

Evidence-informed management of chronic low back pain with watchful waiting

Ben B. Pradhan, MD, MSE*

The Spine Institute at Santa Monica, Santa Monica, Saint John's Health Center, 1328 Twenty-Second Street, Santa Monica, CA 90404, USA

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Abstract

EDITORS' PREFACE: The management of chronic low back pain (CLBP) has proven very challenging in North America, as evidenced by its mounting socioeconomic burden. Choosing among available nonsurgical therapies can be overwhelming for many stakeholders, including patients, health providers, policy makers, and third-party payers. Although all parties share a common goal and wish to use limited health-care resources to support interventions most likely to result in clinically meaningful improvements, there is often uncertainty about the most appropriate intervention for a particular patient. To help understand and evaluate the various commonly used nonsurgical approaches to CLBP, the North American Spine Society has sponsored this special focus issue of *The Spine Journal*, titled Evidence-Informed Management of Chronic Low Back Pain Without Surgery. Articles in this special focus issue were contributed by leading spine practitioners and researchers, who were invited to summarize the best available evidence for a particular intervention and encouraged to make this information accessible to nonexperts. Each of the articles contains five sections (description, theory, evidence of efficacy, harms, and summary) with common subheadings to facilitate comparison across the 24 different interventions profiled in this special focus issue, blending narrative and systematic review methodology as deemed appropriate by the authors. It is hoped that articles in this special focus issue will be informative and aid in decision making for the many stakeholders evaluating nonsurgical interventions for CLBP. © 2008 Elsevier Inc. All rights reserved.

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Chronic low back pain; Recurrent LBP; Nonoperative treatment; Activity modification; Patient education; Passive nonintervention

Description

Terminology

Chronic low back pain (CLBP) by definition implies that the acute low back pain (LBP) has not resolved. This is not to be confused with recurrent LBP, which refers to episodes of acute LBP separated by periods without any symptoms. The point at which “acute” or “recurrent” LBP becomes “chronic” LBP is a subjective matter. Many authors and guidelines have used the 6- to 12-week point after incidence as a chronological landmark (6 wk of back pain or resulting

functional limitation for 12 wk), after which some form of operative or nonoperative treatment is indicated [1]. The US Food and Drug Administration and many clinical scientists generally recommend a minimum of 6 months of nonoperative treatment before surgical consideration for axial or radicular CLBP because of degenerative disc disease.

Watchful waiting, in the context of this article, is defined as minimal care through rest, activity modification, education, or avoidance of inciting or aggravating factors. Watchful waiting is a passive nonintervention and does not include any active intervention (eg, medications, home exercises, stretching, etc), although it can include noninvasive forms of patient-initiated comfort measures such as icing or heat packs. The decision to initiate watchful waiting may be made by a health-care provider after an initial consultation or by the patient without seeking medical attention. The latter represents an educated decision made by patients who have contemplated available options and have chosen to try watchful waiting for a period.

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* Corresponding author. Spine Research Foundation, The Spine Institute, 130, 20th Street, Ste 400, Santa Monica, CA 90404. Tel.: (310) 829-5511.

E-mail address: benpradhan@yahoo.com (B.B. Pradhan)

History

After the common cold and other upper respiratory issues, LBP is the most common reason why medical attention is sought in the United States. The lifetime prevalence of LBP is estimated at 60% to 80% in industrialized nations. However, the presence of LBP does not necessarily require medical attention. Most cases occur without an obvious or diagnosable cause, and are self-limiting. Absent certain red flags indicative of serious pathology, care for LBP should generally begin with the least invasive option, as there is no evidence that more invasive approaches are more effective for nonspecific LBP.

