

Ileal Pouch-Anal Anastomosis

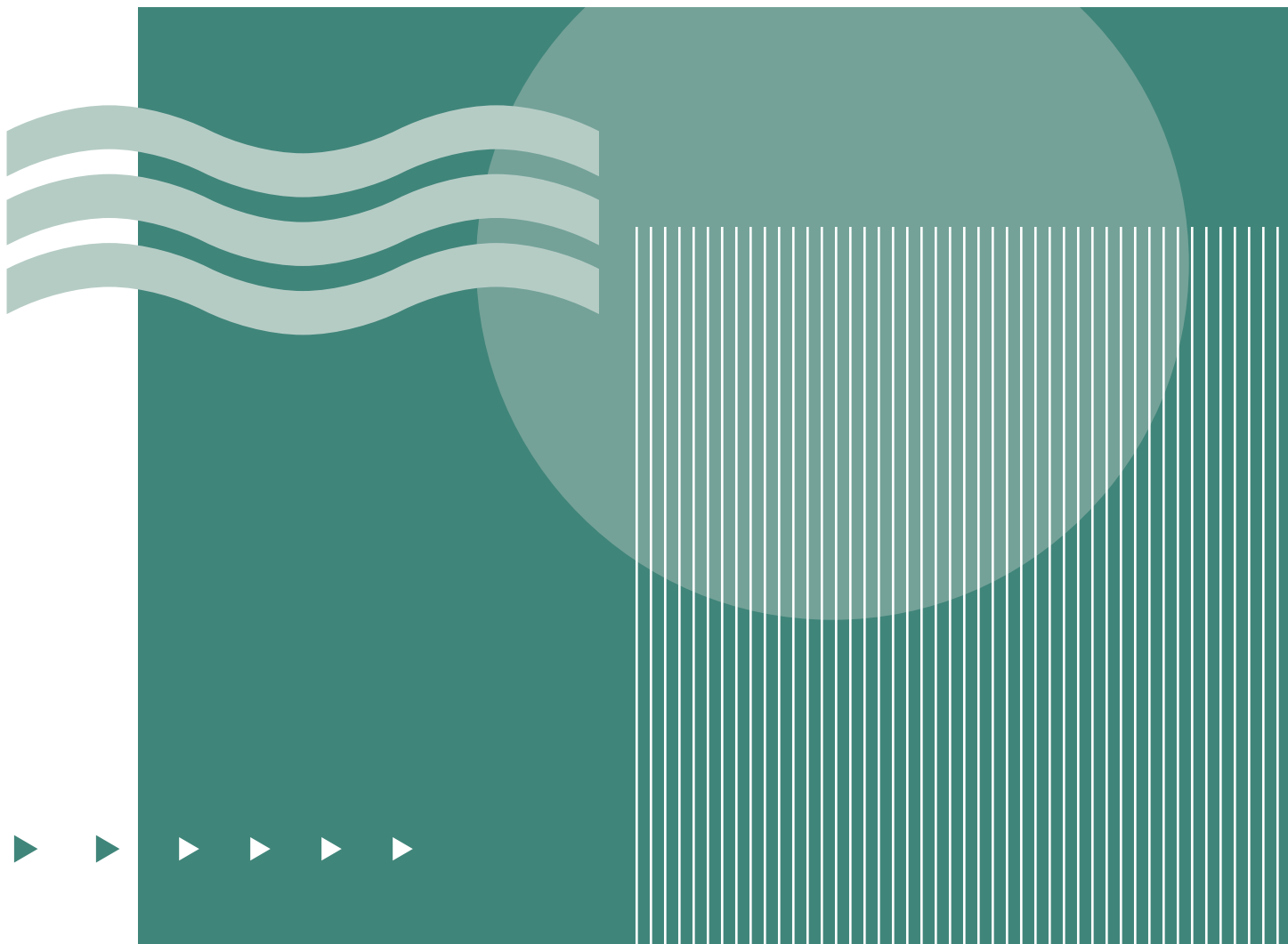


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Introduction

Ileal pouch-anal anastomosis is a surgical procedure for certain types of bowel disease. During the surgery, the diseased colon is removed, but the anal sphincter muscles are preserved so that you will have bowel movements through the anus.

This booklet includes information about the ileal pouch-anal anastomosis surgical procedure, as well as information you will need following the surgery. The booklet is divided into three sections. The section Stage 1 reviews your first surgery and how to manage your temporary ileostomy. The section Stage 2 discusses your second surgery to close the ileostomy and includes information on living with the ileal pouch-anal anastomosis. The Resources section can be used as a reference. A word list and a place to write any questions you have also are included.

Your team of health-care professionals can answer your questions, as well as help you with your recovery.

The digestive system

To understand ileal pouch-anal anastomosis surgery, you must first know about the digestive tract and how it functions. The normal digestive system is shown in figure 1.

Digestion starts in the mouth where enzymes begin to break down food so that nutrients can be absorbed into the blood and used by body tissues. Food moves from the mouth through the esophagus to the stomach.

The food in the stomach is churned by muscles in the stomach walls. Acid and enzymes break down food further. When the food is in a semi-liquid state, the stomach pushes it into the small intestine. It is here, in the small intestine, that most of the digestion and absorption of nutrients takes place.

The small intestine is a tube measuring about one inch in diameter and 20 feet in length. It lies in loops and fills most of the abdominal cavity. The small intestine consists of three sections: duodenum, jejunum, and ileum.

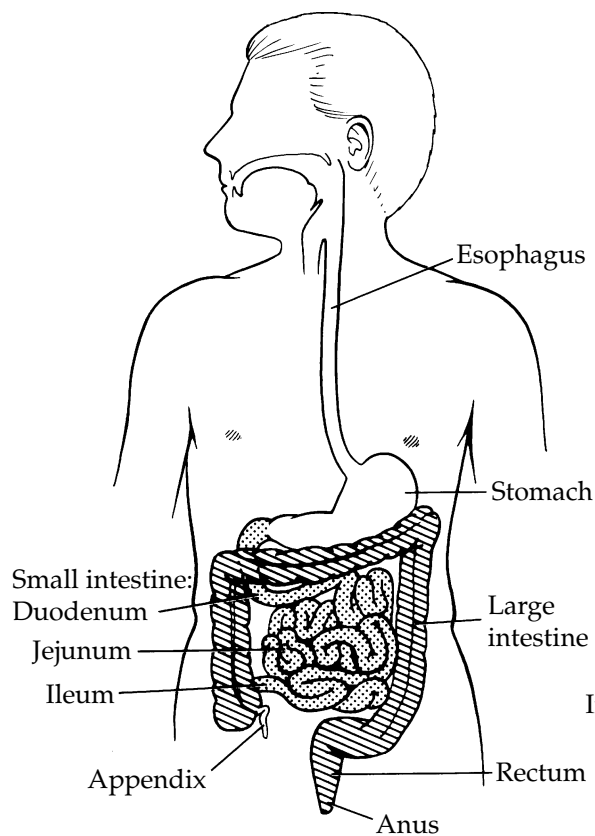


Figure 1.

