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**Colonoscopy Instructions – Large Volume Electrolyte Solution**  
**PLEASE READ AND FOLLOW ALL INSTRUCTIONS CAREFULLY**

**Introduction**

Colonoscopy is a commonly performed procedure. At CareMount Medical, the Department of Gastroenterology collectively performs well over 10,000 colonoscopies per year. All of our gastroenterologists are board certified and exceed the national benchmark for adenoma detection rate in both males and females. A physician’s adenoma detection rate is the proportion of individuals undergoing a complete screening colonoscopy who have 1 or more adenomas (polyps), detected and excised. This measurement best reflects how carefully colonoscopy is performed, and ensures that you are receiving a high-quality examination.

A colonoscopy is an examination in which a flexible thin video electronic instrument called a colonoscope is inserted into your rectum and guided through your entire colon (about five or six feet long). The major purpose of a colonoscopy is to search for and remove benign colon and rectal polyps. If polyps are removed, the incidence of colon and rectal cancer can be greatly diminished, as most colon cancers start as these benign polyps. Colonoscopy procedures have saved thousands of lives by removing these polyps and preventing cancer. Colonoscopy requires a cleansing preparation before the procedure that will give you much diarrhea.

This packet has been prepared to help you better understand your procedure. You will be asked to sign consent upon arriving to the endoscopy suite.

We have made this a virtually painless procedure by having an anesthesiologist present. The anesthesiologist will administer an intravenous anesthetic called **Propofol** that will make you fall asleep during the procedure. **If you are allergic to eggs or soy, please discuss this with your Gastroenterologist and Anesthesiologist**, as alternative sedatives may be required. Propofol is short acting, expect to feel wide-awake within an hour of the completion of the procedure. **You are not allowed to drive for the entire day, so someone must be present to take you home.** Going home by taxi or car service is **not** permissible unless you have a responsible non-sedated adult other than the driver with you.

Colonoscopy is now recommended for **everyone** beginning at 50 to look for and remove colon polyps. A colonoscopy may be started earlier than age 50 if a person has colon symptoms, there is a strong family history of colon problems, or as evolving changes in recommendations are set forth by the multi society Gastroenterology task force.

Colonoscopy also may detect colon cancer at an early stage when the cancer may be cured by surgery. Colonoscopy is the best procedure for evaluating the cause of blood in the stool, and is also used to evaluate people with diarrhea and/or colitis.

Colonoscopy is also recommended for people with any of the following:

- Occult blood in the stool (found on home testing or Hemoccult card or finger exam)
- Past history of polyps or cancer of the colon or rectum
- Family history of colon or rectal cancer or polyps
- Intestinal bleeding
- Iron deficiency
- Chronic diarrhea or other colon related symptoms
- Polyp found on virtual colonoscopy
- Abnormal Cologuard

## Preparation

If you are taking medicine for your **heart, lung, blood pressure**, or **thyroid** problems, please discuss taking these medications the morning of your procedure with your gastroenterologist.

Daily “baby aspirin” (81mg) is permissible before the procedure. If you are taking this, do not stop it before the procedure. If your aspirin dose is more than 81mg daily, please discuss this with your doctor. Do NOT stop your **aspirin** before the procedure if you are currently taking aspirin for a heart condition, coronary stent, or have had heart bypass surgery.

If you are taking **Coumadin** (Warfarin), or another anticoagulant alternative such as **Xarelto** (Rivaroxaban), **Eliquis** (Apixaban) or **Pradaxa** (Dabigatran) you must discuss this with your doctors (cardiologist, internal medicine and/or gastroenterologist) at least 7 days before the procedure, as dosing adjustments will need to be made.

If you are taking an antiplatelet medication such as **Plavix** (Clopidogrel) or **Effient** (Prasugrel), or a **full dose aspirin (325 mg dose daily)** you must discuss this with your doctors (cardiologist, internal medicine and/or gastroenterologist) at least 7 days before the procedure, as dosing adjustments will need to be made.

