COLOSTOMY CARE

INTRODUCTION

A colostomy is defined as the attachment of a surgically created opening in the colon, to a surgically created opening on the surface of the abdomen. The opening in the colon is called the stoma, and the stoma creates a passage for feces that avoids the lower colon and the rectum. Instead of evacuating the bowels through the gastrointestinal tract and the rectum, feces are collected in an appliance that is fitted over the stoma.

The word colostomy is formed by the prefix colo, referring to the colon; and the suffix stomy, which means making an artificial opening. This type of surgical procedure is called an ostomy. There are many different types of ostomies that can be created, and they are named after the part of the body that is involved: for example, an ileostomy connects the part of the small bowel called the ileum to the abdominal wall and a urostomy connects the urinary bladder to the abdominal wall.

Ostomies are commonly performed surgical procedures, and the colostomy is perhaps the most common type that is done. Depending on the patient’s clinical condition, colostomies can be permanent or temporary and there are several varieties of colostomies that can be performed. A colostomy is not very complicated to manage and many patients who have one can provide self-care. However, some patients, because of age, disability, or other limiting factors, cannot do routine colostomy care and this is an area of patient management that
certified nursing assistants (CNAs) and Home Health Aides (HHAs) are often required to perform. Colostomy care is considered to be a basic skill that all CNAs and HHAs should know.

OBJECTIVES

After completing this module, the learner will be able to:

1. Identify the primary function of the colon.
2. Identify the correct definition of a colostomy.
3. Identify the two basic reasons for performing a colostomy.
4. Identify the two basic types of colostomy.
5. Identify the correct definition of a stoma
6. Identify complications associated with a colostomy.
7. Identify basic CNA/HHA responsibilities of colostomy care.
8. Identify the infection control practices needed when providing colostomy care.
9. Identify a procedure used to establish regular passage of feces.
10. Identify activity and diet concerns of patients who have a colostomy.

ANATOMY AND PHYSIOLOGY OF THE GASTROINTESTINAL TRACT

The gastrointestinal tract begins with the mouth and the oral cavity and ends with the anus. The two basic functions of the gastrointestinal tract are: 1) intake and absorption of food and fluids, and; 2) elimination of wastes.

The intake of food and fluids is begins in the mouth. Food is chewed and salivary juices begin to break down the food into useable nutrients. The process
continues with further breakdown and digestion of food in the stomach. After the stomach, the gastrointestinal tract continues with the small bowel. The small bowel is a long, relatively narrow tube and most of the nutrients we eat such as carbohydrates, fats, proteins, minerals vitamins, etc. are absorbed through the small bowel. The small bowel connects with the colon, which is also called the large bowel, and the colon connects with the rectum and the anus. Feces is formed and stored in the colon and expelled from the rectum and anus.

The colon is approximately five feet long. It is located in the abdomen below the navel and above the pubic area, it extends across most of the stomach wall and it is divided into four sections: 1) ascending colon; 2) transverse colon; 3) descending colon, and; 4) sigmoid colon. After food has been broken down by the stomach and after the nutrients and most of the fluids have been absorbed by the small bowel, the remainder of what we eat - and what cannot be digested - passes from the small bowel into the colon. At that point, most of the remaining water is absorbed through the wall of the colon and feces are formed. The primary function of the colon is to form and store feces, and it also absorbs or eliminated water as the needs arise.
COLOSTOMIES
As mentioned in the introduction, a colostomy is the attachment of a surgically created opening on the colon to a surgically created opening on the surface of the abdomen. The opening in the colon is called the stoma, and the stoma and the opening in the abdominal wall to which the stoma is attached are collectively called the colostomy.

Colostomies can be done in two ways. A **loop colostomy** is performed by taking a loop of the colon, making a surgical opening along a point in that loop, and then using sutures to attach that part of the colon to a surgically created opening, or exit point, on the abdominal wall. A **terminal colostomy** or **end colostomy** is performed by completely cutting through the colon, taking the end that has been created by this cut, and then using sutures to attach the resected end of the colon to the surgically created opening, or exit point, on the abdominal wall. In either case, the result is the same; feces are diverted from the lower colon, the rectum, and the anus and emptied through the stoma. Terminal/end colostomies are preferred because loop colostomies are difficult to fit with a bag and they are more likely to prolapse (Note: Prolapse will be discussed later in the module). Some colostomies are temporary and some are permanent.

