

MRI Contrast Dye (Gadolinium) Information

What is MRI Contrast Dye?

Gadolinium is the ingredient used in contrast agents (dye) used in MRI. This contrast is completely different to the dyes used in x-rays and CT scans.

Why would I need a dye injection for my MRI scan?

Sometimes to obtain clearer scans or to help identify the number and type of abnormalities it is necessary to give patients an injection of gadolinium based contrast dye. This is especially important for some particular scans (e.g. breast MRI). Without the dye injection, the diagnostic quality of the scan may be reduced.

How safe is gadolinium?

Gadolinium is regarded as a safe contrast agent. As with any type of medication, patients may have an adverse reaction. The rate of mild contrast reactions to gadolinium is very low, approximately 0.4% and the incidence of more severe reactions are much smaller than this rate.

Having an allergy to another drug, food or insect bite causes a very minor, usually insignificant increase in the risk of an allergic reaction to intravenous contrast. If you have had intravenous gadolinium before, without any adverse response, the chance of having a reaction to a subsequent injection is reduced, but not zero.

If you have moderate or severe renal (kidney) disease you should not receive an injection of gadolinium contrast unless cleared to do so by the Radiologist.

After more than 25 years of over 100 million individual doses of gadolinium worldwide, studies from recent years have found that some patients have a very, very small amount of gadolinium noted in the brain after undergoing multiple MRI exams with gadolinium agents administered. To date, no harmful effects have been noted related to this retained/deposited gadolinium in the brain.

It is noted that:

- The amount of retained gadolinium is a very, very small proportion of the injected dose.
- Retention/deposition of gadolinium is greatly reduced with the newer macro-cyclical GBCA's, including Dotarem, which is the dye used at North Shore Radiology and Nuclear Medicine.
- No known harmful effects have been attributed to retained/deposited gadolinium in the brain.

How is the contrast dye administered?

The dye is administered intravenously (through a vein) via a small needle or cannula (plastic tube) placed in the arm.

Can I choose not to have the dye injection?

Please note that it is ultimately your decision whether or not to have an injection of a gadolinium based contrast agent for your MRI examination. If you wish to decline a contrast injection, please inform the MR technologist undertaking your scan.