



SPORTS MEDICINE

The Downside of MRIs

DO HIGH-TECH IMAGING SCANS CAUSE MORE HARM THAN GOOD FOR CASUAL ATHLETES?

by GINA KOLATA

Each year, more than 28 million MRIs are performed in the U.S. to detect everything from tumors to brain aneurysms. They're also widely used in sports medicine to diagnose torn or damaged tendons, ligaments, and muscles. And while the scans — which use powerful magnetic fields to produce detailed images of the body — are vital to identifying serious injuries, many orthopedists have come to believe that MRIs are overused and often detect issues that lead to unnecessary treatments and surgeries.

"Some [MRIs] are appropriate, but the vast majority are not," says Dr. Christopher DiGiovanni, a foot and ankle orthopedist at Brown University. Patients who see DiGiovanni either come with an MRI that

another doctor ordered or ask that he prescribe one, he says. And when he does order a scan, "it's very rare for an MRI to come back with the words 'normal study.' I can't remember the last time I've seen it."

Because MRIs detect tiny changes in tissue, scans often find abnormalities that aren't problems or even the source of an injury. For example, half of all middle-aged people with no shoulder pain have partially torn rotator cuffs. If you have shoulder pain and an MRI reveals a torn cuff, there's no way to tell if the tear is causing the pain or is simply a normal part of aging. Either way, the treatment is to rest, avoid motions that hurt, and do strengthening exercises. "You don't need a scan for that," says Dr. Volker Musahl, an

orthopedic surgeon at the University of Pittsburgh Medical Center.

Typically, patients consult orthopedic doctors when pain keeps them from exercising. If a runner's foot hurts, a swimmer's shoulder throbs, or a bicyclist's knee aches, for many doctors, the first step is to order an MRI to help identify the injury and the extent of the damage. Sometimes, these scans are useful: They can affirm a doctor's suspicion of a torn ACL or other traumatic injury, or provide a patient with a confirmed diagnosis and a sense of relief, even if the treatment remains the same.

Many times, though, the treatment doesn't remain the same. MRIs often expose abnormalities that require surgery or other aggressive procedures. Take the example of a patient who saw Dr. Jordan Metzl, an orthopedist at New York's Hospital for Special Surgery, for a second opinion. His first orthopedist ordered an MRI, which found ripped cartilage under his kneecap, and recommended major surgery. Upon examining him, Metzl realized that the man had a minor overuse injury and no operation was necessary. "Many things that show up on MRIs are of no clinical relevance," he says. "Surgery to fix the MRI finding and not the patient is becoming increasingly common."

Many orthopedists order MRIs because they feel compelled to offer something other than an old-fashioned physical exam. "Orthopedists like to intercede," says Dr. Joseph Bernstein, an orthopedist at the University of Pennsylvania. Patients also like it when doctors give them something actionable, like a test or a prescription, rather than ask them to wait to heal. Doctors will even offer scans against their best judgment because patients expect them. Refusing a patient's demand for a scan "is a complete nonstarter," Bernstein says. "If you don't get the scan, some other doc will, and the patient will think you're an idiot for having 'missed' what the other doc found." But, he adds, "I do tell patients, 'Don't get this MRI just so you won't worry. If anything, it will make you worry more.'"

Some doctors may be under financial pressure to order MRIs because they generate revenue. Most medical centers won't reveal prices for scans, but one clinic estimates that the basic charge to a patient for a knee MRI is more than \$1,700, plus \$240 for interpreting the results. Insurers typically reimburse half the costs. Many doctors own MRI machines, in which case they get both the scan and the interpretation fees. Small practices that pay for their own machines may have extra motivation: The cost of an MRI machine is \$300,000 to \$1 million, and a scanning suite can run up to \$500,000. It takes a lot of MRIs to break even.