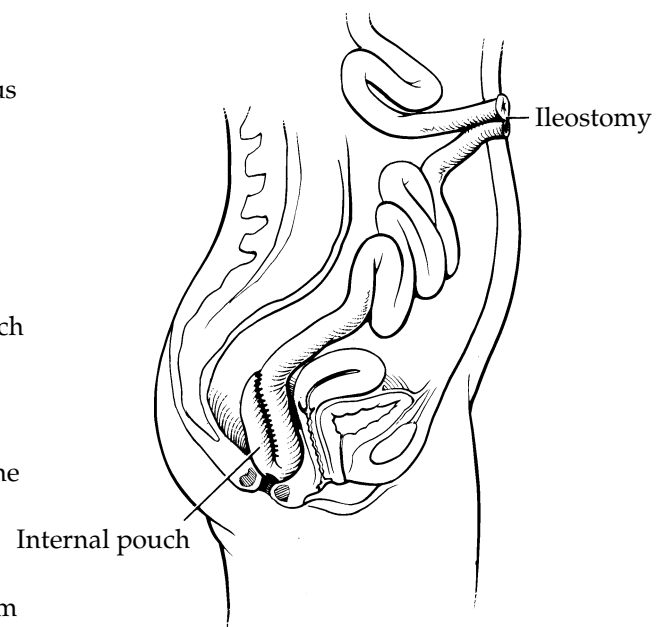


Figure 2.

The duodenum is the first section of the small intestine. It is about 10 inches long. The second section of the small intestine, the jejunum, is about eight feet long. The last section of the small intestine, the ileum, is about 12 feet long. The ileum connects to the large intestine (colon).

The small intestine has two main functions. It completes the digestion of the food and absorbs the nutrients from the food. The small intestine secretes enzymes that break down food during digestion. It absorbs nutrients by way of millions of tiny fingerlike projections, called villi, that contain blood vessels. These villi line the entire inner surface of the small intestine. The blood vessels in the villi absorb the nutrients.

After nutrients in the food are absorbed by the blood vessels, the remaining stool passes from the small intestine into the large intestine. The large intestine has two main functions. It absorbs water from the stool and stores stool until it is pushed into the rectum.

The rectum stretches when filled with stool causing the urge to have a bowel movement. The anal sphincter is a muscle that surrounds the lowest part of the rectum to prevent stool and gas from leaking. The anus is the opening through which stool is expelled.

Indications for surgery

Ileal pouch-anal anastomosis surgery is a procedure that may be performed when a diseased colon cannot be successfully treated with medications. This procedure also may be done to reduce the risk of cancer. The most frequent reasons for this surgery are chronic ulcerative colitis and familial (multiple) polyposis.

The ileal pouch-anal anastomosis procedure

The ileal pouch-anal anastomosis is usually a two-stage procedure. During the first operation, the colon and a portion of rectum are removed. An internal pouch, formed from the ileum, is sutured to the anus. The internal pouch will eventually be used to hold stool. However, to allow the pouch to heal, a temporary ileostomy is formed. An ileostomy is an opening from the ileum through the abdominal wall that allows stool to pass to the outside of the body (figure 2). In the second operation, the ileostomy is closed allowing stool to pass into the internal pouch and be expelled through the anus.

The role of the enterostomal therapy (ET) nurse

During your hospital stay many healthcare professionals will help you — physicians, nurses, and dietitians, as well as chaplains. You will meet the enterostomal therapy (ET) nurse, who specializes in helping people as they face ileal pouch-anal anastomosis surgery.

The ET nurse will discuss your surgery as outlined by your physician with you and your family. This is a time when you will probably have many questions. The ET nurse will listen, answer questions, and clarify any areas of uncertainty.

Your ET nurse will be available throughout your hospitalization to teach and support you in your adjustment and your return to a full life.

Stage 1 — The First Surgery

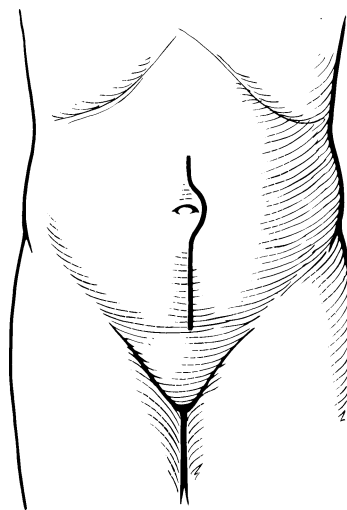
Preoperative preparation

To prepare for surgery, you will drink a special solution to clean stool from the intestine. Occasionally, enemas also are used to clean stool from the intestine. Your intestine must be as empty as possible to provide a clean surgical area. You will be given antibiotics to help prevent infection, and your diet will be limited to clear liquids.

The ET nurse will see you before your surgery to mark the ileostomy site. Several factors enter into the site selection: the natural skin folds, rectus muscle, scars, navel, waistline, hip bone, and visibility of the site when you are sitting. Selecting the proper location makes caring for the ileostomy easier after surgery.

The surgery

The surgeon makes an incision in the middle of your abdomen through which the diseased colon and upper portion of rectum are removed (figure 3). In some cases, the surgeon may do the surgery laparoscopically, which involves making three to four small incisions on the abdomen and using a small camera inserted into the abdomen to perform the surgery. The mucosa (lining) of the lower rectum may be removed to prevent recurrence of disease in the rectum. The anal sphincter muscles remain to provide control of your bowel movements.



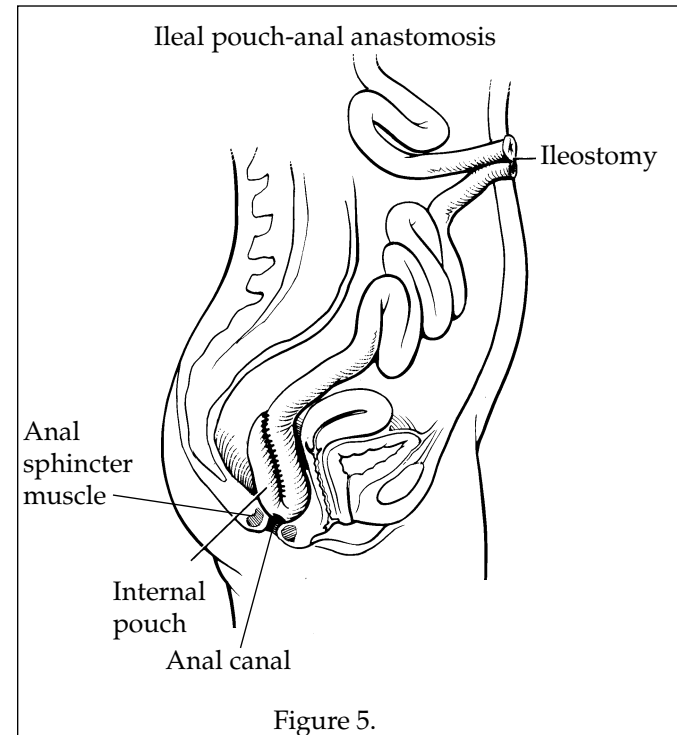
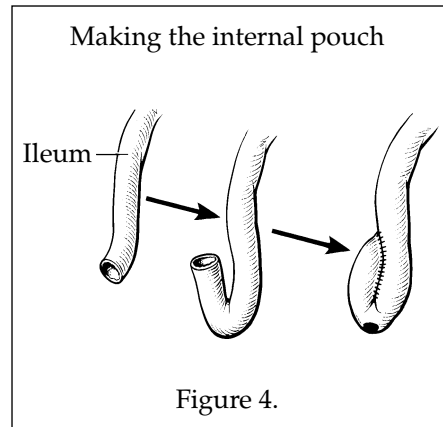
Typical surgical incision

Figure 3.