The primary function of a colostomy is to provide an alternative way of passing feces. Colostomies are performed for the treatment of a wide variety of clinical conditions, but the two **basic** reasons for performing a colostomy are **rest** and **diversion**: some times these are both accomplished by a colostomy.

- Rest: If the colon becomes obstructed, feces cannot pass through and be eliminated. Also, there may be times when the colon is infected or injured
and needs time to rest and heal. A temporary colostomy can be done to allow the feces to be passed while the cause of the obstruction is being corrected. A temporary colostomy can also be done to allow the colon to heal after an injury or to rest while an infection is being treated.

- Diversion: Some times the colon or another part of the gastrointestinal tract is too damaged or diseased to be repaired and a part of it needs to be removed. If the patient needs to have part of the colon permanently removed, perhaps because of cancer in the colon, a colostomy will be performed in order to allow the colon to function and for feces to be eliminated. This type of colostomy is permanent.

Specific medical conditions that may require a colostomy to be performed include:

- Anal cancer
- Chron’s disease
- Colon cancer
- Diverticular disease
- Fecal incontinence
- Rectal cancer

After the colostomy has been performed, feces are eliminated through the stoma. Depending on what part of the colon was used to create the colostomy, the stoma will be located on the right side of the stomach, the upper part of the stomach and near the mid-line, or on the lower left side of the stomach. For example, if the stoma was created from the ascending colon it will be located on the patient’s right side.
The stoma is covered with an appliance. This appliance is a flat, transparent, flexible bag made of plastic. Most are about 5 inches wide and about 8-10 inches long. The appliance has an opening that fits over the stoma and this part of the appliance is attached to the stomach wall by an adhesive. It also has an opening at the opposite end that is used to empty the feces.

COLOSTOMY CARE

Most people who have a colostomy do not have any significant limitations on what they can do. Aside from managing the colostomy, they live life exactly as they did before the procedure was done. Because the feces is passed through the colostomy into an appliance instead of being evacuated through the rectum, someone who has a colostomy should make sure they drink plenty of fluids to avoid being constipated, avoid foods that can cause constipation or diarrhea, avoid foods that can cause gas, and take sensible precautions to protect the stoma from physical harm. The patient must also learn how to care for the stoma and use the colostomy appliances. Apart from those simple requirements, someone who has a colostomy can eat a normal diet and exercise as tolerated within the guidelines provided by their physician or other healthcare provider. Specific issues relating to living with a colostomy will be discussed later in the module.

But although though a colostomy does not put insurmountable limitations on lifestyle, a colostomy does require specific care. The person who has a colostomy is no longer passing feces through the gastrointestinal tract as she/he
did prior to the operation. Instead, the feces is being passed through the stoma and collected in a pouch that is attached to the abdomen. Because of that there are certain considerations and these impact your care of the patient. When you are providing colostomy care for a patient, you need to be familiar with: 1) emptying and changing the bag; 2) irrigation of the colostomy, and; 3) complications associated with colostomies, and; 4) how to assess a patient who has a colostomy.

**Learning Break:** Providing colostomy care does not require you to use sterile technique. However, you should always use standard precautions when you are changing or emptying the appliance, irrigating a colostomy, or performing any other type of patient care.

**Emptying and Changing the Bag**

The feces that are expelled from the stoma are collected by an appliance; this is also often called a bag or a pouch. There are several different types of bags that can be used to collect feces. Depending on where the colostomy is, what type of feces is formed, and how regularly the feces is formed, the bag can have an opening at one end so that it can be emptied when the need arises, or occasionally it can be a disposable bag that is removed and discarded when this is needed. Most patients use a bag that is emptied and re-used and if the patient has a lot of liquid feces that is formed irregularly and unpredictably, a bag that can be emptied is definitely the best choice. The bags are attached to the skin
around the stoma by using an adhesive ring that has a hole that fits over the stoma, and the bag is attached to the ring. The adhesive ring can be a separate piece that is applied independently or it can be a part of the bag.

