



## Patient Experience and Strategies to Improve Patient Comfort and Reduce Anxiety during MRI Procedures

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### Description

Magnetic Resonance Imaging (MRI) is a diagnostic medical imaging technology that uses strong magnetic fields and radio waves to produce images of the internal structures of the body. MRI is an important tool in the diagnosis and treatment of a wide range of medical conditions, including brain and spinal cord disorders, musculoskeletal injuries, and cancer. However, for some patients, the experience of undergoing an MRI scan can be stressful and anxiety-inducing [1].

Patient anxiety during MRI procedures can be caused by a number of factors, including the confined space of the MRI machine, the noise produced by the machine, and the fear of the unknown. Patients who are claustrophobic, have a history of anxiety or panic attacks, or are uncomfortable in medical settings may be particularly susceptible to anxiety during MRI scans [2,3].

#### Strategies to enhancing patient comfort and reduce anxiety

**Education and communication:** Healthcare providers can help to reduce patient anxiety by providing clear and detailed information about the MRI procedure, including what to expect during the scan and how to prepare for it. This can include explaining the purpose of the scan, the duration of the procedure, and the types of noises that the patient will hear during the scan. Healthcare providers should also encourage patients to ask questions and express any concerns that they may have.

**Music and relaxation techniques:** Playing music or providing headphones during the MRI scan can help to distract the patient from the noise of the machine and create a more calming environment. In addition, healthcare providers can teach patients relaxation techniques such as deep breathing, progressive muscle relaxation, or visualization, which can help to reduce anxiety during the scan [4-6].

**Sedation and anesthesia:** For patients who are unable to tolerate the MRI scan due to severe anxiety or claustrophobia, sedation or anesthesia may be an option. This can help to calm the patient and reduce anxiety, but it also comes with risks and should only be used when necessary and with careful monitoring [7].

**Open MRI machines:** Open MRI machines are designed to provide a more open and less confining environment for patients during the scan. While open MRI machines may not provide the same level of image quality as closed MRI machines, they can be a useful option for patients who are unable to tolerate the confined space of a closed MRI machine [8].

**Communication during the scan:** Healthcare providers can help to reduce patient anxiety during the scan by communicating with the patient through an intercom system or by providing them with a panic button that they can use to communicate with the technician if they experience any discomfort or anxiety [9].

**Patient positioning and comfort:** Healthcare providers can improve patient comfort during the scan by ensuring that the patient is positioned comfortably and has adequate support for any areas of the body that may be uncomfortable or painful. This can include providing pillows, blankets, or other support devices.

**Personalization and distraction:** Healthcare providers can help to personalize the MRI experience for the patient by allowing them to bring in personal items such as a favorite blanket or stuffed animal. Distraction techniques such as movies or virtual reality headsets can also be used to help distract the patient from the scan [10].

### Conclusion

In conclusion, MRI scans are an important tool in the diagnosis and treatment of a wide range of medical conditions. However, for some patients, the experience of undergoing an MRI scan can be stressful and anxiety-inducing. Healthcare providers can implement a number of strategies to improve patient comfort and reduce anxiety during MRI procedures, including education and communication, music and relaxation techniques, sedation and anesthesia, open MRI machines, communication during the scan, patient positioning and comfort, and personalization and distraction. By implementing these strategies, healthcare providers can help to ensure that MRI scans are a positive and effective experience.

### References

- Weinmann HJ, Brasch RC, Press WR, Wesbey GE (1984) Characteristics of gadolinium- DTPA complex: a potential NMR contrast agent. *AJR Am J Roentgenol* 142: 619-624.
- Winterstein AG, Thai TN, Nduaguba S, Smolinski NE, Wang X et al (2022) Risk of fetal or neonatal death or neonatal intensive care unit admission associated with gadolinium magnetic resonance imaging exposure during pregnancy. *Am J Obstet Gynecol* 228:465
- Fraum TJ, Ludwig DR, Bashir MR, Fowler KJ (2017) Gadolinium-based contrast agents: a comprehensive risk assessment. *J Magn Reson Imaging* 46:338-353.
- Oh KY, Roberts VH, Schabel MC, Grove KL, Woods M, et al (2015) Gadolinium chelate contrast material in pregnancy: fetal biodistribution in the nonhuman primate. *Radiology* 276:110-118.
- Chen MM, Coakley FV, Kaimal A, Laros Jr RK (2008) Guidelines for computed tomography and magnetic resonance imaging use during pregnancy and lactation. *Obstet Gynecol* 112:333-340.

6. Patenaude Y, Pugash D, Lim K, Morin L, Bly S, et al (2014) The use of magnetic resonance imaging in the obstetric patient. J Obstet Gynaecol Can 36:349-355.
7. Kanal E, Barkovich AJ, Bell C, Borgstede JP, Bradley Jr WG, et al (2007) ACR guidance document for safe MR practices: 2007. AJR Am J Roentgenol 188:1447.
8. Layton A, McKay L, Williams D, Garrett V, Gentry R, et al. (2006) Development of Bacteroides 16S rRNA gene TaqManbased real-time PCR assays for estimation of total, human, and bovine fecal pollution in water. Appl Environ Microbiol 72:4214-4224.
9. Levine MM, Kotloff KL, Barry EM, Pasetti MF, Sztein MB, et al. (2007) Clinical trials of Shigella vaccines: two steps forward and one step back on a long, hard road. Nature Rev Microbiol 5:540-553.
10. René K, Vidal PK, Christine FM, Véronique PN, Magloire BS, et al. (2005) Shigella dysenteriae type 1-induced diarrhea in rats. Japanese J Infect Dis 58:335.