by plenty of rest. Please be courteous and have consideration for your fellow patients regarding the number of visitors coming to see you. Patients and their families are asked to adhere to the following visiting hours and to limit visitors to two at the bedside at one time.

Surgical inpatient visiting hours

11:30 a.m. to 2:00 p.m.

4:00 p.m. to 8:00 p.m.

Only two visitors are allowed at a time and please limit visits from young children to immediate family only.

Preparations before Surgery

Health tips before surgery

Notify your Surgeon before your surgery if you develop a cold or any other illness

This is important for your well-being and the safety of others because there is a risk for everyone if you go into surgery with an infectious process (cold or flu) in progress. Should your surgery be delayed, every effort will be made to have you rescheduled as soon as possible.

It is also important to inform your Surgeon if you have any burns, rashes or skin irritation, which may need to be treated before your surgery.

If you need to speak to a Pre-operative Nurse BEFORE surgery you may call 613-721-2000, extension 2920 between 8:00 a.m. to 4:00 p.m., Monday to Friday (except holidays).

**On the day of your Pre-Operative Assessment Clinic visit we advise you to purchase 2 scrub brushes of Chlorhexidine 4% soap. They can be purchased at the Queensway Carlton Hospital Gift Box on the main floor next to the front lobby.**

QCH Gift Box Hours

Monday to Friday 9 a.m. to 8 p.m.

Weekends 12 p.m. to 4 p.m.

Diet

Your bowel preparation is to start two days before your surgery. Please follow the instructions below:

**Two days before surgery (Low Residue Diet)**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ☐ check box when complete

The purpose of a Low Residue Diet is to provide a diet of low residue foods and fluids to help prepare the bowel for surgery.

Avoid

* Spicy foods
* High fat foods
* High fibre foods or fluids, raw fruits, vegetables, coarse grain products, nuts, seed or popcorn
* Alcohol

Avoid gas-forming foods such as broccoli, turnips or cauliflower.

Do not drink or eat anything with red or purple colouring. This can cause discolouration in the bowel.

You are encouraged to drink at least 6-8 glasses of caffeine free fluids throughout the day. Caffeine is a stimulant to the bowel (can cause increase bowel spasms) and is a diuretic.

**Sample Menu – Low Residue Diet**

| **Breakfast** | * Orange juice (pulp free) * White toast with margarine or jelly or jam * Cornflakes™ * Milk * Decaffeinated tea or coffee |
| --- | --- |
| **Lunch** | * Cream soup with milk * Sandwich with white bread * Use fillings like plain meats, fish, chicken, egg or cheese, without raw onions, celery etc. * Banana (canned fruit or applesauce) * Milk * Caffeine free drinks (coffee, tea, soda pop) |
| **Snack** | * Apple juice/milk, tomato juice * Crackers with peanut butter/low fat cheese * Social tea cookies™ |
| **Supper** | * Skinless chicken breast * White roll with margarine * Frozen yogurt, pudding, ice cream (no nuts or seeds) * Decaffeinated drinks |
| **Evening snack** | * Crackers, cheese, plain biscuits * Fruit juices, milk, pudding, custard, yogurt (vanilla) |

**skin preparationAfter midnight clear fluids only**

**Skin preparation:** Stop shaving in the operative area one week (7 days) before your surgery date. Shaving can cause tiny nicks in the skin that may allow germs to enter your body and cause an infection. Do not use bath scents, powders or body lotions.

Skin preparation:

* The night before surgery bath or shower and wash your entire body using the Chlorhexidine soap.
* The morning of surgery repeat your bath or shower using Chlorhexidine soap sponges.

**One day before surgery (Clear Fluid Diet)**

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ ☐ check box when complete

Purpose: To provide a diet that will decrease the amount of stool matter in the bowel. The Clear Fluid Diet must provide adequate calories and electrolytes and proper hydration.

Avoid

* Milk products
* Solid foods
* Juices/fluids must be clear (able to see through) with no pulp (no tomato or orange juice)
* Alcohol

On a clear fluid diet, you are encouraged to drink at least 8 glasses of fluid throughout the day to prevent dehydration.