It is recommended to change or empty the bag when it is about 1/3 to 1/2 full, but of course this recommendation can be adjusted as needed. The weight of a bag that is too full can be distracting to the patient and although it is not likely to happen, a bag that is too full can pull down on the adhesive attachment and become loose. A bag that is too full can also pull on the adhesive and irritate the skin.

Emptying the bag is very easy and is done by following these eight steps.

1. Wash your hands and put on disposable gloves.
2. Open the end of the bag. Most bags are closed at the end by a simple plastic clip.
3. Let the feces drain into an acceptable container.
4. If desired, the bag can be rinsed out with a large disposable syringe.
5. Close the bag.
6. Properly dispose of the feces. Remove the gloves, dispose of them properly, and wash your hands.

7. Document the amount of feces that was emptied. If the feces was especially lose or watery or especially hard make sure to document this, as well.

Changing a bag is also very easy and when you are required to do so, follow these five steps

1. Wash your hands and put on disposable gloves
2. Remove the bag from its attachment ring.
3. Inspect the stoma and the skin around the stoma.
4. Clean the area with a mild soap and water or with the cleaning agent that has been recommended by the physician or other healthcare provider.
5. If a barrier cream or powder has been ordered, apply it to the area around the stoma. If cream or powder gets on the stoma, simply wash them off gently with gauze and water.
6. Put a new bag in place. If the adhesive ring is separate from the bag, this can be changed, as well.

There is a wide variety of colostomy appliances - adhesive rings, bags, skin protectors, etc. - that can be used, and it is not possible to provide detailed information here about how to work with all the available types of colostomy
appliance and accessories. However, the basic process of changing and emptying a bag is the same regardless of the brand. Changing and emptying the bag will be done on a schedule that is determined by the ostomy nurse (The role of the ostomy nurse will be explained later in the module), the physician, or by the patient’s needs and/or preference. Checking the bag should be done at least once every eight hour shift, or according to the schedule that is specific to where you work or the patient’s needs.

**Irrigation**

Patients who have a colostomy in the descending or sigmoid colon may need to have the colostomy **irrigated**. Irrigation is a procedure by which an irrigation solution - usually water - is introduced into the colon through the stoma. Irrigation can help certain patients establish a regular pattern of elimination because the irrigation solution fills the colon and stimulates the movement of feces into the appliance.

Irrigation is typically done an hour so after a meal, but the schedule for irrigation will vary from patient to patient. Irrigation is a relatively simple procedure and it can be done in several ways, but the basics of the procedure are as follows.

1. Assemble the equipment. You will need a container to catch the irrigating solution and the feces; irrigating solution; an irrigation bag and tubing; water-soluble lubricant, and; an irrigating cone that is placed into the
stoma. Irrigation can also be done with the patient sitting on the toilet or a bedside commode.

2. Wash your hands and put on disposable gloves.

3. Fill the irrigation bag with irrigation solution (there should be instructions on the patient's chart for the amount) and let it flow so that the attached tubing is filled. The bag should then be placed approximately 18 inches or so above the stoma.

4. Remove the colostomy bag, lubricate the cone and gently place it into the stoma. Attach the tubing from the irrigation bag to the irrigating cone.

5. Let the irrigating solution flow through the stoma. There should be instructions on the patient's chart that will tell you how fast the solution should be infused. The irrigating solution should be comfortably warm and it should not be instilled too quickly. If the solution is too cold or flows in too quickly the patient may develop cramping.

6. After the solution has all been instilled, you will need to wait for 20 minutes or so for the feces to be evacuated.

7. Finish the procedure by cleaning and drying the area around the stoma, inspecting the skin around the stoma, and closing the bag.

