

Low Back Pain Optimal Management in General Practice



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Outcome of low back pain in general practice: a prospective study

BMJ 1998;316:1356



- It is widely believed that 90% of episodes of low back pain seen in general practice resolve within one month
- While 90% of subjects consulting general practice with low back pain ceased to consult about the symptoms within three months, most still had substantial low back pain and related disability
- ***Only 25% of the patients who consulted about low back pain had fully recovered 12 months later***
- Since most consulters continue to have long term low back pain and disability, effective early treatment could reduce the burden of these symptoms and their social, economic, and medical impact

Assess the Person – not just the Pain



- **Broad Classifications**
 - Acute
 - **more clearly linked to tissue nociception**
 - Chronic
 - **emotional components predominate**
 - Recurrent Acute
- **Dimensions of pain experience**
 - Sensory discriminative
 - Motivational affective
 - Cognitive evaluative

Acute Pain



Chronic Pain



Indicators of chronic pain



- **Does the patient:**
 - **Have pain that has persisted > 3 months?**
 - Despite appropriate investigations
 - In the absence of progressive disease
 - **Have unrealistic expectations?**
 - Of the health care provider
 - Of the treatment offered
 - **Complain about previous health care providers?**
 - **Have a history of substance abuse?**
 - **Display pain behaviours?**
 - Grimacing
 - Rigid or guarded movement

The Consultation



- Detailed pain history and assessment of impact of pain
(validation of the patient's pain experience)
- Assessment of co-existing diseases and conditions
(Including red flag review)
- Review of previous diagnostic investigations
(Opportunity to normalise - not trivialise –findings)
- Psychosocial assessment
(show empathy – checklist of yellow flags)
- Review of outcomes of previous interventions and strategies, including patient self-management
(Applaud any individual achievements)
- Directed physical examination *(ritual laying on of hands)*

Levels of pain



- Nociception is defined as neural response to noxious stimulation
- Pain is the conscious perception of nociception
- Suffering is used to refer to the negative affective responses generated by pain

Red Flags



- **Cancer Related Red Flags**

- History of cancer
- Unexplained weight loss >10 kg within 6 months
- Age over 50 years or under 17 years old
- Failure to improve with therapy
- Pain persists for more than 4 to 6 weeks
- Night pain or pain at rest

- **Infection Related Red Flags**

- Persistent fever (temperature over 100.4 F)
- History of intravenous Drug Abuse
- Recent bacterial infection
 - Urinary Tract Infection or Pyelonephritis
 - Cellulitis
 - Pneumonia
- Immunocompromised states
 - Systemic Corticosteroids
 - Organ transplant
 - Diabetes Mellitus
 - Human Immunodeficiency Virus (HIV)
 - Rest Pain

- **Acute abdominal aneurysm red flags**

- Abdominal pulsating mass
- Atherosclerotic vascular disease
- Pain at rest or nocturnal pain
- Age greater than 60 years

- **Cauda Equina Syndrome Related Red Flags with Back Pain**

- Urinary Incontinence or retention
- Saddle anesthesia
- Anal sphincter tone decreased or faecal Incontinence
- Bilateral lower extremity weakness or numbness
- Progressive neurologic deficit

- **Significant Herniated nucleus pulposus**

- Major Muscle Weakness (strength 3 of 5 or less)
- Foot drop

- **Vertebral fracture related red flags**

- Prolonged use of Corticosteroids
- Mild trauma over age 50 years
- Age greater than 70 years
- History of Osteoporosis
- Recent significant trauma at any age
 - Ejection from motor vehicle
 - Fall from substantial height

Yellow Flags



- **A**ttitudes
- **B**ehaviours
- **C**ompensation
- **D**iagnosis/Treatment
- **E**motions
- **F**amily
- **W**ork



(T_{he})ART

- Tenderness
- Asymmetry
- Range of movement
- Tissue texture abnormalities

Range of Motion testing





Thoracic Spine Landmarks

Recommendation 1:

Ann Intern Med.2007;147:478-491.



Clinicians should conduct a focused history and physical examination to help place patients with low back pain into 1 of 3 broad categories:

1. nonspecific low back pain,
2. back pain potentially associated with radiculopathy or spinal stenosis,
3. back pain potentially associated with another specific spinal cause.

The history should include assessment of psychosocial risk factors, which predict risk for chronic disabling back pain

(strong recommendation, moderate-quality evidence).

Recommendation 2:



Clinicians should *not* routinely obtain imaging or other diagnostic tests in patients with nonspecific low back pain.

(strong recommendation, moderate-quality evidence).

Ref IMPLEMENT trial

Recommendation 3:



Clinicians *should* perform diagnostic imaging and testing for patients with low back pain when:

- severe or progressive neurologic deficits are present or
- when serious underlying conditions are suspected on the basis of history **and physical examination**

(strong recommendation, moderate-quality evidence).