**If you are a diabetic:** Check with your Doctor about taking your usual medications.

| ****Fluids Allowed**** | ****Fluids Not Allowed**** |
| --- | --- |
| Clear juices (apple, white cranberry, peach, white grape juice) | Milk or milk products (milkshakes, custards, yogurt) |
| Water | Cream soups |
| Clear broth | Tomato juice |
| Sodas | Orange juice |
| Decaffeinated coffee or tea | Oatmeal or Cream of Wheat™ |
| Water popsicles | Grapefruit juice |
| Lemonade | Alcohol |
| Kool Aid™  Sports drinks (Powerade™, Gatorade™)  Hard candies | Do not drink or eat anything with red or purple colouring. This can cause discolouration in the bowel |
| Clear gelatin (Jell-O™) with no added fruit |  |

**Sample Menu – Clear Fluid Diet**

| **Breakfast** | 8 oz/250 mL clear juice – example apple, peach, white cranberry  4 oz/120 mL Jell-O™  Decaffeinated coffee or tea, with sugar or sweetener, honey |
| --- | --- |
| **Snack** | 4 oz/120 mL clear juice  4 oz pop e.g. Ginger ale™, 7-Up™ |
| **Lunch** | 8 oz/250 mL clear broth (chicken or beef)  4 oz/120 mL clear juice (no pulp)  4 oz/120 mL Jell-O™  4 oz/120 mL Ginger ale™ or 7-Up™  Decaffeinated tea with sugar, sweetener or honey |
| **Snack** | 4 oz/120 mL Ginger ale or 7-Up™ (Powerade™)  4 oz/120 mL clear juices (no pulp) |
| **Supper** | 8 oz/250 mL clear broth (chicken or beef)  4 oz/120 mL clear juice (no pulp)  4 oz/120 mL Jell-O™/water popsicle  4 oz/120 mL Ginger ale™ or 7-Up™ |
| **Snack** | 4 oz/120 mL Ginger ale™ or 7-Up™ (Powerade™)  4 oz/120 mL clear juices (apple juice)  Water popsicle, club soda or water |

Remember to drink plenty of fluids the day before surgery, at least 6 - 8 glasses.

* You may have sips of clear fluids up until the time when you leave home to come to the Hospital for your surgery.
* You should drink one cup (250 mLs) 8 ounces clear fluid e.g. apple juice, water or ginger-ale™, before leaving to come to hospital.

**Will I need to see a Social Worker/Discharge Planner?**

A Social Worker is available by phone or during your pre-operative visit if there are any issues that may make it difficult for you to manage at home on discharge. If you are worried about being alone, you may want to think about convalescent care in a retirement home. If you are the caregiver for someone else, please let us know at the time of your pre-operative appointment.

**Day of Surgery**

What should I bring to the hospital?

Please bring:

* A housecoat or dressing gown and slippers
* Toothbrush, toothpaste, soap, shampoo, deodorant, shaving cream, razor, Kleenex. These items are not supplied by the hospital
* All your current medications in proper bottles, including non-prescription medication (including creams, eye drops, inhalers/puffers, vitamins, patches, and herbal products)
* A list of allergies including type of reactions
* 2 packs of chewing gum. Chewing gum with help you recover from your colorectal surgery

Preparations for surgery (medication/vitamins/food)

You must follow these rules if you are to have your surgery on the scheduled date:

* You should drink one cup (250 mLs) 8 ounces clear fluid e.g. apple juice, water or ginger-ale, before leaving to come to hospital.
* You should take your regular medications with water the morning of your surgery unless you are told not to. If you use inhalers bring them with you.
* You must stop taking medications such as Vitamin E, Ginkgo biloba, omega, feverfew, garlic or ginseng at least one week before surgery. These medications thin your blood, which could cause excessive bleeding during and after surgery. If you are taking Aspirin, please inform your Surgeon or Nurse. You will be given specific instructions.
* If you are a smoker, try to stop smoking 24 hours before your surgery. We can provide you with smoking cessation support to prevent nicotine withdrawal during your hospitalization.
* No alcohol for 24 hours before surgery.
* Have a bath or shower before coming to the hospital.
* On the day of surgery do not wear any deodorant, lotions, powders, nail polish or contact lenses. Do not wear any scented products as the hospital has a scent free policy.
* Remove all jewellery, including body piercing jewellery.
* Do not bring any valuables to the hospital (credit cards, money or jewellery). We do not take responsibility for lost or stolen articles.
* Bring only the minimum personal belongings (clothing, etc.) with you to Hospital. Patient rooms are small and there is limited storage.
* Arrange for someone to drive you to the Hospital the day of surgery and home on your discharge day.

**What happens the day of your surgery?**

* Report to the Patient Registration at the main entrance of the hospital by the front parking lot. Please bring your health card and any medications that you are taking (in the proper bottles), including patches, creams, sprays, eye/ear drops, inhalers/puffers, vitamins, and herbals.
* From Patient Registration you will go to the Day Surgery Unit (DSU).
* After you arrive at the Day Surgery Unit (DSU) you will change into a hospital gown. Your clothes will be put into a bag for transfer later to your room.
* The Nurse will complete your paperwork and prepare you for your surgery.
* The Nurse, Anesthesia Assistant, or Anesthesiologist will start an intravenous by inserting a small needle into your hand or arm. Prior to the surgery you will receive an intravenous antibiotic.
* Your Surgeon and your Anesthetist will come and talk to you before your surgery.
* Your Nurse or Ward Assistant will take you to the Operating Room.
* Your operation can last from 2 to 3 hours.
* After your surgery, you will go the Post Anesthetic Care Unit (PACU) for monitoring.
* The Nurse will check your blood pressure, pulse and operative site frequently.
* The Nurse will check the circulation, sensation and movement of both legs. If you have an epidural for pain management, your legs may feel heavy.
* You may have oxygen provided.
* If you feel any pain or nausea, inform the Nurse. You will be given medication to help this.
* You may be drowsy after the surgery, as you become more alert, we will encourage you to do deep breathing and ankle exercises. These exercises will help to prevent complications.
* You will be transferred to your room when the Nurse determines it is safe to move you.
* You will then be transferred to your room in your bed. Your family will be able to visit you after you are admitted to your room. They can also bring any extra personal toiletries and clothing at this time.

