



CT(Virtual) Colonography

CT colonography (CTC) or Virtual Colonoscopy (VC), is an exam used for colon poly screen. The entire inner surface of the colon can be seen with CTC. A computer tomography (CT) or “CAT” scan creates images of the inside of your colon. CTC allows the doctor to see your colon and to take a limited look outside of the colon for problems in the abdomen and pelvis. The main purpose of this exam is to screen for growths (polyps) in the lining of the large intestine (colon and rectum).

How to prepare

To prepare for this exam, you must clean your colon. Any residual fecal material will obscure the images and decrease the chance of finding a colonic polyp. Follow the CT Colonography Protocol outlined below to ensure that your bowel is well prepared.

What to Expect

The VC exam usually takes 15 or less minutes to complete. You will not need pain or sedation medication. You will be asked to change into a hospital gown for the exam. You will be taken to a CT exam room where you will lie on a CT exam table. A small, flexible tube (smaller than a pinky finger) will be gently placed a very short distance into your rectum (the feeling is like having a digital rectal exam). Carbon dioxide will be infused slowly into your colon. The exam should not be painful, though you may have some abdominal fullness, discomfort, or cramping during the exam. You may feel the urge to have a bowel movement. These feelings should go away as soon as the exam is over. CT images are taken of your abdomen and pelvis while you are lying on your back and then on your stomach. Each time you move, you will be asked to hold your breath for about 10 seconds while the CT scanner takes pictures.

After the Exam

After the exam, most of the carbon dioxide will be removed from your colon through the catheter in your rectum. You may feel bloated or pass gas for a few hours after the exam as you clean the remaining air or gas from your colon. Walking may relieve any discomfort, and you can return to your usual diet and activities right away. Consult your doctor if your signs and symptoms don't improve on their own.

Potential Risks

Rarely, a tear (perforation) can occur in the colon or rectum wall due to colon and rectum being inflated with air or carbon dioxide. If you had a recent colonic biopsy or recent colonic infection or inflammation, you shouldn't have this study for at least 6 weeks. If you experience severe abdominal pain post CT Colonography, return to Radiology or the ER department.

The level of radiation used during a screening CT scan, such as virtual colonography, is lower than the amount of radiation used in a diagnostic CT scan. It is comparable to Barium Enema exam. Radiation used during a virtual colonoscopy is unlikely to be dangerous.



CT Colonography Protocol

To get a clean and empty colon you will start to prepare the day before your exam. Both a clear liquid diet and the contents of the bowel prep kit are needed to clean out the colon. The bowel prep kit contains laxatives and contrast material. The laxatives will help clean out the bowel for the exam. The contrast will help to highlight any stool left in your colon on the VC pictures.

List of Items to be picked up at X-Ray department:

- ✓ Readi-Cat Barium
- ✓ Gastrografin (60ml)

Items to be purchased 2 days prior to exam:

Bisacodyl tablets (2 tablets, 5mg each)	Magnesium Citrate, Citro-Mag (2 bottles, 300ml each)
	

The Day Before Your Exam (Prep Day)

Starting at midnight the day of your prep, you may drink as many clear liquids (see below) as you want unless you are under a fluid restriction by your doctor. If you are under a fluid restriction, please speak with your doctor to be sure this prep is right for you. Drink only clear liquids for breakfast, lunch, dinner and snacks. Do not eat any solid foods. Drink plenty of fluid to avoid dehydration and to make the laxative work better. Please avoid red liquids (ie. Red Jell-O or cranberry juice). Clear liquids may include:

- Gatorade, Powerade (sports drinks with electrolytes are recommended to help with hydration)
- Water, tea, or coffee (no cream or milk; sugar or honey is okay to add)
- Vitaminwater, Crystal Lite • Bouillon or broth (chicken, beef, or vegetable)
- Jell-O, popsicles (no fruit or cream added)
- Apple, white grape, or white cranberry juice (no orange, tomato, grapefruit, or prune juice)
- Soda such as Sprite, 7-up, ginger ale or any cola
- Clear hard candy, gum
- Lemonade (with no pulp), iced tea



Follow the Bowel Prep medicine schedule. If you take other medications, take them 1 hour before or at least one hour after taking the laxative (magnesium citrate). You may wish to place the kit in the refrigerator to make the contents more pleasant to drink. Or, you may drink them at room temperature. You may have as many clear liquids as you like between each step and up until midnight.

- ✓ **Step 1 – Before 11am:** Take two Bisacodyl tablets (5mg each) with 1 glass (8 ounces) of clear liquids. This will gently help move your bowels (6-8 hours after you take this medicine) to help the laxative taken in Step 2 work better. You can take these tablets and still do normal activities because they will rarely cause diarrhea.
- ✓ **Step 2 – between 2 and 6pm:** Drink the first bottle (300ml) of magnesium citrate. Follow this with at least 4 to 6 cups of clear liquids before Step 3. This is a laxative, so you should begin to have closely spaced bowel movements. You will want to be near a restroom. The time it takes for the laxative to start working varies for each person. Wait at least 3 hours from the time you take the first bottle of magnesium citrate before going on to Step 3.
- ✓ **Step 3 – between 5 and 9pm:** Step 3 should begin at least 3 hours after the start of Step 2.
 - Drink 250 mL of Readi-Cat Barium. This is a contrast medication.
 - Drink the second bottle (300mL) of magnesium citrate. Follow this with at least 4 to 6 cups of clear liquids before step 4. This is a laxative and will continue the process of cleaning out the colon. Wait 2 to 3 hours before starting Step 4.
- ✓ **Step 4 – between 8 and 11pm:** Step 4 should begin 2-3 hours after the start of Step 3. (Choose one option)
 - Option A: Drink 1 bottle (60ml) of Gastrografin undiluted. You may find it tastes better if you quickly drink it and then follow it with 1 glass (8 ounces) of clear juice, soda or water. This will dilute the medicine in your stomach.
 - Option B: Mix 1 bottle (60ml) of Gastrografin in 1 glass (8 ounces) of clear juice, soda, or water. If you dilute the medicine, you must be able to drink the entire amount, but it is not necessary to drink it quickly.

The Gastrografin is another contrast medication that helps enhance the VC pictures

You may keep drinking clear liquids until midnight.

Bowel Prep Complete!

The day of the Exam

Sips of fluid for any normal medications as directed 2 hours before the exam. If you are on insulin, ask your physician about dose modifications. Try to empty bowel one last time before the test.

Resume normal diet and medication after the exam.