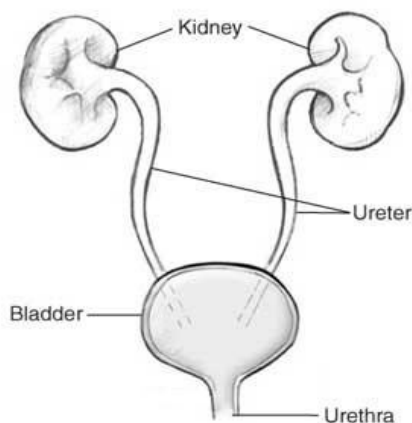


# DMSA

## What is a DMSA?

**Note:** child-friendly language in **green**.

- A DMSA renal scan is a nuclear medicine study of your child's kidneys. It creates pictures of your child's kidneys, showing both their shape and how they are working.
- In nuclear medicine studies, patients are given a very small amount of radioisotope (**picture water**) which travels to the part of the body the doctors want to examine.
- In this study, a large gamma camera creates pictures of your child's kidneys using the radioisotope.



Nuclear medicine scanner

## Why is it done?

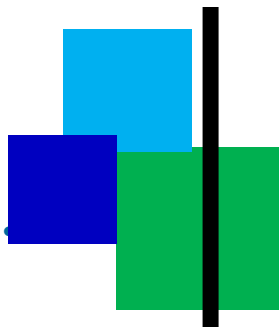
- This procedure is usually recommended after a urinary tract infection (UTI) and/or pyelonephritis (kidney infection).
- It will check how the kidneys are working and look for possible scarring of one or both kidneys.

## What can I do to help my child?

- Child life specialists are available to help your child better understand and cope with the scan.
- Parents/caregivers are also encouraged to be with their child during the scan, though there are some exceptions. Pregnant women may need to limit their time around a child that has been injected with a radioisotope.
- Please ask a staff member for more information about these options for support!



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# What should I expect during the procedure?

This test is done in two stages. The entire procedure takes between approximately 2 and 4 hours, depending upon whether or not your child is being sedated for the scan.

## Stage 1: Injection

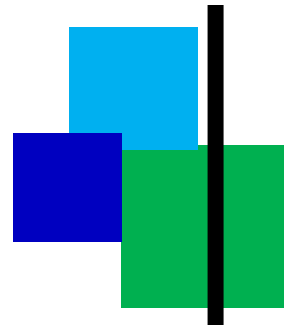
- For a DMSA renal scan, your child will be given an injection of a small amount of radioisotope (picture water) through a vein.
  - \* Your child may either sit on your lap or by him/herself with an arm stretched out on the bed.
  - \* Young children may be wrapped in blankets to help them stay still during the injection and/or pictures.
- A technologist (person who helps take the pictures) will then look for the best place to give the injection and wash this area with a cold, wet wipe.
  - \* Let your child know that his/her job is to hold his/her arm very still.
- Next, the technologist will place a small needle into a vein in your child's arm or hand to inject the radioisotope (picture water). Once the radioisotope is injected, the small needle is removed.
  - \* Your child may feel a bit of discomfort when the needle is placed.
  - \* Counting, singing a favorite song, and/or taking deep breaths may be helpful coping strategies.
- You and your child will be instructed to come back for the pictures 1.5-2 hours after the injection.
  - \* Your child can bring his/her favorite toy or game from home to help with the wait time.

## Stage 2: Pictures

- When it is time for the pictures, your child will need to lie on his/her stomach and hold very still under the camera. The camera will be positioned over your child, but will not touch him/her.
- Approximately five pictures will be taken, lasting up to 10 minutes each. Your child must lie very still during each picture or the images may be unreadable (blurry). The radiologist (picture doctor) may also order additional pictures after viewing the initial images.
  - \* To help make this part easier, many children like to watch a movie. The child life team can provide DVDs and portable DVD players.
  - \* Sedation is an option for those unable to hold still for the pictures. If your child is scheduled with sedation, a nurse will call you 1 or 2 days in advance in order to provide instructions as to how to prepare your child.

# Tips for preparing your child for a DMSA

A child life specialist (CLS) can help support your child for his/her procedure by explaining it in developmentally appropriate language and suggesting possible coping strategies. If you would like to speak to a CLS before your appointment, see back for contact information.



## Infants (0-12 months old):

- Remember you are the most important thing to your child. Your presence will help him/her feel as safe and secure as possible.
- If you are prepared mentally and physically, you will be more relaxed around your child.
- Bring familiar objects that comfort your child such as a favorite blanket, toy, or pacifier.
- Remember that children use many different ways to cope. Crying is a healthy and normal way for children to cope because it allows them to express their emotions.

## Toddlers (1-3 years old):

- Begin preparing your child the day before.
- Let your child know that he or she will have special pictures taken so that the doctor can learn about his/her body.
- Use simple words to describe what your child may experience.
- Reassure your child that you will be close.
- Bring comfort items with you that help your child feel safe, such as a favorite toy or blanket.
- Toddlers are learning to be independent and make their own choices, so try to offer realistic choices. For example, “What stuffed animal should we bring?”

## Preschoolers (3-5 years old):

- Begin preparing your child about 1-3 days in advance.
- Talk to your child about why he/she is having pictures taken. For example, “The doctors wants to take special pictures of inside your body to learn more about how your body works.”
- Let your child know that he/she will get special picture water that makes the pictures clear.
- Talk about ways to make the challenging parts easier, such as pretending to blow out birthday candles or breathing deeply to get through any difficult parts of the exam.
- Tell your child that it is his/her job to hold still so that the pictures are clear.
- Remind your child that the camera will not hurt or touch him/her.

## School Age and Up (6 years old and up):

- Prepare your child at least a few days in advance.
- Talk to your child about why the doctor wants to take special pictures of inside his/her body. For example, for a younger child, “So the doctor can learn more about how your body works.” For an older child, “So the doctor can learn about how your kidneys are working.”
- Explain to your child what he/she might see, hear, and feel in the order things will occur. Use child-friendly language and/or real terms depending on your child’s age and/or preference.
- Talk to your child about different ways to cope. Some children like to know everything that is happening during the exam, while some want to direct their attention elsewhere.
- Encourage your child/teen to ask questions.

## Child Life

Children's National Hospital Department of Radiology is staffed with Certified Child Life Specialists. 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.

## Contact Information

If you would like to speak to a child life specialist before your child's radiology appointment, please call **202-476-3338** or email **[childliferadiology@childrensnational.org](mailto:childliferadiology@childrensnational.org)**.

Created by Children's National Child Life Services

