Children’s services

Having a magnetic resonance imaging (MRI) scan under general anaesthetic

Parent information
This leaflet has been created to enhance your understanding of your child’s forthcoming MRI scan under general anaesthetic. It also discusses the risks involved.

The Ward will telephone you at home a few days before the scan to confirm that your child is well and can still attend, remind you about fasting instructions and give you the opportunity to ask any questions you may have. Contact details for people and organisations offering information can also be found at the end of this leaflet.

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 future 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?
MRI is a method of building up a detailed picture of the body and its organs. Unlike computerised tomography (CT) 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 fragments still remain.

During the scan the magnets make a wide range of loud noises such as banging, buzzing and rumbling.

We may have to give your child some medicine (contrast dye) during the scan to make the pictures clearer. This can very rarely cause an allergic reaction. It is important to let us know if your child has any allergies, kidney or liver problems.
**How long will the MRI scan take?**

It usually takes around 30 minutes to an hour to scan one part of their 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 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 of the 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 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 an afternoon list.

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

If your child is on the morning list:
- No food or formula after 02.15am
- No breast milk after 04.15am
- Clear fluid or dilute juice up to 06.15am

If your child is on the afternoon list:
- No food or formula milk after 6.30am
- No breast milk after 8.30am
- Clear fluid or dilute juice up to 10.30am

Please remember to bring your child’s medication and inhalers with you to your 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 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 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 (cannula) is inserted into a vein and medication given through it to send your child to sleep. If a cannula is planned, anaesthetic cream (magic 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 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 placed.

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 will meet them again before returning back to the ward.

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 10 patients) include headache, sore throat, dizziness and sickness.

Uncommon risks (One in 1000 patients) include damage to teeth, an existing medical condition getting worse.

Rare risks (One in 10,000 to one in 100,000) include serious allergy to drugs, equipment failure. Deaths caused by anaesthesia are very rare. There are probably about 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 will be responsible for allowing your child to be discharged home. You will not routinely see the 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 your child’s scan produces and so the report will not be available straight away. You should have an appointment to be reviewed in the outpatient department to discuss the findings of your child’s scan and any further treatment that might be necessary. If you do not have one, please let the nurses know and they will be able to tell you which number to telephone to book one.

Please phone the ward (contact number needed including weekend number) if your child has or had contact with chicken pox or is unwell with diarrhoea, vomiting or has a severe cold shortly before the scan.

Useful organisations and information

Ward F3 01223 217567 or 217569

Association of Paediatric Anaesthetists of Great Britain and Ireland
21 Portland Place
London W18 1PY

www.apagbi.org.uk
Email: apagbi.org.uk/
Telephone: 020 7631 8887

Further information and leaflets under the parents and carers and children and young people sections.
We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site. For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

Other formats:

If you would like this information in another language, large print or audio, please ask the department where you are being treated, to contact the patient information team:
patient.information@addenbrookes.nhs.uk
Please note: We do not currently hold many leaflets in other languages; written translation requests are funded and agreed by the department who has authored the leaflet.

Document history
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