

Prevention: MRI and MRA

What is an MRI?

Magnetic Resonance Imaging (MRI) is a type of imaging of the body using large magnets. MRIs help doctors look inside the body to see the brain and other parts of the body.

What is an MRA?

Magnetic Resonance Angiography (MRA) is a type of MRI that helps doctors see the blood vessels inside the body. It is done using the same machine as an MRI.

For more information on SCD and stroke, see the "Complications: Stroke" resource.



One of the MRI/MRA machines at Lurie Children's.

Why might my child need an MRI/MRA?

MRI/MRA is the only way to see if your child has had a "silent" stroke. A silent stroke is a stroke that does not cause obvious stroke symptoms but does cause injury to the brain. Silent strokes may lead to learning difficulties and increase the risk of having other types of brain injury in the future. This is why developmental check-ups are important to have throughout your child's sickle cell care and treatment.

How is an MRI/MRA different than a TCD?

A TCD measures how fast blood is flowing through the vessels in the brain to help doctors tell if your child is at a high risk for stroke (See: "**Prevention: Transcranial Doppler Ultrasound**"). MRI/MRA is used to create a detailed picture of the brain to see if a stroke has already happened. In order to get these pictures, it is important to lay perfectly still during the MRI/MRA. Young children will need sleeping medicine for the MRI/MRA to help them stay very still.

What else do I need to know?

- The MRI/MRA machine uses strong magnets. It is important that your child does not have metal (e.g. jewelry, hair clips, zippers) inside or outside his or her body.
- The nurse will give you specific eating and drinking instructions based on your child's age. Be sure to follow these instructions or your test may have to be rescheduled.
- You may want to bring your child's favorite blanket or stuffed animal to comfort them during the scan.
- If your child receives sleeping medicine (sedation), he or she will not feel anything during the scan.
- Sleeping medicine can be given either orally through the mouth or through an IV.



If your child has hemoglobin SS or hemoglobin S/B0 and has not had a TCD this year, call the Hematology team to have one scheduled: **312-227-4813 (M-F 9am to 5pm)**

The Comprehensive Sickle Cell Program

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