



A lifetime of specialist care

Royal Brompton & Harefield **NHS**  
NHS Foundation Trust

Royal Brompton Hospital

# Your cardiovascular magnetic resonance (CMR) scan



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*This leaflet gives you general information on your cardiovascular magnetic resonance (CMR) scan. It does not replace the need for individual advice from a qualified healthcare professional. Please ask if you have any questions.*

## Your appointment details

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Time: \_\_\_\_\_

Important notes: \_\_\_\_\_

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If you cannot make your appointment, please contact us as soon as possible on **020 7351 8800** to let us know. We can then give your appointment time to another patient and give you a different appointment. Your new appointment time may be a few weeks later.

## What is a CMR scan?

A cardiovascular magnetic resonance (CMR) scan uses a strong magnetic field and radio waves to create detailed images of your heart. It gives us information on the structure of your heart and blood vessels, and how well they are working.

## Can anyone have a CMR scan?

Patients with certain kinds of metallic implants, or any other metal in their body, sometimes cannot have the scan. This is because the scanner uses a very strong magnet, which attracts certain metals.

Please let us know before your appointment if you have:

- a pacemaker
- implants or metal in your body, such as a stent
- small pieces of metal in your eye (e.g. from welding)
- problems with your kidneys or are on kidney dialysis
- had any major surgery or illness.

It is important that you let us know if you are, or think you may be pregnant, as it may be better to wait until after your child is born to have the scan. This can help ensure your wellbeing and that of your baby.

## Before your scan

Unless you are told otherwise, you can eat, drink, and take all your medication as normal.

If your appointment includes a stress test, please see page 6 of this leaflet and follow the instructions in your appointment letter.

We will ask you to remove all jewellery and body piercings before the scan as the scanner uses a very strong magnet. We suggest that you leave all jewellery at home.

When you arrive in the department for your scan, we will ask you to change into a hospital gown. This is to avoid any metal buttons, zips or fasteners from your clothes coming into contact with the magnetic field.

## What happens during the scan?

We will ask you to lie on a bed that will slide into the scanner.

During the scan, an electrocardiogram (ECG) will help us to make sure we take the pictures at the right time during your heart beat. It involves placing electrodes (small sticky patches) on your chest. The electrodes are connected by leads to a monitor that records the rhythm and electrical activity of your heart. A small monitor on your chest will receive the radio signal that creates the images of your heart. This is not painful.

We will ask you to lie as still as possible and to hold your breath for a few seconds while we take the scan. This stops your chest from moving and ensures that the images we take are as clear as possible.

Sometimes we need to get extra information from the scan by using a contrast agent. This is a colourless fluid that we can inject into a vein in your arm and lets us see your heart and blood vessels more clearly.

We will let you know before the scan if we need to use a contrast agent. If so, we will place the needle in your arm before the scan begins. When you are inside the scanner, we will let you know when we are going to start injecting the contrast agent.

## Stress testing

Sometimes we will also need to do a stress test. This is to check how well your heart is working during exercise. Your appointment letter will tell you if we would like you to have this test and gives you more information.

If your appointment includes a stress test, it is important that you do not eat or drink anything containing caffeine on the day of your scan. This includes coffee, tea, some fizzy drinks and chocolate. Caffeine increases the heart rate and could affect the results of the test. All these details will be covered in your appointment letter.

During a stress test, we will inject a medication that increases your heart rate without the need for exercise. It has the same effect on your body as taking a brisk walk. If you are scheduled to have a stress test, we will ask you some questions when you arrive to make sure the test is suitable for you.

## What is the scanner like?

The scanner is shaped like a doughnut. You will lie on a bed that slides into the centre of the hole in the middle.

We will make you as comfortable as possible. During the scan, you will be able to talk to the CMR technician (radiographer) through a microphone.

The scanner can make a loud noise when it is operating. We will give you headphones to wear to make it less noisy. You can also listen to music or the radio.

