

Article Level: Advanced

Open or Closed MRI: What's Better for You?

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Introduction

Lying motionless in a long, narrow tube, 64-year-old Theresa Derosa listened to the incessant banging noise and wondered how much longer she needed to be enclosed in this metal apparatus. Her foot itched, then twitched involuntarily. A voice came through a microphone telling her that because she moved they would have to start over.

"Get me out of here!" Derosa called back. "I don't care, I'm not doing this again!"

Not all patients have Derosa's experience, but some doctors worry that people will believe they can't handle closed MRIs. For those people, the open MRIs have given both patient and doctor another option.

The [magnetic resonance imaging](#) machine (MRI) has been described as the claustrophobic's nightmare. During the closed procedure, patients lie on a table that glides into a narrow tube with the ceiling inches from the patient's face. The scans are accompanied by banging noises that sound like someone is going at the machine with a sledgehammer.

Then came the improved technology of the open MRI, giving most patients a choice.

"For a long time, the image quality wasn't very good in open MRIs and no matter how easy it was for the patient, doctors wouldn't use them," says Dr. Catherine Beal of Open MRI of St. Louis and St. Charles County, St. Louis, Missouri. "Now they see there is an alternative to the closed MRI that gives excellent image quality while allowing for better patient comfort."

MRIs are not [X-rays](#), but special techniques that look at soft tissue, bone marrow, tendons, and any disease or injury involving tissue with a high fat or water content. "MRI is a technique or machine that uses radiowaves and a magnetic field to generate pictures of the body sliced like a loaf of bread. It uses no radiation and poses no known risk to people," says Dr. John Niemeyer, chief of radiology for Missouri Baptist Medical Center, St. Louis.

Dr. Beal says, "Most patients can have MRIs unless they have pacemakers." Patients with other implantable metal objects--like pins or clips--can't have MRIs either.

The Great Wide Open

Even though patients still have to remain motionless during the open MRI, doctors say patients feel more in control since they are not enclosed. During the open procedure, patients lie on a table with the coil over only the part of the body that needs to be imaged.

There's no "banging" noise, and patients can listen to music through a headset.

The open procedure also offers an advantage for larger patients because it provides more space.

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Some doctors like open MRIs because they can use "interventional systems" which they cannot do with the closed. As Dr. Niemeyer explains, "I can reach in with a needle or put a tube in the patient's body using the open system which I can't with the closed."

Derosa says there is no comparison. "When I was supposed to go in, I got a cough and called them to tell them. They said no problem, come on in. They gave me a drink, then a piece of hard candy."

Sometimes, Closed Is Better

Many physicians, however, still prescribe the closed MRI. Dr. Jack Jallo, director of neurosurgical and critical care at Temple University Hospital in Philadelphia, says, "While the open MRIs lessen feelings of anxiety and is more like a CAT scan since it is open on both sides, I don't believe they give the same quality of diagnosis as the closed MRIs, although for some people, they are necessary."

Dr. Niemeyer says he prefers the closed MRI in most cases, especially when a more definitive diagnosis is needed. "One of the things we do is magnetic resonance angiography where we look at the blood flowing within the body, and the closed systems are better for that. Also, while an open MRI would be adequate for a patient who had a seizure, if we don't find an abnormality, then we would consider a closed to look for small lesions that you might not see on the open."

Dr. Beal says if your doctor needs to determine whether you have a brain infection or a brain tumor, you would probably have the closed procedure.

From the patient's point of view, time can be a factor. So while open MRIs take longer, patients would be trading comfort for speed. If you want to be in and out, choose the closed. "For patients with back pain who have a hard time lying flat for a long time, we can do a closed examination in 30 minutes that would take an hour to an hour and 10 minutes in the open system," Dr. Niemeyer says.

To combat the noise, patients use earplugs and many facilities have special headsets for listening to music. This doesn't completely mask the noise, but it does help for many patients.

So while open MRIs take longer, patients would be trading comfort for speed. If you want to be in and out, choose the closed.

Karen Becker, 26, of Cherry Hill, New Jersey, had a closed MRI for recurring headaches. Jallo recommended a closed MRI because, although Becker had been diagnosed with migraines, he thought she might have something more serious.

"We talked extensively about what to expect and I had no problem," Becker says. "I closed my eyes before I went in. When I did open them briefly, I could see how close the machine was, but I could also see down the tube and into the room. The noise is loud and while I had earplugs, it didn't eliminate the noise. I guess it didn't bother me because I knew what to expect."

Coping with Closed MRIs

If you have to have a closed MRI, here are some tips to help you through the experience:

- Count off the minutes during the pounding sequences. The technician will tell you how long they last and you'll probably be surprised at how fast they go.
- Many hospitals and clinics provide special headsets so your favorite music can lessen some of the noise.
- Meditating might work if you know how to do it.
- Covering your face with a washcloth before you enter the machine sometimes removes the feeling of being in a closed area.
- Talk to your physician if you have doubts and ask for a mild relaxant medication that can help decrease your anxiety or nervousness.
- You can talk to the technician between sequences, and if you feel you have to leave, you can.

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