

# TESTfacts

An Educational Health Series From National Jewish Health®



## Stress Cardiac MRI

### What is an MRI?

Your doctor has suggested you have an MRI as part of the evaluation at National Jewish Health. Magnetic resonance imaging (MRI) is an advanced medical imaging technique that does not use x-rays or radiation. Instead it uses a strong magnetic field, radio waves and a computer. This creates very clear pictures of internal body structures.

A **Stress Cardiac MRI** is performed to help evaluate the blood flow in the heart arteries, looking for blockages. In addition the function and structures of the heart can be evaluated. You will be given an intravenous (IV) medicine to open the arteries of your heart as images are being taken. The MR image offers unique information to help your doctor better plan your treatment and care.

### How do you get ready for the test?

#### Planning Ahead:

- ✓ Inform your doctor if you have any of these items: a pacemaker, aneurysm clips, metallic implants, metal fragments in your eyes or any other electronic or magnetically activated implant. If you have any of these items it may not be possible, or safe, to have an MRI scan.
- ✓ You will be called by the cardiology nurse a day or two before the test. The nurse will give you instructions for preparation. It is very important that you follow all the instructions given.
- ✓ If you are claustrophobic or experience pain when lying on your back for more than 30 minutes, let the cardiology nurse know before the day of the test. Your doctor can prescribe a relaxant or pain medicine.
- ✓ If your doctor has you take a relaxant medicine, arrange for a companion (family member or friend) to pick you up after your MRI. You will not be able to drive or take a taxi home after the test if you take a relaxant medicine.
- ✓ If you are pregnant or breast feeding, you must notify the MRI staff before the study as we will not be able to do this test.

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### 24 hours before the test:

- ✓ Avoid caffeine sources for 24 hours prior to this test. This includes coffee, tea, soda and chocolate. You may be instructed by the cardiology nurse to hold some of your medicines.

### The day of the test:

- ✓ An EKG will be done in the cardiology department prior to the Cardiac Stress MRI. After the EKG, you will go to the Institute for Advanced Biomedical Imaging for the MRI scan. If your MRI requires the injection of a contrast agent, bloodwork will be done to make sure your kidneys are working well
- ✓ You will be given a hospital gown to wear. Shoes, belt buckles, hair barrettes, hairpins, jewelry and watches will need to be removed before entering the MRI room. You will be provided with a secure locker to lock up your purse, wallet, cards with magnetic strips, keys, cell phones, beepers, coins, etc. Eyeglasses, dentures and foil lined medicine patches will also need to be removed prior to the imaging.

### What is done during the test?

The Cardiology nurse will explain the Stress Cardiac MRI scan to you before you start. Ask questions if you don't understand.

The nurse or technologist will start 2 IV's in your arm. You will feel a prick when the IV is started. The first IV will be used to give you medicine to open your heart arteries. The second IV will be used to give you a contrast agent. The contrast agent is called "gadolinium". Unlike contrast agents used in x-ray studies, MRI contrast agents do not contain iodine and rarely cause allergic reactions or other problems.

You will be asked to lie down on the padded scanning table. The technologist will place EKG leads on your chest.

You will be required to wear earplugs or headphones to protect your hearing from the loud noise produced during the scan. During the scan you can listen to music through the headphones.

The inside of the scanner is well lit and has a fan to blow fresh air gently over you. The technologist will be able to see, hear and speak with you at all times using a 2-way intercom. The machine makes a rhythmic knocking and thumping sounds as it takes the images. The cardiology nurse will be in the scanner room with you during the administration of the heart medicine. She will be monitoring your blood pressure, heart rate and oxygenation.

MRI images are very sensitive to movement. You will be asked to remain perfectly still during the time the imaging takes place. By keeping very still during the scan you can improve the quality of the images we obtain. Most scans require you to hold your breath for 15-20 seconds.

### What should you do after the test?

- ✓ After the test, you will have another EKG. You will be observed and monitored until you are ready to go home which typically takes 15 to 30 minutes. You will be discharged with instructions regarding oral fluids, meals and resuming medicines.
- ✓ You can resume your normal activity after the test is complete.
- ✓ If you had relaxant medicine, a companion (family member or friend) will need to pick you up after your MRI. You will not be able to drive or take a taxi home after the

test if you take a relaxant medication.

### How long will the test take?

A Stress Cardiac MRI takes about 3 hours. This includes 1 ½ hours for the test and 1 ½ hours for preparation and recovery.

### How do you get to your test?

Your appointment starts in Cardiology. Cardiology is located in the Adult Clinic in the Smith building. You will be directed where to go when you check-in. If you have any questions you can contact Advanced Biomedical Imaging (Radiology) at 303-398-1611.

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