Recommendation 4:



Clinicians should evaluate patients with persistent low back pain and signs or symptoms of radiculopathy or spinal stenosis with:

- magnetic resonance imaging (preferred) or
- computed tomography

only if they are potential candidates for surgery or epidural steroid injection (for suspected radiculopathy)

(strong recommendation, moderate-quality evidence).

Recommendation 5:



Clinicians should provide patients with evidence-based information on low back pain

- with regard to their expected course,
- advise patients to remain active, and
- provide information about effective self-care options

(strong recommendation, moderate-quality evidence).

Recommendation 6:



For patients with low back pain, clinicians should consider the use of medications with proven benefits in conjunction with back care information and self-care.

Clinicians should assess severity of baseline pain and functional deficits, potential benefits, risks, and relative lack of long-term efficacy and safety data before initiating therapy

(strong recommendation, moderate-quality evidence).

For most patients, first-line medication options are paracetamol or nonsteroidal anti-inflammatory drugs.

Recommendation 7:



For patients who do not improve with self-care options, clinicians should consider the addition of non-pharmacologic therapy with proven benefits

- for acute low back pain, - spinal manipulation;
- for chronic or subacute low back pain - intensive interdisciplinary rehabilitation, exercise therapy, acupuncture, massage therapy, spinal manipulation, yoga, cognitive-behavioural therapy, or progressive relaxation

(weak recommendation, moderate-quality evidence).



The Effectiveness of Acupuncture in the Management of Acute and Chronic Low Back Pain

A Systematic Review Within the
Framework of the Cochrane
Collaboration Back Review
Group

Conclusions.

Because this systematic review did not clearly indicate that acupuncture is effective in the management of back pain, the authors **would not recommend acupuncture** as a regular treatment for patients with low back pain.

Spine 1999;24:1113–112

Trigger Point Therapy (Travell)



The Journal of Manual & Manipulative Therapy
Vol. 14 No. 4 (2006), 203 - 221
Myofascial Trigger Points: An Evidence-Informed
Review

Traction – pulling your leg?



Thoracolumbar syndrome (Maigne)



- Pain is felt in low back (dermatome related to T12 and L1)
- Pain referred through posterior rami of spinal nerves
- Pain rarely noted at L1 region but local tenderness can be elicited
- Erroneous attribution to lower lumbar segments

www.maitrise-orthop.com/corpusmaitri/orthopaedic/mo70_maigne_thoracolumbar/index.shtml

