



## Cardiac Magnetic Resonance Imaging (Cardiac MRI and MRA) Non-Sedated

### ***Our Mission***

Nicklaus Children's Hospital's mission is to inspire hope and promote lifelong health by providing the best care to every child. The hospital focuses on family-centered care in order to provide an optimal experience for patients and their families. We believe that parents and guardians play a vital role in the success of this test and want you to have an active role in your child's healthcare. The following information is to help prepare both you and your child for this scheduled exam.

### **What is a Cardiac MRI?**

- A Cardiac Magnetic Resonance Imaging (MRI) test uses a MRI scanner to take very clear, detailed pictures of the heart. Magnetic Resonance Angiography (MRA) is the portion of the test that looks at the blood vessels.
- Many times a Cardiac MRI or MRA will require contrast, a liquid substance to help create the details in the pictures.
- MRI does not use radiation but instead uses magnets. You and your child must be screened for any metal inside the body and will be asked to remove any jewelry or clothing that may contain metal.
- Any personal belongings that contain metal can be locked in a secure cabinet during the scan.
- After being screened, one caregiver may accompany the child during the scan.
- All other visitors must wait in the waiting room and children must be supervised by someone of 18 years or older.
- *Women who are pregnant are not permitted to be in the MRI room during the scan. Please bring another adult who can stay with your child during the scan.*
- A CMRA is not painful. The bed moves slowly through the tunnel and the camera remains around your child, never touching the child. A lot of children think the camera looks like a spaceship or doughnut!
- In order to get good results, it is very important that your child *holds still* for the scan. A Cardiac MRI and MRA may take between one to two hours.
- In some cases, your child may be given a mild sedative medication by mouth to help them stay calm and still.
- Patients who need stronger sedation medication (typically, children younger than 6 to 8 years-old and some older children with developmental delays) will be re-scheduled for a future scan under general anesthesia.



## What to Expect During the Procedure (Non-Sedated Cardiac MRI and MRA)

### **Step 1: Getting Ready**

- From the Radiology Department waiting room, you will be brought to an exam room which we can call the “get ready room”. Here your child will be seen by a nurse who will take your child’s vital signs and medical history.
- *Please bring your child’s favorite toy or activity to provide distraction while in the “get ready room”.*
- If contrast is required for the test, your child will also receive an “IV catheter” which is a tiny, plastic straw inserted into a vein in the hand or arm.
- *Numbing medicine may be used to help your child feel as comfortable as possible during the IV placement*

### **Step 2: Taking Pictures**

- Next, you and your child will be taken into the MRI room, or the “picture room”, where you will see a long table attached to a tunnel-like scanner where the camera is located.
- Once your child lays down on the bed, the technologist will secure him/her in place with a Velcro seatbelt.
- A non-painful plastic shield called a “coil” will also be placed over your child’s chest.
- Once the scan begins, the bed will move through the tunnel to stay in place during the scan.
- The MRI never touches your child and does not hurt. It only takes pictures.
- As it takes pictures, the MRI machine will make sounds such as banging and knocking noises.
- You and your child will be given a set of foam earplugs to help shield the noise from your ears.
- When the scan begins, the technologist and cardiologist will be in the control room attached to the MRI room, telling your child important instructions to follow during the scan.
- During the test your child will need to remain still. They will also be asked to hold their breath for up to ten seconds several times during the test. Staff members will let your child know when to hold their breath and when to breathe normal again.
- For younger children, it may be helpful to practice breath-holding and laying still at home before the exam.
- When it comes time for your child to be given the contrast, he or she may notice their arm feels cold. This feeling is normal and will go away shortly.
- The scan takes a minimum of about one hour to complete.
- Once the scan is completed your child’s IV will be removed and you are free to go home!

### **Step 3: Results**

Your child’s cardiologist will contact you with results following the scan.

### ***Child Life Specialists***

A part of the Child Life Specialist’s role in the Radiology Department is to help children and families cope with the anxiety and fear associated with medical procedures. A Child Life Specialist may be available on the day of the exam to provide education and coping strategies. For more information, please contact Nicklaus Children’s Hospital’s Children’s Experiences Department at 305-666-6511 extension 4875 and select #1.