8. Discard the glove in the proper place and wash your hands.

The patient’s physician or the ostomy nurse will specify what appliance should be used, what skin protectors should applied, when the colostomy should be irrigated, and all of the other important aspects of colostomy care. *These instructions and guidelines are specific to the needs of each patient and should always be followed.*

**Learning Break:** The term ostomy nurse was used previously. These specialist RNs are more formally called wound, ostomy, and continence (WOC) nurses. Wound, ostomy, and continence nurses are trained and experienced in the care of patients who have colostomies, wounds, and continence problems and their input is invaluable for providing colostomy care.
Complications of the Colostomy and Stoma and Assessment

A colostomy requires someone to make changes in life style and learn specific self-care but the great majority of people adjust to these challenges. However, a colostomy creates an artificial, permanent opening in the abdominal wall and exposes a section of the colon. Complications are an inevitable part of any such procedure and a colostomy is no exception. Fortunately the ones associated with colostomies are seldom dangerous. The following are the commonly encountered complications that your patients may experience.

1. **Allergic skin reactions:** Allergic reactions of the skin around the stoma are caused by the adhesive of the pouch or by the barrier creams or powders that are applied to protect the skin around the stoma. An allergic skin reaction can look very much like a mild skin irritation and it can be difficult to distinguish between the two. However, although both an allergic skin reaction and simple skin irritation will produce redness and some pain, an allergic reaction is usually less painful, especially to the touch: patients will usually describe the sensation of an allergic skin reaction as irritation rather than pain. Also, the area of redness caused by an allergic reaction is often clearly marked in the shape of the pouch adhesive or by where the creams or powder were applied. Skin irritation patterns tend to be random and irregularly shaped.
2. **Appliance leaks:** Appliance leaks are very common. They can happen because the appliance is not fitted properly, the seal between the skin and the appliance is not intact, the appliance becomes too full, or for many other reasons.

3. **Skin irritation:** One of the most common complications of a colostomy is skin irritation. Contact of the skin around the stoma with feces and bowel contents is typically the cause of skin irritation, and this often happens when the colostomy appliance is not well fitted or cannot be well fitted; the latter is a particular problem if the patient is obese and skin folds prevent the appliance from being correctly applied. The issue is often made worse because in response to pain and discomfort, the aperture of the appliance is made bigger so that the irritated skin is not touching the adhesive that holds the bag in place. Unfortunately although this spares the skin that is irritated, it exposes skin that was, to that point, intact and unaffected. Skin irritation can also happen if the aperture of the appliance is too small and the adhesive contacts the stoma; if the appliance is removed without sufficient care (Like pulling off bandage too quickly), or; if the patient does not have access to professional help with appliance fitting and stoma care.

4. **Parastomal hernia:** A parastomal hernia occurs when a section of the bowel that is part of the colostomy but below the opening in the abdominal wall protrudes into the abdomen around the area of the surgical incision. A parastomal hernia is recognized by a noticeable bulge in the stomach in the area surrounding the colostomy site. Occasionally the bulge caused by
a parastomal hernia may only be seen when the patient is coughing.

Parastomal hernias are a common complication of colostomies. They happen because the surgical incision that is created for the bowel to be brought to the surface of the stomach weakens the muscles and tissues in that area. People who are obese and elderly patients are more likely to develop a parastomal hernia, and poor nutrition and the use of immunosuppressant drugs also increase the risk. Parastomal hernias are unsettling for the patient but most of them are not medically dangerous, and can they be managed by using a hernia belt. If the hernia interrupts the blood supply to the bowel (a condition called strangulation), causes persistent pain, or causes a bowel obstruction, the stoma may need to be surgically revised.

5. **Infections:** Infections are not as common as allergic reactions or skin irritation. But the warm and moist environment in and around the stoma and the presence of fecal matter can encourage the growth of microorganisms. Skin irritation also increases the risk of infection, as an intact skin is one the body’s primary defense mechanisms against infection.

