

# MRI Scans and Breastfeeding

*The information provided is taken from various reference sources. It is provided as a guideline. No responsibility can be taken by the author or the Breastfeeding Network for the way in which the information is used. Clinical decisions remain the responsibility of medical and breastfeeding practitioners. The data presented here is intended to provide some immediate information but cannot replace input from professionals.*

MRI stands for magnetic resonance imaging. MRI scans use strong magnetic fields to produce detailed images of the organs and other parts of the body. It is a painless but noisy procedure that lasts between 15 and 90 minutes, according to the number of images needed. MRI scans are usually outpatient procedures carried out by radiologists.

Sometimes it is necessary to inject a contrast medium containing gadolinium to make the images more clearly visible. It is not radioactive and is given by intra venous injection into the arm. The gadolinium will be excreted (removed) from the body through the kidneys within 24 hours. For this reason it is often suggested that mothers should pump and dump their breastmilk during this time.

There is no need to discontinue breastfeeding after the contrast medium has been given or to pump to clear milk of the contrast medium (Georgen 2009). The amount that will pass to the baby is very small and does not represent a risk. Oral absorption is minimal, with only 0.8% of gadopentetate being absorbed. (Lactmed, Hale).

The concerns of radiologists to avoid exposing any baby to any product is understandable but dismisses the needs of the mother and baby to continue breastfeeding. Expressing for 24 hours after the procedure is not without difficulty. The use of artificial formula is not without risks and some babies refuse to feed from a bottle whether given expressed breastmilk or formula.

A small number of patients (1-5%) who are given gadolinium as part of the MRI scan, may experience headache, nausea or dizziness but these effects generally pass within a few minutes of the injection. There is no evidence that the breastfed baby experiences any such effects as a result of exposure through breastmilk.

Webb et al carried out an extensive literature review on the use of contrast media in pregnancy and lactation. They drew up guidelines which were presented and discussed at a European Symposium. They concluded that "only tiny amounts of iodinated or gadolinium-based contrast medium given to a lactating mother reach the milk, and only a minute proportion entering the baby's gut is absorbed. The very small potential risk associated with absorption of contrast medium may be considered insufficient to warrant stopping breastfeeding for 24 hours following either iodinated or gadolinium contrast agents". This is supported by Chen and the ACR committee.

Ingredients and Brands; gadoterate (Dotarem®); gadodiamide(Omniscan®); gadobenate (MultiHance®), gadopentetate (Magnevist®, Magnegita®, Gado-MRT ratiopharm®), gadoteridol (ProHance®), gadoversetamide (OptiMARK®), gadoxetate (Primovist®), gadobutrol (Gadovist®)

**To talk to a mum who knows about breastfeeding call the National Breastfeeding Helpline 0300 100 0212**

*Calls to 0300 numbers cost no more than calls to UK numbers starting 01 and 02 and will be part of any inclusive minutes that apply to your provider and call package.*

Radiology guidelines are due to be reviewed in May 2017 taking into account recommendation 2.10 (page 22 RANZR)

## 2.10 Breast Feeding Recommendations

R29. Cessation of breast feeding or expression and discarding of breast milk after iodinated contrast media administration are not required.

## References

- ACR Committee on Drugs and Contrast Media. ACR manual on contrast media. 2010; Version 7:61-2.
- Chen MM, Coakley FV, Kaimal A, Laros RK Jr Guidelines for computed tomography and magnetic resonance imaging use during pregnancy and lactation. Obstet Gynecol. 2008 Aug; 112(2 Pt 1):333-40
- Goergen S, Molan M The Royal Australian and New Zealand College of Radiologists Gadolinium Contrast Medium (MRI Contrast agents) 2009.  
[www.insideradiology.com.au/pages/view.php?T\\_id=38#.VGUqyvmsUt](http://www.insideradiology.com.au/pages/view.php?T_id=38#.VGUqyvmsUt)
- Hale T Medications and Mothers Milk
- Lactmed website <http://toxnet.nlm.nih.gov/cgi-bin/sis/htmlgen?LACT>
- Ranzr Iodinated Contrast Media Guideline, 2016 Version  
[www.ranzcr.com/component/docman/?task=doc\\_download&gid=573](http://www.ranzcr.com/component/docman/?task=doc_download&gid=573)
- Webb JA, Thomsen HS, Morcos SK; Members of Contrast Media Safety Committee of European Society of Urogenital Radiology (ESUR).