An internal pouch, usually J-shaped, is made from the last portion of the small intestine, the ileum (figure 4). The pouch is pulled down and sutured to what remains of the rectum (figure 5). Eventually, this pouch will take the place of your removed colon and rectum by storing stool between bowel movements. In rare instances, the internal pouch may not be necessary for children and young adults. Over time the ileum can adapt itself to storing stool.

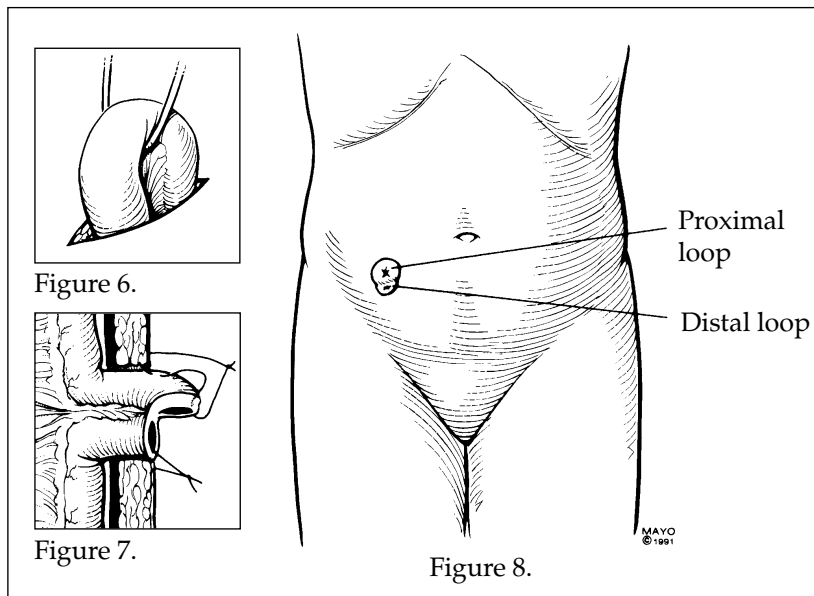
A temporary ileostomy is made to divert the stool so the internal pouch can heal. You will have the ileostomy for about three months. When an ileostomy is created, a small portion of the ileum is brought out through the abdominal wall for the passage of stool. The opening is called a stoma and is usually located on the right side of your abdomen. The stoma will usually protrude one-half inch to one inch above the abdominal wall.

There are two types of ileostomies, a loop ileostomy and an end ileostomy. Your surgeon will decide which one will function best for you.



Loop ileostomy

A loop ileostomy is formed by bringing a loop of ileum through the abdominal wall (figure 6). The loop is partially divided to create one stoma with two openings (figure 7). One opening expels stool and the other expels small amounts of mucus. You may not be able to see both of the openings (figure 8).

**End ileostomy**

In an end ileostomy, the small bowel is divided; the top portion is brought out through the abdominal wall to form a stoma. The other portion is stitched shut and attached under the abdominal wall below the stoma (figure 9).

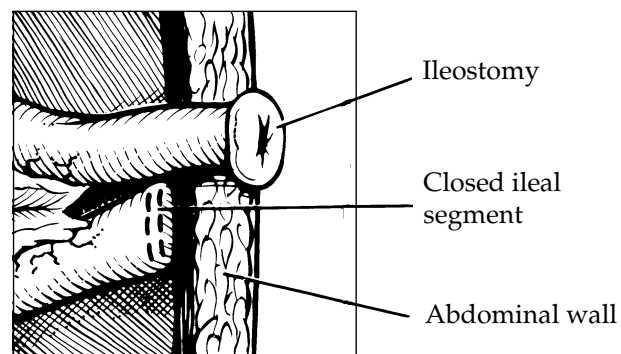


Figure 9.

Postoperative care

After surgery you will go to the Post Anesthesia Care Unit (PACU) until you are awake. Once you are awake and your blood pressure, pulse, and respiration are stable, you will be moved to your room. When you arrive in your room, the nurse will check your progress.

You will experience some pain and discomfort after surgery. Pain medications are available to make you more comfortable. Your discomfort will gradually decrease as you recover. Coughing and deep breathing are important to keep your lungs clear. The nurse will help you walk the day after surgery. Walking is important for getting your intestine to function properly. You will increase the length and time of walking as your strength returns.

You may have several tubes in place after surgery (figure 10).

- An intravenous (IV) line is used to give you fluid, medication, and nutrition until you are able to take these by mouth.
- A nasogastric (NG) tube may be placed through your nose into your stomach. This tube empties your stomach of its contents until your intestine begins to work on its own. You may notice some nose irritation or a sore throat while the NG tube is in place. When gas and stool begin to move through the ileostomy, the NG tube will be removed. The first food you will have by mouth will be clear liquids. Gradually, you will progress to solid foods.
- One or two wound drains may be inserted. These drains remove excess fluid from the surgical areas. They will be removed once drainage decreases.
- A urinary catheter is placed into your bladder to drain urine. The catheter is usually removed in two to three days.

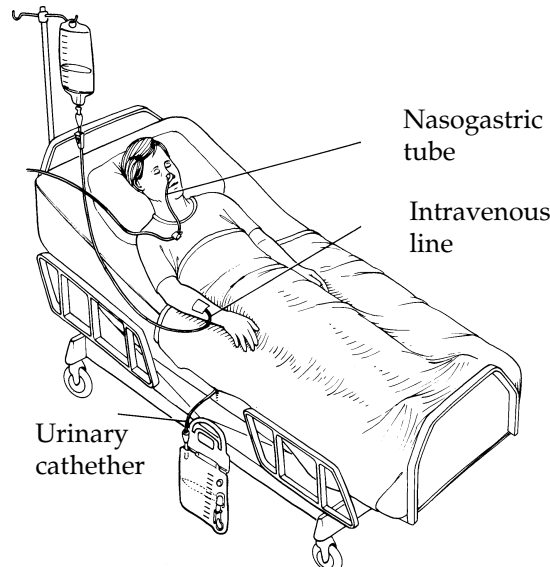


Figure 10.

Along with your tubes and drains, you will also have an appliance which has been placed over your ileostomy.

The ET nurse and the nurse caring for you will teach you how to care for your ileostomy. You will assist with emptying and changing your appliance as part of the education to become independent in ileostomy management. Your confidence will increase with practice. It is helpful to have a family member or friend present for the ileostomy teaching and practice sessions.

Managing Your Temporary Ileostomy

People who have new ileostomies may be concerned about how they will manage. You will learn how to care for your ileostomy while in the hospital and have an opportunity to practice the skills you learn. Over time, you will become more confident in managing your ileostomy.

The ileostomy, unlike the anus, does not have a sphincter muscle to control the stool output. An appliance needs to be worn at all times.

When bowel function first returns, frequency and consistency of the stool from the ileostomy is unpredictable. Stool output may become more predictable as you begin to eat solid food at regular intervals.

Following surgery, your ileostomy appliance will be changed every two to three days. The nurse and ET nurse will work with you throughout your stay in the hospital to help you learn to manage your ileostomy.

The stoma

When you look at your stoma, you will see that it is red, swollen, and moist. The swelling will decrease and your stoma will become smaller over the next six to eight weeks. You may notice that your stoma moves. This movement occurs throughout your intestinal tract.