6. **Prolapse:** Prolapse is a medical term that means *to fall out of place*, and prolapse of a colostomy stoma is a relatively common complication of colostomies. Typically the stoma of a colostomy should be even with the surface of the stomach or be just slightly above or below the surface. When the stoma of a colostomy has prolapsed it will protrude quite noticeably, sometimes as much as six inches. A fixed prolapse happens
when more of the colon was brought out past the surface than was
necessary. Much more common is the sliding prolapse. This type of
prolapse increases and decreases in length, moving in and out at various
times of the day when the patient coughs, shifts his/her weight, or places
strain on the abdominal wall. Risk factors for a prolapsed stoma include:
advanced age; the location of the stoma; loop colostomy; obesity, and;
weak abdominal muscles. A prolapsed stoma can be quite dramatic to see
and can be very disconcerting for the patient, but they rarely cause
serious harm or interfere with how well the colostomy functions.
Occasionally the stoma can strangulate or a bowel obstruction can
happen. If these occur the patient may have pain or the stoma may
appear and feel abnormal, eg, the stoma looks very dark or very pale or it
is very cold or hot to the touch. If this occurs, surgical intervention may be
needed.

7. **Ischemia and necrosis**: Ischemia is defined as *lack of blood flow to an
organ or tissue*, and necrosis is defined as *dead tissue*. Ischemia and
necrosis are unusual complications of colostomies. A normal, healthy
stoma should be red or pink, warm, and moist. A stoma that is ischemic
will be cold to the touch, the patient would have decreased sensation of
the stoma (although the average stoma has little sensation at all), and the
stoma would look pale or dusky. Necrosis would cause the stoma to look
black and there would be no sensation.
8. **Retraction**: Retraction of a stoma occurs when the stoma is pulled abnormally far below the surface of the abdominal wall. Retraction of a stoma usually happens soon after the stoma has been created, but it can be a late complication. Because the opening of the stoma is below the level of the abdominal wall proper appliance fitting is difficult and feces and digestive juices contact the skin and cause irritation.

Remembering the details of all of the problems that can occur with a colostomy and a stoma is a difficult task, but you should familiarize yourself with these complications. But what is *more* important in this discussion of colostomy complications is the need for **assessment** and **referral**. It is not necessary for you to be able to distinguish between the various types of colostomy complications. You *are* required to be able to perform a basic assessment of a stoma, a colostomy site, and the patient, recognize abnormal findings, and make an appropriate referral if something is wrong. When you providing care to a patient who has colostomy you should:

1. Assess the skin around the stoma, *eg*, look for area of redness, actual breaks in the skin surface, bleeding, signs of infection, etc.
2. Assess the stoma, *eg*, color, overall appearance.
3. Document the amount and appearance of stool that is emptied.
4. Assess the patient for signs and symptoms of complications such as pain, appliance leaks, skin irritation, prolapse of the stoma, hernia, etc. Ask the patient if she/he is having any pain at the colostomy site or other
difficulties with the stoma or the appliance. Determine if there is too much or too little stool being formed.

Are you expected to provide any immediate treatment for these complications? The short answer is no. There are some simple first-aid type maneuvers that can be done for a prolapse, a retraction, or some of the other problems of colostomies. But it is much more important for you to know your patient, know when something is wrong, and make the appropriate referral.

**LIFE STYLE ISSUES AND COLOSTOMIES**

A colostomy does require patients to make life style changes, but these changes are actually very manageable for most people. The patient's physician or the ostomy nurse will provide the patient with information about the use of appliances, colostomy complications, diet, and exercise, but CNAs and HHAs should have a basic understanding of those following issues.

People who have a colostomy may find a support group helpful for managing their day-to-day life, for emotional and psychological support, and for finding practical information about colostomy care. The United Ostomy Associations of America has a list of ostomy support groups. The Association's website address is [http://www.ostomy.org/Home.html](http://www.ostomy.org/Home.html). Their telephone number is 1-800-826-0826

**Appliances**

Selecting and using the proper appliance requires the input of a physician or an ostomy nurse. However, inform the patient that if she/he has any questions
about how to use an appliance it is important to raise these concerns and that resources are available. If the patient self-manages her/his colostomy it is reasonable to ask if you can observe, at least once, how they change and empty the bag and perform irrigation to ensure that these procedures are being done correctly.

Complications

The patient does not need extensive information about complications associated with colostomies. But he/she should know what situations require an urgent consultation with a physician or the ostomy nurse. In brief, the patient should seek help if:

- There is evidence of a bowel obstruction
- He/she has significant pain in the area of the colostomy or in the abdomen
- There is evidence of a parastomal hernia
- There is skin irritation or a break in the skin
- There is a problem with the appliance.
- There are signs and symptoms of infection
- The stoma has prolapsed or retracted for the first time
- The prolapse or retraction has become more severe
- Stools are excessively loose or abnormally hard
- He/she has questions about the colostomy or how to care for it.

