

# PATIENT INFORMATION

## Your Stress Cardiac MRI Scan (Magnetic Resonance Imaging)

### MRI (Magnetic Resonance Imaging)

It is natural for all of us to experience some degree of anxiety before we undergo medical tests. Knowing more about the testing process - how it works, and what to do beforehand - helps reduce those jitters and makes you a better informed patient.

We suggest you take a few moments to read this leaflet and learn more about this extraordinary new diagnostic tool.

### What is a stress cardiac MRI?

MRI stands for Magnetic Resonance Imaging.

It is a way to look inside the body without using x-rays. MRI can produce two or three dimensional images of what is going on inside a patient's body.

It uses:

- a large magnet (large enough to surround the whole patient);
- radio waves;
- a computer.

Your doctor has referred you for this scan to obtain accurate information regarding the function of your heart. The scan will answer questions about the blood supply to the heart and its overall structure and function.

### Preparing for a stress cardiac MRI scan

#### At home

Relax and go about your normal routine.

There are two types of drug we can use to 'stress' the heart – adenosine or dobutamine.

#### ADENOSINE

This is the most commonly used drug.

- If you are taking any tablets containing a nitrate (e.g Isosorbide mononitrate, Monomax, etc) stop this for 24hours prior to the scan.
- Stop taking any products which contain caffeine for 24 hours (e.g tea, coffee, chocolate – this includes 'decaffeinated' products).
- During the administration of adenosine you may experience facial flushing, shortness of breath, chest discomfort or nausea. The administration time is 4 minutes. Any symptoms you experience are very short-lived.

#### DOBUTAMINE

- If you have asthma or are a 'renal' patient we will use Dobutamine.
- The administration of this drug is slightly longer, up to 12 minutes. This drug works by increasing the heart rate or pulse.
- If you are taking a beta blocker (e.g. bisoprolol, atenolol, metoprolol) stop this tablet for 24 hours before the scan.

- We may need to give you an additional drug called atropine if your target heart rate is not achieved. If we administer atropine this can lead to blurred vision for several hours after the scan. For this reason please do not drive yourself to the scan if you are to have dobutamine.

Bring something to read or do while you wait for the scan. Leave magnetised bank or credit cards at home, they may be affected.

## On the day of the scan

- Please attend the department 30 minutes prior to your appointment.
- You will be asked to change into a gown.
- An ECG (tracing of the heart) will be performed by a Cardiac Nurse.
- You will have 2 cannulae (drip needles) inserted – one in each arm.
- You will be asked about your medical history, especially whether you have a pacemaker or metallic object or implants inside your body. Some implants are contraindicated for MRI. Please contact us if you have a pacemaker, heart valve replacement or repair, cerebral aneurysm clip in place following brain surgery, a stapes or cochlear implant. If you have any of the above or a history of metallic foreign body in the eye please contact **01392 402861** prior to your appointment. **Failure to do this may mean that we have to postpone your scan.**
- You will be asked to remove any metallic objects, such as jewellery, hairpins, glasses, wig (if it has metal clips) and non permanent dentures. Do not wear mascara and ask us about wearing any other makeup.

## The scan

The equipment may look intimidating, but there is no need to be frightened at all. It is important to lie still and relax.

## Before the scan

- The radiographer or cardiac nurse will help you onto the scanning table. He or she can address any questions or concerns you may have.

- You will be positioned comfortably, generally with your arms at your sides and your head cradled in the headrest. If you have long hair it will be tucked into the headrest. You will be asked to remain still during the scan.
- You will be attached to a monitor to record your heart rate.
- A blood pressure cuff will also be applied.

## As the scan begins

The scanning table will slide into the scanner. Your whole body will be in the machine. You will not be totally enclosed and you will be able to communicate with the radiographer through an intercom or bell.

The advantage of MRI is that many pictures can be taken without repositioning the patient.

## During the scan

You won't feel a thing! But you will hear some loud knocking noises. Ear protection will be provided to minimise this. After the first pictures are taken the drug will be administered through one of the cannulas in your arm to 'stress or exercise' the heart.

## Some common questions and answers

### Can pregnant women have MR scans?

**It is not usually advisable.** There is no evidence that a hazard exists, however, as with any diagnostic procedure, tell your doctor you are pregnant if considering an MR scan. Be sure to discuss any concerns you have.

### Will the fillings in my teeth affect the scan?

They may cause some distortion in images taken around the mouth area. Tell your physician if you have braces, permanent bridges, or any embedded shrapnel, metal clips, etc.

### How long does a scan take?

A scan of the heart will take around 60 minutes.

## Can people with cardiac pacemakers be scanned?

**No.** People with cardiac pacemakers and/or other implanted stimulatory devices normally cannot have an MR scan.

Others who cannot be scanned are people with some types of metal implants, including some plates, clips, staples or sutures.

## How long has MR been used?

Approved MRI systems became available to patients in the early 1980s, although chemists and physicists have been using the basic principles of MRI since the 1940s.

**Please inform the radiographer if you have had brain surgery.**

## Results of the scan

### Evaluation by the radiologist/ cardiologist

We aim to report examinations, as soon as possible. Results will be sent to the Doctor who referred you for the investigation, as they may need further review and therefore it could be approximately 20 days before you are contacted by your Doctor.

### Evaluation by your doctor

Your doctor will suggest treatment based on the results of the scans as well as your history, symptoms and other test results.

## Valuables

Patients are encouraged to leave their valuables at home. It is the patient's responsibility to ensure all valuables are on their person before leaving the Medical Imaging Department.

## Contact us

If you have any queries or concerns you can contact us on: **01392 402336**.

## How to get to the Royal Devon & Exeter Hospital at Wonford

### Park & Ride

**Our Dartline PR3 Park & Ride bus is quick and not expensive.**

It runs from Wonford Hospital to Digby. Digby is near Tesco, the railway station and junction 30 of the M5. There are signs along some of the main roads into Exeter pointing to the RD&E park and ride.

The park and ride service runs from Monday - Friday. **There is no service at the weekend.**

### By bus

Stagecoach buses H Service run to Wonford Hospital from the high street in the city centre Monday to Saturday. Limited Sunday service. They also run to Wonford Hospital from the Broadfields area.

Stagecoach buses from Exmouth (57), Dawlish (2), Torbay (X46), Teignmouth (2) and Plymouth (X38) stop next to the hospital on Barrack Road.

First Southern National bus X53 from Weymouth, Seaton, Beer and Sidford stops next to the hospital on Barrack Road. Turner's Tours bus 369 from Chulmleigh, Lapford, Morchard Bishop and Crediton stops next to the hospital on Barrack Road and outside the main front entrance of the hospital.

### By car

Follow signposts to the hospital from most of the main routes into Exeter. Follow signposts in the hospital grounds to our car parks.

Car parking is by pay & display, so please bring change.

The number of spaces is limited, so please leave plenty of time to find a space.

### Using Sat Nav to find us?

Tap in postcode: EX2 5DW for RD&E Wonford

For more information on how to get to the hospital, please use the following website:

**[www.rdehospital.nhs.uk/patients/where](http://www.rdehospital.nhs.uk/patients/where)**

For more information on the Medical Imaging Department, please visit our website:

**[www.rdehospital.nhs.uk/patients/services/medical-imaging](http://www.rdehospital.nhs.uk/patients/services/medical-imaging)**

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