After surgery

Minimally Invasive Surgery

You will have an (intravenous) IV in your arm to give you fluids until you are able to drink and eat well.

You will have several small incisions on your abdomen. You may have a small dressing over one or several of the incisions if they are draining. The dressing(s) can be removed within a day or two. The incisions will be closed sutures or clips. Tapes (Steri-strips™) may also cover your incision and will last approximately 5 -7 days before they fall off or can be removed.

Drain – A small drainage tube may be inserted at the time of surgery and used to drain excess fluid that sometimes collects around the area of the surgery. It will be in place for a couple of days before being removed by the Nurse.

Urinary catheter – You may have a drainage tube in your bladder for 1 to 2 days after your surgery. The catheter will be inserted during the surgery and removed by the Nurse on the unit.

Open Surgery

You will have an (intravenous) IV in your arm to give you fluids until you are able to drink and eat well.

You will have an abdominal incision. A dressing is used to cover the incision. Staples are usually removed 7 to 14 days after the surgery.

Drain – A small drainage tube placed close to your incision line may be inserted at the time of surgery and is used to drain excess fluid that collects in the area of the surgery. It will be in place for a couple of days before being removed by the Nurse.

Urinary catheter – You will have a drainage tube in your bladder for several days after your surgery. The catheter is inserted during the surgery and removed by the Nurse on the unit.

Ankle and deep breathing exercises

**Ankle exercises**

These exercises help the blood circulate in your legs while you are less active. Point your toes toward your head, then towards the foot of the bed. Make your feet go around in circles 5 times. This should be done every hour while you are awake.

**Deep breathing exercises**

Air enters the nose and mouth and travels into the lungs. This is where oxygen moves into the bloodstream and is carried to the cells. Often surgical procedures, anesthesia, pain or not moving around as much after surgery cause us to want to take smaller breaths. Doing deep breathing and coughing exercises after surgery will help keep your lungs healthy. Deep breathing exercises will prevent pooling of secretions in your lungs. Deep breathing exercises works best when you are sitting up in a chair or on the side of the bed. Follow these instructions:

* Support your incision with a small blanket or pillow
* Take a deep breath in through your nose. Hold for five (5) seconds
* Breathe out through your mouth
* Repeat this exercise ten (10) times each hour while you are awake and until your activity level increases

Coughing exercises help to loosen any secretions that may be in your lungs and should be done after your first five (5) deep breaths. To produce an effective cough:

* Support your incision with a small blanket or pillow
* Take a deep breath and cough

Protecting your skin from pressure ulcers

Are you at risk for developing a pressure ulcer (bed sore)? A pressure ulcer is a sore that develops, usually from sitting or lying in the same position for long periods of time or from sliding down in the bed. It is most often seen over the tailbone and heels. Some of the key things that can be done to help prevent these sores are: avoid sitting in bed with the head of the bed higher than 30 degrees for long periods of time, reposition yourself or ask for help, about every 2 hours, and use pillows under your legs, to avoid having your heels directly on the bed.

Moving and positioning

It is important to move and re position yourself while you are in bed. Move every 2 hours while awake.

* Support your incision with a small blanket or pillow.
* Bend your knees and roll from your non-operative side to your back.

Getting out of bed

Your Nurse will get you out of bed as soon as you are able. Walking and exercise are important to your recovery. For safety reasons your bed rails will remain raised for the first 24 hours after surgery. The Nurse call-button will be within your reach so you can push the button if you need assistance

**How do I get out of bed?**

The correct way to get out of bed following surgery is described below with diagrams to illustrate the process:

* Roll onto your side and bring your knees up towards your abdomen.
* Place your upper hand on the bed below your elbow.
* Raise your upper body off the bed by pushing down on the bed with your hand.
* Swing your feet and legs over the edge of the bed and bring your body to a sitting position.
* Once in a sitting position, take a few breaths and ensure your balance is good before you attempt to stand.
* Slide your bottom to the edge of the bed.
* Stand up keeping your back as straight as possible.
* When getting back into bed, reverse the process.

