

## WHAT IS AN MRI SCAN?

An MRI (Magnetic Resonance Imaging) scan uses a strong magnetic field and radio waves to create pictures of your body, including brain and spinal cord, bones and joints and the internal organs.

At the Institute of Sport, Exercise and Health (ISEH) we have a 3T Siemens MRI Scanner that produces superior image quality and exceptional anatomical detail due to a more powerful magnet.

## HOW DOES AN MRI SCAN WORK?

Your body contains millions of hydrogen atoms. When you are in an MRI scanner the following happens:

- The strong magnetic field aligns particles called protons (hydrogen atoms). All of the protons line up in parallel to the magnetic field like tiny magnets.
- Short bursts of radio waves are sent from the scanner into your body. The radio waves knock the protons from their position.
- The protons in different tissues of the body realign at different speeds, meaning that softer tissues can be distinguished from harder tissues on the basis of the signals sent.
- The computer creates a picture based on the radio signals emitted from the body.

## IS IT SAFE?

The MRI scanner uses an extremely strong magnet, so people with certain types of medical implant cannot be scanned, for example some pacemakers. This is because the magnet can potentially move medical devices with metal in them, or affect their function.

You will be asked to fill in a detailed safety questionnaire before you are taken into the scanner. The radiographer will go through this with you prior to you being scanned. If you have any queries or concerns about surgery you may have had in the past which may affect your suitability for an MRI scan at the ISEH, please do not hesitate to contact us on +44 (0)20 3447 2860.

## CAN I HAVE THE SCAN IF I AM PREGNANT?

If you are, or think you may be pregnant, please consult your doctor and call the MRI department on: +44 (0)20 3447 2860.

## WHAT PREPARATION DO I NEED TO DO BEFORE AN MRI SCAN?

No actual preparation is needed beforehand and you can eat and drink as normal.

## GIVING CONSENT

We ask you to give consent to have the MRI scan. Your decision to have the scan will be informed by the consultation with your doctor, this leaflet and the explanation given by the radiographer performing your scan. When you sign the safety questionnaire you are also confirming the information you have given us is correct.

If you require an injection of a contrast agent (dye) you will be asked to sign a separate document consenting to this.

## WILL I NEED AN INJECTION?

In some cases, an injection of a special dye is given into the bloodstream through a needle into the arm. This helps to give clearer pictures of certain tissues or organs.

## WHAT HAPPENS DURING AN MRI SCAN?

- During an MRI scan, you lie on a flatbed that moves into the scanner. The scanner is operated by a radiographer in a separate room.
- The scanner will make loud noises. This is as a result of an electric current in the scanner coils being turned on and off.
- You will be given either earplugs or headphones to protect against this noise.
- You will be able to talk to the radiographer through an intercom. You can listen to music through the headphones or bring a CD to listen to.
- It is very important that you keep still and follow instructions during your MRI scan.

## HOW LONG WILL IT TAKE?

The scan time is usually 30 minutes but some scans can take up to an hour.

## WHAT HAPPENS AFTER MY MRI SCAN?

The scans are interpreted by a consultant radiologist who sends a report to your referring doctor within 48 hours (usually within 24 hours).

You should make an appointment with your referring doctor to discuss the results.

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If you have any further questions or concerns, please contact your referrer in the first instance as they will know more about your medical history and will have a greater understanding of your specific situation.