

Magnetic Resonance Imaging (MRI) of the Small Bowel



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Please read this information alongside your appointment letter which contains general information about the MRI scan and contrast injection.

Your consultant has requested that we perform a small bowel MRI (also known as small bowel enterography), this procedure takes approximately 1 hour and 45 minutes. MRI is an examination which uses a powerful magnet and radio waves to produce detailed images of the body. The MRI scanner does not use X-rays.

If you suspect that you may be pregnant then please call the CT/MR department as soon as possible before your appointment on **01493 453260**.

What is the small bowel?

The small bowel is divided into three parts. The upper region is called the duodenum, the middle region is called the jejunum and the lower region is called the ileum. All three regions will be looked at during the scan.

Why is the scan needed?

The MRI small bowel examination will confirm if there is any active inflammation or narrowing within the small bowel, which may help the doctor to understand why you have been feeling unwell.

Are there alternatives to small bowel MRI?

There are alternative ways to look at the small bowel such as small bowel barium studies, endoscopy, video-capsule endoscopy and CT small bowel examinations. However, unlike MRI which gives information about the other structures inside your abdomen, these examinations may be invasive, use ionizing radiation (x-rays) and may only give a limited view of the small bowel.

Before the scan

You are not allowed to eat for six hours before the scan. You may only have small sips of water or diluted squash during this time, and you can continue to take your medications as normal.

It is recommended that you attend for your examination in clothing that contains no metal fastenings, zips, decorations or metallic fibres. If this is not possible a hospital gown will be provided.

What happens on the day of my appointment?

You will be asked to arrive in the department one hour before your scan. An MRI Radiographer will go through your MRI safety questionnaire with you, explain what will happen, before, during and after your scan, and they will be able to answer any queries that you may have with regard to the MRI small bowel examination.

You will be asked to drink a special drink called Mannitol, which is an oral contrast media. This is to allow clearer pictures to be taken of the bowel. It is important to drink the full amount over one hour.

After completing the drink a cannula will need to be inserted into a vein in your arm. A cannula is needed so that MRI dye (gadolinium-based contrast media), and a smooth muscle relaxant (hyoscine butylbromide) can be administered during the scan. These fluids allow the blood vessels to show up, and make the pictures clearer in the small bowel. A leaflet describing these medicines in more detail will be provided for you when you attend for your appointment.

Once the scan is completed the cannula will be removed and a small dressing will be applied over the site.

What happens during the scan?

The MRI scan lasts approximately forty minutes. The scanner bed slides you into the correct position within the scanner. It is important to stay still so that the pictures taken are clear. The scanner will make different noises, some of which will be loud. To protect your hearing ear plugs and/or headphones will be provided. You will be asked at times to hold your breath for short periods, this allows much clearer images to be taken. The Radiographer will not be in the same room as you during the examination but they will be able to talk to you via a microphone.

What happens after the procedure?

- You may leave the department 20 minutes after your scan.
- Please eat and drink normally.
- The results of your scan will be sent to the doctor who asked for the examination.

How might I feel after the scan?

- It is likely that you will experience cramping, wind-like discomfort and some diarrhoea for the first 24 hours after the scan. This is caused by the Mannitol drink, and is very common affecting 1 in 10 people. If this happens to you, you may wish to take some pain relief, and drink water to keep hydrated.
- If you had Buscopan you may experience blurred vision or a dry mouth, these should last no longer than 20 minutes. These are common side effects affecting up to 1 in 100 people. **If you do have blurred vision, do not drive or operate machinery until this has worn off.**

Risks of the Procedure

Risks of oral Mannitol: Mannitol is a mild laxative. It is normal to get diarrhoea for up to 24 hours after drinking Mannitol. Common side effects of mannitol are nausea, vomiting and thirst (affecting between 1 in 10, and 1 in 100 patients).

Risks of Buscopan: Buscopan is usually very safe, but it may not be appropriate for you to have this medicine if you have certain health conditions. The radiographer will ask you questions about your heart health, and any medical conditions such as glaucoma and myasthenia gravis that may be affected by taking Buscopan. Some of the common side effects of Buscopan (which may affect between 1 in 10, and 1 in 100 patients) are blurred vision, a dry mouth, dizziness, and increased heart rate and constipation.

Risks of Gadolinium Contrast Media: Gadolinium injected intravenously during magnetic resonance imaging (MRI) is generally very safe, however gadolinium is not suitable for everybody.

The Radiologist will decide if it is appropriate for you. In people who have severely reduced kidney function or hepato-renal syndrome (a condition involving reduced function of the liver and kidneys), gadolinium should only be used with radiologist approval. This group of patients cannot excrete gadolinium through urine and this may cause problems.

In patients with normal kidney function, most gadolinium contrast media (over 90%) is excreted in the urine within 24 hours. Side effects or reactions are uncommon, but can occur. Mild side effects or reactions, such as nausea and headache are uncommon, affecting between 1 in 100 and 1 in 1000 patients, these effects pass off quickly. More severe reactions, such as vomiting or an itchy rash are rare (between 1 in 1000 and 1 in 10,000 patients), and anaphylaxis which is very rare affecting less than 1 in 10,000 patients.

Known adverse effects: Nephrogenic systemic fibrosis is a rare condition associated with gadolinium contrast media given to patients with severe renal disease. Since radiology facilities routinely screen patients for kidney disease, and withhold gadolinium from those with severe renal disease NSF is very rare, affecting fewer than 1 in 10,000 patients.

Extravasation: It is possible that contrast media (10-20mls) may leak out from the vein to the tissues under the skin, this is known as extravasation. You may experience a stinging sensation at the injection site which can be painful. Extravasation may commonly affect between 1 in 1000 to <1 in 10 cannulated patients (0.1%- 6% of patients) and usually resolves with conservative treatment.

If you have further questions regarding the scan, please contact MRI Appointments on **01493 453260** or your referring clinician.

Feedback

We want your visit to be as comfortable as possible. Please talk to the person in charge if you have any concerns. If the ward/ department staff are unable to resolve your concern, please ask for our Patient Advice and Liaison (PALS) information. Please be assured that raising a concern will not impact on your care. **Before you leave the hospital you will be asked to complete a Friends and Family Test feedback card.** Providing your feedback is vital in helping to transform NHS services and to support patient choice.

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Responsive communication
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IN TRAN
communication for all
The hospital can arrange for an interpreter or person to sign to assist you in communicating effectively with staff during your stay. Please let us know.

For a large print version of this leaflet, contact
PALS 01493 453240