Person laying down on their side with a pillow between their legsPerson sitting up in bed

Person getting out of bed using their elbow to push off the bed

Pain management

Pain management is very important for a quick and speedy recovery. Pain medication is given as often as required in order to make you comfortable enough so that you will be able to deep breath and move with minimal discomfort. Inform your Nurse if you are uncomfortable or having pain.

You will be discharged home with a prescription for medication to manage your pain.

You may also experience bladder spasms, which may feel like a muscle cramp that comes and goes in waves. The spasms can be relieved with medication if they become severe.

If your pain medication seems to stop working, call your Nurse to check and assess your level of pain. If you are still uncomfortable and the Nurse has checked and assessed your pain level your Nurse will notify your Doctor and your dose will be adjusted as required.

**Pain scale ruler**

**What is a pain scale ruler?**

A pain scale ruler is a simple tool to measure how much pain you are having. Each Nurse will use this ruler to measure your pain.

**Why do we measure your pain?**

We measure your pain frequently so that we can be sure your pain medication is working.

**What does a pain scale ruler look like?**

One side of the ruler has numbers from 1 to 10. The other side has colors from white to deep red (shown here in shades of grey).

**How does our pain scale ruler work?**

Our ruler measures pain in two ways – by number or colour.

By number: the ruler is numbered from 0 to 10, with 0 being no pain and 10 being the most severe pain you can imagine.

By faces: the faces are coloured and range from happy, with 0 being no pain as shown with a clear face to sad with 10 being the most severe pain you can imagine as shown with a deep red face. (Shown in this example as shades of grey).

The Nurse will show you the ruler and ask you to choose a number or colour.



**Diet**

After your surgery, you will gradually progress from drinking fluids to a soft, easy to digest low residue diet. The purpose of this is to allow your bowel to rest until the swelling around the surgical site is gone. Unless you have been given specific diet instructions you should be able to resume a regular diet with no restrictions in 2 to 7 weeks. The following are suggestions for the early days after your surgery:

* Until your appetite is back to normal, try to eat 3 small meals plus 2 to 3 snacks daily.
* Eat slowly, chew your food well.
* It is important to drink plenty of fluids. Choose nutritious liquids to provide energy, vitamins and minerals:
* Milk, fruit juice, vegetable juice, milkshakes or yogurt shakes.
* Liquid meal substitutes (i.e. Ensure™, Boost™, Resource™, Instant Breakfast shakes).
* LIMIT tea, coffee, and pop. These will fill you up without the benefit of extra nutrients.
* You should chew gum starting the day after your surgery.
* You should chew once stick of gum, for at least 5 minutes three times per day.
* Do not chew more than 3 pieces of gum per day.
* Chewing gum after surgery will help you pass gas which is a sign that your bowels are working.
* If you cannot chew gum for any reason, talk to your Surgeon or Nurse.

Preparing for Discharge

When you are discharged from Hospital, you may need help at home. It is best to make arrangements for housekeeping before being admitted to Hospital. Discuss your discharge plans with your Nurse. You may also need a Nurse to visit you at home.

If you have had an Ostomy, you may be discharged a day later. You are responsible for your own transportation home. You may require help to do your shopping and house chores from a family member or friend for 4 to 6 weeks after surgery. Arrangements for convalescence care, if desired, should be made before you are admitted to the hospital. The Social Worker is available through the Social Work Office, 613-721-2000 ext. 3753 or 3771, to help with the arrangements if necessary.

**Discharge Planning**

You may have a number of concerns related to how you will manage once you return home. If you have such concerns, or any others, you may request to see a Social Worker as part of your discharge plan. Please let your Nurse know.

Arrange for someone to pick you up by 10:00 a.m. on the day of discharge. You will receive a prescription for medication and a follow-up appointment to see your Surgeon in about 2 to 3 weeks.

Be sure you understand about:

* Activity restrictions
* Medication you are to take
* Incision care
* Diet
* When to call your Doctor
* Follow-up appointment

After Discharge

Activity

* Take frequent rest periods as necessary. Let your body be your guide.
* Do light activities for 2 weeks. Avoid strenuous exercise including heavy lifting, lifting grocery bags, snow shoveling, or pushing a lawn mower until you have been seen by your Doctor/Surgeon on your follow- up visit.
* Increase your walking distance each day.
* Resume your usual activities gradually over 3 to 6 weeks. Discuss any specific concerns with your Doctor/Surgeon including when to resume sexual activity.
* Do not drive a vehicle for at least 2 weeks after your surgery or if you are taking narcotics. You may resume driving after 2 weeks if you are physically comfortable with this activity.

