Clinical Evidence Handbook

A Publication of BMJ Publishing Group

Low Back Pain (Chronic)

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EB CME

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More than 70 percent of persons in developed countries will experience low back pain at some time, which usually improves within two weeks; however, about 10 percent remain unable to work and about 20 percent have persistent symptoms at one year.

Nonsteroidal anti-inflammatory drugs may be more effective than placebo at improving pain intensity in persons with chronic low back pain.

Opioid analgesics (with or without paracetamol) may improve pain and function compared with placebo. However, long-term use of nonsteroidal anti-inflammatory drugs or opioids may be associated with well-recognized adverse effects.

- We do not know whether antidepressants decrease chronic low back pain or improve function compared with placebo in persons with or without depression.
- Benzodiazepines may improve pain, but studies of nonbenzodiazepine muscle relaxants have given conflicting results.

Caution: Since the last update of this review, a drug safety alert has been issued on increased suicidal behavior with antidepressants (http://www.fda.gov/medwatch).

We do not know whether epidural corticosteroid injections or local injections with corticosteroids and local anesthetic improve chronic low back pain in persons without leg pain (sciatica).

- Facet joint corticosteroid injections may be no more effective than placebo at reducing pain.

Fusion surgery is more effective than standard rehabilitation for improving pain in persons with chronic nonradicular low back pain, but it is no better than intensive rehabilitation with a cognitive behavioral component.

Exercise improves pain and function compared with other conservative treatments.

Intensive multidisciplinary treatment programs improve pain and function compared with usual care, but less-intensive programs do not seem beneficial.

Acupuncture, back schools, behavioral therapy, and spinal manipulation may reduce pain in the short term, but effects on function are unclear.

Massage may improve pain and function compared with sham or other active treatment.

We do not know whether electromyographic biofeedback, lumbar supports, traction, or transcutaneous electrical neural stimulation improve pain relief.

We also do not know whether intradiscal electrothermal therapy, radiofrequency denervation, or disk replacement improves pain relief or function.

Definition

Low back pain is pain, muscle tension, or stiffness localized below the costal margin and above the inferior gluteal folds, with or without sciatica, and is defined as chronic when it persists for 12 weeks or more. Nonspecific low back pain is pain not attributed to a recognizable pathology (e.g., infection, tumor, osteoporosis, rheumatoid arthritis, fracture, inflammation). This review excludes chronic low back pain with symptoms or signs at presentation that suggest a specific underlying condition. Persons solely with sciatica (lumbosacral radicular syndrome), pain due to herniated disks, or both are also excluded. Persons in this review have chronic low back pain.

Incidence and Prevalence

More than 70 percent of persons in developed countries will experience low back pain at some time in their lives. Each year, between 15 and 45 percent of adults have

Clinical Questions

What are the effects of oral drug treatments for persons with chronic low back pain?	
Trade-off between benefits and harms	Muscle relaxants
	Nonsteroidal anti-inflammatory drugs
Unknown effectiveness	Analgesics
	Antidepressants
What are the effects of injection therapy for persons with chronic low back pain?	
Unknown effectiveness	Epidural corticosteroid injections
	Facet joint injections
	Local injections
What are the effects of nondrug treatments for persons with chronic low back pain?	
Beneficial	Back exercises
Likely to be beneficial	Acupuncture
	Behavioral therapy
	Intensive multidisciplinary treatment programs (evidence of benefit for intensive programs, but none for less-intensive programs)
	Massage
	Spinal manipulative therapy
Unknown effectiveness	Back schools
	Electromyographic biofeedback
	Lumbar supports
	TENS
	Traction
What are the effects of nonsurgical treatments for persons with chronic low back pain?	
Unknown effectiveness	Intradiscal electrothermal therapy
	Radiofrequency denervation
What are the effects of surgical treatments for chronic low back pain?	
Likely to be beneficial	Fusion surgery
Unknown effectiveness	Artificial disk replacement

TENS = transcutaneous electrical neural stimulation.

low back pain, and 5 percent of persons present to the hospital with a new episode. About 10 percent remained unable to work and about 20 percent had persistent symptoms at one year.

Etiology

Symptoms, pathology, and radiologic appearances are poorly correlated. Pain is nonspecific in about 85 percent of persons. About 4 percent of persons with low back pain in primary care have compression fractures, and about 1 percent have a tumor. The prevalence of prolapsed intervertebral disk among persons with low back pain in primary care is about 1 to 3 percent. Ankylosing spondylitis and spinal infections are less common. This review covers only chronic low back pain for which a definitive diagnosis cannot be made.

Risk factors include heavy physical work; frequent bending, twisting, and lifting; and prolonged static postures. Psychosocial risk factors include anxiety, depression, and mental stress at work. Having a history of low back pain and a longer duration of the present episode are significant risk factors for chronicity. One systematic review of prospective cohort studies found that some psychological factors (distress, depressive mood, and somatization) are associated with an increased risk of chronic low back pain. Individual and workplace factors have also been reported to be associated with the transition to chronic low back pain.

Prognosis

Generally, the clinical course of a low back pain episode appears favorable, but back pain among persons in a primary care setting typically has a recurrent course (characterized by variation and change), rather than an acute, self-limiting course. Most persons with back pain have experienced a previous episode, and acute attacks often occur as exacerbations of chronic low back pain. In general, recurrences will happen more often and be more severe if persons have had frequent or long-lasting low back pain symptoms in the past. The course of sick leave caused by low back pain can be favorable; however, the longer the period of sick leave, the less likely the return to work becomes. Less than 50 percent of persons with low back pain who have been off work for six months will return to work. After two years of work absenteeism, the chance of returning to work is almost zero.

EDITOR'S NOTE: Paracetamol is called acetaminophen in the United States.

SEARCH DATE: April 2009.

Author disclosure: Roger Chou has received research funding from the American Pain Society, the Agency for Healthcare Research and Quality, and the Drug Effectiveness Review Project. He is the lead author of four systematic reviews referenced in this review.

Adapted with permission from Chou R. Low back pain (chronic). *Clin Evid Handbook*. June 2011:403-405. Please visit http://www.clinicalevidence.bmj.com for full text and references. ■