

# Colostomy Irrigation and Stimulation

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Hello, and welcome to the lesson on colostomy irrigation and stimulation. In this module, you will learn about the procedure known as colostomy irrigation. This is most commonly used by individuals with either a descending or a sigmoid colostomy as a means to regulate the timing of colostomy evacuation. It can also be used to treat constipation, deliver medications, or clear the colon before a procedure.

## Objectives

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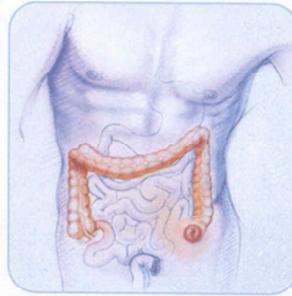
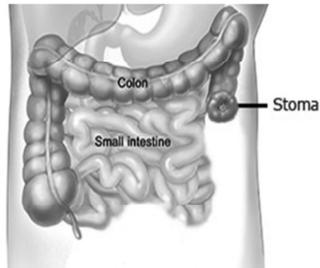
- Recite the steps of colostomy irrigation
- Discuss criteria for selecting appropriate candidates for colostomy irrigation
- Differentiate between colostomy irrigation and colostomy stimulation

The learning objectives include to recite the steps of colostomy irrigation, discuss the criteria used to select the appropriate candidate, and to differentiate between irrigation and stimulation.

## Colostomy Irrigation: Definition

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- Instillation of fluid into the colon via the stoma to mechanically distend the bowel and stimulate evacuation



Colostomy irrigation is the instillation of fluid into the colon via the stoma to mechanically distend the colon and stimulate the evacuation of stool. Fluid, usually tap water, is instilled to cause the distension, which will cause a peristaltic wave to push stool through the colostomy and out of the body. This is accomplished once a day at the same time each day, and when successful provides the person a viable option to manage the colostomy.

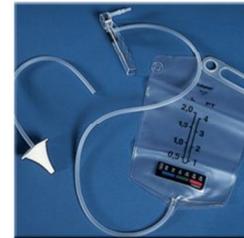
# Colostomy Irrigation: Purpose

## Purpose

- Regulate bowel function/promote regular bowel evacuation
- Cleanse bowel before and after diagnostic tests
- Administer therapeutic solutions
- Treat and prevent constipation

## Considerations

- Location of colostomy
- Normal bowel function
- Ability to learn and perform procedure
- Patient preference



The primary purpose of irrigation is to regulate colon function to occur at the time of the irrigation. In this way, the individual gains a sense of control, to feel more confident when performing activities of daily living, have a greater sense of normalcy, and in some instances, avoid the need for a pouching system over the stoma. Other times irrigation is used include cleansing of the colon before or after a diagnostic test, treatment of constipation, or administration of therapeutic solutions. An example of therapeutic use of irrigation would be an individual with a descending colostomy who is prescribed an antibiotic to treat a sinus infection. The individual subsequently develops *C. difficile* colitis and Vancomycin is ordered to be given as instillation via the colostomy. Thus, the Vancomycin solution in this situation is delivered to the colon through an irrigation.

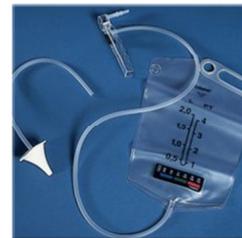
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There are several factors that need to be assessed before a patient is even considered a candidate for irrigation to regulate bowel function. Since only those with a descending or sigmoid colostomy have the potential to be regulated through irrigation, the nursing assessment starts at that point. A conversation with the patient needs to include a review of the person's normal bowel movement activity prior to the disease that caused the need for the colostomy. Those who normally had one bowel action a day or every other day will be the most successful. The person with multiple bowel actions a day are not likely to be successful in daily irrigation, and therefore not considered for this management option. Next, the individual will need to have the cognition and manual dexterity skills to learn how to do an irrigation and to be physically able to perform the procedure. Finally, the person needs to have the desire or self-motivation to do irrigation. Patients are generally not in the hospital long enough to learn how to irrigate, so the procedure is usually taught in the home or in an outpatient clinic setting. Remember, irrigation is a choice. Patients can choose to quit irrigating or they can choose to learn even if years have gone by from their original ostomy surgery.