Medications

* Take your pain medication as required (e.g. before going to bed, or prior to activity). It is normal to experience some incision discomfort for a period of time after discharge.
* Add water-soluble fibre to your diet to avoid constipation from pain medication e.g. bran, whole grain, fruit. If constipation is a problem, you may take a mild laxative (e.g. Metamucil™).
* Do not drive a vehicle if you are taking narcotics (e.g. Tylenol #3™, HYDROmorphone™, Percocet™).

Incision Care

* Swelling or bruising may appear around the incision. This may continue for several weeks.
* You may have a shower. Once you have finished your shower, pat the Steri-strips™ dry with a fresh, clean towel.

Diet

Ideas for meals:

* Muffin, bagel or toast with margarine and cream cheese, cheese or jelly
* Pancakes or French toast with syrup
* Cheese omelet, white toast, margarine and jelly
* Macaroni and cheese of other pasta with sauce and well-cooked vegetable
* Spaghetti with meat sauce and parmesan cheese
* Plain hamburger with mustard and/or ketchup

Ideas for between meal snacks:

* Yogurt
* Cheese and crackers
* Hummus and crackers
* Fruit
* Peanut butter or oatmeal cookies
* Commercial supplement (Ensure ™, Resource™, Instant Breakfast Shake™)
* Homemade milkshake

**Low Residue Diet**

This diet is suitable for those with gastrointestinal disorders and as a transition between a liquid diet and a regular diet following bowel surgery. You should follow this diet for 3 weeks or longer depending on your condition. Contact your Dietitian or Doctor for further advice as required.

Guidelines

* Eat a variety of the allowed foods to obtain the nutrients your body needs.
* Eat slowly and relax when you eat. Remember to chew your food well.
* Avoid raw fruits and vegetables, coarse whole grain products, nuts, seeds and popcorn.
* Some people may experience difficulty digesting spicy foods, condiments and highly spiced foods, such as pepper and garlic, high fat foods, fried foods and gassy foods such as broccoli, cauliflower and legumes.
* You may need more iron in your diet. To increase iron intake, choose iron-rich soft foods such as lean red meat, chicken, eggs, Cream of Wheat™, oatmeal and enriched bread.
* Increasing the protein in your diet is recommended to promote healing. Include foods such as lean meat, fish or poultry, peanut butter, cheese and tofu.

Sample menu

| Breakfast | * Orange juice * Toasted white bread with margarine and/or jelly * Oatmeal or Corn Flakes™ with milk |
| --- | --- |
| Lunch | * Tomato or chicken noodle soup with crackers * Sandwich on white bread with sliced meat, tuna, salmon or egg filling * Canned fruit cocktail or applesauce |
| Supper | * Skinless chicken breast * White rice, pasta or mashed potato * Well cooked green beans or carrots * White roll with margarine * Frozen yogurt or pudding |
| Snack ideas | * Plain muffin or cookie * Crackers with peanut butter/cheese * Yogurt/cheese and banana * White toast with cheese/jelly or jam |

| ****Type of food**** | ****Food to use**** | ****Foods to avoid**** |
| --- | --- | --- |
| **Milk and milk products** | All types tolerated except those listed under “Foods to Avoid” | Yogurt containing seeds, nuts or fruit |
| **Breads & cereals** | Cereals – refined, cooked or dry cereals such as Cream of Wheat™, oatmeal, Cheerios™, Corn Flakes™ and Rice Krispies™  Bread – plain white bread and rolls, waffles and pancakes  Baked Goods – plain muffins, plain cookies such as arrowroots™, social teas™, digestive, soda crackers and melba toast™  Pasta – macaroni, spaghetti, noodles  White rice | Any products containing nuts, seeds, coconut, dried fruits, whole wheat/grain flour, bran and bran cereals |
| **Meat, poultry, fish and alternatives** | All lean meat, fish & poultry, cheese, eggs, tofu and smooth peanut butter | Fried, salted, smoked or spiced meat, fish, poultry or eggs  Legumes (dried beans, peas, lentils, or soybeans) Nuts and seeds |
| **Fruits and vegetables** | Bananas, apple sauce, melons, avocado and canned peaches and pears  All strained juices except prune and strained vegetable juices  Peeled AND well-cooked vegetables, canned vegetables | Fruit –  Any fruit with seeds such as berries, tough skins or tough membranes  Prunes, all dried fruits, candied fruits  Fresh apple, pineapple, rhubarb and grapes  Vegetable – Any raw vegetables. Corn, brussel sprouts, cabbage, celery, eggplant, leafy green lettuce, spinach and radish |
| **Fats & oils** | All as tolerated | Crunchy peanut butter, nuts and seeds |
| **Soup** | Cream or stock soups. Strained and cream soup | Soups containing corn, lentils, dried peas, beans and barley |
| **Desserts & sweets** | Plain candies and chocolates, jellies, honey, syrups in moderation | Jams with seeds, marmalade  Candies and desserts containing coconut, nuts, fruits or seeds |
| **Other** | Cream sauce, finely chopped herbs, gravy, ketchup, mustard, lemon, salt & pepper | Coconut, popcorn, pickles, relish, horseradish and olives |

When should I call the Doctor or go to the nearest Hospital Emergency Department?

