

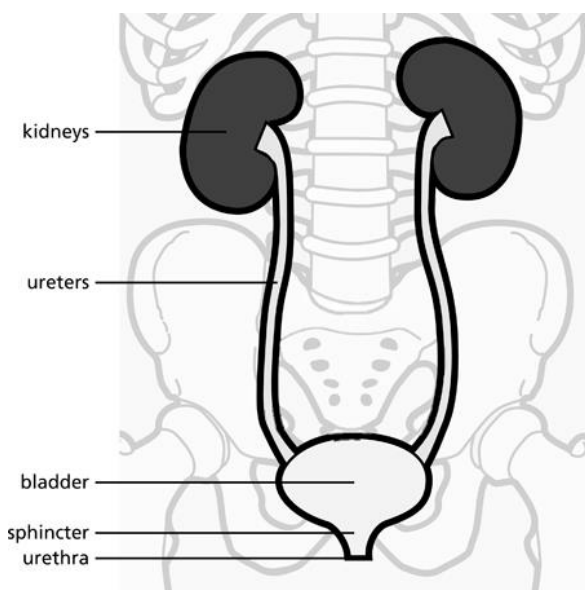


## MAG3 Renogram (kidney imaging) scan: information for families

This information sheet from Great Ormond Street Hospital (GOSH) explains about the MAG3 Renogram scan, how it is used to look at your child's kidneys, what it involves and what to expect when your child comes to GOSH. An Easy Read information sheet about the scan is also enclosed for your child. If you have any questions, please call the Radiology Department on 020 7405 9200 extension 5262.

A MAG3 Renogram scan is used to assess the structure and location of the kidneys and to check how well they are working. It is also used to show any blockages or obstructions in the kidneys that might stop them working as well as they should.

It works by injecting a substance called an isotope into your child's veins, which then travels to the kidneys and comes out in their urine. The MAG3 scan is named after the chemical 'mercaptoacetyltriglycine' or MAG3 for short, to which the isotope is attached.



### When you receive your appointment letter

If you are unable to keep this appointment, please inform the department at least two weeks beforehand. Sometimes, we can offer the appointment to another child on the waiting list.

As so many children and young people need to use our services, we have had to introduce a policy where if you cancel or a child does not attend two appointments in a row, we will inform their GOSH consultant and close their referral.

### Are there any alternatives?

Various types of scan such as CT, ultrasound and x-rays can show the size and shape of your child's kidneys but not how they function. The results of the scan are then used to plan your child's treatment.

### Before the appointment

If you are pregnant or think you could be pregnant, please let us know at least two days before your child is due to come to GOSH for the injection. There is a small risk that the isotope given to your child could harm your unborn baby, so we advise you to organise another adult to help look after your child for the first 24 hours

after the scan. If this is not possible, we may have to reschedule your appointment.

If your daughter is 12 years old or older, we will ask her about her periods and any possibility that she could be pregnant.

If your child is apprehensive or scared of needles, please telephone the Nuclear Medicine Department before the appointment – we can advise you on how to prepare your child and may involve the play team.

Your child will be able to watch a DVD during the scan, so please bring along any favourites. It can also help if your child has a favourite toy to hold as well.

Your child will not need to get undressed for the scan. However, they should wear clothes containing as little metal, such as zips or buttons, as possible as this can interfere with the scan.

## **The day of the scan**

Please arrive at the Radiology (X-ray) reception desk at the time stated in your child's appointment letter. This is one hour before the injection is due to be given, so your child can have local anaesthetic cream applied to numb the skin.

If your child does not want local anaesthetic cream, please let us know and arrive 45 minutes after the time given in the letter – this is 15 minutes before the injection.

Your child needs to be well hydrated (not thirsty) for the scans to give a good result. Please make sure that your child drinks plenty of fluids on the day of the scan. If your child is on restricted fluids, please follow guidance from your doctor.

