

Nuclear Medicine Department  
Children's Hospital, John Radcliffe Hospital

# MIBG Scan

Information for parents and carers



This leaflet explains what an MIBG scan is and what to expect when your child comes for their appointment.

An MIBG scan is a diagnostic test that is used to look for neuroblastoma cells. These cells are found in tumours that affect the nervous system. It can show up cells in a primary tumour (original tumour) as well as any cells that have escaped to other areas of the body.

An injection of a radioactive isotope (radioactive liquid) containing meta-iodobenzylguanidine (MIBG) will be given to your child. This will stick to any areas of tumour cells. These then show up as 'hot spots' on the scan pictures. We will carry out several scans, over two days.

## On the day of the first scan

Please come to Kamran's Day Care at **9.00am**.

This is on Level 0 of the Children's Hospital at the John Radcliffe Hospital.

or

Children's Day Care Ward at **9.00am**.

This is on Level 1 of the Children's Hospital at the John Radcliffe Hospital.

Your appointment letter will tell you which ward to come to. If you are unsure, please contact your child's medical team. (Telephone numbers are at the back of this leaflet.)

## Before your child's MIBG scan

If you think you could be pregnant, please let us know. There is a slight risk that the isotope given to your child could harm an unborn baby. The isotope remains in your child's body for up to 24 hours and can be dangerous to an unborn baby if you have close contact with your child (such as hugging or carrying them). This means it might be necessary for another adult to look after your child for 24 hours after the isotope injection.

If your child is under 5 years old and not likely to be able to lie still during the scan, they may need to be sedated so that we can get the pictures we need. Whether your child needs sedation will be decided during a discussion with you, the medical team and the nurse looking after your child.

If your child does need sedation, they will need to fast (not eat or drink) before the scan. You will need to follow the fasting instructions below. We will give you a separate information sheet to explain the sedation process.

## Fasting instructions for sedation

Please make sure that you follow the fasting instructions below if your child needs sedation for the MIBG scan. Fasting is very important before having sedation. If your child has any food or liquid in their stomach whilst they are sedated, they might vomit while they are asleep. There is a risk the vomit could get into their lungs.

Please follow these instructions carefully.

### **Day 1 SCAN**

Scan time ..... (PM)

In the morning your child may eat breakfast/drink cow's milk but must be finished by 7.30am.

They can drink formula milk until 9.30am.

They can have breast milk until 10.30am.

They can drink water or squash (not fruit juice) until 11.30am.

### **Day 2 SCAN**

Scan time ..... (AM)

In the morning your child must not have any breakfast.

They can drink formula milk until 4.30am.

They can have breast milk until 5.30am.

They can drink water or squash (not fruit juice) until 6.30am.

## What will happen on the day of the MIBG scan?

Your child will be assessed by a Doctor or an Advanced Nurse Practitioner. Your child's weight and height will be measured.

Before the isotope can be injected, your child will be given a potassium iodide tablet. This stops their thyroid gland from absorbing the radiation in the isotope. This can be mixed in milk to mask the taste or can be taken as a capsule.

One hour after they have taken this tablet, the radiographer will use your child's Hickman Line or a cannula (narrow tube) in a vein on the back of their hand to inject a small amount of the radioactive isotope. If we have used a cannula, we will then remove it and cover the injection site with a small plaster.

Your child will then return for the scan 4 hours after the isotope injection and again the next morning, 24 hours after the injection.

## What will happen during the MIBG scan?

A radiographer will take you and your child into the scanning room. Your child will need to lie still on a special bed. Safety belts will be placed around their tummy and legs to stop them from falling off the bed during the scan. You can stay with your child throughout the scan (unless you are or could be pregnant).

If your child is awake for the scan they can watch a DVD. You can bring along a favourite one for them to watch, along with any other comforters they find reassuring.

The scan takes 30-45 minutes and involves your child being moved into different positions. This helps the radiographer to get clear pictures of different parts of their body. Each picture takes 5-10 minutes.

## What will happen after the MIBG scan?

After the scan, if your child has had sedation they will be brought back to the ward to recover. They will need to have woken up fully and to have had something to eat and drink before they can be discharged home. If they have not had sedation they can go home once the scan is complete.

## Are there any risks associated with an MIBG scan?

The radioactive isotope contains only a very small amount of radioactivity. This poses no significant risk. The amount of isotope we use is based on your child's height and weight. This means that they have as little isotope as possible, whilst still helping us to get the best possible pictures that we can.

It is best if your child can avoid close contact with pregnant women for 24 hours after having the isotope injection. Please contact us for advice if you are unsure about where your child can go during this time.

Your child will get rid of the isotope in their urine and faeces (poo) for the first 48 hours. It will also come out if they vomit. Making sure your child drinks lots of fluid will help them to flush out the isotope. It is also very important that your child washes their hands after visiting the toilet, so that they wash the radioactive substance from their hands. If they are still in nappies you must wash your hands after changing every nappy.

If you are or could be pregnant you should avoid changing your child's nappies or helping them to use the toilet for 24 hours after the injection.

## After the MIBG scan

The results of the MIBG scan are generally available a few days later, once the images have been discussed with the radiologists and your child's consultant.

## Are there any alternative scans?

There are many types of scans such as X-rays, ultrasound, Computerised Tomography (CT) and Magnetic Resonance Imaging (MRI) that can all be used to look for areas of abnormal cell growth. These are often used alongside MIBG scans to give us the maximum information. The MIBG scan specifically allows us to look at your child's entire body in one scan, whereas other scans are more specific to one area.

## How to contact us

If you have any worries or queries about any part of the MIBG scan, please contact us.

### **Kamran's Day Care**

(7.30am to 6.00pm)

Tel: **01865 234 062**

### **Kamran's Ward**

(6.00pm to 7.30am)

Tel: **01865 234 069**

Email: [kamransdaycare@ouh.nhs.uk](mailto:kamransdaycare@ouh.nhs.uk)

This email account is checked every weekday.

## Further information

You can find further information about MIBG scans on the Great Ormond Street Hospital for Children website:

Website: [www.gosh.nhs.uk/medical-information/procedures-and-treatments/mibg-scans/](http://www.gosh.nhs.uk/medical-information/procedures-and-treatments/mibg-scans/)

Please bring this leaflet with you on the day of your child's first scan.

We hope that this information is useful to you and welcome any comments about the care or information you have received.

If you have a specific requirement, need an interpreter, a document in Easy Read, another language, large print, Braille or audio version, please call **01865 221 473** or email **PALSJR@ouh.nhs.uk**

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