Contact your Family Doctor/Surgeon or go to the nearest Hospital Emergency Department if you experience:

* Fever over 38ºC or 100.4ºF
* Chills/perspiration
* Increased or new discomfort
* Redness, swelling or drainage around the incision or incision separation.
* Nausea, vomiting, constipation, abdominal swelling or bloody stools
* New or unexplained symptoms develop
* Sudden onset of severe chest pain, difficulty breathing or shortness of breath (CALL 911)

Clinical Pathway Patient Version

Your hospital stay will follow a plan of care called a Clinical Pathway. The patient versions of the Bowel Resection Surgery (MIS and Open) Clinical Pathways have been prepared so that you, your family and all members of your healthcare team know your plan of care including what tests, treatments and diet you require as well as the education and planning necessary for discharge.

Once you and/or your family have read the information in this booklet, please feel free to ask your Nurse or other members of the healthcare team any questions.

**Bowel Resection Surgery**

Minimally Invasive Surgery

| Process | Pre-admission (2-3 weeks before surgery) |
| --- | --- |
| Assessment | * Your Nurse will take your weight, height, blood pressure and pulse. |
| Tests | * Blood tests, urine sample, electrocardiogram (ECG) and Chest x-ray will be done if ordered by your Surgeon. |
| Consults | * Anesthesiologist and Medicine will be consulted if ordered by your Surgeon. * Dietitian, Social Worker/Discharge Planner with Community Care Access Center (CCAC) will also be consulted if needed. |
| Medications | * All your medications, including non-prescription, herbal and vitamin supplements will be reviewed. * You will be advised what medications and supplements to take before your surgery and what to stop. * The Nurse will review the bowel preparation required for surgery with you. |
| Nutrition | * 2 days before surgery you will follow the low residue diet as described in this booklet. * 1 day before surgery you will follow a clear fluid diet as described in this booklet. * You may have clear fluids up until the time when you leave home for your surgery. |
| Rest and activity | * You can continue with normal activity. |
| Education | * The Nurse will review the patient education booklet and if applicable Ostomy Booklet with you. * The Nurse will also review deep breathing and coughing exercises with you. |
| Discharge planning | * Your Nurse will discuss your arrangements for help at home after surgery with you and arrange for a discharge planner if needed. |

| Process | OR Day  🖵 with ostomy 🖵 without ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, blood pressure, pulse and oxygen level frequently. * Your abdominal dressing and drain will be monitored. * Your fluid Intake and output will be recorded. |
| Tests | * You may have blood work done before and after surgery if ordered by your Surgeon. |
| Medications | * Your pain level will be monitored, and pain medication will be given as required. * Your regular medications will also be given as ordered. * If you feel nauseous, let your Nurse know she/he will give you medication for this as well. |
| Treatments | * Your urinary catheter will be emptied every shift. * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises every hour while awake. * The Nurse will administer intravenous fluids. * If applicable: * Your drain will be emptied every shift. * Your ostomy appliance will be monitored every shift. |
| Nutrition | * You will be allowed clear fluids (water, apple juice, ice chips) after surgery. |
| Mobility/ hygiene | * You will be encouraged to sit up at bedside as tolerated. * After surgery you will be given a bath if needed. |
| Education | * Your Nurse will review the pain pump/epidural and pain scale with you. * Your Nurse will also discuss methods to manage your pain or nausea with you. |

| Process | Day 1 Post-Op |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, blood pressure, pulse and oxygen level. * Your abdominal dressing and drain will be monitored and changed as necessary. * Your fluid Intake and output will be recorded. |
| Tests | * You may have blood work if ordered by your Doctor. |
| Treatments | * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises. * You will be administered intravenous fluids. * Your urinary catheter will be emptied every shift.   If applicable:   * Your drain and nasogastric tube will be emptied every shift. * Your ostomy appliance will be monitored every shift. |
| Nutrition | * You be advised to take fluids/foods as tolerated if applicable. |
| Mobility/ hygiene | * You will be encouraged to walk around as much as you can tolerate with help. * You will be able to wash with assistance. |
| Education | * Your Nurse will continue to review deep breathing and coughing, foot and ankle exercises. * Your Nurse will continue to discuss methods to manage your pain with you. * Your Nurse will review the patient clinical pathway and discharge instructions with you.   If applicable:   * Your Nurse will review the Ileostomy or Colostomy Teaching Booklets. |
| Discharge planning | * Your Nurse will discuss what plans you have made for discharge with you and arrange for a Social Worker/Discharge Planner if needed. |