In the early 1990s, the US Department of Health and Human Services (presently known as the Agency for Healthcare Research and Quality [AHRQ]) developed and published clinical practice guidelines on the management of acute LBP, which was grouped into three categories: 1) potentially serious spinal conditions (eg, fractures, infections, tumors, and cauda equina syndrome), 2) sciatica (radiculopathy), and 3) nonspecific back symptoms. Sciatica implies nerve root compression or irritation, whereas nonspecific back pain symptoms imply neither any serious underlying spinal condition nor nerve root involvement. Both sciatica and nonspecific back symptoms are self-limiting in most cases, and improve without medical attention or non-surgical therapy.

Subtypes

Watchful waiting as a treatment philosophy in dealing with acute LBP does not imply a total lack of care and does not mean that if someone develops back pain you simply do nothing and see what happens. What watchful waiting can mean, however, is that if acute LBP is incurred, the patient is given a chance to improve with conservative and self-care methods. And even if recurrent LBP or CLBP exists, active self-care is encouraged to determine if the patient can reduce his or her own symptoms before arriving at the conclusion that a more aggressive or invasive approach is warranted. Most people are able to deal with low-level, nagging, or even annoying LBP using self-care, activity or living modifications, and other coping mechanisms. They may not need any higher level of treatment unless the pain interferes with their work, leisure, or sleep.

To specifically address acute LBP, and especially if the episodes are recurrent, many patients, well informed or not, may foray into self-treatment first. Many have found that simple treatments such as ice massage or heat of various kinds can be helpful. Others rely on over-the-counter menthol or other analgesic-base creams, or over-the-counter analgesics. Many will attempt one or more forms of complementary and alternative medicine such as massage therapy or spinal manipulation therapy, which are reviewed elsewhere in this supplement. Others still will try whole host of bracing options or ergonomic aids.

Patients with CLBP often find that their symptoms will wax and wane over time, and many of them will have devised strategies for treating their symptoms when the need arises. In the event that their usual strategies for pain are no longer effective and their pain is worsening, that indicates it is a reasonable time to see their physician, particularly if their quality of life has significantly changed because of that increased pain. For instance, those with LBP may choose to seek care only if they are no longer able to work or recreate, if their sleep is now disrupted, if they are no longer able to do the things they like with their family or in the greater community, or if symptoms seem worse than in the past.

The following may be considered subcategories of “watchful waiting”; most are tried before seeking more active treatment, so they may in fact be considered progressive steps in watchful waiting. There may be other treatments that one can argue fall into the category of “watchful waiting” but which are discussed elsewhere in this supplement. The majority of the following recommendations are adapted from the AHRQ. Specific details about guidelines resulting from a multitude of clinical studies are available from the National Guideline Clearinghouse, an initiative of the AHRQ. The mission of the National Guideline Clearinghouse is to provide physicians, nurses, and other health professionals, health-care providers, health plans, integrated delivery systems, purchasers and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines and to further their dissemination, implementation, and use. This is true for LBP or any number of other medical conditions. On-line access is available at <http://www.ngc.gov>.

General description

Watchfulness

Waiting for symptoms to resolve does not mean ignoring telltale signs of something more serious—thus the term “watchful” waiting. If a health-care provider is recommending watchful waiting for someone with acute LBP, a detailed medical history is critical. Certain conditions require urgent diagnosis and treatment (such as tumors, which fortunately usually causes slow progressive pain, unless there is a pathologic fracture). Acute pain, in the back or leg, may be caused by disc herniation. Paraspinal symptoms are usually muscular in origin. Most LBP is mechanical in nature (worse when loading or moving the back). Nonmechanical back pain, or pain during rest, usually indicates an inflammatory, infectious, or oncologic origin. There are certain conditions that exhibit “red flags,” which can be detected with careful screening (history taking and physical examination) and need urgent diagnosis and appropriate treatment (Table 1).

