

MR Urogram without Sedation

(Magnetic Resonance Imaging)

What is an MRU?

Note: Child-friendly language in Orange.

- An MR Urogram is a test that uses a large magnet, radio waves, and a computer along with contrast to take detailed pictures of inside the body. It does not use X-Ray radiation.
- An MRI scanner (**special, big camera**) has a tunnel with a bed that moves in and out. Some kids say it looks like a spaceship or doughnut.



Patient and MRI staff



MRI Scanner #3– Sunset Safari Theme

Why is it done?

- An MRU is used to produce 2D and 3D dimensional images of your child's urinary system including the kidneys, ureters—tubes that drain urine from the kidneys to the bladder and bladder.
- An MRU is often used to diagnose certain conditions such as an urinary tract obstruction, and kidney function.

What can I do to help my child?

- Parents/caregivers are strongly encouraged to stay with their child throughout the entire procedure whenever possible. Women who may be pregnant cannot be in the scanner room during the MRU. In these cases, another trusted adult is encouraged to stay with the child during this time.





What should I expect during the procedure?

The entire test takes about 2-3 hours and is done in three stages. Results will be sent to your doctor in 1-2 business days.

Stage 1: Getting ready

- First, MRI staff will bring you and your child into a small private room to get ready for the exam. A nurse will ask you general questions about your child's health.
- Most kids need IV hydration (**water**) and Lasix, a diuretic medicine to increase urine, to help make their pictures more clear. A nurse will gently place an IV (**tiny, soft straw placed into a vein using a small needle**) into his or her arm or hand.
 - * Your child may feel a little discomfort, like a small quick poke, when the IV is placed.
 - * Encourage your child to hold his or her arm very still and to take deep breaths.
 - * If you are interested a nurse can place a topical numbing medication of your child's arm and/or hand to help make this part easier.
- Depending on your child's age he or she may need a catheter (**small, soft tube**) to drain urine (**pee**) throughout the exam. If your child needs a catheter a nurse will clean the area where your child goes pee with Betadine (**brown soap**) and then insert a catheter (**tiny, soft tube**) into your child's urethra (**the opening where pee comes out**) and into the bladder.
 - * Your child may feel a sense of pressure and/or the urge to urinate.
 - * Encourage your child to take deep breaths to help make this part easier and quicker.
- Next, MRI staff will ask if your child has any metal on or inside his or her body such as jewelry, watches, or pacemakers.
 - * If your child is curious, explain that the MRI scanner (**special, big camera**) uses magnets to take pictures, so metal is not allowed near it.
 - * A parent and/or trusted adult is allowed to accompany their child during the scan. This adult will also need to be screened for metal items. We have lockers you may use to store belongings and any metal items during your child's scan.

Stage 2: MRI Scanner Room

- When your child is ready, an MRI technologist (**person who helps take the pictures**) will walk him or her to the Scanner Room and help your child get in a comfortable position on the camera bed.
 - * Your child will have pillows, blankets, earplugs and/or music headphones placed.
 - * Your child will have an imaging coil (**helmet**) placed over their abdomen, which will help make the pictures even more clear.

Stage 3: Pictures

- Next, the bed will move into the tunnel. Your child's job now is to stay very still to ensure clear pictures. The technologist will leave the room to take the pictures.
 - * Talk with your child about ways to make holding still in the tunnel easier such as taking a nap, thinking of a favorite place, or pretending they are a statue.
 - * Let your child know the technologist will be able to see and hear him or her the whole time.
 - * Your child may feel the need to urinate (**pee**), encourage them to hold it as long as possible and to tell the MRI staff.
- * The MRI scanner makes very loud noises when taking the pictures. Talk with your child about the sounds they may hear (loud knocking). We have ear plugs and music to help make this part easier.
- * The pictures last approximately 1 hour. Results will be sent to your doctor in 1-2 business days.

Tips for preparing your child for a MRI Urogram without sedation



School Age (5–12 years old):

- Prepare your child at least several days in advance.
- Talk to your child about why the doctor wants to take special pictures of inside his or her body. For example, “So the doctor can learn more about how your body works.”
- Explain to your child what he or she will experience, in the order that it will occur, using child-friendly and/or real terms.
- Let your child know that he or she will need an IV (**tiny, soft straw placed into a vein using a small needle**) for the pictures. Talk about ways to make the IV easier such as taking deep breaths, watching TV, etc.
- Let your child know to help with the pictures he or she may need a catheter (**tiny, soft tube**) placed into the area where your child goes pee. Talk about ways to make the tube part easier such as deep breathing, counting, etc.
- Talk with your child ahead of time about the sounds an MRI scanner makes (**loud buzzing and knocking**). Let your child know he or she will wear earplugs or listen to music to help reduce the noise. Your child can bring a CD or iPod from home or choose from our music selection.
- Let your child know that he or she will need to stay very still so that the pictures are not blurry.
- Help your child practice lying absolutely still on a bed or a table. Talk about ways to help make staying still easier, such as keeping his or her eyes closed, taking a nap, listening to music, etc.
- Encourage your child to ask questions.

Adolescents and Up (13 years old– and Up):

- Prepare your teen at least several days in advance.
- Talk to your teen about why the doctor wants to take special pictures of inside his or her body. For example, “So the doctor can learn information about your kidneys, ureters and bladder.”
- Explain to your teen what he or she might, see, hear and feel, in the order things will occur, using real terms.
- Let your teen know that he or she will need an IV (**tiny, soft straw placed into a vein using a small needle**) for the pictures. Talk about ways to make the IV easier such as taking deep breaths, watching TV, etc.
- Let your child know to help with the pictures he or she may need a catheter (**tiny, soft tube**) placed into the area where your teen goes pee. Talk about ways to make the tube part easier such as deep breathing, thinking of a favorite place, etc.
- Talk with your teen ahead of time about the sounds an MRI scanner makes (**loud buzzing and knocking**). Let your child know he or she will wear earplugs or listen to music to help reduce the noise. Your child can bring a CD or iPod from home or choose from our music selection.
- Let your teen know that he or she will need to stay very still so that the pictures are not blurry.
- Talk about ways to help make staying still easier—keeping eyes closed, taking a nap, listening to music, taking deep breaths, etc.
- Encourage your teen to ask questions.

My questions for the Radiology staff ...

- 1.
- 2.
- 3.
- 4.
- 5.

Child Life

Children's National Medical Center Department of Radiology is staffed with two full-time Child Life Specialists at Children's National Medical Center Main Campus, and one full-time Child Life Specialist at Children's National Imaging Montgomery County Regional Outpatient Center. Child Life Specialists are trained to address the emotional and developmental needs of children and their families during healthcare experiences, and can provide procedural preparation and support before and during your child's exam.

Phone Numbers

- If you would like to speak to a Child Life Specialist before your child's Radiology appointment at Children's National Medical Center Main Campus, please call **202-476-3338**.
- If you would like to speak to a Child Life Specialist before your child's Radiology appointment at Children's National Imaging Montgomery County Regional Outpatient Center, please call **301-765-5727**
- For more information about hospital-wide Child Life Services at Children's National Medical Center, please call **202-476-3070**.

Children's National Medical Center supports the Image Gently campaign and strives to keep radiation exposure to our patients as low as possible. For more information on this campaign, please visit www.imagegently.org

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