

# CT Colonography & Bowel Preparation



**Radiology Department**

This leaflet tells you about having a CT Colonography also known as a virtual colonoscopy (VC). It explains what is involved and the possible risks. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure please ask the doctor who has referred you.

## What is CT Colonography?

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A CT Colonography involves using a CT scanner to produce 2D and 3D images of the whole of the colon (large bowel) and rectum (back passage) to look for polyps (fleshy growths) or signs of cancer.

You may have been referred for this test to help your doctor find out what is causing symptoms such as abdominal (tummy) pain, weight loss, a change in your usual bowel habit or blood in your faeces (stools).

## Are there any alternative tests?

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- Barium enema is a test which also examines the large bowel (colon and rectum). It is not as accurate at picking up small polyps and signs of cancer as CT Colonography.
- Colonoscopy uses a flexible tube with a camera on the end to directly visualise the large bowel and continues to be the main test for looking at the bowel. It is more invasive than CT Colonography and usually requires sedation. However a biopsy or sample of tissue can be taken at the same time if required. CT Colonography is as accurate as colonoscopy.

Both of these tests require that the bowel be cleaned with medication (laxatives) prior to the test in the same way as CT Colonography.

## Are there any risks?

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CT Colonography is regarded as a very safe test.

There is a small risk that inflating the colon (carbon dioxide is introduced into the tummy cavity to expand it so that the colon is well seen) may cause a tear (perforation). The risk of perforation is about 1 in 3000 and is lower than that of a colonoscopy.

There is a link between developing cancer and excessive exposure to radiation. We keep the radiation dose to an absolute minimum and the dose you are exposed to during a CT Colonography is approximately the equivalent to three years natural background radiation (i.e. the amount of natural radiation you would receive from living in the UK for three years).

However, by referring you for this test your doctor feels the benefit of an accurate diagnosis outweighs any potential health risks.

## Do I have to do anything before my CT Colonography?

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The bowel lining needs to be clear for us to get good pictures and you will need to follow a low fibre /low residue diet two days before the test and take bowel cleansing agents, strong laxatives and a liquid, the day before. You will want to stay close to a toilet once you have taken the laxatives. This is explained in the following section.

If your doctor has not arranged any recent renal function blood tests, you may be sent a request for your blood to be tested prior to your appointment.

## What Bowel preparation is required?

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Your clinician has deemed you fit to take a bowel preparation

(Picolax ®/ CitraFleet® or Moviprep®).

You should take this the day before your examination to clear the bowels before the test. Carefully follow the manufacturers' instructions provided. If you do not follow the instructions properly it may not be possible to get a diagnosis from the examination.

## **Warning:**

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Be prepared for frequent watery bowel movements starting within 2-3 hours of taking the bowel preparation so stay close to a toilet.

It is a good idea to apply barrier cream or Vaseline around your anus so you do not get too sore.

The purpose of bowel preparation is to empty the bowels so they can be visualised more easily on the CT Colonography.

To help empty the bowels, it is important to have a suitable diet on the same day as the bowel preparation. This requires avoiding foods, which are high in fibre (e.g. brown bread, fruit and vegetables), and avoiding dairy products and fried foods because they create constipation, which would reduce the effectiveness of the bowel preparation.

What you eat will improve both the performance of the bowel preparation and the diagnostic accuracy of the procedure.

## **A suitable diet on the same day as the bowel preparation:**

### **Breakfast 8.00am–9.00am**

If eaten, should be limited to a boiled or poached egg and/or white bread. A scraping of butter or margarine is allowed, but NO jam or marmalade.

### **Lunch 12.00pm–1.30pm**

A small portion of steamed, poached or grilled whitefish or chicken may be eaten, with a small portion of boiled potato OR white bread.

No other vegetables are allowed. Clear jelly may be eaten for dessert.

### **Supper 7.00pm–9.00pm**

No solid food is allowed.

You may have, clear soup or meat extract drink, followed by more clear jelly for dessert.

- The diarrhoea, which occurs as a result of bowel preparation, means the body loses a lot of fluid and hence it is advisable to avoid alcohol and strong coffee as these may make you more dehydrated.

On the day of your examination you can drink clear fluids but do not eat anything.

## **Before taking Picolax®/CitraFleet®/Moviprep®; please consider the special warnings and precautions below**

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There is an information leaflet enclosed with the bowel preparation, **please read this thoroughly before you take the above.**

If you think it may not be safe for you to take bowel preparation, please contact the unit where you are to have your examination.

