Radiology department

CT colonography
(CT pneumocolon or virtual colonoscopy)

Part 1 - The examination
Part 2 - Preparation instructions

Part 1 - CT colonography examination

This leaflet is for patients who are referred for a CT colonography examination with faecal tagging. This procedure is sometimes called a CT pneumocolon or a CT virtual colonoscopy. The leaflet will explain what the procedure involves and what the risks are.

Please contact the CT department on 01223 217427 between 08:00 and 17:00 (Monday to Friday) as soon as possible if:
- you cannot attend for your appointment for any reason
- you are or there is any chance you may be pregnant
- you weigh more than 180kgs or 28 stone
- you are claustrophobic
- you have limited mobility
- you are diabetic and require further advice

Every year thousands of people fail to keep their appointments. If you don't turn up, we can't give your slot to someone else. So please, if you can't make it, or no longer need it or want to arrange it, call 01223 217427.

What is CT colonography?

This is a CT scan of your large bowel (colon and rectum). 'CT' stands for Computed Tomography, which means using X-rays to produce 'sliced' pictures through a part of your body, which can be reviewed by the doctor in two and three dimensions.

The purpose of the test is to try and find out what may be causing your symptoms (for example, a change in bowel habit, weight loss or anaemia).

What happens during the examination?

Firstly, the radiographer will explain the procedure and answer any questions you have. You will then be asked to change into a hospital gown to prevent any metal objects showing up on the pictures. The radiographer will put a cannula into one of your arms.

You will be asked to lie down on the scanner table on your left side and a very small and flexible tube will be inserted into your back passage. This will allow the radiographer to slowly introduce some carbon dioxide (CO₂) and inflate the bowel. This will enable the doctors to see the walls of your bowel clearly. This may make you feel bloated.
Most patients are given two injections through the cannula. One is called Buscopan and it relaxes the bowel muscles and makes it more comfortable for you. The other is an iodine-based injection to show your blood vessels. Scans will then be taken on your back and most likely your front.

What should I expect after the examination?
The examination will last for about half an hour. You will be asked to stay in the department for about 15 minutes. You will be offered a hot drink and something to eat (feel free to bring something else with you).

You may wish to rest at home for the rest of the day, as you may experience

- Abdominal pains over the next few hours. The CO₂ will gradually be absorbed over the hour or so after the scan.
- You may have some residual diarrhoea.
- You may have blurred vision following the injection. Your eyesight will return to normal within an hour. **Do not drive or operate heavy machinery until your eyesight has returned to normal.**

Are there any risks or side affects?
CT colonography is generally regarded as a safe test. Problems are rare and are similar to those which could happen with other methods of examining the bowel.

These include the following:

- There is a risk of damage to the lining of your bowel wall. This is very rare, fewer than one in 2000 tests.
- There is a risk you may react to either the x-ray dye or the Buscopan. The radiographer will ask you questions to reduce this risk before giving you the injections.
- Very rarely, the injection can cause painful blurred vision in people who are already at risk of glaucoma. **If this occurs you should call your GP as an emergency.**
- The bowel preparation, Gastrografin, may cause dehydration or an electrolyte imbalance. It is important that you drink plenty of fluids. In some people it can also cause nausea and vomiting, skin rashes and very rarely an allergic type reaction.
If you are concerned that you may be experiencing any of the above, please do not take any more and contact the CT department on 01223 217427 or your GP.

Taking the bowel preparation might prevent the absorption of the oral contraceptive pill. Additional contraceptive precautions should be taken until your next period begins.

As with all x-ray examinations, there is a risk from the use of radiation. The dose is kept to a minimum and it is equivalent to a barium enema or a few years of natural exposure.

**Are there alternative tests?**
The alternative way of imaging the bowel is colonoscopy.

Colonoscopy involves passing a narrow flexible instrument through the rectum into the colon to examine the colon lining. This remains the standard test for the large bowel. It is more invasive than CT colonography and usually requires sedation. It does, however, allow tissue samples to be taken if needed.

Colonoscopy only gives information on the large bowel, whereas CT colonography also provides extra information on the other structures within your abdomen.

**When and how will I get the results of the examination?**
The pictures taken of your bowel will be reported by the radiologist (radiology doctor) who will send a report to the person who referred you for the procedure.

If you have an appointment booked, the results will be ready by then. If you do not have another outpatient appointment and you do not hear anything within three weeks, please contact the consultant’s secretary for advice.

**Part 2 - How to prepare for your scan**

**What do I have to do before my CT colonography?**

To enable the doctor to have a clear view of your bowel lining, your bowel will need to be prepared before the test. To do this we will ask you to drink a liquid called ‘Gastrografin’ and to follow a limited diet for two days before the test.

During this time you will need to:
- stay near a toilet at all times
- drink plenty of fluids as instructed to prevent dehydration
- continue to take your regular medication
- use extra precautions if you take the oral contraceptive.

**Can I take other medication along with Gastrografin?**

If you are taking iron tablets please stop them for seven days prior to your scan.

You should continue with your all other regular medication as prescribed by your doctor unless directed otherwise.

If you are diabetic, please refer to the chart in this leaflet.
If you are taking beta-blockers, hypersensitivity or allergic-type reactions may be aggravated. Please contact the CT department on 01223 217427 if this happens.

**Is there a reason why I should not take the Gastrografin?**

If you are hypersensitive to iodine-containing contrast media or have hyperthyroidism then you **should not** take the Gastrografin. Please contact the CT department for further advice.

If you are or think you might be pregnant, please contact the CT department on 01223 217427 before taking the medication.

**How do I take the Gastrografin?**

You need to start taking Gastrografin at 20:00 two days before your appointment. A bottle of Gastrografin will be enclosed with your appointment letter.