## Colostomy Irrigation: Contraindications

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- Children
- Poor prognosis
- Cancer treatment
  - Chemotherapy
  - Pelvic or abdominal radiation
- Stomal complications
  - Prolapse
  - Stenosis
  - Peristomal hernia
- Residual bowel disease
- History of multiple bowel actions per day



There are some contraindications for irrigating a descending or sigmoid colostomy. It takes approximately one month to determine if irrigation will lead to regulation of bowel function. That is, no function of stool in between irrigation. Therefore, individuals with a poor prognosis would not benefit from this procedure. Additionally, individuals whose bowel function has in the past been unpredictable, particularly if their usual bowel activity occurred more than once a day, or those undergoing chemotherapy or radiation would not benefit from irrigation. Any residual bowel disease would also be a contraindication. In addition, stomal complications such as prolapse (as can be seen in this picture), stenosis (as the fluid cannot be instilled) or peristomal hernia increase the risk of perforation and are reasons not to irrigate.

## Colostomy Irrigation: Advantages

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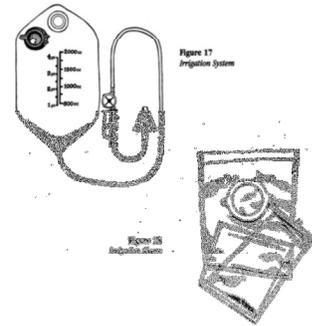
- Less odor
- Less flatus
- Lower costs
- Less skin problems
- Definite evacuation time
- Sense of control over bowel function



The advantages to colostomy irrigation as a management option include that individuals may find a definite time for daily irrigation with resulting bowel movement to be of advantage in that it may free them from wearing a pouching system, and promotes a predictable daily routine. Flatus and odor is minimized as bowel movement activity occurs immediately following the irrigation. There is limited chance for stool to be in contact with the skin so there is a decrease in peristomal skin complications. Finally, equipment costs over the course of a year are decreased.

# Colostomy Irrigation: Procedure

- Scheduling
- Type and volume of irrigating solution
- Equipment
- Procedure



Once the decision to irrigate for bowel regulation has been made, there are other factors that need to be considered. Individuals should time the irrigation procedure to occur at about the same time prior bowel activity occurred so as to take advantage of their body's natural rhythms. Potable water is used for irrigation; if necessary, bottled water can be used. Research has not proven the "ideal" volume of water for irrigation (Carmel & Scardillo, 2022). Usually, irrigation is begun with 500cc of water with the amount being increased up to 1000cc. What indicates, then, when the volume is correct? It is the volume of water used that keeps the person free from a bowel action until the next irrigation (Carmel & Scardillo, 2022). It is appropriate to fill the water bag with more water which is then used to rinse out the irrigation sleeve. No more than 1000cc of water should be instilled at any one sitting (Carmel & Scardillo, 2022). Equipment needed includes the water bag, an irrigation cone, water soluble lubricant, an irrigation sleeve, an irrigation sleeve clip, and a new pouch or stoma cap. Irrigation sleeves are made to attach onto a flange or are held in place with a belt. Now, let's go through the steps of the procedure.

## Colostomy Irrigation: Procedure

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Fill the irrigation bag with the appropriate amount of tepid tap water. If water is too hot, it can burn the bowel mucosa; too cold and excessive cramping can occur. The irrigation bag is placed so that the bottom of the water bag is level with the individual's shoulder as they are seated. The water bag can hang from a shower curtain ring as can be seen in the middle photo, suspended from a hanger, or from a hook placed on the bathroom wall. The important point is that the end of the water bag is at shoulder level while the individual is seated so as not to have too much pressure as the water flows into the bowel. Clear the air from the tubing. This air could create cramping.

