

PATIENT ISSUES

Heading off MRI claustrophobia

Advances in scanner technology could ease anxiety for patients.

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Magnetic resonance imaging, a diagnostic tool that scans the body using powerful magnets, has revolutionized modern medicine in the 30 years since it was introduced. The scanners can find tumors and other medical problems before they become deadly.

As with many things, though, the solution sometimes creates problems of its own. In this case, it is MRI claustrophobia, in which patients having an MRI are seized by anxiety attacks so severe that they sometimes try to crawl out of the machine or require anti-anxiety drugs to get through the scans. Some patients are so afraid they refuse medically necessary scans.

"I was feeling anxious about getting in the car and even going there," says Kim Blarimore, a 55-year-old from Columbus, Ga., of an MRI scan three years ago. "The thought of being stuck in that chamber made me sick." As her breathing became shallow, the MRI technicians tried to talk her through it, to no avail. Only the anti-anxiety drug Xanax, prescribed by her doctor for this eventuality, was of any help.

MRI practitioners say they frequently see similar reactions. One 1998 study by the department of psychology at the University of British Columbia examined the level of fear induced in 80 adults undergoing their first MRIs; 25 percent experienced moderate to severe anxiety.

Technicians don't have much time to head off such incidents. "Most panic attacks begin with the patient screaming, 'Get me out of here!' and then trying to crawl out of the unit," says Dr. Steven Sommerville of NEWisconsin MRI Center in Green Bay, Wis. "Worried patients start to breathe erratically. As less oxygen goes to the brain, the patient's heart rate goes up, and they become hot and sweaty."

One MRI expert, Dr. Justin Pearlman from Dartmouth College, is aware of the underlying reasons for MRI claustrophobia and suggests ways to overcome it.

"The patients notice a change in environment and loss of sense of liberty that disturbs them," he says. "It is very similar to the feelings some people notice when they look

over an edge from a high place. If the feeling is intense, some people can choose either to accept the feelings knowing there is no harm, or they can distance themselves by closing their eyes and thinking of lying on a beach."

In addition to thinking calming thoughts, anxiety can be dramatically reduced if the patient is thoroughly briefed before the procedure, says Dr. Jeannette Goss, of ImageOne MRI Center in Kelowna, Canada. "At good scanning facilities the technologist helps to relax the patient prior to the scan," Goss says. "The patient is given information prior to their appointment on what to expect."

Careful screening helps, as well, Sommerville says. Screening allows him to identify those patients who will require sedation.

Some advances

The latest generation of MRI scanners has larger openings than earlier versions of the device, which were shaped like tubes and were a tight fit for many patients. (Although more open scanners began to be available a decade ago, the images were not as reliable.)

The Fonar Group, which introduced the first commercial MRI in 1980, has developed the Upright MRI scanner, which allows patients to simply walk in and be scanned. The company, in Melville, N.Y., has dubbed its product "The Only True Open MRI" and claims that the image resolution is far better than earlier machines.

"With regards to spinal imaging, our scanner is better than conventional MRI," says Dan Culver, a spokesman for Fonar. "The only area where our images aren't as clear is with the vascular system." The Upright MRI scanner has had a dramatic effect on people suffering from claustrophobia. With conventional MRIs, one in five people refused scans, the firm's studies showed. "With our open scanner, that figure has nearly dropped to zero," Culver says.

Researchers at the Harvard-Smithsonian Center in Cambridge, Mass., are developing another variant on the open MRI scanner that focuses on lung disease. "The patient can simply walk in or sit down to be scanned," says Ronald Walsworth, the research team leader.

Though still in the preclinical stage, the scanner uses weaker magnets than a conventional MRI but requires that the patient inhale magnetized gases such as helium or xenon through a plastic tube. The gases enter a patient's lung and interact with the magnetic fields to produce images, Walsworth says.

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