| Process | Day 2 |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises. * Your IV will be removed, if you are drinking well. * Your urinary catheter may be removed.   If applicable   * Your drain and nasogastric tube will be removed. * Your ostomy appliance will be monitored and changed as needed. |
| Nutrition | * You will start on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you are able. * You may wash at the sink or have a shower. |
| Education | * Your Nurse will discuss methods to manage your pain with you. * Your Nurse will review what activities you can resume. * Your Nurse will also review incision care with you explaining the signs and symptoms of infection.   If applicable   * Your Nurse will initiate teaching basic pouch care as per the Ostomy Booklet including family members. * You will document teaching on Ostomy Flow Sheet with guidance from your Nurse. |
| Discharge planning | * You will discuss what plans you have made for discharge with your Nurse. * Patients with an ostomy will have follow up with Community Care Access Center (CCAC) following hospital discharge. * You will be referred to Community Care Access Center (CCAC) for assistance after discharge if you have an ostomy. |

| Process | Day 3  Expected day of discharge for patient without ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | * If you still have an intravenous (IV), it will be removed today if you are drinking well.   If applicable:   * Your ostomy appliance will be monitored and changed as needed. |
| Nutrition | * You will continue on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you can tolerate. * You will be able to wash at the sink or have a shower. |
| Education | * Your Nurse will discuss discharge instructions including diet, activity, pain management and incision care.   If applicable:   * Your Nurse will continue teaching basic pouch care as per the Ostomy Booklet including family members. * You will continue to document teaching on the Ostomy Flow Sheet. * Plan to change your ostomy appliance with family participation. |
| Discharge planning | * Patient/family aware of discharge time at 10 a.m. |

| Process | Day 4  Expected day of discharge for patient with ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | If applicable:   * Your ostomy appliance will be monitored and changed as needed. |
| Nutrition | * You will continue on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you can tolerate. * You will be able to wash at the sink or have a shower. |
| Education | * Your Nurse will discuss discharge instructions including diet, activity, pain management and incision care.   If applicable:   * Your Nurse will continue teaching basic pouch care as per Ostomy Booklet including family members. * You will continue to document your teaching on the Ostomy Flow Sheet. * Plan to change ostomy appliance with family participation if not done yesterday. |
| Discharge planning | 10 a.m. today |

**Bowel Resection Surgery**

Open

| Process | Pre-admission (2-3 weeks before surgery) |
| --- | --- |
| Assessment | * Your Nurse will take your weight, height, blood pressure and pulse. |
| Tests | * Blood tests, urine sample, electrocardiogram (ECG) and chest x-ray will be done if ordered by your Surgeon. |
| Consults | * Anesthesiologist and Medicine will be consulted if ordered by your Surgeon. * Dietitian, Social Workers/Discharge Planner with Community Care Access Center (CCAC) will also be consulted if needed. |
| Medications | * All your medications, including non-prescription, herbal and vitamin supplements will be reviewed. * You will be advised what medications and supplements to take before your surgery and what to stop. * The Nurse will review the bowel preparation required for surgery with you. |
| Nutrition | * 2 days before surgery you will follow the low residue diet as described in this booklet. * 1 day before surgery you will follow a clear fluid diet as described in this booklet. * You may have clear fluids up until the time when you leave home for your surgery. |
| Rest and activity | * You can continue with normal activity. |
| Education | * The Nurse will review the patient education booklet and if applicable Ostomy Booklet with you. * The Nurse will also review deep breathing and coughing exercises with you. |
| Discharge planning | * Your Nurse will discuss your arrangements for help at home after surgery with you and arrange for a Social Worker/Discharge Planner if needed. |

| Process | OR Day  🖵 with ostomy 🖵 without ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, blood pressure, pulse and oxygen level frequently. * Your abdominal dressing and drain will be monitored. * Your fluid intake and output will be recorded. |
| Tests | * You may have blood work done before and after surgery if ordered by your Surgeon. |
| Medications | * Your pain level will be monitored, and pain medication will be given as required. * Your regular medications will also be given as ordered. * If you feel nauseous, let your Nurse know and you will be given medication to help with this. |
| Treatments | * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises every hour while awake. * The Nurse will administer intravenous fluids.   If applicable:   * Your drain and nasogastric tube will be emptied every shift. * Your Ostomy appliance will be monitored and changed as needed. |
| Nutrition | * You will be allowed fluids after surgery and progress to a diet as tolerated if able. |
| Mobility/ hygiene | * You will be encouraged to sit up at bedside and stand as tolerated. * After surgery you will be given a bath if needed. |
| Education | * Your Nurse will review the pain pump/epidural and pain scale with you. * Your Nurse will also discuss methods to manage your pain or nausea with you. |