## Colostomy Irrigation: Procedure



The individual applies the irrigation sleeve in place, either removing and properly disposing of the pouch of a two piece system and snapping the irrigation sleeve in place, or by removing the prior pouching system, generally a closed-end pouch, and applying the irrigation sleeve around the stoma and securing it in place with a belt. The individual then sits on the commode with the irrigation sleeve positioned between their legs so it can drain into the toilet. Alternately, the individual may sit on a chair facing the commode with the end of the irrigation sleeve resting in the toilet bowl. The clock now begins. The end of the irrigation cone is lubricated with water soluble lubricant, then the cone is gently inserted into the stoma. The first time the irrigation procedure is performed, the health care professional should insert a well-lubricated pinkie finger into the bowel lumen to determine the direction of the bowel. The cone is then inserted through the open top of the irrigation sleeve and positioned in the bowel lumen in the direction that was determined earlier in order to facilitate the flow of the water. It should take about 10, at most 15 minutes for the fluid to instill. Once the correct volume of water is instilled, the cone is removed, the top of the irrigation sleeve is closed, and the patient then awaits the returns. Have the patient take note of the time.

## Colostomy Irrigation: Procedure

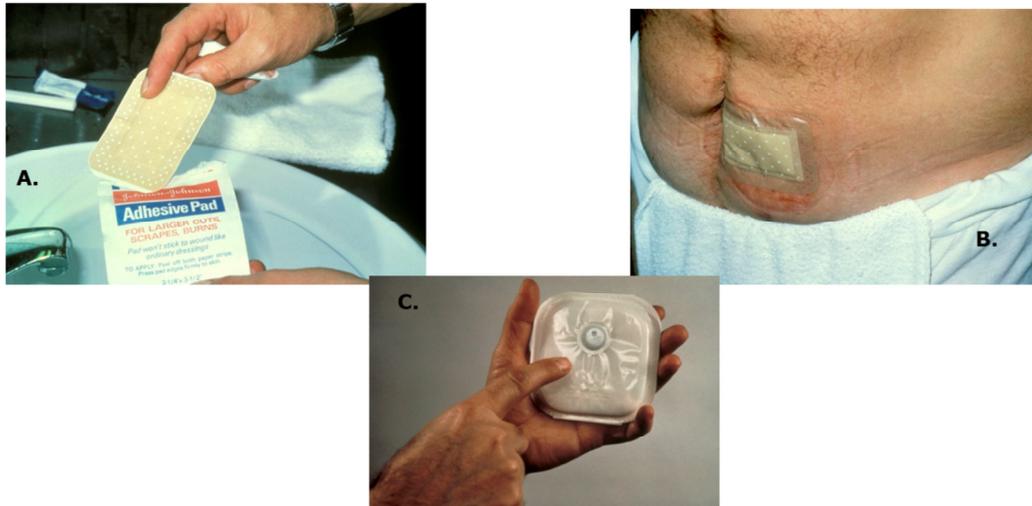


Cleveland Clinic

There is an initial return which can last for up to 30 minutes; during this time, the majority of stool and gas returns. The individual needs to sit on the toilet during this phase. After a few sessions, people can generally tell when the initial returns are done. At this point, the end of the irrigation sleeve is cleansed and the clip applied.

There is also a secondary return, which can take up to another half hour. Again, each person will learn for themselves the exact timing of this return. When the returns are completed (total time is anywhere from a half hour to an hour), the individual removes the irrigation sleeve, cleanses the flange and snaps on a fresh pouch. Or, if a belted sleeve is used, the skin is cleansed, and a pouch or stoma cap is applied.