If at any stage you feel uncomfortable, you can ask us to stop the scan and we will move you out of the scanner.

If you have any questions before your appointment, please contact us on **020 7351 8800**.



## Can I bring someone with me?

You are welcome to bring someone with you. They can wait while you have your scan. We ask that you only bring one person with you into the waiting room as we do not have much space. There is also a coffee shop in main reception where friends or family can wait while you have your scan.

## How long does the scan take?

The scan takes about an hour.

# Are there any risks and side effects?

All medical procedures carry some risk. It is important to remember that we would not recommend this scan if we did not believe the benefits outweigh any risks.

A doctor is always close by and can deal with any side effects if they happen.

There are some risks from the contrast agents we may use to see your heart and blood vessels more clearly:

## Leaking

The contrast agent can leak from the vein into the surrounding tissue. This is rare and happens in less than one in 1,000 cases. If it does happen, it is not serious, but can cause temporary discomfort.

## Allergy

Some patients may be allergic to the contrast we use. Any reactions are normally mild (such as a metallic taste in the mouth, a headache, or feeling sick). Severe allergic reactions are very rare (one in 100,000).

## Nephrogenic systemic fibrosis (NSF)

NSF causes a thickening of the skin and sometimes the internal tissues. It is a side effect of some contrast agents used in magnetic resonance scanning, and only occurs in patients with severe kidney failure or those waiting for a liver transplant. Therefore, it is extremely rare (less than one in 1,000,000).

We use a contrast agent called Gadovist, which has not been linked with NSF to date. If you have not had a recent blood test to check how well your kidneys are working, we will take a sample before you have the scan.

If you are having a stress test, there are some risks from the medication we use to increase your heart rate:

## Asthma

If you have asthma, the medication can very occasionally cause an asthma attack. If this should happen, we will stop the injection and give you any treatment needed.

We will ask you if you have asthma before the scan and you can talk to the doctor if you have any questions.

## Shortness of breath

The medication can make you feel short of breath or give you some chest pain. If you experience either of these side effects, we can stop the injection immediately. The side effects from the medication do not usually last longer than a couple of minutes after the drug is stopped.

## Abnormal heart rhythm

The medication may cause an abnormal heart rhythm. If this happens, we will stop the injection and give you treatment to return your heart rhythm to normal.

We will ask you if you have a heart rhythm disorder before the scan and you can talk to the doctor if you have any questions.

## Are there any alternatives?

If you would like to discuss alternatives to a CMR scan, please talk to your consultant or your GP. This could delay your diagnosis and treatment.

Other tests may not provide exactly the same information as a CMR scan and may have their own risks.



## Who can I contact for more information?

If you have any questions about your CMR scan, please contact us on **020 7351 8800** (Monday to Friday 9am-5pm).

If you have any questions about your CMR appointment, please call **020 7349 7742** (Monday to Friday 9am-5pm) or email [rbh-tr.cmrbooking@nhs.net](mailto:rbh-tr.cmrbooking@nhs.net).

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If you have concerns about any aspect of the service you have received in hospital and feel unable to talk to those people responsible for your care, call the Patient Advice and Liaison Service (PALS) on 020 7349 7715 or email [pals@rbht.nhs.uk](mailto:pals@rbht.nhs.uk). This is a confidential service.



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إذا كنت ترغب في الحصول على ترجمة فورية لمضمون هذه الوثيقة إلى اللغة العربية، يرجى منك الاتصال بأحد مستخدمينا بجناح المصلحة التي يتم فيها استشفائك. أحد موظفينا سيسعى لترتيب إجراءات الترجمة وإتمامها في الوقت المناسب لك.

Brosurteki bilginin Türkçe tercumesi için tedavi goruyor oldugunuz bolume bas vurunuz. Bolum personeli tercumenin gerçeklesmesini en kısa zamanda ayarlayacaktır.