Stopping any anticoagulant or antiplatelet medication may increase the risk of sudden heart attack or even death. Failure to manage these medications prior to the procedure may prevent the Gastroenterologist from removing large polyps.

If you have **diabetes**, you will need to discuss your medicines with the doctor in advance of the procedure. Insulin doses will need to be adjusted and Glucophage (Metformin) containing medicines will need to be temporarily stopped.

Do not take strong **diuretics** such as Lasix (Furosemide) or Zaroxolyn (Metolazone) in the 24 hours before the procedure, unless discussed with the doctor beforehand.

Do not take **iron pills** for 3 days before the procedure. **Vitamins** containing iron are permissible.

Do not take any **anti-inflammatory** medicine for 1 day before the procedure. Common anti-inflammatory medicines are Advil and Motrin (Ibuprofen), Aleve and Naprosyn (Naproxen). You are allowed to take **Tylenol** (Acetaminophen).

Your procedure will be performed in the hospital setting if you have: an implantable defibrillator, cardiac pacemaker, are undergoing hemodialysis, have severe sleep apnea or severe obesity (BMI 44 or higher)

If you have an artificial heart valve or a history of endocarditis, this should be discussed with your gastroenterologist prior to your procedure.

### **Colonoscopy Preparation:**

There are multiple large volume electrolyte solutions that are commercially available for colonoscopy preparation; TriLyte/Nulytely/GoLYTELY/polyethylene glycol prep. Please discuss with your gastroenterologist which one is most suited for you.

Your physician will need to provide a prescription to purchase a 4 liter preparation from your pharmacy.

You will need to have a very clean colon for the Gastroenterologist to examine your colon. This process requires taking strong laxatives which will cause significant diarrhea. You must follow the preparation instructions carefully to assure you will be cleaned out and to prevent dehydration. Occasionally despite your best efforts, the clean out will be insufficient and the procedure will have to be postponed. Your Gastroenterologist will make recommendations appropriate for your digestive system.

**On the entire day before the procedure only liquids, no solid foods are allowed. NO solid foods are allowed for breakfast, lunch or dinner.** You may have any liquids such as water, juices, tea, coffee, soda, non-red sports drinks and non-red Jell-O. Until 5 pm, you are permitted milk, ice cream with no solid particles, milk shakes and yogurt with no solid particles. After 5 pm, no milk products are allowed.

### **At 5 PM the night before the procedure:**

At 5:00 pm on the night before the procedure, start drinking  $\frac{1}{2}$  (one-half) gallon of the preparation. Drink an 8-ounce glass every 10 to 15 minutes. **Gulp the glasses down, do not sip.** You must finish  $\frac{1}{2}$  (one-half) gallon which is  $\frac{1}{2}$  of the container. Eventually, the preparation will pass through you in the form of diarrhea.

**On the day of the procedure:** Starting at least 5 hours before the procedure, drink  $\frac{1}{2}$  (one-half) gallon of the preparation, an 8-ounce glass every 10 to 15 minutes. You must finish the entire gallon of preparation (including the amount taken the previous night) at least two hours prior to the procedure.

At any time during the preparation period, you may have any clear liquids of your choice.

**You must stop drinking 3 hours before the procedure. If you have anything by mouth, including gum, in the three hours before the procedure, the procedure may be rescheduled.**

**If you take heart or blood pressure medications, take your pills three hours before the procedure with water (unless advised differently by your Gastroenterologist).**

**Note: Please leave all jewelry and valuables at home. CareMount Medical is not responsible for the loss of any patient's property. Do not wear contact lenses.**

### **Before the procedure**

Your colonoscopy will be performed either in our Endoscopy Suite, on the third floor of 110 South Bedford Road, or the Endoscopy Suite at Northern Westchester Hospital. Your Gastroenterologist may decide which location is better for you. Arrive one half hour before the procedure is scheduled. The average colonoscopy is about 30 minutes. However, the duration of the colonoscopy will vary depending on multiple factors, such as difficulty of maneuvering, number and size of polyps and quality of the preparation.

