

Low Back Pain

For information on all types of injuries visit:
<http://www.cssphysio.com.au/Doctors/forDoctors.html>



Imaging for LBP

As you know, in the absence of red flags, imaging is not indicated for the assessment of non-specific low back pain (Chou et al 2011; Jarvik & Deyo, 2002; Sloan & Walsh, 2010). It does not improve outcomes or enhance diagnosis (Alan et al 2012; Cochrane Review; AAFP; AHCPR; RCGP 2009; van Ravesteijn et al 2011). Even when there is concurrent radiculopathy, imaging is not helpful unless more invasive interventions are being considered (injection or surgery). Of even greater concern is the evidence that radiological imaging for LBP actually results in:

- Poorer health outcomes
- Poorer perceived prognosis
- The patient being more likely to progress to surgery

(Alan et al 2012; Sloan & Walsh, Spine, 2010, Webster et al 2010).

So what do we tell our patients when they are eager to obtain an X-ray or scan of their troublesome lumbar spine? Or what do we say to a patient who presents with their MRI and its page-and-a-half report of 'abnormal' findings and scary words like dessication, degeneration, and spondylosis?

I start by telling them the prevalence of such findings in people with no history of low back pain (Boos et al 2000; McCullough et al 2012; Savage et al 1997). The following statistics provide very powerful information:

- The prevalence of MRI findings in (middle-aged) people with no LBP:
 - Disc degeneration / dessication 91%
 - Disc height loss 56%
 - Disc bulges 64%
 - Disc protrusions 32%
 - Annular tears 38%

(McCullough et al, Radiol, 2012)

Even in 20 year olds, the prevalence of disc degeneration was found to be around 37%. (Brinjikji et al 2014).

Of particular concern to patients (and many practitioners) is the belief that back pain has a poor prognosis. However the majority of people recover quickly from their LBP episode (Inhahl et al 1995; Pengel et al 2003). It is also thought that 'bulging discs' don't recover. A surprising finding from one study was that subjects who had MRI evidence of disc protrusions actually had a lower risk of future LBP on 3 year follow-up. The same authors found that imaging findings can improve over time, and even revert to 'normal'. Some subjects with bulging discs were normal on follow-up. Others with protruded discs reverted to bulges. And there was even one subject with a grade 1 (10%) retrolisthesis that reverted to 0%. While disc extrusions showed less complete healing, resorption and repair was evidenced at follow-up. (Jarvik et al 2005).

References:

1. Alan, G et al (2012). X-ray scans for non-specific low back pain. Canadian Family Physician, 58, 3 275.
2. Boos, N et al (2000). Natural history of individuals with asymptomatic disc abnormalities in magnetic resonance imaging: predictors of low back pain-related medical consultation and work incapacity. Spine, 25, 12, 1484-92.
3. Brinjikji, W et al (2014). Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. American Journal of Neuroradiology. 1-6.
4. Chou, R et al (2011). Diagnostic imaging for low back pain: advice for high value health care from the American College of Physicians. Annals of Internal Medicine, 154, 181.

5. Pengel, L et al (2003). Acute low back pain: systematic review of its prognosis. British Medical Journal, 327, 323.
6. Indahl, A et al (1995). Good prognosis for low back pain when left untampered. A randomised clinical trial. Spine, 20, 473-7.
7. Jarvik, J et al (2005). Three-year incidence of low back pain in an initially asymptomatic cohort. Spine, 30, 13, 1541-1548.
8. Jarvik, J & Deyo, R (2002). Diagnostic evaluation of low back pain with emphasis on imaging. Annals of Internal Medicine, 137, 586.
9. McCullough, B. et al (2012). Lumbar MR imaging and reporting epidemiology: do epidemiologic data in reports affect clinical management? Radiology, 262, 3, 941-946.
10. O'Sullivan, P (2005). Diagnosis and classification of chronic low back pain disorders. Maladaptive movement and motor control impairments as underlying mechanism. Manual Therapy, 10, 242-55.
11. Savage, R et al (1997). The relationship between the magnetic resonance imaging appearance of the lumbar spine and low back pain, age and occupation in males. European Spine Journal, 6, 2, 106-14.
12. Sloan, T & Walsh, D (2010). Explanatory and Diagnostic Labels and Perceived Prognosis in Chronic Low Back Pain. Spine, 35, 21, E1120-5.
13. van Ravesteijn, H et al (2011). The reassuring value of diagnostic tests, a systematic review. Patient Education and Counseling, 86, 1, 3-8.
14. Webster, B et al (2010) Relationship of early magnetic imaging for work-related acute low back pain with disability and medical utilization outcomes. Journal of Occupational & Environmental Medicine, 52, 9, 900-7.



[Concord Sport & Spine Physiotherapy](#)
[202 Concord Road](#)
[Concord West, NSW 2138](#)
[Sydney, Australia.](#)

Ph (02) 9736 1092

Email: info@cssphysio.com.au

Web: www.cssphysio.com.au

Copyright © 2014 Paul Monaro. All Rights Reserved

Please contact us if you would like a printable copy of this document.

For information for doctors on physiotherapy management of all types of injuries visit:
<http://www.cssphysio.com.au/Doctors/fordoctors.html>

Information for patients is at:
<http://www.cssphysio.com.au/forpatients.html>