| Process | Day 1 Post-Op |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, blood pressure, pulse and oxygen level. * Your abdominal dressing and drain will be monitored and changed as necessary. * Your fluid intake and output will be recorded. |
| Tests | * You may have blood work if ordered by your Doctor. |
| Treatments | * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises. * You will receive IV fluids. * Your urinary catheter will be emptied every shift.   If applicable:   * Your drain and nasogastric tube will be emptied every shift. * Your Ostomy appliance will be monitored and changed as needed. |
| Nutrition | * You will be advised to take fluids/foods as tolerated if able. |
| Mobility/ hygiene | * You will be encouraged to walk around as much as you can tolerate with help. * You will be able to wash with assistance. |
| Education | * Your Nurse will continue to review deep breathing and coughing, foot and ankle exercises. * Your Nurse will continue to discuss methods to manage your pain with you. * Your Nurse will review the Patient Clinical Pathway and discharge instructions with you.   If applicable:   * Your Nurse will review the Ileostomy or Colostomy Teaching Booklets. |
| Discharge planning | * Your Nurse will discuss what plans you have made for discharge with you and arrange for a Social Worker/Discharge Planner if needed. |

| Process | Day 2 |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | * You will be given oxygen if needed. * You will be encouraged to do deep breathing and coughing exercises. * You will also be encouraged to do ankle and leg exercises. * You will receive IV fluids. * Your urinary catheter may be removed.   If applicable:   * Your drain will be emptied every shift. * Your nasogastric tube will be removed if ordered by Surgeon. * Your Ostomy appliance will be assessed and changed if necessary. |
| Nutrition | * You will start on a low residual diet if tolerated. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you are able. * You may wash at the sink or have a shower. |
| Education | * Your Nurse will discuss methods to manage your pain. * Your Nurse will review what activities you can resume. * Your Nurse will also review incision care with you explaining the signs and symptoms of infection.   If applicable:   * Your Nurse will initiate teaching basic pouch care as per the Ostomy Booklet and will include your family members. * You will document any teaching on the Ostomy Flow Sheet with guidance from your Nurse. |
| Discharge planning | * You will discuss what plans you have made for discharge with your Nurse. * Patients with an ostomy will have follow up with Community Care Access Center (CCAC) following hospital discharge. * You will be referred to Community Care Access Center (CCAC) for assistance after discharge if you have an ostomy. |

| Process | Day 3 |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | * Your IV will be removed, if drinking well. * Your urinary catheter will be removed if not removed yesterday.   If applicable:   * Your drain will be emptied every shift. * Your Ostomy appliance will be assessed and changed if necessary. |
| Nutrition | * You will continue on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you can tolerate. * You will be able to wash at the sink or have a shower. |
| Education | * Your Nurse will discuss discharge instructions including diet, activity, pain management and incision care.   If applicable:   * Your Nurse will continue teaching basic pouch care as per Ostomy Booklet including family members. * You will continue to document teaching on Ostomy Flow Sheet. * Plan to change ostomy appliance with family participation. |
| Discharge planning | * Patient/family aware of discharge time at 10 a.m. |

| Process | Day 4  Expected Discharge Day for Patient Without Ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | If applicable:   * Your drain will be drained every shift. If going home today it will be removed. * Your Ostomy appliance will be assessed and changed if necessary. |
| Nutrition | * You will continue on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you can tolerate. * You will be able to have a shower. |
| Education | * Your Nurse will discuss discharge instructions including diet, activity, pain management and incision care.   If applicable:   * Your Nurse will continue teaching basic pouch care as per Ostomy Booklet including family members. * You will continue to document any teaching on the Ostomy Flow Sheet. * Plan to change ostomy appliance with family participation. |
| Discharge planning | * Patient/family aware of discharge time at 10 a.m. |

| Process | Day 5  Expected Discharge Day for Patient with Ostomy |
| --- | --- |
| Assessment | * Your Nurse will monitor your temperature, pulse, blood pressure and oxygen level. * Your fluid intake and output will be recorded. * Your abdominal dressing will be monitored and changed as necessary. |
| Tests | * You may have blood work taken as ordered by your Doctor. |
| Treatments | * Your drain will be removed. * Your Ostomy appliance will be assessed and changed if necessary. |
| Nutrition | * You will continue on a low residual diet. |
| Mobility/ hygiene | * You will be encouraged to walk in the hall as much as you can tolerate. * You will be able to have a shower. |
| Education | * Your Nurse will discuss discharge instructions including diet, activity, pain management and incision care. * Your Nurse will continue teaching basic pouch care as per Ostomy Booklet including family members. * You will continue to document any teaching on the Ostomy Flow Sheet. * Plan to change ostomy appliance with family participation. |
| Discharge planning | * Discharge at 10 a.m. |

**REFERENCES**

The Ottawa Hospital Bowel Resection Patient Information Booklet, 2006.

The Ottawa Hospital ERAS Clinical Pathway, 2013.

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