Concerned About Your X-ray or MRI Findings?

Medical Imaging: The Untold Truth

Medical imaging such as x-rays, ultrasounds, CT scans and MRIs can be very valuable for identifying serious medical conditions such as broken bones. However, once serious problems have been ruled out by a doctor, minor findings are of no value in helping to explain the vast majority of aches and pains. Not only are the majority of imaging results not helpful, studies support that they are even harmful from a psychological point of view. Several studies have shown that those who are told of "abnormal" (though irrelevant) findings on their medical imaging have more doctor's visits, longer lasting pain, more disability, and a lower sense of well being. [1,2,3]

Despite this fact, every day, thousands of patients are deceived by their imaging reports as they are informed of coincidental tendon tears, disc bulges, degenerations and arthritic changes. Regrettably, patients are rarely told the whole truth about their imaging results as they are simply not informed of what is normal and what is not normal. **If you have been told of "abnormal" findings on your medical imaging and are rightfully concerned about them, please read the information below.**

Lumbar Spine

Studies have shown that lumbar disc degeneration is present in 40% of individuals under the age of 30 and is present in **over 90%** of those between the ages of 50-55. [9]

Another study showed that amongst healthy young adults aged 20-22 years with no back pain, 48% had at least one degenerated disc, and 25% had a bulging disc. [10]

Leading physicians at the department of Neurosurgery at the University of California strongly recommend AGAINST the routine use of MRI for low back pain since they have found NO LINK between degenerative changes seen on x-rays or MRIs and low back pain. [11]

Translation: Do not panic if your x-ray or MRI shows "problems" with your discs; **they are simply NORMAL changes that happen from the age of 20 onwards.**

Thoracic Spine

MRI studies of healthy adults with no history of upper or low back pain found that 47% had disc degeneration, 53% had disc bulges and 58% had disc tears in their thoracic spine. Amazingly 29% of these healthy adults had a disc bulge that was actually deforming and pressing on the spinal cord, yet they did not even know about it. [7,8]

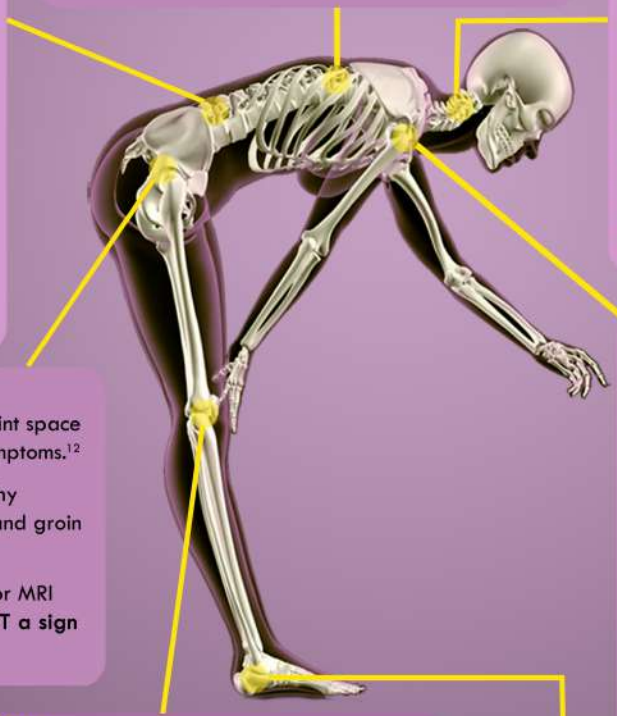
Translation: Do not panic if your x-ray or MRI shows "problems" with your discs; they are simply common and NORMAL findings.

Cervical Spine

An MRI study of healthy adults and seniors found that **98%** of all the men and women with no neck pain had evidence of "degenerative changes" in their cervical discs. [4] In addition, among healthy pain-free young adults in their 20's, up to 78% have been shown to have disc bulges. [5]

A 10 year study compared the MRIs of healthy people to those with neck whiplash injuries. Both immediately and 10 years later, both group had similar MRIs with 3/4 having neck disc bulges. [6]

Translation: The far majority of all healthy adults get **neck degeneration (arthritis) and disc bulges, meaning they are a NORMAL aging process!** Therefore neck arthritis or mild to moderate disc bulges cannot possibly be a reasonable explanation of your neck pain, or else 98% of people would have neck pain.



