

CT Colonography (Virtual Colonoscopy)

Patient information

CT colonography is a way of looking inside your bowel and abdomen. This information explains how it is done, what to expect, and the risks involved.

What is CT colonography?

CT colonography involves using a scanner to produce two and three dimensional images of the whole of the large bowel (colon and rectum).

The scanner uses x-rays to produce images of a “slice” through a part of the body. This is called Computed Tomography or CT. **Sometimes CT colonography is called ‘Virtual Colonoscopy’.**

During CT colonography, gas will be used to inflate your bowel via a thin flexible tube placed in your back passage. Then CT scans will be performed with you lying on your back and your front. After the scans, doctors will look at your images for polyps and signs of cancer. If anything unusual is seen on the images, or if further information is needed, you may be offered further tests.

Are there alternatives to CT colonography?

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 up and 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.

CT colonography also provides information about the other structures inside your abdomen.

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 three days before your CT colonography.

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

- Diabetes
- Over active thyroid or Grave's disease
- Kidney problems
- Prostatism
- Angina or other heart problems
- You have had a reaction to iodine based intravenous contrast medium (x-ray dye) if you are not sure about this, please ask us.

Here are some questions which we are frequently asked.

Q. I have already had a colonoscopy that was difficult; how is this test different?

A. This test will be easier and more comfortable than trying to pass the endoscope around the bowel.

Q. I have diabetes, can I still take the bowel preparation?

A. Yes. You have also been provided with an information sheet with additional guidance for patients with diabetes.

Q. Is this test just for my bowel or will it show anything else?

A. With this test it is possible to get information about other structures within your abdomen; the amount of information will vary, depending on the technique used for each patient.

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. The amount of radiation needed will depend upon various factors including the reason why the scan is being performed and if additional scans are required.

It is possible, in some cases, to use a very low dose which would be the equivalent to 1 year's background radiation.

Q. Why are the scans done first thing in the morning?

A. Our patients generally prefer to be scanned at the beginning of the day for several reasons

- The department is less busy.
- There is no need to spend the day without eating
- Less time off work is needed- many people go to work straight after their test
- If the scan indicates that an additional test is required we may be able to organise it for the same day

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. 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. Can I have this test if I don't have any bowel symptoms?

A. Currently you will only be able to have this test on the NHS if you have symptoms, or if your GP feels that you have an increased risk of developing bowel cancer.

Q. Can anybody have this test?

A. As this test uses radiation, we try to avoid performing this test on anyone under the age of 45, however we treat every case individually and there will always be exceptions.

Also, this test is not suitable for those patients who have, or are suspected of having inflammatory bowel disease or who have polyposis.

On the day of your test

You should go to the Radiology (x-ray) department on level 4 at **Northwick Park Hospital** and report to the **CT/Ultrasound Reception**.

You will be greeted by a radiology assistant or radiographer and guided to the preparation area to get changed into a gown.

What happens during CT colonography?

- The radiographer will explain the test and answer any questions, before asking for your consent. 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
- The radiographer will pass a small flexible tube into your back passage
- A muscle relaxant will normally be injected to avoid bowel spasm
- If you need help with changing or translation you may 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.
- You may be given an iodine-based intravenous contrast medium via the cannula
- Gas (carbon dioxide or air) 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; usually first on your front or side and then on your back.
- 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.

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
- 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 Gastrografin. 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 Gastrografin, please do not take any more and contact us or your doctor (or out of hours GP service for weekends/evenings).

What happens after the test?

A specialist radiologist will review the images from your CT colonography and send a report to your doctor.

Same-day endoscopy

Most patients will go home immediately after the test. Where an abnormality in the colon is found we may occasionally be able to offer some patients a 'same-day' endoscopy. When this happens, we will need you to stay in the hospital (or be available on a phone), fasting, for up to two hours after your CT colonography test while we fully review your scan and arrange the endoscopy appointment. If same-day endoscopy is offered, you will be informed about what this examination will involve and escorted to the **Endoscopy Unit** at St Mark's Hospital.

Any further questions?

We will do our best to make your visit as comfortable and stress free as possible.

If you have any questions about the time or date of your appointment, please phone our appointment desk:

Monday to Friday between 10.30am and 4.00pm on 020 82354181.

If you have any questions about the procedure, please contact Janice Muckian, CTC Service Manager:

Monday to Friday 10.30 am to 3.30pm on 07770 784911.

If your call cannot be answered, please leave a message and we will return your call as soon as possible.

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