

Magnetic Resonance Imaging (MRI)

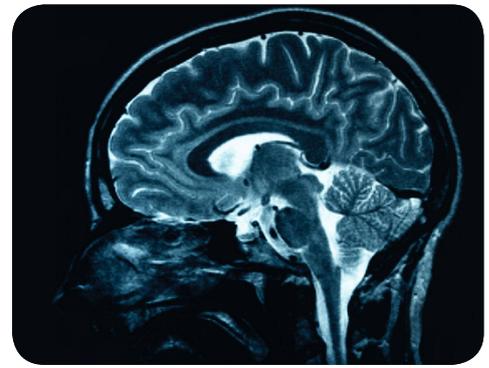
An imaging test

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Magnetic resonance imaging (MRI) is one type of imaging test – a test that uses special equipment to create one or more pictures of part of the inside of the body.

→ This topic gives general information. The way these tests are performed will vary between different hospitals.



What is it?

Magnetic resonance imaging (MRI) uses powerful magnets and radio waves to build up a very detailed picture of parts of the inside of your child's body. It can show things that cannot be seen on an ultrasound scan or X-ray test.

An **MRI scanner** is a machine that looks a bit like a short tunnel. A bed passes through the tunnel.

Sometimes a **contrast dye** is used to show parts of the body more clearly. When this is used to look at the urinary system, the test may be called a **MR urogram**. This is injected using a needle – a special gel or cream can be used to help your child stop feeling any pain during the injection. If your child has significantly reduced kidney function, injection of contrast dye will be avoided.

Why does my child need this test?

An MRI scan may be necessary when more information is needed to make a diagnosis. your child may already have had either an **X-ray test** or an **ultrasound scan** but these may not have provided enough detail.

Risks and complications

Children who have any metal in their body may not be able to have an MRI scan. The radiographer performing the scan will ask detailed questions to ensure it is safe for your child to have an MRI scan. Anyone who accompanies the child in the MRI scanner room will also be questioned.

For most children, an MRI is considered a very safe test.

General anaesthesia

It is very important for the success of this test that children lie very still. Young children and children with developmental delay or learning difficulties find this hard, and may need a short **general anaesthetic**. A general anaesthetic may be given as a gas that your child will breathe in, or it may be injected into a blood vessel.

How to prepare your child

Your child does not usually need to do anything to prepare for this test, but your doctor will let you know.

Your doctor may ask whether your child has allergies to any medicines or contrast dye that may be used during the test.

How to prepare your child (continued)

Older girls may be asked by the doctor whether they are, or may be, pregnant. This is because it is not known if MRI is safe in the early stages of pregnancy.

MRI may not be safe for some people with metal in their body although it will depend on the circumstances. For example, most patients with pacemakers will not be able to have an MRI scan or go into scan room. This also applies to parents or carers who wish to accompany their child.

The radiographer will ask questions to ensure it is safe for your child to have an MRI scan. You should let them know if you or your child has had any operations or if they have any metal in their body.

Some children – and adults – find it uncomfortable or claustrophobic to be inside the scanner. The machine also makes loud noises. If your child is worried, speak with your doctor – your child may be able to meet with a **play specialist**, who can use dolls and other toys to help him or her prepare for the test.

You *may* be able to stay with your child during the test. You will be told how long the test will take – this is usually about 20 to 40 minutes, but sometimes longer.

If your child needs sedation or a general anaesthetic for the test you will be given separate instructions, particularly about the time your child should have the last feed or meal before the procedure.

What happens

The MRI takes place in the X-ray department of your hospital. A **radiographer**, a specialist trained in imaging tests, performs the test.

Your child cannot wear anything that has metal, such as zippers, buttons or metallic thread on clothes, jewellery such as metal ear rings or body piercings, a watch or glasses. You and your child cannot take anything metal into the scanning room – this includes mobile phones, keys and debit cards.

- If a **contrast dye** is used, this is given to your child as an injection.
- Your child lies on the bed. There may be pillows and straps to help your child feel comfortable and lie still.

- The bed moves slowly into the tunnel, so that the part of the body being scanned is in the machine.



A type of MRI scanner.
Image source: KasugaHuang

- Your child needs to lie still while the scanner takes pictures – these can take several minutes each. Sometimes, your child will need to hold his or her breath. The radiographer can talk with your child during the scan, and let him or her know what to do.
- The MRI is usually very noisy. Your child and anyone who goes into the MRI scan room with them will be given ear plus to wear, and they may be able to listen to music during the scan.

What to expect afterwards

Your child can usually go home straight away after the test.

Getting the results

A radiologist (X-ray doctor) will look at the scan images and send a report to your doctor. Speak with your doctor about when you should expect the results.

Your notes and contact information

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For details on any sources of information used in this topic, please contact us through our website www.infoKID.org.uk.

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