

# **MRI Scan**





# Contents

What is an MRI scan?	1
Why am I having an MRI scan?	1
Who can have an MRI scan?	1
What preparation will I need?	2
What happens when I come for the scan?	3
Does the scan hurt?	4
What happens during the scan?	5
How long will the scan take?	5
What happens afterwards?	5
When will I know the results?	6
What if I cannot keep my MRI appointment?	6
Where can I get further information?	6
Notes and questions	7

# What is an MRI scan?

Magnetic resonance imaging (MRI) scanners use a magnetic field and radio waves to build up detailed pictures of various parts of the body by picking up signals sent out by water molecules. There are no x-rays used during an MRI scan.

# Why am I having an MRI scan?

MRI scans are investigations that can be used to help doctors make a diagnosis or assess the effects of treatment. Your doctor will recommend an MRI scan based on the reason for the scan.

# Who can have an MRI scan?

Your doctor will decide if an MRI scan would be helpful in your case. Depending on your medical history, further investigations may be required to find out if it is safe for you to have the MRI scan. Examples include:

- you have a heart pacemaker that cannot be put into safe mode for your MRI scan
- you have aneurysm clips in your brain
- you have ever had an injury to your eyes or skin where metal (such as welding fragments, shrapnel, or pellets/bullets) may remain.

Further investigation may be required for other implants/ procedures. Please complete the safety questionnaire on the MyMarsden App prior to your scan appointment and contact the MRI Department if you are asked to. This is to minimise the risk of your scan being delayed.

# Please contact the MRI department if you think you may be pregnant.

# What preparation will I need?

Usually there is no special preparation for an MRI scan. You may eat and drink normally before and after the scan unless you have been told otherwise.

Any necessary instructions will be provided to you prior to your appointment – please read them carefully.

**Please note** all patients will be asked if they can change into a hospital gown for their scan. If you don't feel comfortable doing so, it may be possible to wear your own clothes if they are deemed safe. This is to reduce the risk of heating occurring during your scan.

Clothing that is unsafe to wear during your scan includes:

- clothing with metal fastenings and fibres
- bras with metal wires and fastenings
- sportswear with anti-microbial properties
- period/incontinence underwear.

Disposable equivalents to period/incontinence underwear are safe to wear for your scan.

Please be aware that the following items/products might pose a risk during your scan and you might be asked to remove them.

This includes the following:

- false eyelashes and hair extensions
- removable metallic dentures, coloured contact lenses, hearing aids, body piercings, jewellery (except wedding ring)
- drug infusion pump, glucose monitor or drug patches (please ensure you bring a replacement monitor/patch for after your scan if required).

**Please note** that some cosmetics products, such as nail polish, powdered hair dye, skin creams, beeswax, hairspray or dry shampoo can also contain traces of metal which might cause extra heat during scanning and affect the image quality.

If you have any queries about what can you wear on your face, body, or hair, please contact the MRI Department who can advise you.

### What happens when I come for the scan?

Upon your arrival to the department, you will meet our reception staff. You will then be met by radiographers who are trained to carry out the scans. A member of radiology staff will go through your safety questionnaire, and you will be asked to sign to say you are happy to have your scan.

If deemed necessary for your scan, and you agree, an injection of contrast medium (dye) may be given into a vein during your scan. As with all medication, a very small number of patients may be allergic to contrast medium. Please inform the member of staff if you have any allergies. During injection there is a very low risk of contrast leaking outside the vein, into the surrounding tissue. The radiographers are trained to recognise the signs and to treat them.

If you are breastfeeding, there is no special precaution, and cessation of breast feeding is not required, however you can contact MRI department if you wish to discuss further.

For scans of your abdomen or pelvis, we may need to give you an anti-spasmodic drug to slow down the movement of your bowel, as this will help to obtain high quality images. The drug is usually given by a small injection in the muscle of the upper arm, rather like a flu jab. Before we give you the drug, a member of staff will go through a questionnaire with you to ensure that the drug is safe to give and that you are happy to have it.

You may wear your glasses to your appointment, but you will be asked to remove these immediately before the scan. A locker is provided for your valuables. You must give the key to a member of staff as it is magnetic.

