

# Nuclear Cystogram

## What is a Nuclear Cystogram?

A nuclear cystogram is a test that takes pictures of your child's urinary system. It is performed in the Nuclear Medicine department and uses a special kind of camera called a gamma camera. This camera **does not** give off radiation. We do this study by using a medicine called a tracer. This medicine contains a small amount of radioactive material. It travels through a catheter into the bladder to the area we need to see so the gamma camera can take pictures.

These tracer medicines (called radiopharmaceuticals) are carefully tested. Side effects are rare and give low radiation exposure. <http://snmmi.files.cms-plus.com/Patients/Nuclear%20Medicine%20and%20Radiation%20Safety%20Factsheet.pdf>

## Why is this exam performed?

A nuclear cystogram helps to decide if your child has urinary reflux, a condition where urine from the bladder goes upward, back to the kidneys. The exam may be ordered by your doctor if your child has frequent urinary tract infections.

## What to expect

If your child does not require medication to sleep (sedation) for the exam, one parent or guardian may be with your child in the exam room. It may be helpful to make arrangements for other siblings. For safety reasons, you will not be permitted to accompany your child if you are pregnant.

Preparing your child is key to the success of this study. To help prepare your child, our Child Life Specialists will help ease your child's fear and anxiety. Please let a staff member know if you are interested in a Child Life consultation at no additional cost.

For female patients, it is helpful to practice the position with her that will be used during the study. The "frog-legs" or "butterfly" position is where she lays on her back with feet together and knees spread out to the side.

Due to the personal nature of this exam, a parental presence during the exam provides comfort. If you feel that your child will need sedation, please make sure to request this at scheduling as these services are only offered on a limited number of days each week.

For those children requiring sedation for the test, you will be able to stay with your child until he or she is asleep.

Any child receiving sedation for the exam can:

- Eat food up to 8 hours before your arrival time.
- Drink milk, formula, and food thickener up to 6 hours before your arrival time.
- Breastfeed or given breast milk up to 4 hours prior to your arrival time.
- Only drink clear liquids up to 1 hour before your arrival time (water, Pedialyte, Sprite, 7-up, or apple juice). Orange juice is not a clear liquid.
- Take prescribed medications with a small sip of water (if needed) prior to arrival time unless otherwise specified.
- **If these instructions are not followed, the exam may be rescheduled or cancelled due to the risk posed to your child.**

You will meet with a Nurse Practitioner and/or the doctor who will be providing the sedation medication. You will have the opportunity to ask questions, discuss risks, and will be asked to sign your consent.

Your child and the accompanying adult will be taken to the procedure room by a technologist and asked to change into a gown. The technologist will ask why the study is being done and explain it to your child.

### For this 30-45 minute exam:

- If your child will be sedated, an intravenous line, also known as an IV, is required to give medications. An IV is a tiny tube that is used to give the body medicine. Your child might feel a pinch or a poke when it goes in the vein, however, we have ways to manage the pain associated with it.

- To help make sure your child is safe and can hold still for the test, we use seatbelts. Seatbelts can be Velcro straps, swaddle blankets, or tape straps. Seatbelts They can be quickly removed in the event of an emergency.
- Your child will lie on his/her back on the exam table, beneath the gamma camera. The technologist will apply numbing jelly on the urethral area.
- Using sterile gloves and supplies, the technologist will wipe the urethral area with cotton swabs soaked in “brown soap” which is an iodine-based cleaning agent, and two cotton swabs soaked in sterile water. This will feel cold to your child, which is normal.
- The technologist will insert a small catheter into the bladder and tape it to your child’s leg. Your child may feel some pressure or the urge to urinate. Taking long, deep breaths will help.
- The catheter will be connected to a bag of saline (sterile salt water) that will fill your child’s bladder. Pictures will be taken as the bladder fills up. Your child will be asked to hold the saline in, even though he/she may feel the urge to urinate.
- Once the bladder is full, the technologist will ask your child to void on the table. One this occurs, a few additional pictures are needed. A “post void” picture is taken once the bladder is empty.
- Although the camera taking pictures will be close, it will not touch your child.
- We have television in all the exam rooms which may be used if your child is not sedated. You can also bring a tablet with your child’s favorite movies.
- You will be provided discharge instructions at the conclusion of your appointment.

### **If your child received anesthesia**

Your child may be sleepy and unsteady from the anesthetic for several hours. Your child may have a red face or be slightly swollen around the face and eyes. This should improve within 24 hours. Your child may wake up feeling hungry. When he or she is wide awake, the recovery nurse will give clear liquids such as Pedialyte, apple juice, Sprite or water. If your child does not throw up during the next 30 minutes, he or she can eat normally.

To prevent accidents, closely monitor him or her for the next 24-48 hours. Walk with your child, holding hands even if he or she seems to walk without trouble. It is also important to help your child in the bathroom.

The sedative and the test may disrupt your child’s routine. You may notice a change in behavior for the rest of the day. Some children may become cranky; some sleep for hours. Others need to stay up late because they slept for the test. Be patient. Things will be back to normal the next day.

### **When to seek help**

Call 911 if your child has difficulty breathing and looks very pale or has blue lips or nails or a very high fever (greater than 103°F).

Call your child’s doctor if your child has any of the following:

- Red blood in the urine, pain
- Throws up more than three times
- Seems confused or dizzy the next day, is harder to wake up than usual
- Has a sore throat that gets worse or does not go away in two days
- Has a fever of over 101°F for more than 24 hours
- Develops any allergies such as hives, itching or a rash

### **Receiving your Nuclear Cystogram results**

Call your doctor for a follow up appointment as instructed. You can also call the doctor who ordered the study for the results 24 to 48 hours after the test. If you have any additional questions or concerns, please don’t hesitate to call Radiology Nursing at 832-826-5371.

If you would like a CD of your child’s study, please call the film library at 832-822-1202. The Radiologist’s report will also be included on the CD.