Waiting

It has been observed in several reports that the vast majority of acute LBP episodes will resolve spontaneously

Table 1
Red flags associated with potentially serious pathology related to low back pain

Factor
Age >70 y
Duration greater than 6 wk
Focal neurologic deficit progressive or disabling symptoms
History of cancer
Immunosuppression
Intravenous drug use
Prolonged use of corticosteroids and osteoporosis
Recent significant trauma or milder trauma, and age >50 y
Unexplained fever
Unexplained weight loss

with time. A preexisting active lifestyle has been shown to accelerate symptomatic recovery, and to reduce chronic disability [2]. The routine use of passive treatment modalities is not recommended as it might promote chronic pain behavior. It may be more appropriate for “subacute” pain. The *British Medical Journal* reported that increased stress from therapeutic exercises may be harmful in acute conditions based on a randomized clinical trial that was included in the Philadelphia Panel’s study [1].

Reassurance

It may help to reassure patients, decreasing their stress and anxiety, and thus reducing pain behavior and encouraging proactive healthy behavior. Reassurance may be the first noninterventional step of psychological treatment. Some authors do recommend that in addition to the traditional examination of neurological symptoms and signs, psychological factors should be considered at the initial visit of a patient with an episode of LBP. Reassurance usually consists of educating the patient about the basic facts that this is a common problem, and that 90% of patients recover spontaneously in 4 to 6 weeks [3]. Patients may need to be assured that complete pain relief usually occurs after, rather than before, resumption of normal activities and their return to work can be before they have complete pain relief. Working despite some residual discomfort poses no threat and will not harm them [4].

Activity modification

Although severe LBP may necessitate rest or activity modification as tolerated, mandatory bed rest has not been shown to be beneficial effect in the overall course of acute back pain. If disabled by pain, bed rest may be recommended, but for no more than 2 days, as longer periods of bed rest can be harmful in some people [4–6]. The Philadelphia Panel also concluded that there is good evidence to include continuation of normal activities as an intervention for people with acute LBP [1]. The Institute for Clinical Systems Improvement also recommends that patients with acute LBP should be advised to stay active and continue ordinary daily activity within the limits permitted by the pain. Patients may be advised to carefully introduce activities back into his/her day as he/she begins to recover from the worst

of the back pain episode [4]. Gradual stretches and regular walking are good ways to get back into action. Patients need to be told to “take time to relax, as tension will only make your back feel worse.” They should also be instructed to avoid activities that cause the onset of symptoms, or cause the aggravation of symptoms, especially those that peripheralize (spread outward to the extremities) the symptoms.

Education

Educating patients can help them take steps in their own everyday lives that will help maintain back health. Although most studies point to the spontaneous resolution of the vast majority of episodes of LBP, there are more sobering estimates. The Institute for Clinical Systems Improvement, based on their sources, provides a slightly less optimistic outlook. The natural history of LBP is that most patients will experience partial improvement in 4 to 6 weeks and will have a recurrence of LBP in 12 months [4]. The long-term course of LBP is typically a return to previous activities though often with incomplete recovery of pain. Thus, providers in clinic systems are encouraged to provide primary education through other community education. Institutions and businesses are encouraged to develop and make available patient education materials concerning prevention of LBP and care of the healthy back. Topics that should be included are promotion of physical activity, smoking cessation, and weight control; these interventions are reviewed elsewhere in this supplement. Emphasis should be on patient responsibility, workplace ergonomics, and home self-care treatment of acute LBP. Employer groups should also make available reasonable accommodations for modified duties or activities to allow early return to work and minimize the risk of prolonged disability. Education of frontline supervisors in occupational strategies to facilitate an early return to work and to prevent prolonged disabilities is recommended [4].

Practitioner, setting, and availability

A licensed health provider trained in recognizing signs and symptoms of red flags associated with serious pathology may administer this intervention. This intervention is widely available in the United States in a variety of private practice, clinic, or hospital settings.

Reimbursement

Insurers will typically reimburse regular examinations and follow-up visits with licensed health providers for CLBP.