Posterior rami – Cluneal nerves



Options for Injection Therapy





**You might
want to try
this at home
first**

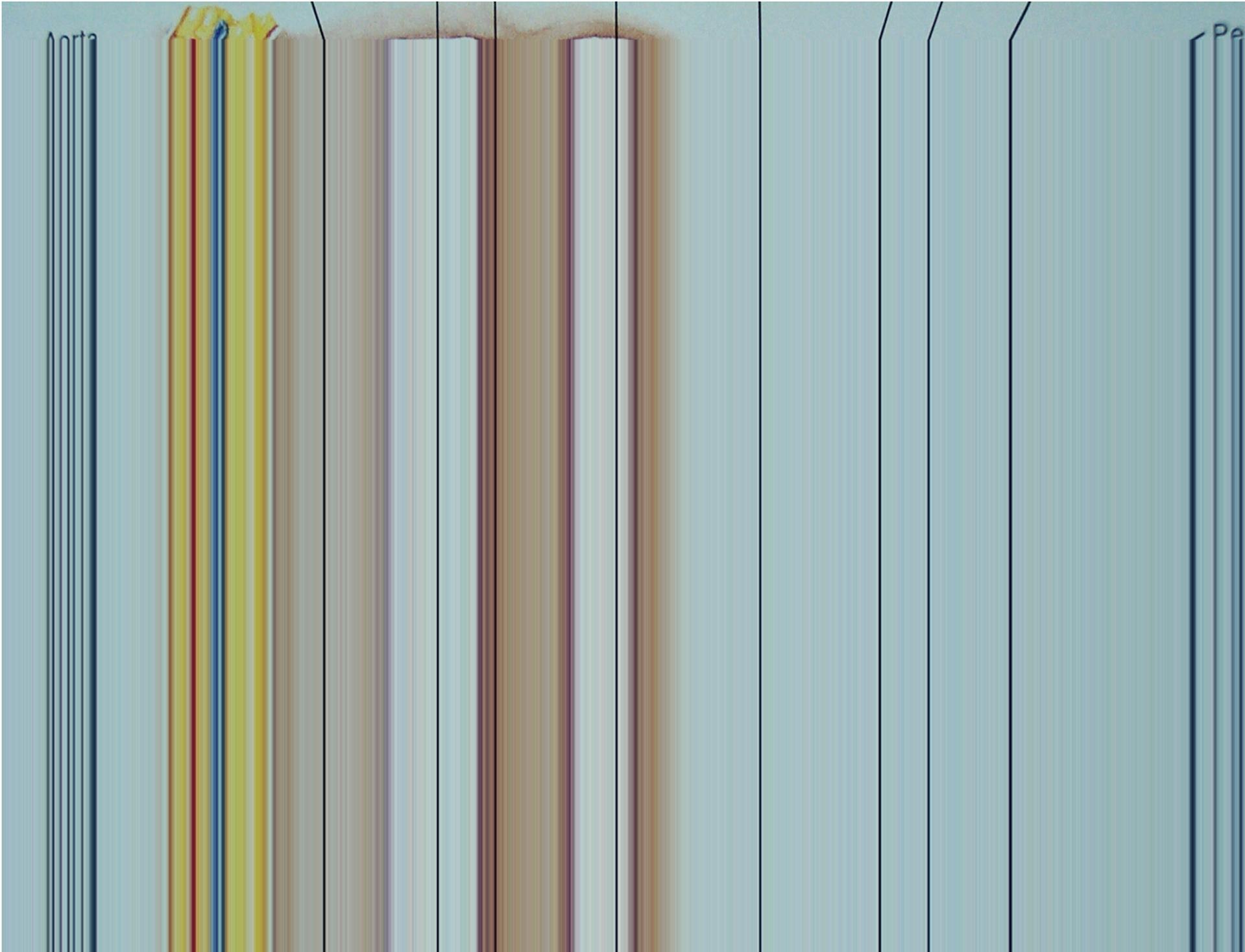
Manual Therapy



Psoas Syndrome

- Common
- Presents as “sciatic scoliosis”
 - Forward flexed
 - Lateral deviation
 - Hip flexion
- No long tract signs
- Remits in 2-3 weeks
- Recurrences common
- Related to sitting
(shortness / weakness)





Assessing Psoas / Quads length



Psoas MET - 2





USEFUL DIAGNOSTIC INVESTIGATIONS AND EMERGING THERAPIES

Home based Transversus Abdominus training – pressure biofeedback



The relationship of transversus abdominis and lumbar multifidus clinical muscle tests in patients with chronic low back pain

Julie Hides et al

School of Physiotherapy, Australian Catholic University, McAuley at Banyo, Queensland 4014, Australia Manual therapy 16 (2011) 573-577

Use of Imaging in LBP - SPECT



- Consider in older age groups - esp with pain upon extension.
- Consider for sporting injuries – spear tackles etc.

Facet joint injections



- Debate about efficacy
- Short term responses
- Useful for diagnostic confirmation

Medial Branch Blocks



- For investigation of future therapeutic options
- Not of itself therapeutic

Radiofrequency Denervation



- Proven efficacy
- Long lasting 6-9 months
- Can be repeated
- Minimally invasive

High Intensity Zones - MRI



- Seen in 28% of MRI for back pain.
- correlated with Grade 4 annular disruption and with reproduction of the patient's pain
- PPV for a severely disrupted, symptomatic disc was 86%.
- This sign is diagnostic of painful internal disc disruption.

Caudal Epidural - ? Office based



- Applicable for acute and chronic pain
- VARIABLE response
- Choice of injectate
 - LA
 - Steroids
 - Dextrose
 - Saline
- Xray imaging not essential

Conflicting Evidence



1. This systematic review shows Level I evidence for relief of chronic pain secondary to disc herniation or radiculitis and discogenic pain without disc herniation or radiculitis. Further, the indicated evidence is Level II-1 or II-2 for caudal epidural injections in managing chronic pain of post lumbar laminectomy syndrome and spinal stenosis. [Pain Physician](#). 2009 Jan-Feb;12(1):109-35.

2. There was good evidence for short- and long-term relief of chronic pain secondary to disc herniation or radiculitis with local anesthetic and steroids and fair relief with local anesthetic only. Further, this systematic review also provided indicated evidence of fair for caudal epidural injections in managing chronic axial or discogenic pain, spinal stenosis, and post surgery syndrome. [Pain Physician](#). 2012 May-Jun; 15(3):E159-98

3. This review is in agreement with others, that the evidence for CEIs ranges from nil to possible, based on the cause of chronic back pain conditions. There is no convincing evidence for the efficacy of CEI for long-term relief of back pain of any studied etiology

RHODE ISLAND MEDICAL JOURNAL JANUARY 2013 GAURAV DIGHE, MD;
JOSEPH H. FRIEDMAN, MD

MODIC – 1 changes on MRI



- Strong correlation with pain
- Signs indicate oedema
- Suggestions that there may be an infective basis
- CRP not raised (if so, more likely discitis)
- Pain often increased with “core” exercises

Antibiotic therapy? -



- 2 studies – Hanne Albert - Denmark
- First study sampled discs at time of surgery.
- Those patients with Modic changes pre surgery more likely to have bacterial culture positive
- Second study
- 3 months of Augmentin
- Pain significantly lower in treated group by 100 days and still significant benefit at 1 yr.
- High GI adverse event rate.

Fusion



AIDR - ?Preferred



- *ANZ J Surgery 2013; online*
- *Less serious complications than fusion*
- *Higher patient satisfaction*
- *Less pain and disability*