# MANAGING CHRONIC LOW BACK PAIN WHILE MINIMIZING USE OF DANGEROUS PRESCRIPTION OPIOIDS

## *AN OVERVIEW*



Most people will experience low back pain at some point in their lives (Frymoyer, 1988). Low back pain is the fifth most common reason for all physician visits in the United States (Hart, Deyo, & Cherkin, 1995). In addition, lower back injuries account for 30–40 percent of workers' compensation payments (Daltroy et al., 1997). Lost work claims typically result from an acute injury caused by a single event, such as lifting or moving a heavy object. Acute pain also can occur suddenly, without any obvious cause. Acute back pain is usually treated successfully with several days of modified activity, nonnarcotic pain relievers, and muscle relaxants. But in up to one-third of cases, the acute symptoms do not go away (Von Korff & Saunders, 1996). Pain that lingers for months is called ***chronic low back pain*** (***CLBP***).

The word ***opiate*** refers to naturally occurring substances that are derived directly from the opium poppy, which possesses painkilling properties. ***Opioid*** is a broader term that includes not only opiates but also synthesized chemicals that bind to the same receptors, such as methadone, meperidine (Demerol), and fentanyl. Opioid drugs also are commonly referred to as ***narcotics***. Although it is tempting to treat CLBP with opioid pain relievers, such as codeine or OxyContin, people with CLBP and their families should be cautious of that approach. It is not advised to move to opioid treatment too soon before exploring other treatment options for nonspecific CLBP (Chou & Huffman, 2007a, 2007b). Research has found that while opioids may alleviate pain in some people, they are generally not more effective than nonopioid pain relievers, have a less beneficial effect on function, and may have serious side effects in many individuals (White et al., 2011). Moreover, combining these prescription drugs with alcohol, tranquilizers, a large number of other drugs, or other opiates can cause a potentially fatal overdose. If the person has other medical conditions, such as anxiety, depression, arthritis, or cancer, medications prescribed for those problems could interact with opiate pain relievers and lead to an overdose. Patients with CLBP who take opioid medications are significantly more likely than patients not taking them to have an emergency room visit within 30 days after the initial drug prescription date (Rhee, Taitel, Walker, & Lau, 2007). Also, opioid pain medications do not treat the root cause of pain; they only cover it up (Bogduk, 2004). In addition to the risk of overdose, patients prescribed opiates for relief of chronic pain have a high potential risk of developing opioid dependence. For those requiring treatment for chronic noncancer pain and who have weighed the risks and benefits of opiates, often the best decision is to avoid opiates in favor of other treatments (Dowell, Kunins, & Farley, 2013).

This series of four fact sheets explains the causes of CLBP and some proven approaches for treatment. This fact sheet describes the main causes of CLBP and who is most at risk for developing CLBP. It lists the symptoms a person with CLBP should report to his or her health care provider and briefly describes approaches that may be helpful in treating CLBP. Subsequent fact sheets (2–4) describe these treatments in more depth.

*Chronic Low Back Pain Series*

## What Causes CLBP?

Work that requires repetitive motions like bending or lifting may cause back injuries. Workers may aggravate a preexisting back condition in an accident or while performing normal work activities. Causes of CLBP include osteoarthritis, intervertebral disk disease, bulging or ruptured disks (herniation), spinal stenosis, tumor, infection, and rheumatologic and other systemic diseases. Spinal abnormalities such as scoliosis (curvature of the spine) and osteoporosis may also make it more likely that someone develops back pain. However, most cases of CLBP are nonspecific, meaning the pain does not have a single known cause (van Tulder, Assendelft, Koes, & Bouter, 1997).

***Osteoarthritis*** is an inflammation of joints (called ***facet joints***) that connect the vertebrae (bones of the back) to one another and form the spine (or backbone). It also can affect the joints between the ***sacrum*** (the large triangular bone at the base of the spine) and ***pelvis*** (called the ***sacroiliac joints***). Cartilage and bone making up the vertebral and sacroiliac joints can be damaged by the wear and tear of life. Damaged bones try to heal themselves by growing, but this new growth is irregular and can worsen the problem by making joints less stable and pinching nerves as they exit the spine. People with spine abnormalities and who lead either sedentary or very physically active lifestyles, or whose activities frequently involve weight-loading the back, are more prone to developing osteoarthritis, disk degeneration, and CLBP.

***Osteoporosis*** is a condition wherein bones lose their density and become thin and weak. This weakening can lead to vertebral fracture and collapse. Postmenopausal women are more likely than men to develop osteoporosis or a less serious condition called ***osteopenia***. These conditions occur in part because around the time of menopause, the production of estrogen, a hormone that promotes bone health, decreases (Seeman, 2002). Vertebrae affected by osteoarthritis and osteoporosis are also more likely to slip (move forward), causing pain and sometimes nerve impingement. This is called ***spondylolithesis***.

