CT COLONOGRAPHY

Patient information

CT colonography (sometimes called virtual colonoscopy) is a way of looking inside your bowel and abdomen. The following explains how it is done, what to expect, and any risks involved.

What is CT colonography?

CT colonography uses a CT scanner to produce two and three dimensional images of your large bowel (colon and rectum). The CT scanner uses x-rays to produce images of a “slice” through a part of the body. During CT colonography, a thin flexible tube is placed in your back passage through which gas will be introduced to inflate your bowel. When your bowel is sufficiently full, CT scans will be performed with you lying on your back, your front or your side. After the scans, doctors will look at your images for polyps and signs of cancer. If any cause for your symptoms is seen on the images, you may be offered further tests.

Are there alternatives to CT colonography?

There are two other ways of looking at the large bowel: barium enema and endoscopy. Barium enema has been available for many years but does not provide as much information for doctors and is often more uncomfortable for patients.

Endoscopy is the standard way of examining the large bowel. In this, a thin tube with a camera on the end (colonoscope) is passed into the back passage and moved around the bowel. The procedure is more invasive than CT colonography and usually requires sedation. However, it does allow tissue to be removed for testing (biopsy) or polyp removal if needed.

These two tests will only give us information about your large bowel. CT colonography also provides information about the other organs inside your abdomen and pelvis.

What do I have to do before my CT colonography?

Bowel preparation.
To give us a clear view of the bowel lining, your bowel must be prepared before the test. You will have to clear your bowel of stool (faeces) by
using a strong laxative and/or drinking an iodine based “tagging” liquid for 2 days before having your test.

The second leaflet in your appointment package will explain this preparation in more detail. The leaflet also gives dietary instructions about what you should and should not eat before your test. It is important that you drink plenty of fluids to avoid becoming dehydrated during this bowel preparation.

**Taking tablets and medicines**

If you take Metformin (Glucophage) tablets for diabetes, please let us know on the day of your test. We sometimes ask patients to stop these tablets for two days after their test.

You should continue to take all your other tablets except iron tablets which should be stopped seven days before your CT colonography.

Please let us know when you arrive for your test if you have any of the following

- Diabetes
- Asthma
- Kidney problems
- Prostate problems
- Angina or heart arrhythmias
- Glaucoma

or if you

- have had a heart attack in the last six months
- are waiting for heart surgery
- are waiting for a coronary angioplasty
- have any allergies
- have had a reaction to iodine or any intravenous contrast medium (if you are not sure about this, please ask us).
- Are not happy to undergo this test

**On the day of your test**

You should go to the CT department in Royal Lancaster Infirmary or Furness General Hospital and report to the Reception. You will be greeted by a radiology assistant or radiographer and guided to the preparation area to get changed into a gown.

If you need help with changing or translation please bring someone with you to help you. If you need an interpreter please tell the person who sent you for this test so that it can be organised.

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What happens during CT colonography?

- You will have plenty opportunity to ask questions when the radiographer explains the test to you. You will then be asked for your consent to proceed. Please let them know if you had any problems with your bowel preparation.
- The procedure usually takes about 15-20 minutes
- You may have a small tube, called a cannula, inserted into one of the veins in your arm
- You will be asked to lie down on the scanner table on your left side
- A muscle relaxant will normally be injected to avoid bowel spasm
- The radiographer will then pass a small flexible tube into your back passage
- Gas (carbon dioxide) will be gently introduced into your bowel through the tube in your back passage. This is done at a controlled rate by a machine specifically designed for the purpose
- Despite the muscle relaxant, you may still feel some bloating and mild discomfort in your abdomen like “bad wind”.  
- Once the radiographer is satisfied with the amount of gas in your bowel, CT scans will be taken with you lying in 2 positions; first on your back and then on your front or side.
- Each scan will take 10-20 seconds (one breath hold)
- Sometimes the radiographer may need to take extra scans to ensure we can fully see your entire bowel. Occasionally we will perform a scan of your chest at the same time for additional information. During this you will be given an iodine-based intravenous contrast medium via the cannula.

Are there any risks?

CT colonography is generally regarded as a very safe test. Problems can occur, but they are rare. Problems which might occur are similar to those which can happen with other methods of examining the large bowel. These include

- Abdominal discomfort
- “faint-like” reactions
- Reaction to the injected contrast. If you are given any drugs during your test the radiographer performing the test will give an explanation of any potential risks or side effects they may have.
• Damage to the bowel wall (there may be a small tear in the lining of the colon or rectum; this happens in fewer than one in 3000 tests)
• Dehydration or an electrolyte imbalance caused by the laxative. It is important that you drink plenty of fluids - your diet sheet will give you this information. If you feel very unwell after taking your laxative, please do not take any more and contact us or your doctor.

What happens after the test?

A specialist radiologist will review the images from your CT colonography and send a report to the doctor who sent you for this test.

FAQ’s

Q. I have already had a colonoscopy that was difficult; how is this test different?
A. During this test a small flexible tube is inserted into the rectum through which gas is passed. The gas will gradually fill the loops of bowel which will be easier and more comfortable than trying to pass the endoscope around the bowel.

Q. I am diabetic, can I still take the bowel preparation?
A. Yes.
1. If your diabetes is controlled only by tablets or by diet and you are able to measure your own blood sugar then most people can continue with the diet as instructed. Taking laxatives can reduce your blood sugar so you may have to monitor your blood sugar level more frequently than usual. If you have difficulty managing to maintain a balance sugar level, please see below.
2. If your diabetes in controlled by insulin or if you have difficulty in maintaining a balanced sugar level we can adjust your preparation accordingly – please phone us.

Q. Why do I need to be on a restricted diet before this test?
A. It is important that your bowel is as clean as possible to get a good quality scan. Some foods make it more difficult to clean the bowel; this diet is designed to help with the bowel preparation.

Q. Is this test just for my bowel or will it show anything else?
A. This examination provides information about other organs in your abdomen.

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Q. Will I have sedation for this test and will I be able to drive home afterwards?
A. Sedation or pain relief is not needed for this test. Most people find that it can be a little uncomfortable, but as soon as the test is finished the discomfort will ease. Because there is no sedation, this test will not affect your ability to drive.

Q. This test involves radiation; how much radiation will I receive and is it dangerous?
A. We use as little radiation as we are able to, whilst making sure that the scan is of adequate quality.

Q. What happens if an abnormality is found in my bowel?
A. Usually you will get the result of your scan from the doctor who asked us to perform it. You and your doctor will then decide what to do next if any treatment is needed. However, sometimes if further tests are required we may try to organise them for the same day, especially if this means you do not have to have another bowel preparation.

Q. If polyps are found in my bowel, will I have to have them removed?
A. Your doctor will discuss this with you. Generally, those polyps measuring 1 centimetre or more will be removed at endoscopy, but smaller polyps may be left, and monitored by follow up scans. This decision is made on an individual basis and will not be the same for everyone.

Q. Is this test as accurate as colonoscopy?
A. A large study has been performed, comparing this test to other bowel tests. This test has been shown to be as accurate as colonoscopy.

Q. Is this test similar to a Barium Enema?
A. Most people find that this is a much easier test to have, especially for those patients who are older or less mobile. Also this is a much more accurate test.

If you have internet access, you can find out more about CT colonography (virtual colonoscopy) on the National Institute of Clinical Excellence website: www.nice.org.uk/page.aspx?o=104843

For more information on bowel cancer: www.bowelcancer.org

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