

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 to create detailed images 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 structure of the heart will 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, 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, please notify your doctor as we will not be able to do this test.

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 nurse to hold some of your medicines.
- Do not eat anything for 4 hours prior to your exam.

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, blood work may be done to make sure your kidneys are working well

What is done during the test?

When you arrive in radiology you will be asked to fill out a screening form about anything that might create a health risk or interfere with imaging.

- You will be given scrubs to change in to before your exam.
- Metallic objects such as 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, shoes and foil lined medicine patches will also need to be removed prior to the imaging.
- The technologist will explain the MRI scan to you before you start. Ask questions if you don't understand.
- You will lie down on a padded scanning table. The technologist will place EKG leads on your chest. The nurse or technologist will start an IV in your arm. The IV will be used to give you medicine to open your heart arteries. It will also be used to give you a contrast agent 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 required to wear headphones to protect your hearing from the loud noise produced during the scan and to hear the breathing instructions given by the technologist. 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. Most scans require you to hold your breath for 15-20 seconds. You will be asked to remain perfectly still during the time the imaging takes place.

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.

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?

If you are being seen at National Jewish Health, your appointment starts in Cardiology in the Adult Clinic. If you have any questions you can contact Advanced Biomedical Imaging (Radiology) at 303-398-1611.

Visit our website for more information about support groups, clinical trials and lifestyle information.

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NOTE: This information is provided to you as an educational service of National Jewish Health. It is not meant to be a substitute for consulting with your own physician.

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