


## Is Medical Imaging Really Diagnostic? Is it always necessary?

Over the past decade, the use of some medical imaging devices, such as an MRI, has increased significantly. Contrary to the initial design, some healthcare providers use imaging devices to diagnose causes for musculoskeletal pain. Rather, imaging should be used to confirm a medical diagnosis that has already been developed from subjective history and evaluative findings (i.e. muscle strength testing, range of motion, etc). One of the challenges associated with relying upon imaging is that, according to recent research, although positive findings may be identified on imaging, the findings may not be the primary cause for pain. This is commonly true when trauma was not the cause of the pain. This conflict was discussed in the last blog post regarding spinal disc diagnosis in the spine. Research has identified that spinal disc problems are present upon imaging in over 50% of PAIN-FREE individuals over 40. The percentage increases to almost 70% by age 60 and over 80% for people over 80 years old. Research shows that many imaging study findings are age-related changes and often DO NOT relate to the cause of back pain.

Is the same issue true for shoulder problems? Yes. Again, research identifies that 34% of people WITHOUT shoulder pain demonstrate a rotator cuff tear on MRI. The number rises to over 50% for people above the age of 60. Similar to a disc problem visible upon imaging of the spine, research has clearly shown that rotator cuff tearing is common in the aging process and often not the primary cause for shoulder pain. The rotator cuff muscles are prone to injury with overhead activity, based on human anatomy. This is why partial to full rotator cuff tearing is commonly recognized on MRI. The damage visible with imaging; however, does not necessarily relate to shoulder pain.

Another example of a conflict between imaging findings and symptoms is plantar fasciitis. Research has shown that heel spurs (abnormal bony prominences) are a secondary cause of plantar fasciitis and not the primary reason for heel or foot pain. The plantar fascia is a tight band of tissue on the bottom of the foot that travels from the heel to the big toe. When this tissue is inflamed or injured, it can create heel spurs by pulling away at its attachment at the heel. Once the inflammation or injury to the tissue is resolved through activity modification, orthotics, physical therapy, or a combination, pain and limitations reduce, demonstrating that the heel spur was not the primary source of pain. Heel spurs are sometimes treated surgically, however, research supports the belief that foot pain in the presence of heel spurs does not necessitate surgical intervention. Treating plantar fasciitis conservatively is a viable option.



The fact that positive imaging findings do not always relate to pain should be encouraging. Unfortunately, many people are unaware and undergo costly and painful surgical procedures unnecessarily. In this case, medical imaging may be doing more harm than good. Post-surgically, people end up with the same outcome as they would have gathered through conservative management (i.e physical therapy, chiropractic, pain relieving shots). The surgeries cost people time off work and are significantly more expensive than conservative treatment.

I'm hopeful this information arms you to be an informed healthcare consumer – that you are informed about true value of medical imaging. It is only in the most unusual of circumstances that conservative management should not be used prior to going through a costly and time consuming surgical procedure. Though it may seem more challenging to work through conservative management, it many times can save you money and time off work. And, as an added benefit, conservative treatment, such as physical therapy, will provide you the tools to prevent recurrence, giving you control of your health.

**David Wolcott, PT, DPT, CSCS**

**Staff Physical Therapist at UR Noyes Health Physical and Sports Therapy**