

## DMSA (kidney) nuclear medicine scan

### What is a DMSA scan?

This is a type of scan to show how well your child's kidneys are working. S/he will be given an injection of a small amount of radioactivity that will be absorbed by the kidneys over the following few hours. The scan will be performed later in the day (approximately two hours after the injection). The nuclear medicine scanner (gamma camera) is a special machine which consists of either one camera or two cameras that are positioned over/under your child's body while they lie on a couch for about half an hour. The cameras detect the radioactivity, which your child's body will be emitting (giving off). The radioactivity is converted to electrical impulses by the camera and the information is passed to a computer, which produces an image on a TV screen.

### Before your child's scan

You and your child should report to the Children's Observation Unit in the Women's & Children's Hospital at the time given on the appointment letter. One of the unit's staff will place a cannula (needle) into a suitable vein. This could be at the elbow, back of the hand, or the foot. You will then come to the Gamma Camera Unit where the injection of the radioactive isotope will be given through this cannula. You and your child can then return to the ward.

At this point, a decision will be made as to whether your child requires sedation in order to be able to lie still for the duration of the scan. You will be involved in this decision. If your child needs sedation, s/he will need to be asleep before returning to the Gamma Camera Unit for their scan. If your child does not need sedation, you will return to the Unit approximately two hours after the injection.

### What will happen during the scan?

Your child will not need to undress for the scan. S/he will need to lie on the scanning couch for 20 to 30 minutes – it is very important that your child lays still. The gamma camera will come very close to your child, but will not touch them. There is no discomfort involved and you will be able to sit beside your child while the scan is taking place.

### After the scan

You and your child will return to the ward where the cannula will be removed. If no sedation was given, you will then be allowed to go home. If your child has had sedation, s/he will be allowed to wake up naturally. Once awake, children are given something to eat and drink to make sure that the sedation has worn off. Following this, you will be allowed to go home.

You should encourage your child to drink plenty of fluids. This will flush the radioactivity out of your child's body in their urine.

### When will we get the results?

You will not be given any results on the day of the scan. A radiologist (X-ray doctor) will interpret and report on the scan. This result should reach the doctor that sent your child for the scan within seven days.

### Are there any risks?

Nuclear medicine scanning involves the use of radioisotopes and so has the usual risks associated with ionising radiation. We are all exposed to radiation naturally (background radiation). For this test, the extra radiation is equivalent to what your child would receive from the atmosphere (background radiation) over a period of one month. The added risk is very small, but the risks from missing a serious disorder by not having the scan may be considerably greater. However, the dose administered is kept to a minimum, especially in children.

Side effects from the injection are uncommon and the radioactivity will leave the body quickly and naturally when your child passes urine.

## DMSA (kidney) nuclear medicine scan (continued)

As with any procedure, unforeseen complications can occur, although this is rare.

It is important that whoever accompanies the child for their scan is not pregnant. We suggest that you do not bring other children with you when you come. If you have any questions about this, please speak to a member of the nuclear medicine team. You will find our telephone number on the appointment letter.

**Who should I contact if I have any questions?**

If you have any questions about the scan please contact us. You will find our telephone number on the appointment letter.