**Drink plenty of clear fluids; preferably water, throughout the treatment. In general, you should try to drink about a glass of water (approximately 250mls) or other clear fluid over every hour whilst the effects of the bowel preparation on your bowel movements persist.**

Diarrhoea is an expected outcome of bowel preparation. Please be sure that you have ready access to a toilet once you have taken the bowel preparation.

Please give consideration as to your mode of transport to and from the hospital as you may require ready access to a toilet.

## **Are there any alternatives to taking Bowel Preparation?**

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There are no alternatives other than the three options listed here. Bowel preparations is necessary to carry out CT Colonography.

## **Are there any side effects to taking Bowel Preparation?**

Side effects can include nausea, vomiting, bloating, abdominal pain, anal irritation and sleep disturbances. Vomiting and severe diarrhoea can lead to fluid loss (dehydration) with dizziness, headache and confusion without proper fluid and salt replacement. **If this occurs, please seek medical advice.**

Pixolax®/Citrafleet® may affect the absorption of regularly prescribed oral medication. In light of this it is advisable that oral medication should be taken at least 2 hours before taking the above.

The period of bowel cleansing should not normally exceed 24 hours because longer preparation may increase the risk of you becoming dehydrated.

**If this occurs, please seek medical advice.**

If you are taking tablets/medication prescribed by your doctor you should take them at your usual time.

**If you think it may not be safe to take bowel preparation, please contact the doctor who referred you for this examination.**

## **What if I am a diabetic?**

**The day prior to your examination:** If you are concerned that the recommended diet will affect your diabetic control and you are unsure what to do, please contact your Diabetic Nurse Specialist or GP for advice. You may take glucose to correct your sugars.

Do not take your morning diabetic medication but bring it with you as well as something to eat and drink. You may take glucose to correct your sugars. If you are unsure what to do, please contact your Diabetic Nurse Specialist or GP for advice.

## **Can I take my normal medications?**

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Yes, you should continue all your normal medications. If you are diabetic you may need to amend your normal doses. You may take glucose to correct your sugars. If you are unsure what to do, please contact your Diabetic Nurse Specialist or GP for advice.

### **7 days before your procedure:**

Stop taking all iron tablets but continue other medication.

### **4 days before your procedure:**

Stop taking any anti-constipation agents i.e. Fibogel®

### **2 days before your procedure:**

Eat foods which are low in fibre and follow the bowel preparation and dietary advice.

## **Can I bring a relative or friend?**

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Yes, but for reasons of safety, they may not be able to accompany you into the examination room, except in very special circumstances.

## What happens during the test?

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- The radiographer will explain the test to you and answer any questions you may have.
- You will be asked a series of medically related questions prior to the procedure.
- You can expect to be in the department for approximately 30-40 minutes.
- You will be asked to change into a hospital gown, removing all garments and given a special pair of shorts to wear.
- You may have a small plastic cannula (fine tube) put into a vein in your arm before of the CT scan. This will be used for introducing a muscle relaxant called Buscopan® and an intravenous iodine based contrast (dye) if it is appropriate to do so.
- Once on the CT scanning couch, a small flexible plastic tube will be inserted into your back passage which is secured by inflating a small balloon.
- Carbon Dioxide (CO<sub>2</sub>) is then gently introduced into the bowel via the tube in the back passage. This is to distend (swell up) the bowel so we can get good pictures of the entire colon. This may feel a little uncomfortable and you may feel bloated; like having 'bad wind'. The carbon dioxide is absorbed quickly and safely by the body.
- At this stage a small injection of muscle relaxant (Buscopan®) may be given to help relax the bowel.
- The muscle relaxant also affects the muscles of the eyes, making vision blurry for approximately thirty minutes so driving home must be delayed until such time when the effects of the muscle relaxant has worn off.
- When we are happy there is enough gas in the bowel, you will lie on your back for the first part of the CT scan.
- You will be asked to hold your breath and the scan itself takes about 10-20 seconds during which time the iodine based contrast (dye) will be injected through the cannula (small tube) in your arm.