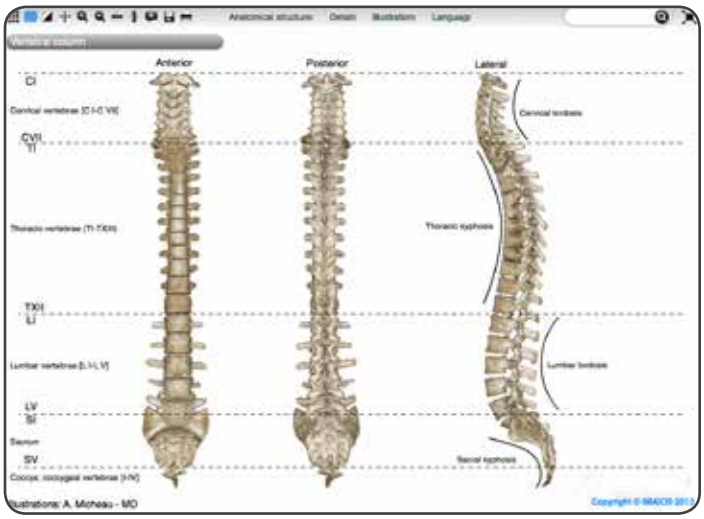
Intervertebral disks are round, pillow-like structures made of cartilage and fibers on the outside and a gel-like substance on the inside. Below the second vertebra from the top, there is one disk between each vertebra. Disks act like shock absorbers and, along with muscles that line the back and the abdominal muscles, help stabilize the spine. Disks can also wear out over time and lose their protective function. They may bulge or rupture.

Obesity contributes to these conditions because excess weight pushes down on and can strain the back. Over time, this extra pressure can contribute to osteoarthritis and can wear away intervertebral disks' outer fibers, increasing injury risk. Excess abdominal fat also can cause the spine to bend too far forward, contributing to CLBP.

## What to Tell the Medical Provider

If a patient thinks she or he has CLBP, the first step is to get examined by a health care provider. Before the appointment, the patient should think about and write down answers to the following questions. The health care provider will need this information to help determine what is causing the back pain.

- **What type of pain is it** (stabbing, burning, shooting, dull, constant, or "comes and goes")?
- **What brings on the pain**? How is it affected by walking, twisting, lifting, bending, lying down? Does it require getting out of bed and pacing at night?
- **What relieves the pain** (sitting, standing, walking, bending over, lying down, etc.)?
- **Where is it located** (middle or side, multiple locations), and does it move down a leg or elsewhere?
- **When did it start**? Was it the result of an injury? Has it changed over time (getting worse or better), or has it been constant?
- **Are there any other symptoms along with the CLBP** (e.g., numbness, weakness, bowel or bladder problems, weight loss, fever)?
- **What medications does the patient take**? Include vitamins and over-the-counter drugs on the list.



## Approach to Treatment of CLBP

In addition to a patient history and physical examination, the health care provider may order certain diagnostic tests, like X-rays or an MRI, to determine the cause of the back pain. However, in many cases, testing is not necessary. Diagnosis of the specific cause(s) of back pain is complicated because test results do not correlate well with a person's symptoms (Patel & Ogle, 2000). Most older adults have evidence of osteoarthritis, causing some backs to look abnormal on X-ray, and yet many have no symptoms (Williams, 2009). Other people may have severe symptoms and little evidence of abnormalities.

Most back injuries can be treated successfully with conservative methods like medication or physical therapy (Chou & Huffman, 2007a; McCaffery, 1980). Surgery is sometimes required when these treatments fail, but this is better at relieving nerve pain that shoots down into the leg than it is for relieving nonspecific back pain. Depending on symptoms and diagnosis, the provider may advise a ***stepped care*** approach (Von Korff & Moore, 2001). A stepped care approach treats people in stages (or steps). Treatment intensity increases step by step if lower-intensity interventions fail or do not have an adequate effect. The conservative or lower-intensity approach is the safest approach for nonspecific back pain. It typically begins with a discussion regarding the causes of back pain, nonnarcotic medications, and advice on how to resume normal activities. Step 2 may include one or a combination of the following approaches: self-management techniques, exercise, injecting pain-numbing and steroid medications into the back, therapeutic massage (also called ***myofascial release***), acupuncture, physical therapy, and spinal manipulation. These approaches necessitate coordinating efforts of the patient, doctor, and allied health professionals to improve outcomes. Step 3 targets patients who need even more intensive interventions before they can return to normal activities in work and family life. The intensive interventions often rely on medications that can be addictive and can cause dangerous adverse reactions. CLBP Fact Sheets 2–4 give details about promising management options.

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