If your child is also having an ultrasound scan, we will try to carry this out during the same appointment. Your child's bladder needs to be full for the ultrasound scan so they should not use the toilet beforehand but they will be able to go immediately afterwards.

## **The injection**

Once the local anaesthetic cream has made your child's skin numb, we will ask you and your child to come to have the injection. Your child will need to lay flat on a scanning bed for the injection and pictures. The radiographer will put a very small needle in your child's hand, arm or foot and inject the isotope followed by a medicine called furosemide (a diuretic). Immediately after the injection, they will remove the needle. The scan starts as your child has the injection.

## **Radiation and risk**

It is our legal duty to tell you about the potential risk of having an isotope scan. There are no side effects to the scan itself and the isotope will not interfere with any medicines your child is taking.

The isotope contains a very small amount of radioactivity, about the amount we receive from natural background radiation in about six months. Our doctors have checked that the expected benefit of your child receiving the study outweighs any small risk from the radiation involved.

The isotope becomes inactive in the hours following the scan and is passed out of the body in your child's urine. You should take precautions in the 24 hours immediately after the injection as described below. Following these simple precautions will minimise the risk of radioactivity from your child's urine.

## **The scan**

You can stay with your child throughout the scan. They will need to lie very still while a series of images are taken over a period of 20 minutes.

After the 20-minute pictures have been taken, you and your child will be asked to sit in the waiting room for 20 minutes. While you are waiting for the next part of the scan, please

encourage your child to drink plenty of water, juice or milk.

Your child will then be asked to go to the toilet and then come back to the scanning room for one image, this will take one minute. Your child will not need another injection for this picture.

If the kidneys have not completely cleared the isotope, then the radiographer may wish to repeat this image again.

## **After the scan**

If your child is not having any further scans or tests, you will be free to go home. A consultant radiologist will send a report about the scan to your child's doctor.

## **For the first 24 hours at home**

Give your child plenty to drink. This will help the isotope pass out of their body as quickly as possible.

If your child is toilet-trained, they should go to the toilet as often as possible. When they have used the toilet, they should flush it twice and wash their hands thoroughly with soap and water.

If they had a diuretic (water) injection as part of the scan, they will need to go more often for the first few hours afterwards anyway.

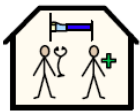
If your child is potty training, flush the toilet twice after emptying the potty. Wash the potty and your hands thoroughly in warm soapy water.

If your child is in nappies or pads, you should change them frequently and dispose of the dirty nappy or pad in an outside bin. Wash your hands thoroughly after nappy or pad changing.

Your child should carry on taking their regular medications as usual. The isotope will not affect them in any way.

**If you have any questions, please call the Radiology Department on 020 7405 9200 extension 5262.**

## Having a MAG3 scan



You are coming to hospital for a MAG3 scan. This looks at your kidneys and how well they work.



Your kidneys take water from your body and clean it. This takes out any bad stuff and turns it into wee.



You cannot have this scan if you are pregnant. We may ask you to give us a wee sample to test.



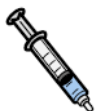
You need to drink lots of water for this scan to give good pictures.



Many children have an ultrasound scan first. We will put some jelly on your skin. This will feel a bit cold. We will put a probe on the jelly to make a picture. We will give you a tissue to wipe off the jelly when we have enough pictures.



You will be able to go to the toilet after the ultrasound scan. You should carry on drinking lots of water ready for the MAG3 scan.



We will put some cream on your hand to make it numb. A while later, you will have an injection. This shows up as a different colour on the pictures.



We will help you get onto the scanner bed ready for your pictures. You need to stay very still so we get good pictures.



After the first set of pictures, you will need to wait 20 minutes. You can play in the waiting room but carry on drinking lots of water. You will then have one very quick picture to check that the liquid has come out in your wee.



After this, you can go home. Remember to keep drinking lots of water to get rid of the liquid.