Hip

There is only a weak association between joint space narrowing seen on hip x-rays and actual symptoms. [12]

In fact, one study showed that 77% of healthy hockey players **who had no pain,** had hip and groin abnormalities on their MRIs. [13]

Translation: Do not panic if your hip x-ray or MRI shows cartilage tears or narrowing; **it is NOT a sign of permanent pain or disability.**

Shoulder

MRI studies of adults who have no shoulder pain show that 20% have partial rotator cuff tears and 15% have full thickness tears. In addition, in those 60 and older, 50% (half) who had no shoulder pain or injury had rotator cuff tears on their MRI that they did not even know about. [17]

A study on professional baseball pitchers showed that 40% of them had either partial or full thickness rotator cuff tears yet had no pain while playing and remained pain free even 5 years after the study. [18]

Translation: Do not panic if your ultrasound and/or MRI shows a rotator cuff tear; **it is NOT necessarily associated with shoulder pain!**

Knee

Studies have shown that when x-rayed, up to 85% of adults with no actual knee pain have x-rays that show knee arthritis. This means that there is little correlation between the degree of arthritis seen on x-ray, and actual pain. [14]

In fact, one study showed that 48% of healthy professional basketball players had meniscal (cartilage) "damage" on their knee MRIs. [15]

Translation: Do not panic if your knee x-ray or MRI shows degeneration, arthritis or mild cartilage tears; **it is NORMAL!**

Ankle

Although there is an association with plantar fasciitis and heel spurs, it should also be known that 32% of people with no foot or heel pain have a heel spur visible on x-ray. [16]

Translation: One third of all people have a heel spur and **have no pain.**

References:

1.Kendrick D, et al. The role of radiography in primary care patients with low back pain of at least 6 weeks duration: a randomised (unblinded) controlled trial. Health Technol Assess. 2001;5(30):1-69.

2.Ash LM, et al. Effects of diagnostic information, per se, on patient outcomes in acute radiculopathy and low back pain. AJNR Am J Neuroradiol. 2008 Jun;29(6):1098-103.

3.Modic MT, et al. Acute low back pain and radiculopathy: MR imaging findings and their prognostic role and effect on outcome. Radiology. 2005 Nov;237(2):597-604.

4.Okada E, et al. Disc degeneration of cervical spine on MRI in patients with lumbar disc herniation: comparison study with asymptomatic volunteers. Eur Spine J. 2011 Apr;20(4):585-91.

5.Matsumoto M, et al. Prospective mid-year follow-up study comparing patients with whiplash-associated disorders and asymptomatic subjects using magnetic resonance imaging. Spine (Phila Pa 1976). 2010 Aug 15;35(18):1684-90.

6.Nakashima H1, Yukawa Y, Suda K, Yamagata M, Ueta T, Kato F. Abnormal findings on magnetic resonance images of the cervical spines in 126 asymptomatic subjects. Spine (Phila Pa 1976). 2015 Mar 15;40(6):392-8.

7.Matsumoto M, et al. Age-related changes of thoracic and cervical intervertebral discs in asymptomatic subjects. Spine (Phila Pa 1976). 2010 Jun 15;35(14):1359-64.

8.Wood KB, et al. Magnetic resonance imaging of the thoracic spine. Evaluation of asymptomatic individuals. J Bone Joint Surg Am. 1995 Nov;77(11):1631-8.

9.Cheung KM, et al. Prevalence and pattern of lumbar magnetic resonance imaging changes in a population study of one thousand forty-three individuals. Spine (Phila Pa 1976). 2009 Apr 20;34(9):934-40.

10Takatalo J, et al Prevalence of degenerative imaging findings in lumbar magnetic resonance imaging among young adults. Spine (Phila Pa 1976). 2009 Jul 15;34(16):1716-21.

11.Chou D, et al Degenerative magnetic resonance imaging changes in patients with chronic low back pain: a systematic review. Spine (Phila Pa 1976). 2011 Oct 15;36(21 Suppl):S43-53.

12.Chu Miaw Lin D, et al Validity and responsiveness of radiographic joint space width metric measurement in hip osteoarthritis: a systematic review. Osteoarthritis Cartilage. 2011 May;19(5):543-9.

13.Bilfeldt MJ., et al High prevalence of pelvic and hip magnetic resonance imaging findings in asymptomatic collegiate and professional hockey players. Am J Sports Med. 2011 Apr;39(4):771-6.

14.Brelsen J, Croft PR. The discordance between clinical and radiographic knee osteoarthritis: a systematic search and summary of the literature. BMC Musculoskelet Disord. 2008 Sep 2;9:116.

15.Kaplan LD, et al. Magnetic resonance imaging of the knee in asymptomatic professional basketball players. Arthroscopy. 2005 May;21(5):557-61.

16.Johal KS, Milner SA. Plantar fasciitis and the calcaneal spur: Fact or fiction? Foot Ankle Surg. 2012 Mar;18(1):39-41.

17.Shur JS, et al Abnormal findings on magnetic resonance images of asymptomatic shoulders. J Bone Joint Surg Am. 2005 Jan;87(1):61-5.

18.Connor PM, et al Magnetic resonance imaging of the asymptomatic shoulder of overhead athletes: a 5-year follow-up study. Am J Sports Med. 2003 Sep-Oct;31(5):724-7.

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