

Radionuclide cystogram (RNC)

Your child is scheduled for a radionuclide cystogram (RNC) at Children's Hospitals and Clinics of Minnesota.

Date: _____

Test time: _____

Check-in time: _____

Children's - Minneapolis
2525 Chicago Avenue South
Minneapolis, Minnesota 55404
(612) 813-8200

Children's - St. Paul
345 North Smith Avenue
St. Paul, Minnesota 55102
(651) 220-6147

Please bring a list of your child's medicines and your insurance card with you. If you have questions about your insurance coverage for these services, or any special referral requirements, please contact your insurance company directly. They will advise you about your plan's coverage.

A parent or legal guardian must accompany children younger than 18 years old.

What is an RNC?

An RNC is an exam that detects urinary reflux. (See the education sheet, "Vesicoureteral reflux.") It gives very little radiation to your child. This exam is usually done as a follow-up study after your child has had a voiding cystourethrogram (VCUG), or if there is a family history of urinary reflux, (sister, brother, or parent).

How is the test done?

A technologist will bring you and your child into an exam room and explain the test to you both. Your child will be asked to put on a hospital gown and lie on the imaging bed (a lightly-padded table). You may stand by your child's head to provide support and distraction.

Girls are then asked to put their legs into a "butterfly" or "frog" position. Boys may keep their legs straight. The technologist will wash and dry the area between your child's legs to make sure it is very clean.

Next, the technologist will insert a soft, flexible tube called a catheter into your child's urethra. The catheter is about the size of a piece of cooked spaghetti, with a smooth, rounded end. A small piece of tape will be used to hold the catheter in place. Putting the catheter in may feel uncomfortable, but this part of the test will be over quickly. Your child may feel the need to urinate when the tube is in, even though the bladder is empty.

While your child is lying on the imaging bed, the radioisotope (a clear liquid that makes it possible to view the bladder) will flow from a bottle or bag through the catheter into the bladder. When the bladder fills, your child will feel the urge to urinate. We will ask your child to say when he or she feels that the bladder is very full. Your child will then be asked to urinate into towels while lying down or will use our potty chair. The camera will take images while the bladder is filling and emptying.

While the catheter is still in we may repeat the process of filling and emptying the bladder. If already sitting up, your child can stay seated on the potty chair for this.

When all the images are completed, the tape holding the catheter in place will be removed and the catheter will come out. This usually is not uncomfortable for your child.

During this exam, many children watch a movie (we have DVDs and videotapes here), listen to a story read by a parent, or simply rest.

The radiologist will check to see if more images are needed before you leave, and will send a report to your child's doctor.

Can I be with my child during the test?

You are welcome to stay with your child. The test will take about 30 minutes. If your doctor has ordered sedation for your child, plan on a total of 1½ hours. See the education sheet, [*Nitrous oxide for sedation*](#).

What should we do before the test?

Usually you can maintain your child's routine eating, sleeping, and medicine schedules before the test. Your child's doctor or a Children's staff member may give you different instructions if your child will have sedation or more tests on the same day.

Read and discuss this information with your child. Answer as many questions as you can.

To learn more about preparing and helping your child cope with this test, call the child life department. Child life specialists are trained to help children understand and cope with medical procedures and can offer advice on how to talk with and support your children. There is no charge for child life.

Children's - Minneapolis (612) 813-6259
Children's - St. Paul (651) 220-6465

How should I prepare my child?

Children are usually less afraid and feel more successful when they know what to expect and what is expected of them. You know your child best. The amount of detail you give will depend on your child's age and developmental level, reactions to previous health care experiences, and degree of anxiety about this test. Talking about it can help your child be more comfortable with the test, which will make the procedure easier for both of you. Most children benefit when you use simple words to explain:

- why the test is needed: "To help find out how your kidneys are working."
- what parts of the body will be involved: "Your kidneys are the parts that make your pee/urine" (use the words familiar to your child).
- what your child might see, hear, and feel. For example, the camera, cool soap, touch to private parts, urge to urinate.
- that it is okay for staff to touch your child's body, including private parts, for this test.
- where parents or other significant care providers will be during the test: "I/we will be with you the whole time."
- that questions are welcome at any time.

For many children, a big concern is whether or not the test will hurt. Assure them that although there may be some discomfort, it will only last a few moments. Remind them that the test is important because it helps find out how their body is working inside.

How can I support my child during this test?

Before the appointment, you and your child can:

- practice lying down and being “as still as a statue.”
- practice relaxing. Imagine being in a favorite place or doing a favorite activity.
- pack comfort items, such as a stuffed toy or blanket, some familiar books or quiet toys, a pacifier for very young children. Older children and teens may want to bring an iPod® or a hand-held video game.
- talk about how much your child wants to know about the test while it’s happening. Some children want to be told each step in advance and also while it’s happening. Others do not want all the detail; they simply want to be distracted and supported. Be sure to share your child’s wishes with the staff once you are here.

During the test

Research is clear that parents are most helpful to their children during stressful times when they offer distraction, rather than apologies.

- Praise your child often during the test. Be specific to behaviors, such as “You’re holding still. Good for you!” or “You’re doing just what we asked you to do!”

- Talk about familiar, positive things – what your child likes, places you’ve enjoyed, activities you’re planning as a family, fun times you’ve had, successes.
- Imagine the places, things, or people you’re talking about and describe them, or have your child describe them to you. Ask open-ended questions that encourage conversation rather than those that require just a yes or no answer. For example, “Tell me what you’d like to do when we go to the pool” works better than, “We’re going to have a great time when we go swimming, aren’t we?”
- Sing songs together. Play games that require thinking, such as spelling words or adding and subtracting out loud. Ask young children such things as which animals live on a farm or in the zoo and the sounds they make, or to name all the people in their family or class, and so on.
- Read the books you brought, hold a toy so your child can see and play with it, play “Can you guess?” and give clues about people and pets you know, things you see in the room.

What can we expect after the test?

If sedation was used, your child will need to be monitored by a nurse until awake

There may be some temporary soreness where the catheter was and the urine may look slightly pink. Assure your child that these are normal and will go away soon. Sometimes a warm bath (plain water, no bubbles) can be comforting. Encourage your child to drink plenty of fluids. See the education sheet, [After a urinary catheter](#).

Your child can go back to normal eating and activities after this test.

You will receive the results from the doctor who ordered the test.

What else do we need to know?

On the day before the test, you may pre-register online at www.childrensmn.org. Please do this before 3 p.m. If you prefer, you can call the admitting office.

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Children's - St. Paul (651) 220-6878

A family member or friend, age 18 or older, may stay with your child. Siblings may not be in the room during the test. Please have an adult stay with them in the waiting room, or sign them into the Sibling Play Area (if 2 years or older). Call to ask about hours:

Children's - Minneapolis, 2nd floor
(612) 813-7051

Children's - St. Paul, 1st floor
(651) 220-7150

Plan to allow extra time before the appointment, to check your children into the Sibling Play Area.

Questions?

This sheet is not specific to your child but provides general information. If you have questions or need more information about the test, call the radiology department at the site checked on page 1.

For more reading material about this and other health topics, please call or visit the Family Resource Center library, or visit our Web site: www.childrensmn.org.

Children's Hospitals and Clinics of Minnesota
Patient/Family Education
2525 Chicago Avenue South
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