

**Royal Devon and Exeter Cardiac Magnetic Resonance Unit
(RD&E CMR)**

Patient Information Leaflet

What is magnetic resonance imaging (MRI)?

This uses a magnet, radio-waves and a computer to take detailed pictures of the inside of your body. It does not use x-rays, is painless and safe.

How does cardiac MR differ from body MRI ?

Cardiac MR uses the same scanner but requires pictures to be taken much faster to avoid blurring when the heart moves during heart-beats or breathing. Performing and interpreting complex cardiac images requires specialized computer software, training and experience.

How does cardiac MR work?

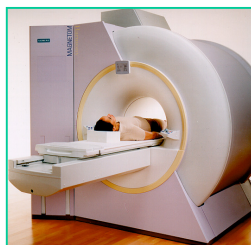
When you lie in a magnet, all the particles in your body (specifically the hydrogen atoms) act like small magnets and line up in the direction of the magnetic field. By changing the direction of the magnetic field and by using radiowaves to provide these atoms with more energy, very small signals can be detected and changed into an image by a computer.

What will I have to do?

You will be asked to change into a gown, remove all metal objects and lock them in a locker provided. All watches and credit cards must be removed as the magnetic field could damage them. You will not normally need to remove wedding rings.

There is no need to stop medication or miss a meal unless you receive prior instructions from us.

You will be helped to lie on a comfortable bed and a technician will apply heart monitoring stickers to your chest. With the gown closed, the bed will be moved inside the scanner. The scanner looks like a tunnel.



Inside the scanner you will be asked to lie still in order to get clear pictures. You will not feel anything. During the scan you hear a rhythmical banging noise. This is quite

normal. The radiographer will be in contact with you throughout the examination, which typically takes 30-60 minutes and may require you to have an injection.

You will not be able to have an MRI if you have:

- A heart pacemaker
- Surgical clips within your head
- Certain inner ear implants
- Neuro-electrical stimulators
- Metal fragments within eye or head
- Some other implants

as the magnetic field may affect them. Metal bone plates, artificial joints, coronary artery stents and most heart valves are perfectly safe, but we will advise you prior to the scan