## Colostomy Irrigation: Procedure



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Some individuals find that a commercial stoma cap, which has a built in gas vent, works well for them. Others will use a large size commercial adhesive pad or a mini-pad. The irrigation sleeve is then cleansed with mild soap and water; it is hung up to dry and when dry, can be placed away for storage. Irrigation bags and cone generally require replacement once a year.

## Colostomy Irrigation: Review

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- Tepid water
- Gentle insertion
- Unhurried procedure



Points to stress with individuals include gentle insertion of the cone in order to prevent bowel perforation, use of tepid tap water, and an unhurried procedure in order to optimize results.

# Colostomy Irrigation: Problem Solving

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- Cramping
  - Quick instillation, use of aerosol, air in colon, colonic hypermotility, cold water
- Vasovagal reaction
- Instillation difficulties
  - Hard stool blocking lumen, stenosis, parastomal hernia, irritable colon
- Failure of irrigant to return
  - Impaction, dehydration, excessive fluid used, trapped irrigant, colonic spasms
- Spillage between irrigations
  - Irrigation procedural errors, emotional factors, food (spices), GI virus



Of course, there are issues that can cause problems for the individual who irrigates. The fluid can be difficult to instill or return. Stomal causes that prevent water instillation include stenosis and parastomal hernia. The individual should be evaluated by their WOC nurse or surgeon if these two problems occur to determine if surgical intervention is warranted. Individuals may have no outward sign of a hernia and are first aware of its presence when the amount of time to instill water or for returns is increased. Additionally, an irritable bowel or hard, constipated stool can be present. If the irrigant fails to return, the individual should review their oral fluid intake to determine if they may be dehydrated as the bowel will absorb fluid if the individual requires it. Excessive amounts of irrigant may be pushed all the way to the right side of the colon thus delaying returns. Fecal impaction and colonic spasms are two additional reasons for slow or failure to return of irrigant.

# Colostomy Irrigation: Problem Solving

- Cramping
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Cramping can be caused by a quick instillation, too cool of fluid, air in the colon, or bowel hypermotility. The use of liquid colace, also known as aerosol, is a bowel irritant and can initiate cramping. LIPs may order aerosol to be used, along with oil, if an individual is constipated. More on this in a moment. Be aware that a vasovagal reaction may occur; check with the physician before beginning irrigations if the person has a history of heart problems. Spillage between irrigation is usually due to dietary indiscretions. Individuals will learn over time what foods affect their gastrointestinal tract; some individuals find their GI tract affected when they are emotionally upset. Irrigation errors such as leakage of a large amount of water around the cone during instillation can occur and affect irrigation results. Close questioning for changes in technique is helpful to determine issues or problems. The best way to determine this, however, is to observe the technique used if at all possible. Over time, people may not pay as close attention to detail as they did when they first learned. Also, individuals with colostomies are just as prone to GI viruses as anyone else. It is important that some drainable pouches be kept on hand for such eventualities.

## Colostomy Irrigation: Diarrhea and Constipation

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### Diarrhea

- Viral infections
- Chemotherapy
- Emotional upset
- Food intolerances
- Bacterial infections
- Medications, particularly antibiotics

### Constipation

- Inactivity
- Dietary changes
- Emotional upset
- Decreased fluid intake
- Medication, primarily narcotics



As you can see, there are a variety of reasons for a change in bowel function. The root cause of the problem needs to be identified; then measures taken to compensate. It may take careful questioning to determine the problem.

# Colostomy Stimulation: Equipment

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## ■ Why?

- Increasing abdominal distention
- No bowel activity from the colostomy after surgery

## ■ Equipment

- Lubricant
- Irrigation sleeve
- Indwelling catheter
- Normal saline solution
- Irrigation set or enema bag



A colostomy stimulation is a procedure done for individuals with a descending or sigmoid colostomy in the post-operative period to assist with return of bowel function. It is indicated when there has been no bowel activity after surgery, usual function is expected to begin in 5-7 days post-operatively, and the individual is having increased abdominal distention with resultant discomfort. Needed equipment includes water soluble lubricant, an irrigation sleeve if available, an 18 fr. or less indwelling catheter, normal saline (1000 cc), irrigation set or enema bag with the tip of the enema tubing with the holes cut off. One can cut a hole in the pouching system the patient currently has on to perform the procedure.