The procedure should not be done if you are pregnant. If you are a female of childbearing age, a urine sample will be obtained for a urine pregnancy test upon arrival at the endoscopy suite.

When you arrive for the procedure, you will be asked to sign a consent form and change into a gown. Either the nurse or doctor will insert an IV (intravenous line) into your arm. You will be attached to heart, lung and blood pressure monitors, and you will be given nasal oxygen. Your GI team of gastroenterologist, anesthesiologist, and nurse will include one female attendant during the entire procedure. The anesthesiologist will administer the Propofol in the IV line, and the procedure will begin.

### **During the procedure**

During the procedure, if given Propofol, you will fall asleep, and the procedure will be virtually painless. If you would like to stay awake, you will experience discomfort while the colonoscope is advanced around sharp colon curves. You may feel bloated, as the colonoscope introduces air into the colon. The physician will make your procedure as comfortable as possible for you, and if needed, more sedation may be administered during the procedure. Each person's colon is unique. Therefore, it is impossible to predict how much discomfort any given person might experience. During the procedure, the physician examines the entire colon. A diagram of the intestinal tract is included in this brochure, and the colon is darkened on this diagram. If the Gastroenterologist encounters a polyp, the doctor will remove the polyp with various instruments, depending on the size of the polyp. The most common way to remove polyps is by encircling the polyp with a wire snare and using a cautery to burn the polyp off. Most very small polyps can even be removed without cautery. You will not feel any discomfort during the cauterization of the polyp.

Endoclips to reduce the chance of bleeding after polyp removal may be placed at the discretion of the gastroenterologist. The endoclips usually detach by themselves and pass out the rectum in a few weeks. While present, however, they may interfere with an MRI radiology procedure. A “tattoo” may also be placed adjacent to a polyp or tumor to mark the area for inspection in the future.

At the discretion of the Gastroenterologist, various other modalities might be used during the colonoscopy, such as biopsies, injections, heat cautery, etc. Occasionally the doctor may have to wake you during the procedure for safety reasons.

### **After the procedure**

After the colonoscopy, the Gastroenterologist will discuss the results of the procedure with you, and if you wish, with your family. It is possible that you will not remember much of the conversation because of the sedation, so you will also be given a written report. It is helpful if a family member or friend is present right after the procedure to hear the results with you. You will feel bloated. You may expect to stay in the recovery area between one half hour and one hour before being discharged home.

You should be driven straight home, eat something, and plan on resting or napping for the remainder of the day. **Someone must be at the endoscopy suite to drive you home. Do not go to a restaurant after the procedure. Go straight home. You may not drive for the entire day. Do not perform tasks that require physical or**

**mental dexterity during the day.** Usually there are no dietary restrictions after the procedure. The Gastroenterologist will clarify this with you after the procedure.

If a polyp was cauterized, you may be advised not to take anti-inflammatory medicines for two weeks. If you were on blood thinners before the procedure, the doctor will advise you when to start taking them again. Tylenol (Acetaminophen) will be allowed. You may see a few drops of blood in the next few bowel movements. This is normal. If a large polyp was removed, we do not recommend nuts or popcorn in your diet for two weeks. After a polyp is removed, there is a small risk of major bleeding anytime within 2 weeks of the procedure. Therefore if a polyp is removed, we do not recommend any distant travel within two weeks after the procedure. **If you see blood clots, experience pain or develop a fever, call the Gastroenterologist immediately, and go to the nearest emergency room.**

If biopsies were done or polyps were removed, the specimens are sent to the Pathology Department for analysis. Your doctor will tell you when you should call for your biopsy results (usually 5 days later after the procedure).

