



## Diagnostic Imaging

# Bowel Cancer Screening

## Having a CT Colonography (CTC) Scan

### What is CT Colonography and how is it performed?

CT colonography is a computed tomography (CT) examination to look at the large bowel (colon). It is a method of diagnosing bowel cancer when it is still at an early stage.

A CT machine uses x-rays and advanced computers to create detailed images. We then examine these images to check the health of your bowel.

### Why have we offered you a CTC scan?

We have offered you a CTC scan for one of two reasons. It is either because:

- you had a colonoscopy, but we could not see the whole length of your large bowel, or
- you were told that colonoscopy was not suitable for you.

### Before your CTC scan

It is very important that you have a well-prepared bowel so that we can take good quality images.

We will send you a list of foods to avoid and a bowel preparation medicine before you attend for your scan. Please follow the instructions you are given very carefully.

### During the scan

The staff will look after you. They will explain the process and ask you to change into a hospital gown.

We may put a small cannula (needle) into a vein in your arm. Someone will help you onto the scanner table and ask you to roll onto your side.

A thin flexible tube will gently be inserted into your bottom. Some carbon dioxide gas will pass through the tube to gently inflate your large bowel. Additional gas is then introduced when necessary to keep your bowel inflated. We may give you a muscle relaxant through the cannula to reduce any discomfort.

The radiographer will help you into the correct position for the first scan. The radiography staff will briefly leave the room, but they will be observing you closely through the scanner room window. You will be able to talk to them using an intercom system. When the scan starts you will be asked to hold your breath for a few seconds, and you will feel the scanner table moving slowly.

The radiographer will then ask you to turn over into the next position (this may be onto your front or side) and they will repeat the scan. They will then check the quality of the images. Occasionally, we may need further scans to look more closely at an area that has not shown up clearly. We may use a dye during x-rays (called a 'contrast agent') given through the cannula to improve scan detail.

At the end of the scan, we gently remove the tube from your bottom and ask you to go to the toilet before getting dressed. The whole investigation takes no more than 30 minutes. You may wish to rest at home for the remainder of the day, although most people are able to resume their normal daily activities.

## **Your scan results**

A specialist will review your scan and send a report to your consultant or specialist screening practitioner. An appointment will then be arranged for you to discuss the results.

## **Risks of CTC**

### **Radiation dose**

A CTC investigation uses x-rays to produce the images. Medical radiation does carry a very small health risk.

The radiation that you receive during a CTC scan is about the same as a few years of natural background radiation (from your surroundings). The risk of this is considered to be low. The CT department monitors radiation doses very carefully and always uses the lowest dose needed to gain good quality images.

### **Expected side effects**

Minor side effects may include:

- Dehydration caused by the bowel preparation medicine – you will need to drink plenty of fluids before and after your scan.
- A dry mouth and blurred vision caused by the muscle relaxant injection (if given). This should wear off within 30 minutes, but please do not drive until your vision is back to normal.
- A feeling of warmth and an occasional strange metallic taste with the feeling that you have passed urine for a few moments, caused by the contrast agent injection (x-ray dye) if given.
- Bloating in your abdomen (tummy) during and after the procedure caused by the gas used to inflate your bowel. This soon wears off once you have been to the toilet and passed wind.
- Haematoma (bruising) where the injection was given.

### **Rare complications**

More serious complications are rare, but the radiography staff are well prepared to manage them.

Before sending you home, they will make sure you do not:

- Feel faint following injection of the muscle relaxant (if given).
- Have severe abdominal pain.
- Have a perforation of the bowel (a small hole in the bowel wall).
- Have a painful eye caused by the muscle relaxant (if given) – this is rare but if it happens you need to attend a hospital emergency department for an urgent eye assessment.

## If you need further investigations or treatment

Following your CTC scan, you may be invited to attend for other investigations. This will be discussed in detail with your specialist screening practitioner (nurse) or your consultant. If treatment is needed, you will be able to discuss this with a team of specialists.

**CTC scans are generally accurate at detecting cancer and large polyps, but no screening test is completely effective and there is a small chance that a CTC can miss a cancer or polyp that could later turn into a cancer.**

## Summary

To help you decide whether or not you want to have the CTC scan, the possible benefits and risks are outlined here. A CT scan:

- Can detect cancer and polyps at an early stage, improving your chances of successful treatment and survival.
- Is generally considered less invasive than colonoscopy.
- Has some common, minor side effects, and some very rare but more serious risks such as perforation of the bowel.
- Delivers a dose of radiation, but this carries a very low risk.
- May miss a polyp or a cancer (the same as with colonoscopy).

A bowel perforation is very rare, and only happens in about one in every 3,000 cases.

Most perforations will heal without treatment, although an overnight hospital stay, and antibiotics may be recommended.