- The radiographer will then help you turn over onto your front (or on your side if lying on your front is not possible) and will perform a second CT scan. You will be asked to hold your breath and the scan itself takes 10-20 seconds.
- The radiographer will then check that the images taken are satisfactory.
- The tube will be removed and you will be able to go to the toilet to make yourself more comfortable.
- You will be required to stay within the department for a minimum of 15 minutes after the procedure. The cannula will be left in. Once a member of the team has been out to check on you they will remove the cannula and you may then get dressed and go home if you feel well.

## How long will it take?

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Generally the scanning process will take up to twenty minutes, however can be longer. Unless you are delayed by having to wait, such as for an emergency patient, the total time in the department will be about sixty minutes.

## Are there any side effects and what happens after the examination?

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You may want to rest at home for the remainder of the day.

It is normal to get abdominal cramp-like pains over the next few hours. The CO<sub>2</sub> gas will be absorbed in the next hour or so after the scan.

Very rarely, in people who are already at risk of closed angle glaucoma, the muscle relaxant can cause very painful red eyes. **If this happens you should call your GP as an emergency or attend the A&E department immediately.**

If you have a muscle relaxant injection you must delay your journey home for approximately thirty minutes.

You will be given an aftercare sheet to take home and read.

## **Can I eat and drink afterwards?**

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Yes, you can eat and drink normally.

Fluids are especially encouraged as the bowel preparation will have caused you to be dehydrated.

## **When will I get the results?**

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The scan will be reported after your visit and the findings sent to your referring doctor, which is normally within 14 days. If your clinic appointment is within this time please inform the radiographer.

## **Information for female patients**

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As this test involves x-ray radiation which can be potentially harmful to an unborn foetus, you must ensure there is no possibility of pregnancy prior to this procedure.

The strong laxatives used for clearing the bowel can interfere with the effectiveness of the oral contraceptive pill and you must take extra precautions for the remainder of the cycle. Please continue to take the oral contraceptive pill as normal.

## **Privacy and dignity**

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Sometimes tests, although necessary, can be embarrassing or undignified for patients but we promise to do everything we can to make you as comfortable as possible during your visit to the department. We hope that the information in this leaflet will answer any questions you may have but please feel free to contact us if you have any particular worries, questions or concerns.

## **Patient surveys**

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We value your opinion on our service and in order to deliver, maintain and improve this service we ask you to complete a short patient questionnaire survey found with the appointment letter. Completion of these surveys is entirely voluntary.

## Questions and contacts

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Following the examination, if you experience any problems please contact the CT Department between 08:30 and 17:00. Outside these times please contact your GP.

If you have any questions or would like to know more about this procedure, please telephone the CT Department on:

**01483 464151** (Direct line)

**01483 571122** Extension **4151 / 4414**

**If you are unable to keep your appointment notify the CT scanner clerical staff as soon as possible.**

For further information about Diagnostic Imaging Services at Royal Surrey County Hospital NHS Foundation Trust, please contact:

**Royal Surrey County Hospital NHS Foundation Trust**

Egerton Road Guildford Surrey

GU2 7XX

[www.royalsurrey.nhs.uk/service-list/radiology/ct-scanning/ct-colonography](http://www.royalsurrey.nhs.uk/service-list/radiology/ct-scanning/ct-colonography)

## Key references sources and other sources of information

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### **Radiation Dose**

<https://www.gov.uk/government/publications/ionising-radiation-dose-comparisons/ionising-radiation-dose-comparisons>

### **Nice Guidelines**

<https://www.nice.org.uk/guidance/ipg129>

### **NHS Choices**

[http://www.nhs.uk/search/?query=colonography&collection=nhs-meta&start\\_rank=1](http://www.nhs.uk/search/?query=colonography&collection=nhs-meta&start_rank=1)

## Contact details

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**01483 464151** (Direct line)

**01483 571122** Extension **4151 / 4414**

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## PALS and Advocacy contact details

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Contact details of independent advocacy services can be provided by our Patient Advice and Liaison Service (PALS) who are located on the right hand side as you enter the main reception area. PALS are also your first point of contact for health related issues, questions or concerns surrounding RSCH patient services.

**Telephone:** 01483 402757

**Email:** [rsc-tr.pals@nhs.net](mailto:rsc-tr.pals@nhs.net)

**Opening hours:** 9.00am–3.00pm, Monday to Friday

If you would like information documents in large print, on tape or in another language or form please contact PALS.

Past review date: October 2016

Future review date: October 2019

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**PIN161027–1145**