### **Procedure risks**

Complications of colonoscopy are quite infrequent. Among the major possible risks of colonoscopy are the following:

1. Significant polyps or cancer may be missed during the procedure, especially if the preparation was inadequate. While this procedure markedly reduces the chance of colon cancer, there is still a chance that colon cancer may arise.
2. Dehydration and kidney failure may occur from the colonoscopy preparation, especially if you do not drink the recommended fluid amounts and/or you have underlying kidney function issues.
3. Reactions to the sedative medications. If this occurs, the gastroenterologist and/or anesthesiologist will treat you as necessary.
4. Bleeding. If this occurs, it can usually be stopped with cautery, other modalities, or time. Rarely, hospitalization, transfusions and even surgery may be necessary. If a polyp was removed, major bleeding may occur up to two weeks after the procedure.
5. Perforation (putting a hole in the colon) is fortunately quite uncommon. It may require endoscopic closure or even emergency surgery to correct with the possibility of a temporary colostomy.
6. Irritation of the vein where the IV line was inserted. This might result in a tender lump in the arm that takes a few weeks to go away.
7. Colonoscopy may sometimes cause acute diverticulitis (infection in the colon) that requires antibiotics and sometimes surgery.
8. During the procedure, saliva or stomach juice may go down into the lungs and cause aspiration. Antibiotics may be given. Serious aspirations may require hospitalization.
9. There are always risks of other problems that are not related to the colon, such as stroke, heart problems or lung/breathing problems.
10. Possible tearing of the spleen which could require surgery.
11. More remote complications may occur. Even death has rarely been reported.
12. Please note the colonoscopy does not examine the appendix.

If a colonoscopy is recommended to you, it is the opinion of your Gastroenterologist and referring physician that the benefits of the procedure outweigh the risks. If your Gastroenterologist does not feel that the colonoscopy can be completed safely, he or she will stop the procedure. However, as noted above, despite all precautions, complications may occur in a very small percentage of patients. Feel free to discuss any concern you have with your gastroenterologist.

## **Alternatives**

There are alternatives to a colonoscopy. One alternative is to do nothing, and take a chance that your colon will not cause you any problem. Noninvasive means to screen for colon cancer include annual stool tests for occult blood, and a Cologuard stool test every three years which may detect blood and/or abnormal DNA from cancer or advanced polyps. Stool tests are designed to detect advanced polyps and cancer. If the stool tests are abnormal, colonoscopy is mandatory. Another alternative is a sigmoidoscopy, the insertion of a two-foot long flexible instrument that covers about one third of your colon.

Another alternative is a CT scan procedure called virtual colonoscopy. This procedure requires a similar preparation as described above. There are advantages and disadvantages to the virtual colonoscopy. This procedure has few risks other than missing polyps or early cancers. The CAT scan does not remove polyps - only colonoscopy or surgery can do that.

If you have a polyp that is not removed, it might grow into cancer. Aside from colonoscopy, the only other way to remove the polyp would be major surgery, done by either laparoscopy or "open" surgery.

Your Gastroenterologist can discuss these options with you, but colonoscopy remains the gold standard.

## **Costs**

The cost of this procedure depends on your insurance policy. The fee includes the procedure and the extensive instrument sterilization required after each procedure. Medicare does cover the procedure in most circumstances (a deductible will apply). The procedure fee will not cover the doctor's consultation before the procedure. Other fees may apply for anesthesia, hospital or office room/equipment fees, and biopsy reports. Your insurance company and our billing staff will be glad to answer questions about the fees.

The gastroenterologist will discuss the results of the procedure with you immediately at its conclusion. If biopsies are taken, it will take five working days to obtain the results. Please call for your results at that time.

This is a diagram of the gastrointestinal system. The colon (large intestine) is darkened. During colonoscopy, the colonoscope is inserted into the rectum and the entire colon, up to and including the cecum is examined. The average adult colon is five to six feet long.