Add 50mls Gastrografin to 250mls water (fruit squash may be added according to taste). Please drink this at **20:00 - two days before your CT appointment.**

Prepare the second 50 mls of Gastrografin in the same way and drink this at **20:00 the day before your CT appointment.**

**Low residue diet**

**This diet sheet must be followed for two days before your CT scan.**

What you are instructed to eat will improve the performance of the bowel preparation and enhance the diagnostic accuracy of the procedure. Please select foods from the items listed below.

<table>
<thead>
<tr>
<th>Dairy</th>
<th>Allowed</th>
<th>Please avoid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Limited to 200mls. Use low fat products eg: milk, plain yogurt, cream cheese, cottage cheese, butter/margarine.</td>
<td>Yogurt with fruit skins or seeds.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Strongly flavoured cheeses.</td>
</tr>
<tr>
<td>Meat/Fish/Poultry</td>
<td>Plainly prepared white fish, or chicken</td>
<td>Red meat eg: pork, beef Gravy, fried sauces, Heavy seasonings. Oily fish.</td>
</tr>
<tr>
<td>Potato/Pasta/Rice/Vegetables</td>
<td>White rice, pasta, noodles, potato with no skin</td>
<td>Brown rice, Wholegrain pasta, potato with skin. All vegetables.</td>
</tr>
<tr>
<td>Bread/Cereal</td>
<td>White breads, crackers. Crisped rice cereal, corn flakes.</td>
<td>Whole grain / wholewheat bread, wholegrain crackers and cereals, popcorn</td>
</tr>
<tr>
<td>Fruit/Fruit juices</td>
<td>Canned fruit (no seeds or skin). Clear fruit juices.</td>
<td>Raw fruit, dried</td>
</tr>
<tr>
<td>Drinks</td>
<td>Tea/coffee. no more than two cups per day. Water, fruit flavoured squash. Carbonated drinks.</td>
<td>All others</td>
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<tr>
<td>Soup</td>
<td>Clear soup only</td>
<td>All others</td>
</tr>
<tr>
<td>Dessert</td>
<td>Clear fruit jelly, fruit ice(sorbet)</td>
<td>All others</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>Salt, pepper, sugar/sweetener, honey. Eggs (boiled/poached) Tofu</td>
<td>Nuts, seeds, cloves, garlic, mustard, jam, marmalade, peanut butter, coconut, beans.</td>
</tr>
</tbody>
</table>

**Suggested menu for two days before the CT scan:**

**Breakfast:**
Tea/coffee (with milk and sugar/sweetener if required) or other drink from list in this leaflet.

Choose one of the following. (Smaller portions are allowed if you prefer):
- 30g crisped rice cereal or cornflakes with up to 100ml of milk
- Two slices of white bread/toast with a thin spread of butter/margarine
- One boiled/poached egg and one slice of white bread/toast with a thin spread of butter/margarine
- 50g cottage or cream cheese and one slice of white bread/toast with a thin spread of butter/margarine.

**Lunch and evening meals:**
Choose one of the following. (Smaller portions are allowed if you prefer):
- 75g white fish or chicken
- Two boiled/poached eggs
- 100g cottage/cream cheese
- Clear soup

**And one of the following:**
- Two slices of white bread/toast with a thin spread of butter/margarine
- Two egg sized potatoes without skin
- Two tablespoons white pasta or boiled white rice

**Dessert:**
- Fruit jelly
- Small natural yogurt
Please do not eat anything on the day of your scan, but it is important that you drink enough fluid to satisfy your thirst. This will help to avoid dehydration and headaches.

Please refrain from drinking any alcohol while you are following this diet.

You must continue to drink plenty of clear fluids until your bowel movements have stopped.

**Advice for diabetic patients undergoing CT colonography**

Please follow these instructions if your procedure is in the morning (before 13:00). For any diabetes related questions during bowel preparation, please contact your GP or the diabetes specialist nurses on 01223 348790 or bleep 152078.

**Food and drink**

You must follow the low residue diet for the two days before the CT colonography. On the day of the procedure you must not eat anything. However, you should drink as much clear fluids as possible, at least a glass every hour, to prevent dehydration.

Make sure you have some sugary drinks available, for example Lucozade (100mls), or apple or orange juice (200mls). **Drink these if your blood sugar falls below four.** Ensure that your bedtime blood sugar is **at least 10.**

Test your blood sugar regularly throughout the day.

### Insulin – taken once daily

No change to insulin dose necessary

### Insulin – taken twice daily

**Day before the procedure**
- normal doses

**Day of procedure,**
- do not take morning insulin, but bring it with you to the department and take half dose with food after procedure
- take normal evening insulin

### Insulin – taken four times a day

**Day before the procedure**
- normal doses

**Day of procedure**
- do not take morning insulin
- after procedure take normal short acting insulin with food
- take your normal evening and bedtime insulin doses

### Tablets for diabetes

**Day before the procedure**
- normal dose

**Day of procedure**
- do not take your morning tablets. Restart at next dose after your procedure unless directed otherwise by your radiographer.
For further information

- Please contact the **CT department on 01223 217427** between the hours of 09:00-17:00.
- Further information can be found on the following websites:
  - [www.bowelcanceruk.org.uk](http://www.bowelcanceruk.org.uk)
  - [www.goingfora.com](http://www.goingfora.com)

**How to find us**

The PET-CT department is between the outpatients and oncology departments on the ground floor. Parking at CUH is limited so please use public transport if possible. If you do need to bring your car then we have two patient and visitor car parks.

You can find information - including information on parking concession - on our website at [http://www.cuh.org.uk/corporate-information/finding-us](http://www.cuh.org.uk/corporate-information/finding-us)

We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

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