## Colostomy Stimulation: Purpose and Procedure

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- Encourages colonic peristalsis through gentle bowel distention
- Decreases abdominal distension
- Achieves stool and flatus elimination
  
- Procedure

The purpose of colonic stimulation is to encourage colonic peristalsis. In essence, one is “teasing” the bowel to help to get it to open up or function. The water bag is filled with 1000cc of normal saline and the indwelling catheter is placed onto the end of the irrigation or enema tubing;. You may find it useful to tape it in place for added security. The tubing is then purged of air. A lubricated pinkie finger is gently placed in the bowel lumen to determine its direction. The tip of the indwelling catheter is lubricated with water soluble lubricant, then gently inserted into the bowel lumen. The saline is allowed to flow slowly into the lumen of the bowel as the catheter is gently advanced into the bowel. The saline will leak around the catheter. This is normal. The full length of the catheter is inserted, then gently pulled in and out. This process is continued until the full volume of saline is instilled. The catheter is then removed. Fluid should return within 10-15 minutes, at which time a fresh pouching system is applied. The stimulation is discontinued if the patient experiences increased abdominal pain, or if the catheter is unable to be advanced. Make note of the volume of solution returned. If there is little or no return, alert the LIP. The patient may be behind in fluids.

## Colostomy Irrigation: Oil irrigation

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- Used for treatment of constipation or impaction
- Solution
  - Aerosol 500cc
  - Cottonseed oil 500cc
- Assess results
- Always follow with water/soap suds irrigation



Oil irrigations are done for individuals determined to be constipated or impacted. The solution most commonly used is cottonseed oil with an equal amount of aerosol. Aerosol is liquid Colace. It acts as a bowel irritant and can cause intense cramping, so be sure that hard stool is not blocking the lumen of the bowel. Mineral oil or vegetable oil may also be used. The oil is instilled using a cone; the usual volume is about 500cc. The purpose of the oil is to soften the stool so it is more easily expelled. You should not expect a large amount of return after the oil is instilled. The more oil that is absorbed into the stool the better. The irrigation sleeves generally have to be thrown away as they are difficult to adequately clean. The oil irrigation is always followed the next day with a soap suds or tap water irrigation. On rare occasions, a molasses and milk, also known as a black and white, irrigation may be used for severe constipation. The high amount of sugars in this solution causes fluid to be pulled into the bowel lumen, softening the stool and stimulating peristalsis.

## Colonic Tip Enema

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- Used with those who have decreased sphincter control
- Ensures complete emptying of lower bowel
- Colonic tip enema kit; irrigation cone; fleet enema bottle



Some individuals who have incontinence may benefit from the use of a colonic tip enema. This patient performs this enema to ensure complete emptying of the colon on a routine basis. By performing this cleansing action, there is less chance for stool leakage. This type of enema tip is used for those with decreased sphincter control. The difference between this and a “normal” enema is the ball on the end of the tubing. Its purpose is to hold the water in during instillation in order to cause the water to distend the colon and cause a peristaltic wave. The individual can give themselves the enema while lying on their left side or while sitting on the commode. The ball is held against the anus for about 5 minutes after all the water is instilled then removed. If cramps are a problem, the patient simply removes the enema tubing when sitting on the commode and allowing the solution to return. This technique is often done in the hopes of preventing ostomy surgery.

## Reference

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Carmel, J., & Scardillo, J. (2022). Adaptations, rehabilitation, and long-term care management issues. In J. Carmel, J. Colwell, & M. T. Goldberg (Eds.), *Wound, Ostomy, and Continence Nurses Society core curriculum: Ostomy management* (2nd ed., pp. 201-222). Wolters Kluwer.