It is normal to see a small amount of bleeding from the surface of the stoma or skin edges when cleaning the stoma. This may happen as long as you have your stoma. The bleeding will stop on its own.

There are no nerve endings in the stoma itself. Any discomfort you feel is from the skin edge where the stoma is sutured.

Initially you will be able to see the sutures around your stoma. These will dissolve as your body heals. You may find pieces of suture as you clean your stoma and the skin around it. This is not a cause for concern. It means that healing has occurred and the sutures under your skin have dissolved.

Cleaning the skin

You should clean the skin around your stoma as you would any part of your body. It is important that the skin be clean and dry before putting on an appliance. Use warm water and a cloth to cleanse the skin thoroughly. Soap is usually not needed. However, if you choose to use soap, it is important to wash off all soap film before applying the pouch.

Appliances

A variety of appliances are available for use with ileostomies. All are odor-proof and have various features. Your ET nurse will help you decide what type of appliance is best for you. You will be given written instructions on the use of your particular appliance.

The appliance will have a skin barrier which protects your skin. The opening in the appliance should fit closely around the edge of your stoma, so stool will not come in contact with your skin. Stool in contact with the skin over a period of time will cause breakdown of healthy skin.

You will be taught to empty your appliance from the bottom while sitting on the toilet. The appliance can be emptied as often as necessary and rinsed with water as needed. Most people find it best to empty the appliance when it is about one-third full. This keeps the appliance from showing under your clothing. It also avoids excess weight in the appliance which may loosen the seal. You may find that most of your output will occur one to two hours after eating a meal.

Gas

When bowel function returns, gas and stool will be expelled from the ileostomy. Because of the bowel prep, surgery, and anesthesia, you will experience more gas following surgery. As you recover and return to your normal activities and diet, the amount of gas may decrease.

The gas may make noise as it passes from the ileostomy. This noise will be less noticeable when you are in regular clothing with more covering over the stoma. Chewing gum, drinking through a straw, or any other activity where you swallow a lot of air may cause more gas. You may also find certain foods cause more gas. (Please refer to the Nutritional guidelines on page 15.) Over-the-counter medications containing simethicone are available to help control gas.

Odor control

Odor is a common concern for people with ileostomies. Although the appliances are odor-proof, there will be some odor when you empty your appliance. You may find that certain foods cause more odor in your stool. (Refer to the Nutritional guidelines on page 16.) If the odor is bothersome, there are a variety of deodorants to use in the appliance or some which you may take by mouth. Information about deodorants will be discussed with you.

Consistency and frequency

When your ileostomy begins to function, the stool is liquid. The stool thickens to a pasty consistency as the small bowel takes over more absorption of water. This was a function of the large bowel before surgery. Other factors such as diet, emotional status and medications may have an effect on the consistency of your stool.

Nutritional guidelines

Your body's ability to digest food has not been affected by having an ileostomy. There is no long-term ileostomy diet. Gradually, you will be able to determine your own response to food. For the first six weeks after surgery, a diet low in roughage is advised. The small intestine is more prone to blockage during this time. The following guidelines may be helpful in managing your ileostomy.

General guidelines	Reason
1. Eat meals at regular times, three or more times daily.	1. Skipping meals may cause more gas production.
2. Eat slowly, and chew all foods thoroughly.	2. Chewing assists the digestive process and reduces the chance of food blockages.
3. During the first six weeks, limit foods which may produce excessive gas, loose stools, or which may be incompletely digested.	3. This will decrease the chance for food blockage and reduce the amount of gas and stool.
4. Include foods in your diet that may help thicken the stool.	4. This helps the food move more slowly through the small intestine. It also allows better absorption of nutrients and water.
5. Drink adequate fluids (eight to ten glasses per day). Sip fluids slowly throughout the day.	5. Drinking fluids will help replace fluids lost through your ileostomy.
6. Try new foods one at a time.	6. This allows you to determine food tolerance.
7. Monitor how the foods you eat affect the consistency of your stool.	7. This will help you make food choices to manage stool consistency while you have your ileostomy and after the ileostomy is closed.
8. Avoid eating large meals during the first six weeks after surgery	8. This will decrease the chance of food blockage.
9. Eat tender cuts of meat, and chew well.	9. This will decrease the chance of food blockage.

Some foods have certain effects on the bowel. The following list may help you select foods to eat or to avoid. Individual tolerance to foods will vary, so use this list as an initial guide.

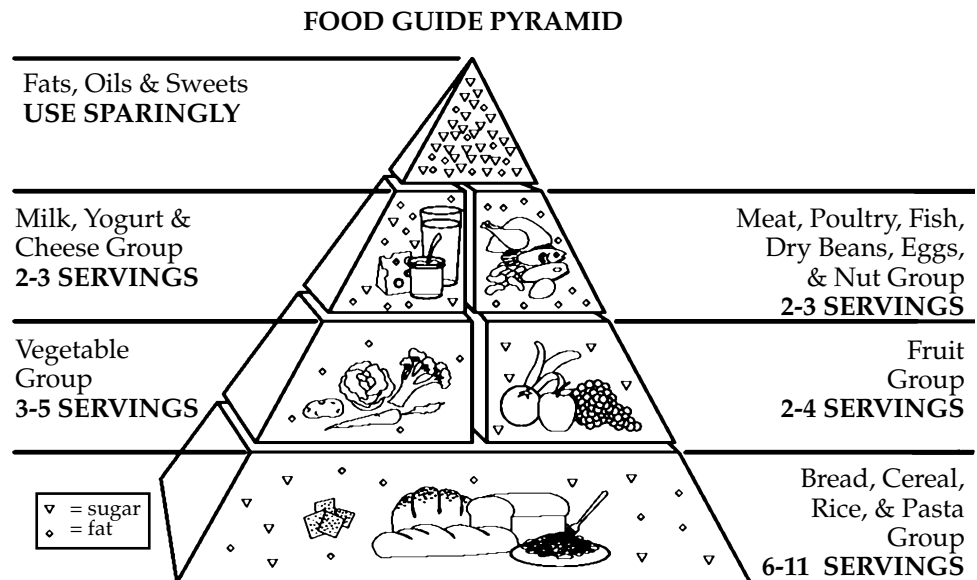
Gas-forming foods Beans Beer Broccoli Brussels sprouts Cabbage Carbonated beverages Cauliflower Onions	Foods that are not digested completely. Avoid for six weeks after surgery. Celery Corn Green beans Lettuce Nuts Peas Pineapple Raw vegetables Spinach Skins of fruits and vegetables Coconut Dried fruit Green peppers Mushrooms Olives Pickles Popcorn Seeds
Stool-thickening foods Applesauce Bananas Breads Cheeses Pasta, rice, potato (without skin) Peanut butter (creamy) Tapioca	Stool-thinning foods Alcoholic beverages Grape juice Heavily spiced foods Prune juice
Foods that reduce odor Buttermilk Yogurt Reminders: <ul style="list-style-type: none"> • Eating more than one food from within a list may intensify the effect on the bowel. • Do not eliminate a food from your diet without trying it several times. • The stool may appear red after eating beets. Do not mistake it for blood. Broccoli, asparagus and spinach may darken the stool. • Check with your physician or dietitian about the need for vitamins and/or mineral supplements. 	Foods that cause odor Asparagus Eggs Fish Garlic Onions

A balanced diet

Good nutrition is essential to maintaining your health. A well-balanced diet gives your body the nutrients it needs for energy, maintaining body cells and regulating body processes. These nutrients include protein, carbohydrates, fats, vitamins, minerals and water. The following suggestions may help you to eat more comfortably and maintain or improve your health.

