

Why do I need to have gadolinium based contrast agent (GBCA) injection?

GBCAs or 'contrast' (also called MRI contrast media, agents or 'dyes') are chemical compounds that are often given as an injection into a vein during MRI scans. These injections are routinely used for about 1 in 3 MRI scans to improve the quality of the MRI scan and help to show up abnormalities.

What is the MRI contrast injection and how is it given?

The GBCA is a chemical compound that binds gadolinium atoms tightly for safe injection into the body. The contrast is a small amount of clear liquid injected intravenously (into a vein, usually in the arm) as part of an MRI scan, and eliminated quite quickly from the body through your urine - you will not notice this. In some circumstances the injection may be given via remote control using a special pump injector.

What are the benefits of gadolinium contrast injections?

The contrast injection helps those who interpret the images (the Radiologist who will provide a report to your referring Doctor), to better report on how your body is working and decide whether there is any disease present or not. Gadolinium MRI contrast injections improve diagnostic accuracy in many conditions, by making images clearer so that the Radiologist can better see what and where the problem is.

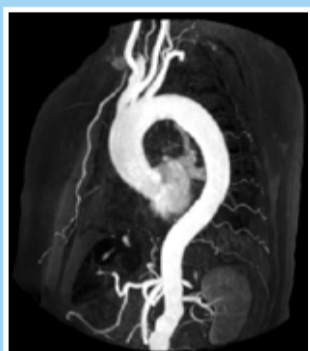
Please tell the radiographer about the following....

Pregnancy and possible pregnancy

If you are pregnant, or think you might be pregnant, please tell your doctor, radiologist or radiographer before having the MRI scan. The risks and benefits to you and your unborn baby of having an MRI scan with the contrast injection will be discussed with you.

Breastfeeding and breastmilk

If you are feeding your child breast milk then you do not need to stop this as extremely little of the contrast gets into the breast milk and these compounds are not absorbed from the gut so will not pass to your child.



Side effects of MRI contrast, how will I know and what should I do?

What are the risks of gadolinium contrast injections?

MRI contrast are generally very safe. Occasionally, if you have fragile veins the contrast may come out of the vein under the skin but this seldom causes any serious problems. Side effects or reactions are uncommon, but can occur. The most common side effects are headache, nausea and dizziness. These soon resolve and are common effects from any injection.

In patients with normal kidney function, the vast majority of the contrast injected (over 90%) is passed out in the urine within 24 hours.

Allergy-like reactions

Less often (in approximately 1 in 1000 patients) an itchy skin rash might appear a few minutes after the injection. This mild allergy usually settles down by itself within an hour or so. In very rare circumstances it might be a warning sign of a more serious allergic reaction developing. If you notice any itching or skin changes, inform the healthcare support worker, nurse or radiographer. If you do have an allergic reaction we will recommend you go on to have formal allergy testing to determine which contrast are safe to use in future.

If I have side effects from the GBCA injection, when will they occur?

The most common side effects occur in a small minority of patients, but if they do occur they will happen within minutes of the injection, when you are likely to still be in the MRI department.

What can be done to prevent or treat these side effects?

There is no way to predict which patients will experience the mild side effects, such as headache and nausea, and no reliable preventive measures are known. These will usually settle down without treatment, or with a simple painkiller for headache. Minor allergic reactions are treated with antihistamines.

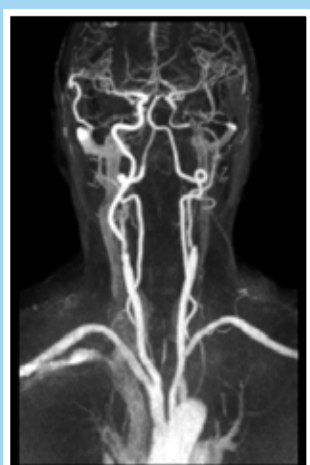
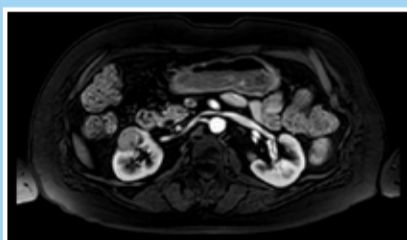
Nephrogenic Systemic Fibrosis

Nephrogenic systemic fibrosis (NSF) is a very rare debilitating disease resulting in localised skin thickening, tightening and internal organ damage. This occurred with some GBCAs in a minority of patients with kidney failure. This was associated with the use of older types of GBCAs which are considered obsolete. These are no longer used in Scotland and we only use modern GBCAs for which there is effectively no risk of NSF.

Gadolinium Retention in the Body

It is known that tiny amounts of gadolinium may remain in the body after a scan with GBCAs, more so with the older ones no longer used in Scotland. This is mainly retained in bone but there have been reports of very small amounts in the brain although there is currently no evidence that these small amounts cause any harm.

For more information on MRI contrast, speak to your radiographer, scan the QR code or contact the telephone



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