Theory

Mechanism of action

Nonspecific CLBP may have an association with an imprint of pain that exists in the central nervous system, specifically the spinal cord and the brain. Patients who have

occasional acute LBP that fully resolves, likely continue to have lesions in the low back that tends to heal over time without any of that subsequent representation of the pain signal that stays in the central nervous system. Thus the importance of properly treating acute LBP, avoiding treatments that may unnecessarily aggravate the symptoms, and especially importantly, letting self-limited episodes pass by without ambiguous interventions.

Watchfulness avoids missing any urgent conditions that need early treatment. Waiting allows the body’s natural healing mechanisms time to repair or support injured tissues. Reassurance decreases mental tension and the negative impact it has on recuperation. Activity modification is instructed to avoid activities that cause the onset of symptoms or cause the aggravation of symptoms. Educating patients, as stated previously, can help them take steps in their own everyday lives that will help maintain back health.

Diagnostic testing required

A thorough history and physical examination are required to rule out the possibility of serious pathology related to LBP before initiating this intervention.

Indications and contraindications

This intervention is indicated for patients with nonspecific CLBP who, in the absence of red flags for serious pathology, do not wish to seek any form of active care and understand the principle of watchful waiting. As discussed above, watchful waiting is indicated in all cases of acute LBP, including recurrent episodes, as long as there are no signs or symptoms indicating a matter needing urgent treatment. The presence of such signs would indicate a contraindication to waiting, and have been listed above as “red flags.”

Evidence of efficacy

Clinical guidelines

The recommendations from published and disseminated guidelines on watchful waiting for acute LBP, as discussed

Table 2
Evidence synthesis

Level	Class	Supporting evidence
A. Primary reports of new data collection	A	Randomized controlled trial
	C	Nonrandomized trial with concurrent or historical controls
		Case-control study
		Study of sensitivity and specificity of a diagnostic test
B. Reports that synthesize or reflect upon collections of primary reports	D	Population-based descriptive study
		Cross-sectional study
	M	Case series
		Case report
R	M	Meta-analysis
		Systematic review
		Decision analysis
		Cost-effectiveness analysis
	R	Consensus statement
		Consensus report
		Narrative review

above, are based on classes A, C, D, M, and R evidence (Table 2). Rather than listing the numerous examples of each specific subcategory of evidence, the reader is encouraged to review the references quoted above, and the citations therein as well.

Harms

Symptoms of CLBP may worsen during watchful waiting, which could affect other aspects of health (eg, causing psychological distress or precipitating anxiety and depression). Factors for the prognosis of acute LBP have been inconsistent in several review studies [7–10]. Psychological problems, such as anxiety, stress, depression, etc, are putative negative prognosticators. Previous history of back pain and job dissatisfaction have also been described as negative prognosticators [8,10]. Increased disability scores in standardized measurements are also indicative of negative outcomes [11]. Hard physical work and, in particular, frequent lifting and postural stress are negative predictors of outcome [12]. Obesity, smoking, and poor general health are also often discussed in the literature as negative prognosticators [12].

Table 3
Recommendations and advice about LBP

Specific content recommendations	Advice to patient
Reinforcing the likely absence of serious disease when red flags are not present.	Hurt does not equal harm.
Emphasize a good prognosis for LBP.	Most patients experience significant improvement in 2–4 wk.
Bed rest is not recommended and should be limited to no more than 2 d.	Take exercise as soon as back pain allows.
Light activity will not further injure the spine and light activity typically helps speed recovery.	Minimize bed rest.
A progressive resumption of work and activity levels leads to better short-term and long-term outcomes.	Keep mobile.
Information and advice may be helpful regarding specific painful or limited activities such as sitting, lifting, getting up from bed, etc.	Increase walking time each day.
No specific exercise type can be recommended as more effective.	Easier sports to get back after one has had back pain include walking or swimming.

LBP = low back pain.

Source: Adult low back pain: ICSI [4].

Summary

Table 3, derived from one of the references [4], provides the best summary and conclusion for this segment on watchful waiting for LBP.

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