Diet

The patient who has a colostomy should approach his/her diet in the same way as someone who has an intact bowel: he/she should eat what they like and
avoid foods that cause problems. For a patient who has a colostomy foods that *might* be best avoided would be ones that can cause constipation or loose stools or ones that cause gas. The problem of gas and odor is very concerning for many patients. Colostomy appliances are odor-proof and odor and gas can be controlled and managed. Certain foods are well known to cause gas and patients can avoid or limit their intake of them. It is helpful to know that there is a delay time of several hours between ingestion of foods that can cause gas and the production of gas, and patients can use this information to plan meals and social activities. There are also special colostomy appliances that have built-in odor filters and deodorizers.

**Physical Activity, Sexual Activity, and Other Concerns**

For most people who have a colostomy the only restriction on physical activity is the need to protect the stoma and the skin around the stoma. Stoma guards and prolapse belts are available that can be fitted over the stoma and protect it; these are especially helpful if the patient has a prolapse. There are also hernia belts that can be purchased and these will help if the patient has a parastomal hernia. Although physical activity is seldom limited in any significant way by a colostomy, patients should consult with a physician or an ostomy nurse and what they can, and can’t do. Certain patients may be prohibited from activities that place a large amount of stress on the abdominal wall, such as weightlifting. Bathing and showering can be done with appliance on or off, swimming can be done with the appliance on. There are no restrictions on sexual activity. Patients
who have had a colostomy should not be given enemas, medications by the rectal route and should not have their temperature measured rectally.

SUMMARY

A colostomy is the surgical creation of an opening between a section of the colon, which is then attached to a surgically created opening on the surface of the abdomen. The opening of the colon is called the stoma. Colostomies are performed to treat a wide variety of clinical conditions but the basic reasons they are done is to either rest the large bowel or divert the passage of feces. Colostomies are typically done as either a loop colostomy or a terminal colostomy, and they can be temporary or permanent.

The colostomy creates a passage for feces that avoids the colon and the rectum; the feces is expelled through the stoma and into a flexible plastic appliance, often called bag or pouch, that is attached to the surface of the stomach around the stoma. After a colostomy feces no longer moves through the gastrointestinal tract in the normal manner and specific colostomy care is required. Some patients can perform colostomy care unassisted, but others cannot and colostomy care is considered a basic skill that CNAs and HHAs should know how to do. The basics of colostomy care you should know are:

- Changing and emptying the appliance.
- Irrigation
- Complications of a colostomy
- Assessment of the stoma and the surrounding skin
The patient’s physician or the ostomy nurse will specify what appliance should be used, what skin protectors should applied, when the colostomy should be irrigated, and most of the other aspects of colostomy care. *These colostomy care instructions and guidelines are specific to the needs of each patient and should always be followed.* Assessment of a stoma and the surrounding skin should be done on a regular basis and any problems should be referred to a physician or an ostomy nurse.

The complications associated with colostomies are:

- Allergic reactions
- Appliance leaks
- Skin irritation
- Parastomal hernia
- Infections
- Prolapse
- Ischemia and necrosis
- Retraction

Most of these complications do not cause serious harm nor are they dangerous. However, any complication or suspicion of a complication should be referred to a physician or an ostomy nurse. Notify your supervisor, a physician, or an ostomy nurse if:

- There is evidence of a bowel obstruction
- He/she has significant pain in the area of the colostomy or in the abdomen
- There is evidence of a parastomal hernia
- There is evidence of ischemia or necrosis
- There is skin irritation or a break in the skin
- There is a problem with the appliance
- There are signs and symptoms of infection
- The stoma has prolapsed or retracted for the first time
- The prolapse or retraction has become more severe
- Stools are excessively loose or abnormally hard
- The patient typically provides self-care for her/his colostomy but does not seem to have a proper understanding of how to do so.