Guidelines for food choices

A well-balanced diet should contain a variety of foods because no single food supplies all of the vital nutrients. Foods in the meat, milk, grain, vegetable and fruit groups provide the body with the majority of essential nutrients. Combination foods, such as casseroles and pizza, can be counted as servings from the food groups from which they are made. To get the nutrients you need daily, be sure to eat at least the suggested number of servings from each of the following food groups.



Foods such as fats, oils, desserts contain few nutrients. They will provide only calories and should be used to compliment other foods in your diet.

Anal discharge

Within a few days after your surgery, you may have some discharge from the anus. At first the discharge will be a dark brown or reddish-black color as old blood from the surgical procedure is passed. Gradually the drainage becomes clear or yellowish-gray in color and has a mucus consistency. This discharge will continue until the ileostomy is closed.

You may not have control of the drainage at first and notice leakage. As you recover, you will gain control of the mucus discharge. Most patients find it helpful to sit on the toilet to urinate, as the anal sphincter may relax and you may pass mucus at the same time. You may feel a sensation to have a bowel movement as mucus accumulates in the pouch. Sit on the toilet and expel the discharge as if it were stool. If you have problems with anal skin irritation due to discharge, refer to Anal skin care on page 31.

It is normal for the mucus to be pink-tinged or have small streaks of bright red blood in it. You should contact your surgeon if you pass large amounts of bright red blood through the anus.

Anal sphincter exercise

While you have your ileostomy, you are not using the anal sphincter muscle to hold back stool. During this time, anal sphincter exercises should be done to maintain the strength of these muscles.

Begin the following exercises within the first week after you leave the hospital and continue doing them until you return for stage 2 surgery.

- Tighten the anus as you would when trying to hold back a bowel movement.
- Hold for a count of 10, relax, and repeat five or six times.
- Repeat this exercise four times daily.

Living With a Temporary Ileostomy

Resuming activities

After having an ileostomy, many people wonder how they will return to a normal lifestyle. Some restrictions are necessary for the next six to eight weeks. Avoid lifting, pushing or pulling anything that weighs more than 10 pounds. Guidelines to resume driving a vehicle will be discussed with you.

Over the next few weeks, your strength and endurance, as well as skills in managing your ileostomy, will increase. This will make you feel more ready to return to work and your normal leisure-time activities.

Physical activities and sports

In order to maintain good health and a stable and healthy weight, everyone, including the person with an ileostomy, needs to exercise regularly. Even simple exercises help firm muscles and keep the digestive tract working properly. The level and type of exercise you choose may depend on the level and type you were comfortable with before surgery.

One of the best activities at home following surgery is walking, whether indoors or outdoors. Swimming is also very good. In the first months after surgery, you may only be able to take short walks or swim one or two laps instead of your usual distance. Any type of activity you choose speeds the healing process. Your ileostomy does not need to restrict your activity.

Swimming

People with ileostomies wonder how an appliance can be worn with a swimming suit and not be noticed. The appliance lies nearly flat to your body. Swimsuits with a pattern or design in the fabric may be more concealing. Some women wear a lightweight panty girdle under their suits. A one-piece suit with Spandex™ in the fabric may keep the appliance closer to the body. Men may wear brief-style underwear under their swimsuits. Some men may choose to wear tank tops with their suits if the stoma is located above the belt line.

There are things you can do to provide added security with the appliance during swimming. You may wish to apply waterproof tape in a picture frame method around the outer edges of your appliance (figure 11). Adding a non-elastic belt may also be helpful.

Wearing a swimsuit over your appliance while sitting in a bathtub of water may help build your confidence for swimming.

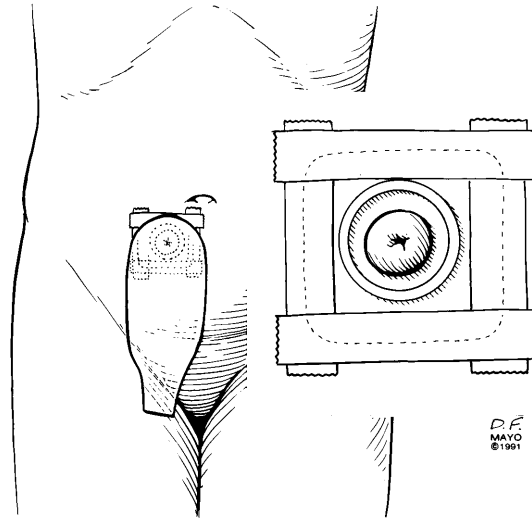


Figure 11.

Bathing

You may bathe or shower with or without the appliance over the ileostomy. On the day you are going to change your appliance, you may wish to shower or bathe without it. Water will not go into the stoma. It may be best to bathe or shower at a time of day when the stoma is less active, such as first thing in the morning.

Soap will not harm your stoma, but it is necessary to rinse off any soap film from the skin around your ileostomy when you finish bathing. Soap film sealed under the appliance may cause skin irritation. Avoid using bath oil because it may prevent the seal from adhering to your skin. Soaps containing a large amount of oil or lanolin may also cause this to occur.

A tub bath for ten minutes or less generally does not cause the appliance to loosen. If you take long, very warm baths, the appliance may loosen and need changing more often. To prevent this, keep the level of the water below the adhesive appliance seal. You may wish to add waterproof tape in a picture frame method on the wafer (figure 11).

Avoid letting the full force of the shower spray directly on your stoma or appliance. This will prevent injury to the stoma or loosening of the appliance. Dry the tape and appliance well after you bathe or shower. A hair dryer may be helpful for this procedure.

Clothing

Your wardrobe from before surgery will usually continue to be your wardrobe after surgery. However, individual body contour determines the placement of the stoma, and for some people, clothing adjustments may be necessary.

Going back to work/school

After recovering from surgery, people have different levels of energy and strength to meet the physical demands of a job or school.

Some people find it helpful to start back to work or school part days and gradually build up to full days. If your job involves heavy lifting, you may need to start back to work more slowly. Discuss returning to work and school activities with your physician.

One of the concerns people have about returning to work or school is who to tell about their ileostomy. You need only share as much information about your operation as you feel comfortable discussing.

Sexuality

The first few weeks following any operation, your desire for sexual activity may be diminished. You may have discomfort for the first four to six weeks as your incision heals. Most physicians recommend waiting four to six weeks before resuming sexual activity. During this time, talking, hugging, and just being close may be most comfortable. Do not assume that your partner will no longer care for you sexually because of your surgery. Be patient and talk about the feelings you and your partner have.

Being nervous about resuming sexual activity is natural, but by relaxing a bit, both partners can enjoy sharing. Some lovemaking positions may be more comfortable than others. It helps to know and assure your partner that the stoma will not get hurt during intimacy.

Keep a good sense of humor to help you through the unexpected happenings such as a noisy stoma. People without ileostomies also pass gas or belch at unexpected times.

The following suggestions may be helpful.

- Have a clean, empty, secure appliance.
- Use a pouch cover.
- Tuck the appliance into a belt or cummerbund.
- Wear clothing that makes you feel attractive.
- Wear an opaque pouch.

