

Patient information

Having an MRI under general anaesthesia

This leaflet has been created to enhance your understanding of your child's forthcoming MRI (Magnetic Resonance Imaging) scan under general anaesthetic. It also discusses the risks involved.

The ward may telephone you at home a few days before the scan to confirm that your child is well and can still attend, remind you about the fasting instructions and give you further opportunity to ask any questions.

The consent form

The doctor arranging the scan will ask you to sign a consent form. The scan is looking for important information to make or rule out a diagnosis and help guide any further treatment decisions. Signing the consent means that you understand the reasons for the scan and why it needs to be done under a general anaesthetic.

What is an MRI scan?

Magnetic Resonance Imaging (MRI) is a method of building up a detailed picture of your body and its organs. Unlike CT (Computerised Tomography) it does not use X-ray radiation, but instead magnetic fields are used to build up the pictures.

Is it safe?

There are no known risks or side effects associated with MRI. Because of the magnets involved, MRI must not be performed on people with certain metal implants in their bodies such as pacemakers, inner ear implants, surgical clips within the head and some artificial metallic heart valves. If your child has ever had metal fragments in their eyes due to an injury it will be necessary for them to have an X-ray of their eyes to ensure that no metal fragments remain. During the scan the magnets can make a wide range of loud noises such as banging,



buzzing, clicking and rumbling. This can be disturbing so your child will be provided with ear plugs to reduce this noise.

How long will the MRI scan take?

It usually takes around 30 minutes to scan one part of the body. It will obviously take a little longer to scan more than one part. The length of the scan also varies depending upon the problem that your child's doctor is trying to investigate. It is important to remember that if the scan takes a little longer it does not necessarily mean that there is something wrong.

Why a general anaesthetic?

Having a scan involves your child lying very still throughout the duration of the scan. This is important so that clear and precise images can be obtained by the MRI scanner. Your child is placed on a moving table which goes through a short tunnel, and some children may find this small and noisy space frightening. Many children do have scans done whilst awake and this is the safest way. However, the doctor arranging your child's scan thinks it is better that it is done under a general anaesthetic.

What is a general anaesthetic?

A general anaesthetic is when the whole body is put into a state of 'controlled unconsciousness' for a controlled amount of time. Anaesthetics are the drugs (gases and injections) that are used to provide the anaesthesia. There is no sensation of touch, pressure or pain.

General anaesthetics are only given by anaesthetists who are doctors who have specialist training in anaesthesia. The anaesthetist will ensure your child is asleep and will monitor your child at all times during the anaesthetic.

Preparation for the anaesthetic

You will be sent a letter telling you the date of the scan, fasting instructions and when to arrive at the hospital. We operate a morning and afternoon list.

Your child will need to fast and stop eating and drinking before the MRI so that a general anaesthetic can be given. If there is food or liquid inside your child's stomach during the anaesthetic, it could come back up and damage their lungs.

The ward nursing staff will call you a few days before the admission to check that your child is well enough for the MRI, and to remind you of the starving times, dependent on the scheduled time of the scan. Usually, your child will be able to have their last food or cow's milk six hours before the scan, and then water or diluted squash up to two hours before the scan. For breast fed babies, the last feed will need to be four hours before the scan.

Please remember to bring your child's medication and inhalers with you to the scan appointment.

A pre operative visit

The anaesthetist will visit you on the ward before the procedure to discuss your child's anaesthetic. This is a good time to discuss any previous experiences your child has had with anaesthetics, injections or hospital visits. The final order of the MRI list will be decided by the

anaesthetist on the day and will be based on the clinical diagnosis and condition of the children for that day.

Occasionally the anaesthetist may learn something about your child that means it would be safer not to do the procedure on that day. For female patients aged 12 years and over, we will ask them about their periods and the risk of pregnancy.

What will happen in the anaesthetic room?

Before your child is given an anaesthetic you will need to go through an MRI safety questionnaire with a member of the MRI team. Your child will be given an anaesthetic using either an injection or anaesthetic gas.

If an injection is used a small plastic tube (a cannula) is inserted into a vein and medication given through it to send your child to sleep. If a cannula is planned, anaesthetic cream is usually put on the back of the hand to make the skin numb. It usually takes an hour to work.

If anaesthetic gas is used the anaesthetist will cup a hand over your child's nose and mouth or use a plastic face mask so that they breathe in the gas and fall asleep. It can take a little time for your child to fall asleep and they may become restless as the gas takes effect. Once asleep, a cannula is then placed in.

As soon as your child is asleep you will be asked to leave with the ward nurse and your child will be transferred into the scanner. After the scan they will be woken up in the recovery area where you may meet them again before returning back to the ward to recover.

Are general anaesthetics safe?

In modern anaesthesia, serious problems are uncommon. Modern equipment, training and drugs have made it much safer however there is always some risk involved with any procedure including anaesthesia. For a child in good health:

Common risks: one in ten patients may experience headache, sore throat, dizziness and sickness.

Uncommon risks: one in one thousand patients may experience damage to their teeth or an underlying medical condition getting worse.

Rare risks: one in ten thousand to one in one hundred thousand patients may experience an allergy to the drugs used, or equipment failure. Deaths caused by anaesthesia are very rare. There are approximately five deaths for every million anaesthetics given in the UK.

My child has special medical problems

The risks of anaesthesia for your child may be higher especially if they have rare or complex health problems which are not known about at the time of their first anaesthetic. Indeed the scan is being done to help diagnose these serious problems.

The conditions anaesthetists worry about are severe heart and respiratory problems and some rare genetic problems. These children may have to stay in hospital after an anaesthetic to be observed.

When will my child be able to go home?

After your child's scan, they will need to eat, drink and pass urine before going home. They may still be wobbly on their feet, but this will resolve by itself over the course of the day. Children usually go home one to two hours after completion of the scan.

The nurses are usually responsible for allowing your child to be discharged home after the MRI scan. You will not routinely see a doctor prior to discharge.

Following a general anaesthetic, children should rest at home for the next 24 hours with a responsible adult caring for them. Children may tire easily and their coordination and judgement may be affected. Allow them to gradually increase their activity until they feel back to normal. Their sleep pattern may be altered for the first 24 to 48 hours.

When will I know the results of the scan?

It takes a long time to look at all the pictures that the scan produces and so the report will not be available for several days. You will be sent an appointment to be seen in the outpatients department to discuss the findings of the scan and any further treatment or changes to current treatment that might be necessary.

Who can I contact if I have any further questions?

Kayleigh Goddard
Paediatric Neurology Clinical Nurse Specialist
Pager: 07659160080

Patient Advice and Liaison Service

If you need general information or advice about Trust services, please contact the Patient Advice and Liaison Service (PALS) on 020 3594 2040 or visit www.bartshealth.nhs.uk/pals. Alternatively please contact staff who are providing your care if you require clinical advice.

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Reference: BH/PIN/546

Publication date: Jan 2017

All our patient information leaflets are reviewed every three years.