### Does the scan hurt?

No, the scan is not painful. However, you will have to lie still on a table for a prolonged period of time. For some scans it is normal to experience minor vibrations of the table and a warming sensation due to the operation of the scanner. The radiographers will do their best to make you comfortable. Our modern MRI scanners have a wider tunnel, which can help reduce claustrophobia. Going into the scanner feet first may be easier, although this isn't always technically possible. If you have a specific concern about this or any other aspect of your visit, please call the MRI department via the numbers below to discuss prior to your appointment, or speak to a member of staff upon arrival.



MRI scanner

# What happens during the scan?

The scanner produces a variety of loud noises. Ear defenders and ear plugs will help reduce this noise, but you may still hear it and feel some vibrations.

During the scan, the radiographer will be able to see you from the control room and you can talk to each other through an intercom. You will be given a call button to press and may be able to listen to music during the scan. For majority of scans you can lie comfortably, but for some scans you maybe asked to hold your breath.

# How long will the scan take?

Scans can take between 20 minutes and an hour. If your scan is going to take longer you will be told this when your appointment is made.

As a research institute, we are always striving to improve the services we offer to our patients. Sometimes we may ask if you would be happy to undergo some extra scanning to help us with our research and development. You will always be asked first and will only be included in a research study if you choose to do so. If you decide not to participate, this will not in any way affect your clinical scan. Any data we collect is subject to strict data protection rules.

# What happens afterwards?

Typically, you may leave the department as soon as your scan is finished. However, if your scan involved a contrast injection you might be asked to stay in the department for a short period of time. You may eat and drink as usual. There are no side effects from the MRI scan itself.

# When will I know the results?

Although the radiographer can see parts of your body on the screen, the images must be carefully interpreted by a radiologist (a doctor who is an expert in image interpretation). The radiologist will prepare a report and send it to your doctor. You doctor will tell you the results and discuss them with you.

# What if I cannot keep my MRI appointment?

If you cannot keep your appointment, please contact the MRI department straight away.

If you are admitted to hospital before your appointment, please tell the ward staff that you have an MRI appointment booked.

# Where can I get further information?

The staff in the MRI department will be happy to answer any questions you may have. Please ask at the time of your appointment or telephone the department at any time.

#### **MRI** Department

Sutton	020 8661 3336
Chelsea	020 7808 2575
Cavendish Square	020 7811 8940

Alternatively, please call

### The Royal Marsden Hotline 020 8915 6899

You can ring the hotline 24 hours a day, 7 days a week.

Call us straight away if you are feeling unwell or are worried about the side effects of cancer treatments.

This service provides specialist advice and support to all Royal Marsden patients, as well as to their carers, and both hospital and community-based doctors and nurses caring for Royal Marsden patients.

# Notes and questions

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This booklet is evidence based wherever the appropriate evidence is available, and represents an accumulation of expert opinion and professional interpretation.

Details of the references used in writing this booklet are available on request from:

The Royal Marsden Help Centre Telephone: Chelsea 020 7811 8438 / 020 7808 2083 Sutton 020 8661 3759 / 3951 Email: patientcentre@rmh.nhs.uk

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The information in this booklet is correct at the time of going to print.

Should you require information in an alternative format, please contact The Royal Marsden Help Centre.

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# The Royal Marsden publishes a number of booklets and leaflets about cancer care. Here is a list of information available to you.



#### Diagnosis

- A beginner's guide to the BRCA1 and BRCA2 genes
- CT scan
- MRI scan
- What is an ultrasound scan?
- A beginner's guide to Lynch syndrome



### Supportive care

- Eating well when you have cancer
- Reducing the risk of healthcare associated infection
- Support at home
- Your guide to support, practical help and therapies





#### Treatment

- Central venous access devices
- Chemotherapy
- Clinical trials
- Radiotherapy
- Radionuclide therapy
- Your operation and anaesthetic



# Your hospital experience

- Help Centre
- How to raise a concern or make a complaint
- Your health information, your confidentiality

Patient Information

Please visit **www.royalmarsden.nhs.uk/patientinfo** where many patient information booklets are available to download.

Patient Information