Women who have had surgery in the rectal area may experience some changes in sexual function. Vaginal intercourse may be uncomfortable at first. However, the discomfort usually decreases in time as the rectal area heals. A different position or vaginal lubrication, as well as gentleness and patience, may help ease the discomfort. If you have concerns, it is important to contact your physician or ET nurse.

Men who have had surgery in the rectal area may experience some changes in sexual function. The inability to achieve or maintain an erection may be a temporary problem.

Some discomfort in the anal area is not uncommon after surgery. This can affect the ability to have an erection. Fatigue, fear, and anxiety may also be factors. Another change in sexual function that may occur in a small percentage of men is retrograde ejaculation. This is ejaculation with discharge of the semen into the bladder. The semen will then be passed with the urine. If, after several months, you continue to have questions or concerns, contact your physician or ET nurse.

Travel

Having an ileostomy should not prevent you from traveling. You may want to wait until you have recovered from surgery and are feeling comfortable with your stoma. To gain confidence, you may wish to try a short trip first. Continue to wear a seat belt.

When traveling, carry your ostomy supplies with you. Supplies should not be left in a hot or cold car for long periods of time. If you are traveling by plane, take supplies in a carry-on bag. Take along a list of retailers so that you can obtain needed supplies on your trip.

As with anyone who travels, eating new foods may cause you temporary intestinal upsets. Check with your physician before traveling for suggestions on managing diarrhea.

No matter what your destination, plan ahead, use the resources available to you, and have a good time.

**Suggestions for
ostomy
management**

The following suggestions may help you as you manage your ileostomy.

- Toilet paper spread on the top of the water in the toilet bowl will prevent splashing when emptying the pouch.
- The best time to change your appliance is before breakfast. Your ileostomy is less likely to be active at this time.
- A makeup mirror on a stand or a full-length mirror will give you a better view of your stoma when examining it and applying the pouch.
- You will have fewer problems with wrinkling of the skin around your stoma if you apply your pouch while standing.
- Carry an extra appliance with you in case of an emergency.
- During warm, humid weather, wear a pouch cover between the pouch and your skin to prevent a rash from perspiration.
- When traveling by air, make sure the pouch is empty before boarding. Gas in the pouch will expand at high altitude.
- Some people have to get up once or twice during the night to empty their appliance. It is helpful to avoid eating late in the evening (two hours before bedtime) to reduce the need to get up during the night.

Medications

Having an ileostomy may affect the absorption and effectiveness of medications. You should use medications that are easily dissolved and absorbed such as liquids, gelatin capsules, uncoated or chewable tablets. Avoid time-released or enteric-coated medications because they may be only partially absorbed. Discuss the use of these medications with your pharmacist or physician.

Certain types of medications which have specific effects on the person with an ileostomy include:

Antibiotics

Antibiotics can cause a change in the normal bacteria of the digestive tract. Some antibiotics cause diarrhea. Diarrhea can lead to dehydration and electrolyte losses in a person with an ileostomy. Consult your physician if diarrhea lasts longer than 24 hours.

Alteration of the normal bacteria may also result in a yeast infection affecting the skin around the stoma. This infection is treated with medications prescribed by your physician. [Refer to Skin Care Instructions (MC1992-08)].

Diuretics

Diuretics are medications used to help the body rid itself of excess salt and water. They are most commonly used to treat high blood pressure and congestive heart failure. Diuretics need to be used carefully by a person with an ileostomy because they may cause electrolyte imbalance and dehydration. If diuretics are used, electrolyte supplements may be necessary.

Potassium supplements

Potassium supplements may be needed to help maintain electrolyte balance, especially if there is high ileostomy output or diarrhea. Potassium is available in liquid, powder, capsules, tablets, and sustained-release tablets. Since the liquid and powder forms may cause diarrhea, divide the dosage into smaller amounts to decrease the potential for this. Sustained-release tablets may be only partially absorbed by the person with an ileostomy. Certain food can also be used to replace potassium. (See Sources of potassium on page 28.)

Laxatives

Laxatives should not be used because they can cause dehydration and electrolyte imbalance.

Other

Certain medications can cause a discoloration of the stool. If you notice a change in stool color, consult your physician or pharmacist to determine if this is related to the medication you are taking.

Also watch for signs that your medication is not being absorbed. Check your stool for whole tablets or capsules when new medications are started. Contact your physician, pharmacist, or ET nurse if you have questions.

Possible Complications

Food blockage

Food blockage is a potential problem for a person with an ileostomy. Incompletely digested foods are the most common cause. Symptoms of a food blockage may include:

- Abdominal cramping
- Bloating or distended abdomen
- Increased odor to the stool
- Nausea and vomiting
- Swelling of the stoma
- Watery diarrhea or no ileostomy output

Many food blockages will resolve by themselves. Getting in a knee-chest position, taking a hot shower or bath, or drinking a warm liquid may help. You can also gently massage your abdomen, especially around the stoma.

If the blockage does not resolve on its own in four to six hours, contact your physician or ET nurse. The usual method of treating the food blockage is an ileostomy lavage done by the physician. An ileostomy lavage is an irrigation of the ileostomy with a small amount of saline until the blockage breaks up and is passed.

Food blockage may also cause dehydration because of the watery diarrhea and vomiting that can occur. (See the following section for more information on high ileostomy output and dehydration.)

High ileostomy output (diarrhea) and dehydration

One function of the colon is to absorb water and electrolytes, such as potassium and sodium, from digested food. When the colon has been removed, it takes time for the small intestine to adapt. Normal output from the small intestine is about one quart (1000 cc.) of stool per day. However, after surgery, the output from the small intestine may increase. This may result in stool output every one to two hours instead of five to six times a day. Output greater than one quart (1000 cc.) of liquid stool in 24 hours can lead to dehydration.

Dehydration occurs when you have increased stool output but do not adequately replace the fluids lost. Signs of dehydration include:

- Feeling thirsty
- Dry skin and mouth
- Feeling lightheaded when sitting or standing
- Decreased amount of urine that is darker in color
- Feeling tired

If you experience signs of dehydration, increase your fluid intake to replace what is lost through stool. Typically, drinking eight to 10 eight-ounce glasses of fluids a day will prevent dehydration. However, drinking more fluids than that and/or drinking a large amount of fluid at one time can result in fluids moving quickly through the bowel, which leads to higher output and more liquid stools. Drinking smaller amounts of fluid frequently throughout the day allows the small intestine to gradually adapt to the loss of the colon and reabsorb more water over time.

If you have high stool output, you may need to increase your water intake and slow down the passage of fluids and foods through your intestine. Slowing down the passage of food and fluids allows more time for your bowel to absorb water and nutrients. To slow down the bowel action, eat stool-thickening foods. See page 16 for a list of stool-thickening foods. Thickening the stool consistency slows the transit time and also helps decrease the amount of output. During this time, avoid foods that thin the stool. (See Nutritional guidelines on page 16.) Other ways to thicken stool are to limit your fluids while eating a meal, and to drink smaller amounts of fluids more frequently between meals.

If your stool output remains high after trying these dietary suggestions, you may find it helpful to use medication to help manage the frequency and consistency of stool. Antidiarrheal medications, such as Lomotil™ and Imodium™, taken about 30 minutes before meals, decrease the number of stools. Bulk-forming medications, such as Metamucil™ and Citrucel™, thicken stool. Usual dosage of bulk-forming medication is one teaspoon in four-ounces of liquid twice-a-day after meals. Discuss the proper use of these medications with your physician or ET nurse. The use and effectiveness vary from person to person. You may find that your need for these medications changes over time. If high stool output is accompanied by nausea or vomiting, you may have a blockage, and therefore, these medications should not be taken.

