



Great Ormond Street Hospital for Children NHS Foundation Trust: Information for Families

Your child is having a cardiac MRI scan under general anaesthetic

The information sheet from Great Ormond Street Hospital (GOSH) explains about cardiac MRI scans under general anaesthetic, what they involve and what to expect when your child has one. Your child's cardiologist (specialist heart doctor) has asked us to carry out an MRI scan on their heart so we can find out about its structure and how it is working.

What is an MRI scan?

MRI is short for Magnetic Resonance Imaging. This means that rather than using x-rays, the scan uses a strong magnetic field, radio waves and a computer to take very detailed pictures of inside the body. MRI scans do not hurt and nothing will touch your child during the scan, although they are very noisy. The MRI scanner is shaped like a short, open-ended tunnel with a bed that moves through the middle of it. Your child will lie down on the bed and the radiographer (specialist in taking images) will move the bed inside the tunnel.

If your child would like to watch a short film about having an MRI scan at GOSH, visit our website at www.gosh.nhs.uk/medical-information/procedures-and-treatments/mri-scan-without-sedation-or-general-anaesthetic/your-child-having-mri-scan-video-podcast or the GOSH YouTube™ channel.

Why does my child need an MRI scan?

When your child has (or has had) heart problems, it can be useful for the doctor to see detailed pictures of how your child's heart functions and how the blood vessels are arranged. This helps them to plan any treatment your child might need and/or monitor how well the treatment they are having is working.

Is cardiac MRI safe for everyone?

No. If your child has a cardiac pacemaker or other metal devices in their chest or body, aneurysm clips in their head, dental braces within the last six weeks, or history of metal fragments in the eyes then the magnetic field of the MRI scanner may not be safe for them. Please call the department immediately when you get the appointment letter if you have any questions about safety.

Important

You will need to tell us your child's full medical history from birth to the present day, including any operations they have had before you sign a metal check form stating that it is safe for your child to enter the MRI scanner, and also a consent form for the scan and anaesthetic. This must be done by someone with Parental Responsibility for the child. If you do not know this information we may have to cancel the scan.



Why do they need a general anaesthetic?

Your child will need to lie very still for the scan, which lasts for up to an hour, and hold their breath for short periods. As with any imaging, the pictures will not be clear if your child moves at all. It is usually quite difficult for young children to lie still for the entire scan so we usually suggest a short general anaesthetic to make the scan easier and the pictures of better quality.

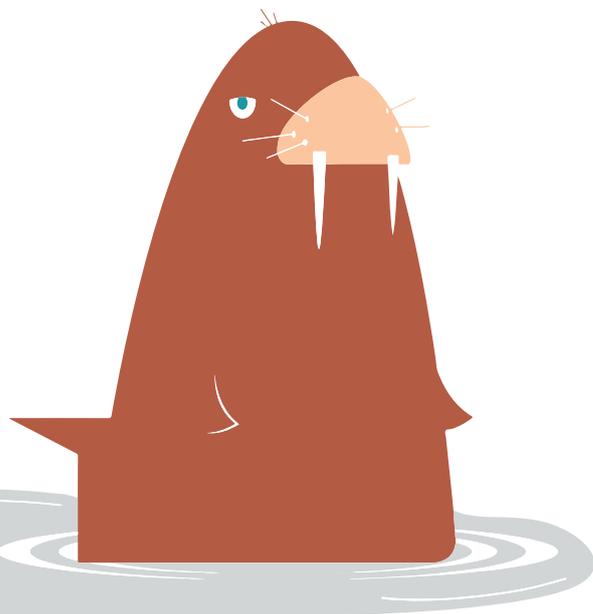
What should my child wear for the scan?

We will give your child a hospital gown to wear for the scan.

Fasting for the anaesthetic

It is important that your child does not eat or drink anything for a few hours before sedation or anaesthetic. This is called 'fasting'. Fasting reduces the risk of stomach contents entering the lungs during and after the procedure which can be dangerous. It is equally important that your child does not fast for too much longer than needed to avoid dehydration so we advise waking them in the night to give them a drink. The nurses from Walrus Ward will call you the evening before the scan to confirm that your child is well enough to come to hospital and will also explain fasting times for the procedure.

Unless otherwise instructed, your child will need to fast for six hours for food and milk, and two hours for water. The last drink of water must be no later than 6.30am. If your child has an underlying medical reason that means they should not fast then please contact your medical team for further advice.



Where do we go for the scan?

You will need to go to Walrus Ward on level 1 (basement) of the Variety Club Building at GOSH. Details of how to get to GOSH are enclosed with your appointment letter and also available on our website at www.gosh.nhs.uk/parents-and-visitors/travelling-gosh. When you arrive at GOSH, ask one of our volunteer guides to show you the lift or stairs down to Walrus Ward.

What happens when we arrive at Walrus Ward?

When you get to Walrus Ward, please tell the receptionist you have arrived and sit down in the waiting area. A member of staff will take you through to a bed and ask lots of questions for our 'metal check' to make sure that it is safe for your child to have the scan. Your child's height and weight will also be measured.

We will ask all girls over 12 years about their periods and if there is any chance they could be pregnant. We always carry out a pregnancy test on all girls over the age of 12 as policy before the general anaesthetic to make sure.

During the scan while your child is asleep, the radiographers will give your child contrast to highlight all the blood vessels in the heart. This is done by injection, so the nurses on Walrus ward will insert a cannula (thin plastic tube) into a vein in your child's arm or hand – they can use local anaesthetic cream or cold spray to make their skin numb first. The contrast we use is called gadoteric acid (Dotarem®) which is a 'dye' to make blood vessels show up more clearly on the pictures.

Dotarem is an extremely safe contrast agent but with all drugs there are potential side effects although these are extremely rare. We are happy to discuss any questions you may have on the day. An anaesthetist will visit your child to talk to you about the anaesthetic. We will ask you to give permission for the cardiac MRI and anaesthetic by signing a consent form.

What happens during the scan?

When your child is ready for the scan, the nurses will take them to the anaesthetic room – you can stay with your child until they are asleep under anaesthetic and then go back to Walrus Ward or elsewhere to wait. The cardiac radiographers will take your child into the scanning room and put them onto the scanner bed. They will put some electrocardiogram (ECG) leads on their chest and lay a light, rectangular coil device over these leads.

Just before the scan starts, the radiographers will put some headphones over your child's ears so the knocking sound from the MRI scanner is not too loud. When they are in position on the bed, the radiographer will go into the room next door to operate the scanner. The scan usually lasts about an hour. Your child will be monitored throughout the scan by the anaesthetist while the radiographers take the images.

What happens afterwards?

When the scan has finished, your child will be moved into our recovery area to wake up from the anaesthetic. The nurses will let you know when you can join them to go back to Walrus Ward. It usually takes two to four hours for your child to fully wake up and be able to have something to eat and drink. Unless your child has any other scans or appointments, you will be able to go home.

When do we get the results?

The Cardiac MRI consultant will look at all the scan results and write a report for your child's cardiologist. They will have these ready for your child's next appointment.

If you have any questions, please call the Cardiac Booking Office on 020 7405 9200 ext. 5178