Children’s Services

DMSA (kidney) Scan

This leaflet is for children and their parents to give them some more information about DMSA scans.

DMSA

The doctor has asked for your child to have a special kidney scan called a DMSA scan. It works by injecting a substance called an isotope into your child’s veins which then travels to the kidneys. The scan is named after the chemical ‘dimercaptosuccinic’ acid or DMSA for short, to which the isotope is attached. This test shows how well your child’s kidneys are working and is very sensitive in detecting any damage caused by urinary tract infections.

Before the appointment

Your child can eat and drink as normal; there is no need to fast for this test.

A tube of ‘EMLA’ cream may be sent to you in the post with your appointment. This is a local anaesthetic cream which will help make the injection painless. It needs to be applied one hour before the appointment. Put some cream on to the back of both of your child’s hands and cover with the plasters included in the pack. Repeat on the inside of their arms over the bend of the elbow. It is helpful to put it where you can see a vein. Although you are asked to put the cream in four places, this does not mean your child will have four injections; it is to help the nurse choose which vein is the best.

At the appointment

On arrival your child will be weighed and given a small injection of a radioactive substance which makes it possible to detect any kidney damage. The amount of radioactivity is calculated according to your child’s weight and the radiation dose is less than a tenth of that from a CT scan.

It takes about four hours for the kidneys to take up the maximum amount of this substance and to obtain the best scan pictures, so you will be able to leave the department and come back three to four hours later.

When you return your child will be shown to an examination room with a couch. There is a large round camera under the couch and above the couch there is a small screen on which the scans of the kidneys can be seen.

The technician also has another big computer and screen for storing the information from the scans.
Your child will then lie on the couch, which can be moved, so that the technician can get the scan in the right position. It is necessary for your child to keep very still while the scans are taken. Each scan takes five minutes.

The first scan is taken with the camera under the couch and then moves to either side. It may seem big but it does not touch your child. You will be able to stay with your child at all times and you may hold their hand. They may also bring a soft toy or a book can be read to them during the scanning process.

Sometimes another scan may be taken with the camera over the abdomen but this is not always necessary.

You and your child may then go home.

**Following the appointment**

The radioactive substance lasts for only a short period of time and has usually disappeared from the body within 24 hours. During this time please ensure strict hand washing following toileting or nappy changing and ensure that potties (if used) are cleaned thoroughly. During this time, place all nappies in an outside bin.

The results of the scan will be sent to the doctor who ordered the test and an appointment will be sent to you to discuss the results (usually within one month).

**Preparing your child**

Research has shown that children cope much better with hospital procedures if they are well prepared and informed of what is going to happen. It is therefore important for you to talk to your child and explain in a simple and positive manner about what will happen during their visit to the hospital.

Some terms that may help when preparing your child could be:

- **magic cream (EMLA).** This cream stops the injection from stinging too much.

- **“while you are having your scan it is important to lie very still so that we do not get fuzzy pictures”**

- Lying still for a story can be practiced at home; remember to bring your book in with you. Playing ‘sleeping lions’ can be a fun way to practice lying still.

- It may be possible for your child to watch a DVD whilst lying still for imaging; you could bring one with you.

**Ultrasound**

An ultrasound scan may also be organised as a further investigation following urinary tract infections.
This does not use any radiation. Sound waves are reflected off the body and give an image of the kidney and urinary tract on a screen (similar to the scan used in pregnancy).

A gel is placed on the abdomen and rubbed over the site with a small hand held device. This gives an image of the kidneys, ureters and bladder and can show if there are any abnormalities or blockages in the urinary tract.

Your child may be asked to drink a quantity of fluid before the test as this helps to make the urinary tract easier to see.

This test should last about fifteen minutes.

**Contacts/Further information**

If you have any further questions please contact the nuclear medicine department on 01223 217145

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We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Other formats:**

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team: patient.information@addenbrookes.nhs.uk.

Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

**Document history**

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