If your ileostomy output exceeds one quart a day, you also may need to replace the electrolytes, sodium and potassium. The following are some sources of sodium and potassium.

Sources of sodium

- Broth
- Cheese
- Electrolyte drinks
- Processed meats
- Salt used in food preparation

Sources of potassium

- Bananas
- Cantalope
- Electrolyte drinks
- Honeydew melon
- Oranges
- Potatoes
- Squash
- Sweet potatoes
- Tomatoes
- Yams
- Yogurt

If you have high stool output, maintain contact with your physician for monitoring of your fluid and electrolyte status.

Stage 2 — The Second Surgery

Preoperative preparation

When the internal pouch constructed during your first surgery has healed, you will have a second operation to close the temporary ileostomy. This allows the stool to pass into the internal pouch and be expelled through the anus. In preparation for surgery, you will have any or all of the following:

- A pouchogram — an X-ray of the internal pouch using contrast medium.
- An anorectal manometry — a test used to measure anal-sphincter-muscle strength.
- Endoscopy exam of the internal pouch — a scope is passed through the anus into the pouch to view the inside of the internal pouch.
- Preparation of your bowel for surgery which may include taking antibiotics and drinking a special solution to clean stool from the intestine.

The surgery

You will be admitted to the hospital the morning of surgery. The operation can usually be done without having to enter the abdomen through your previous incision. Instead, an incision is made around the temporary ileostomy to free the stoma from where it is sutured to the abdominal wall (figure 12). The surgeon closes the temporary ileostomy by connecting the two ends of small intestine and places it back inside the abdomen (figure 13). The skin is sutured shut leaving a small horizontal scar (figure 14).

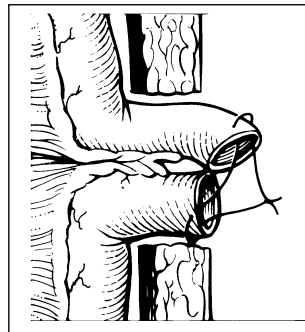


Figure 12.

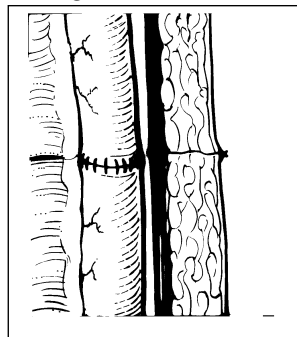


Figure 13.

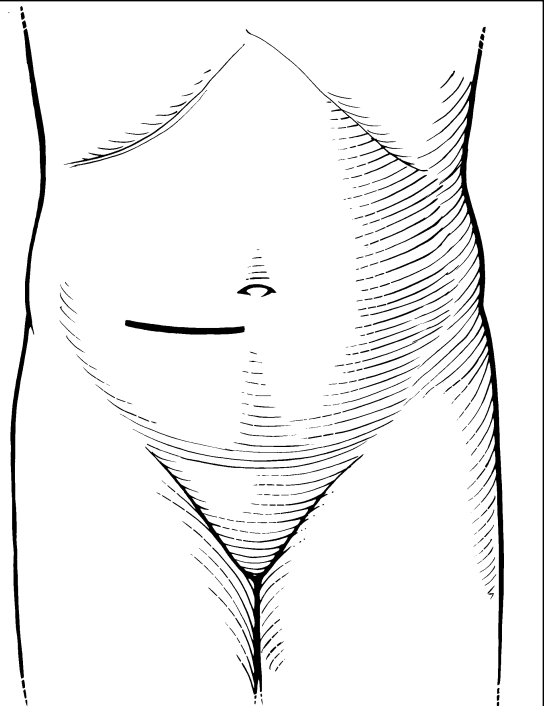


Figure 14.

Adaptation of the internal pouch

At first the capacity of your internal pouch is small, and you will have frequent stools, approximately 10 to 20 daily. Gradually, as your internal pouch enlarges its capacity and your small intestine becomes more efficient at absorbing fluid, the number of stools will decrease.

Some patients experience leakage of mucus and stool at night and occasionally during the day. During this time, you may find an absorbent gauze dressing helpful. Your ET nurse will tell you how to apply the dressing. You will have less leakage as the internal pouch enlarges and your anal muscles strengthen. When you are able, try to hold back on the urge to have a bowel movement. This will help enlarge the internal pouch.

Initially, you may not be able to tell if you need to have a bowel movement or pass gas. It is helpful to avoid gas-forming foods until sensation improves and pouch capacity increases. Gradually, however, you will be able to distinguish between the two just as you could before your ileal pouch-anal anastomosis.

By the time you are ready to leave the hospital, you may be having eight to 12 stools a day. After six months to a year, your internal pouch capacity will have increased, and you may have five to six bowel movements within a 24-hour period.

Living With Your Ileal Pouch-Anal Anastomosis

Anal skin care

It is important to protect the skin around the anus from enzymes in the stool. Do the following preventive skin care steps after each bowel movement.

- Wash the area with warm water.
- Thoroughly pat dry the skin or use a blow dryer to dry the area.
- Apply a moisture-barrier ointment, such as Vaseline™ Constant Care moisture barrier ointment or Desitin™ Daily Care ointment.
- Use absorbent dressings, such as fluff gauze or ARD™ dressing. Toilet tissue or facial tissue are not absorbent and may be irritating to skin.

Additional suggestions:

- Taking a sitz bath one to two times a day can be soothing if the skin becomes tender.
- The area that becomes sore may be the edge of the skin where the anus ends and the skin begins. Be sure to apply moisture barrier ointment to this area.
- Avoid gas-producing food initially as this may help decrease the number of trips to the bathroom, since it is difficult at first to distinguish between gas and stool.
- Eat stool-thickening foods as it is usually easier to hold thicker stool longer than watery stool.
- Avoid eating just before bedtime to reduce leakage and frequent stools at night.

As you gain control and have less frequent stools, you may not need to do this procedure. Restart the anal skin care procedure any time the skin is irritated or you are having more frequent stools. If you have questions or continue to have problems with skin around your anus, contact your ET nurse.

Diet and fluids

Diet is one factor that affects the consistency and frequency of stools. The goal is to have fewer stools with a thicker consistency. As you recall with your ileostomy, certain foods affect the consistency of your stool. This information may be helpful in managing the consistency of stool after closure of the ileostomy. During the first four to six weeks, avoid incompletely digested foods, gas-forming foods, and stool-thinning foods. (Refer to Nutritional guidelines on page 15.) Add new foods to your diet one at a time.

Individual tolerance and effects of food on the intestine will vary. You will learn to adjust your diet in order to manage bowel function. To decrease bowel movements at night, you may find it best to eat a larger meal at noon and a lighter meal early in the evening. If you have loose,

frequent bowel movements following meals, try to avoid drinking fluids at mealtimes.

Continue to watch for signs of dehydration. The potential for dehydration decreases over time as the internal pouch adapts. (Refer to High ileostomy output and dehydration on page 26.)

Medications

Your physician may recommend medications to help you manage the frequency and consistency of your stool. Antidiarrheal medications, such as Lomotil™ and Imodium™, decrease the number of stools. Bulk-forming medications, such as Metamucil™ and Citrucel™, thicken stool.

