

Cardiology

Having an MRI scan with an implanted pacemaker or defibrillator

Introduction

You have been given an appointment for an MRI scan. You are receiving this leaflet because you have had a pacemaker or defibrillator implanted before.

Up until recently, there were worries that if you had a MRI scan with an implantable cardiac device such as a pacemaker or defibrillator that these electronic devices could become dysfunctional and pose a risk to you as a patient. Some patients might have been told that they cannot have an MRI scan.

We now know that it is safe to perform an MRI scan in selected patients if they meet certain criteria. Our hospital has set up a process that allows us to identify patients with a pacemaker or defibrillator who can safely have an MRI scan.

I was referred for an MRI scan – what happens next?

A request for an MRI scan for a patient with an implantable cardiac device is automatically referred to the pacing department. Here a review of the type of device, the number of leads, time since the device implantation, the status of the leads and the batteries as well as the underlying heart rate was performed.

Based on these checks your device has been deemed safe to scan.

A Radiologist (or Imaging Cardiologist) has decided that the benefit of having an MRI scan outweighs the small risks of this scan. The MRI department has have sent you a scan appointment along with this leaflet.

What happens during the scan?

On the day of your scan a radiologist or cardiologist will obtain your consent for the MRI scan to proceed.

A cardiac physiologist will check your pacemaker/defibrillator before and after the



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scan. Throughout the scan your heart rate and blood oxygen level will be monitored and you will be supervised by a cardiologist or cardiac physiologist the whole time.

What are the risks involved?

The MagnaSafe Registry was a large study that assessed the risk of an MRI scan in patients with an implanted pacemaker or defibrillator. Over 1000 patients were included in this study. The MagnaSafe Registry and other major reviewed studies (including more than 5000 patients) demonstrated that no deaths, device failures, generator/lead replacements, or significant abnormal heart rhythms occurred during the MRI scans. As a consequence, MRI scanning of patients with cardiac implantable devices has received approval from the Cardiac Heart Rhythm Society in 2017 and the British Cardiovascular Society.

Outside of these studies, case reports have described rare events of generator replacements, interference with the pacemaker function during the scan and non-life threatening heart rhythm (arrhythmia).

Do you have any more questions?

If you have any further questions regarding this topic please feel free to get in touch with us.

You can ring the pacing department on 02476 966416 or email pacingteam@uhcw.nhs.uk

The Trust has access to interpreting and translation services. If you need this Information in another language or format please contact 0845 310 9900 and we will do our best to meet your needs.

The Trust operates a smoke free policy

To give feedback on this leaflet please email feedback@uhcw.nhs.uk

Document History

Department:	Cardiology
Contact:	26416
Updated:	April 2021
Review:	April 2023
Version:	1
Reference:	HIC/LFT/2595/21