

MAG-3 renogram (kidney) nuclear medicine scan

What is a Mag-3 renogram?

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, which is taken up by the kidneys. Your child will need to lie on a couch while the radioactive injection is given and the scan will start immediately after this. The scan itself will take around 30 minutes.

The nuclear medicine scanner (gamma camera) is a special machine that consists of either 1 or 2 cameras, which are positioned over/under your child's body. The cameras detect the radioactivity that your child's kidneys 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 your 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.

At this point, a decision will be made as to whether your child will need sedation in order to be able to lie still for the scan. You will be involved in making this decision. If your child needs sedation this will be given, and when your child is asleep, s/he will be brought to the Nuclear Medicine (Gamma Camera) Unit for their scan. If no sedation is needed, your child can go straight to the Nuclear Medicine Unit.

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 where the radioactive injection will be given through the cannula (needle), which was put in on the ward. The gamma camera will come very close to your child, but will not touch him/her. 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. After 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 7 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 1 month. The added risk is very small and the radiation dose given 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.

MAG-3 renogram (kidney) nuclear medicine scan (continued)

As with any procedure, unforeseen complications can occur, although this is rare. Despite these risks, it is important to remember that the risk of missing a serious problem by not having the test done could be much greater.

It is important that whoever accompanies the child for the 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.

We will do everything we can to make your visit as pleasant as possible.