Discuss the proper use of these medications with your physician or ET nurse. The use and effectiveness vary from person to person. You may find that your need for these medications changes over time. (Refer to Medications on page 24 for information about other medications.)

Activity

Limit certain activities for the first four to six weeks as you recover from surgery. Do not lift or push anything that weighs more than 10 pounds. Your physician or nurse will discuss when you can resume driving a vehicle. Other than these restrictions, you can return to your normal activities as your strength permits. This includes physical activity and sports, work, travel and sexual activity. Having an ileal pouch-anal anastomosis usually does not affect your ability to become pregnant or have a normal pregnancy. Discuss any concerns you may have about pregnancy with your physician.

Complications

Pouchitis

Pouchitis is an inflammation of the lining of the internal pouch. It is usually caused by an overgrowth of bacteria. The symptoms of pouchitis may include:

- Increase in frequency of bowel movements
- Cramping
- Urgent bowel movements
- Blood in stool
- Flu-like symptoms
- Fever

Your physician may want to look at the inside of the internal pouch using a proctoscope to assist in diagnosing pouchitis. The goal of treatment for pouchitis is to decrease bacteria. This is often done by using antibiotics. Your physician may also recommend irrigation of the internal pouch. If you are instructed to irrigate the internal pouch, you will be given an instruction sheet about this procedure.

Stricture

A stricture is a narrowed area where the internal pouch is sutured to the anus. A stricture is caused by the formation of excess scar tissue after surgery. The symptoms of a stricture include:

- A feeling of incomplete emptying of the bowel
- Frequent bowel movements
- Urgent bowel movements
- A decreased amount of stool passed at one time

Your physician will be able to diagnose a stricture by inserting a finger into the anus or by performing an endoscopic exam. If you are instructed to dilate the stricture, you will be given an instruction sheet about this procedure.

Resources

Resource address list	A current resource address list will be provided with this booklet.
Follow up with ET nurse	It is helpful to maintain contact with an ET nurse when you go home from the hospital. After the first surgery, the ET nurse can be a valuable resource for any questions regarding ostomy management. After the second surgery, as your body adjusts to your new procedure, your ET nurse is available to answer questions about skin care and discuss stool frequency and changes you are experiencing.
Supplies	Ostomy and anal skin care supplies are available at ostomy supply centers, some pharmacies, surgical supply houses, and through mail-order companies. Reimbursement for ostomy supplies may be available from a variety of sources. (See the following section for further information.)
Support organizations	<p><i>United Ostomy Association (UOA)</i></p> <p>The first local ostomy association was founded in 1949. The national organization, United Ostomy Association, was organized in 1962.</p> <p>There are hundreds of local ostomy groups; most of them are affiliated with the national organization. Before you are discharged from the hospital, you will be given contact information to locate an ostomy group near your home.</p> <p>An ostomy group usually meets regularly. Membership consists of people with ostomies, but meetings can also be attended by family members, friends, physicians, nurses and ET nurses. The meeting is a time for the exchange of ideas and for support from others. New developments in ostomy care are discussed, new products are shown, guest speakers are invited and a social time follows the meeting.</p> <p>Some ostomy groups have an ostomy visitor program. In this program, members of the group who have had ostomies for a period of time visit patients in the hospital with new ostomies. Ostomy visitors undergo special training.</p> <p>The United Ostomy Association publishes educational literature and the "Ostomy Quarterly" magazine, which is mailed to all members. It also holds an annual national conference and regional meetings. For additional information write to the United Ostomy Association, Inc., or visit their Web site at www.uoa.org.</p>

Crohn's and Colitis Foundation of America (CCFA)

The CCFA is an organization dedicated to finding the cause and cure of Crohn's disease and ulcerative colitis through research. Chapters are located in various states. Meetings are open to the public. Informational pamphlets on inflammatory bowel disease are available. For additional information write to Crohn's and Colitis Foundation of America, or visit their Web site at www.ccfa.org.

National Easter Seal Society

The National Easter Seal Society is a tax-funded agency that helps provide economic assistance for people under 21 years of age with ostomies. Coverage may vary from partial to full reimbursement for the cost of supplies, visiting nurses, doctors, clinics and outpatient visits. For additional information, write to the National Easter Seal Society.

Private Health Insurance

Most subscribers of major-medical insurance or Health Maintenance Organization (HMO) plans are eligible for some financial benefits for ostomy supply costs. There are usually no specific lists of allowable items.

Subscribers may have the option of paying for their supplies and receiving direct reimbursement or having the insurance company make payment directly to the supplier.

Individuals should review their insurance policies or contact their insurance agent to determine the coverage of the policy.

Medicaid

Most states have some provisions for the cost of ostomy supplies through medical assistance programs. Eligibility and services vary from state to state and may change from year to year. Contact your local representative for this information.

Veterans Administration (VA)

Veterans may be eligible to receive ostomy supplies from the regional VA hospitals and clinics. The local VA office should be contacted if there is a possibility an individual may be eligible.

Word List

Anal Sphincter - Circular muscles that, when relaxed, allow waste materials to pass through the anal opening and, when contracted, close the opening.

Anus - The opening at the end of the bowel through which bowel movements pass.

Appliance - A collecting device worn by people with ostomies — usually a specially made pouch or bag attached to the body to collect stool.

Bowel - The small or large intestine.

Bowel Prep - The process of preparing the bowel for surgery. May include enemas, drinking a special saline solution, liquid diet and antibiotics.

Colon - The large intestine which stores digestive material and absorbs water.

Contrast Medium - Preparation used for X-ray examinations to view specific body organs or structures that may otherwise be difficult to see.

Dehydration - Excessive loss of water from the body.

Diarrhea - Frequent passage of loose, watery stool.

Dysfunction - Abnormal, impaired or incomplete function.

Electrolytes - Chemicals in body fluids and cells that are necessary to maintain some body functions.

Enterostomal Therapy Nurse (ET Nurse) - A person who has had special training in teaching and caring for people who have ostomies.

Enzymes - Proteins found in digestive juices that cause food substances to break down into simpler forms to allow absorption.

Ileostomy - A surgically created opening from the small intestine to the abdominal surface for the passage of stool.

Incision - The opening a surgeon makes into body tissue using a scalpel.

Intravenous (IV) - Into a vein.

Nutrients - Substances supplied by food to nourish the body.

Ostomy - A surgical opening in which a portion of the bowel is brought to the abdominal surface. A generic word for all the types of ostomies (ileostomy, colostomy, urostomy).

Peristalsis - Progressive waves of motion which occur regularly to push stool through the intestine.

Peristomal skin - Skin surface around the stoma.

Postoperative - After surgery.

Pouch - A collecting device worn by persons with ostomies — usually a specially made pouch or bag attached to the body to collect stool (also called an “appliance”).

Rectum - The storage area at the end of the large intestine. Stool is stored in the rectum until it is expelled through the anus.

Residue - Something remaining or left behind.

Skin Barrier - A product applied to the skin around an ileostomy to protect the skin.

Stoma - The opening created by ostomy surgery which is visible on the abdomen.

Suture - Surgical stitching.

Urethra - A tube which carries urine from the bladder to outside the body.

Vagina - The birth canal that leads from the uterus to an opening located in front of the anus.

Wafer - A small disk of adhesive material used to protect the skin around an ileostomy.

Notes



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