



Pediatric DMSA Renal Kidney Scan

What is a DMSA renal scan?

- A DMSA renal scan is a diagnostic imaging exam that evaluates the function, size, shape and position of the kidneys and detects scarring caused by frequent infections.
- A radioisotope is injected into your child's veins through an IV prior to the scan. It is taken up by the kidneys.
- A special camera, called a gamma camera, is used to take pictures of the kidneys and show how the kidneys are working.

When might a DMSA renal scan be needed?

A DMSA renal scan can help assess:

- pyelonephritis
- renal function in the left and right kidneys
- renal ectopia
- infarction
- hypertension
- horseshoe kidney
- acute renal failure
- multicystic dysplastic kidneys
- trauma

How should I prepare my child for a DMSA renal scan?

There is no special preparation needed for this test. Your child can eat or drink as usual.

- It is helpful to give your child a simple explanation as to why a DMSA renal scan is needed and assure him/her that you will be with him/her for the entire time.
- You may want to bring your child's favorite book, toy or comforting object to use during waiting times.
- We have various DVDs to choose from for your child to watch during the procedure or you can bring one from home.

Between the injection of the radioisotope and the scan, there is a three hour delay. In addition, the scan time is approximately 20 minutes. Please schedule your day accordingly.

What should I expect when I bring my child to the clinic for a DMSA renal scan?

When you arrive, please go to the front desk. A clinic coordinator will check in your child and verify his/ her registration information.

What happens during a DMSA renal scan?

A DMSA renal scan involves three steps: injection of the radioisotope, a waiting period and the scan.

Injection of the radiopharmaceutical:

- You will be greeted by one of our nuclear medicine technologists who will explain to you and your child what will happen during the study.
- A tiny amount of the radioisotope DMSA will be injected into one of your child's veins by a small needle.

Waiting period:

- You and your child will be free to leave the department and then return 3-4 hours later for the actual imaging. The technologist will give you an exact time to return for imaging.
- This delay allows the kidneys to absorb the radiopharmaceutical.

The DMSA renal scan:

- When you return, your child will be asked to void (use the bathroom).
- Your child will lie on the table and a large camera will be positioned above and below him/her.
- The camera may stay still or move slowly around your child's body as pictures are taken.
- It is important that your child remains still during the imaging in order to obtain the best quality images possible. Motion will degrade the images and the images will need to be repeated.
- You will be able to stay with your child for the entire time.

The average imaging time is 20 minutes.

Will my child feel anything during a DMSA renal scan?

Your child may experience some discomfort associated with the insertion of the intravenous needle. The needle used for the procedure is small. Once the radiopharmaceutical is injected, the needle is withdrawn and a Band-Aid is placed over the site of the injection. The area where the injection was given may be a little sore.

Although the camera used to take pictures may appear large and intimidating, it does not touch your child.

Is a DMSA renal scan safe?

We are committed to ensuring that your child receives the smallest radiation dose needed to obtain the desired result.

- Nuclear medicine has been used on babies and children for more than 40 years with no known adverse effects from the low doses employed.
- The radiopharmaceutical contains a very tiny amount of radioactive molecules, but we believe that the benefit to your child's health outweighs potential radiation risk.
- The camera used to obtain the images does not produce any radiation.
- It is safe to be in the room with your child if you are pregnant or nursing.

What happens after the DMSA renal scan?

Once the DMSA renal scan is complete, the images will be evaluated for quality. If the scan is adequate, your child will be free to leave and resume normal activity.

One of the clinic's nuclear medicine physicians will review your child's images and create a report of the findings and diagnosis.

How do I learn the results of the DMSA renal scan?

The nuclear medicine physician will provide a report to the doctor who ordered your child's DMSA renal scan. Your child's doctor will then discuss the results with you.

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