## About this leaflet:

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If you have feedback regarding the accuracy of the information contained in this leaflet, or if you would like a list of references used to develop this leaflet, please email [pals@dchft.nhs.uk](mailto:pals@dchft.nhs.uk)



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# Bowel Preparation and Diet Sheet

Please follow these instructions carefully to make sure that your bowel is as empty as possible and to improve the accuracy of this test.

You should have received some laxative (Bisacodyl) tablets and a 100ml bottle of Gastrograffin from the pharmacy. If not, please ring **01305 255397**.

The Gastrograffin contains iodine. It is very important that if you are allergic to iodine or have previously had a severe allergic reaction to x-ray contrast dye, you have difficulty in swallowing or if you suffer from regular choking/coughing episodes when drinking fluids, that you do **not** take it and phone the department on **01305 255397**.

If you have diabetes, please seek advice from your diabetic team about how to manage the diet.

## 4 days before

Continue to take any prescribed medicine, but if you are taking iron tablets you should stop taking them.

## 2 days before

If you are taking any constipating medicines such as Codeine, Kaolin and Morphine, Loperamide (Imodium), Regulan or Fybogel stop this 2 days before you are due to come for the examination. Continue other medications and any laxatives you usually take.

Start low residue diet - you may only eat what is listed below throughout the day.

### Foods allowed on low residue diet:

- White bread and bread products such as crumpets, wraps and white naan.
- Breakfast cereals such as Cornflakes, Rice Krispies, Special K, Frosties with small amount semi skimmed, skimmed milk, rice milk or soya milk.
- White pasta, white rice, couscous, tapioca, ground rice, semolina, peeled potatoes.
- Quorn, tofu.
- Chicken or turkey.
- White fish.
- Boiled, poached or scrambled eggs (without cream or butter).
- Boiled sweets, fruit gums, pastilles, Madeira cake, plain biscuits eg rich tea, water biscuits, cream crackers, rice pudding and plain sponge.
- Strained stock, stock cubes, Marmite, Bovril, soy sauce, instant gravy.
- Clear fluids including water, fruit squash, fruit juice with no bits, rehydration drinks, clear soup or broth, tea/coffee with small amount of milk.
- Small amount of oil for cooking, honey, lemon curd, golden or maple syrup, marmite, smooth peanut butter and jams or marmalades with no bits.
- Salt, sugar, fine ground pepper, vinegar, mustard, gelatine, dried herbs, salad cream, mayonnaise, ketchup.

### Foods not allowed:

- All fruit including dried fruit and vegetables.
- Wholemeal, granary, brown and high fibre white breads and bread products (including best of both).
- Potato skins and chips.
- Crisps and nuts, fresh herbs, pickles, chutney, hummus, freshly ground peppercorns.

- Biscuits or cakes made with wholemeal flour/nuts/fruit/grains (fruit cake, Ryvita, digestives, hobnobs).
- Whole wheat pasta, bran and brown rice or noodles.
- High fibre breakfast cereals such as Weetabix, Shredded wheat, bran flakes, porridge.
- Red meat including burgers, sausages, and ham.
- Pulses such as beans and lentils.
- Fried or fatty fish.
- Full fat milk, cream, full fat yoghurt, ice cream and full fat hard cheese.
- Butter and butter like spreads, vegetable oils.
- Drinks to avoid are full fat chocolate drinks, drinks with full fat milk, cocoa, and vegetable juices.

After your evening meal take 10mg Bisacodyl (2 tablets). This is a mild laxative which usually takes between 6 and 8 hours to work.

## **1 day before**

At 8am, take a further 10mg (2 tablets) Bisacodyl. **Do not plan to be far from any toilet facilities at any point during this day.**

Just before breakfast, drink 30mls of Gastrograffin liquid. This is best diluted with an equal amount of squash or water. Use either a measuring cup or two tablespoons.

### **For breakfast you may have:**

- Tea/coffee but no milk.
- One of the following:
  - 2 slices of white bread with no spread.
  - 1 boiled/poached egg and 1 slice white bread with no spread.
  - 50g cottage cheese and 1 slice of white bread with no spread.

Before lunch take a further 30mls Gastrograffin diluted as before.

### **For lunch you may have one of the following:**

- 75g white meat/white fish.
- 2 boiled/poached eggs.
- 100g cheese.

And **one** of the following:

- 2 slices of white bread with no spread.
- 2 egg-sized potatoes with no skin.
- 3 tablespoons plain white pasta or rice.

At 4pm drink another 30mls Gastrograffin.

After 4pm, no further solid food, milk or dairy products until after the procedure but drink clear fluids such as fruit cordials, herbal tea, Bovril or fizzy soft drinks. You can also have tea or coffee with no milk.

The Gastrograffin also works as a mild laxative, and it is very important that you do not become dehydrated. It is recommended that you try and drink a cup of water/squash or fluid from the allowed foods every hour during the day.

On the day of the scan, you can have clear fluids up to the time of the scan but no solid food. After the scan you can eat and drink as normal and you may want to bring a snack with you to have in the department before going home.