

# LOW BACK PAIN: INTEGRATING CARE

## Chiropractic assessment, diagnosis and treatment of low back pain

### ASSESSMENT

#### Patient history

- Patient history will help a chiropractor determine: the pain's location, duration, constancy/intermittency, intensity and character, and whether there is an associated referral of pain.
- Information such as the patient's general health, previous injuries, medication history, nature of work and daily activity, as well as coping strategies and social supports, can be instructive in informing the diagnosis.

#### Yellow and red flags

- Clinical Practice Guidelines can be used to help screen for red and yellow flags, which are crucial in identifying potential barriers to recovery.
- The presence of red flags is potentially very serious. For example, pain accompanied by changes in bowel or bladder control can be a sign of cauda equina syndrome, which requires referral for emergency care.
- Potential yellow flags, suggesting barrier to recovery, include Kinesophobia (the reliance on, or belief in, bed rest, time off work and passive interventions as the key to recovery), social withdrawal and low job satisfaction.

#### Physical examination

- Observation of posture and gait, and signs of antalgia—motor weakness, abnormal movement patterns and lower limb dysfunction—are fundamental to the exam, followed by select appropriate tests.
- Active and passive range of motion tests should then be performed to help determine which structures—muscles, joints, ligaments, etc.—are involved in the underlying cause of the pain.
- Static and motion palpation can help identify tight, tender soft tissue structures and joint restrictions.
- Neurological tests, including deep tendon reflex, sensory and motor can help identify neurological deficit and level of lesion, and rule out the presence of some red flags.
- Orthopedic testing is the last component of the assessment:
  - Nerve root tension testing (e.g., straight leg raise), provocative testing for facet joint (e.g., rotation extension), and SI joint tests (e.g., compression) can help determine which structures are involved in the cause of the pain.
- Functional testing, including performing specific exercise-based movements until fatigued, biomechanical movement analysis and safe dynamic loading of injured areas can help identify deficits and conditions impacting recovery.

### DIAGNOSIS

Differential diagnosis utilizing a "triage" concept of classifying low back injuries into one of three categories helps guide the chiropractor:

#### Potentially serious

Tumor, infection, fracture, major neurological problem (cauda equina), local open wound or burn, prolonged bleeding (hemophilia), artificial joint implant problems, pacemaker problems, joint infection.

#### Nerve root problem

When the nerve root in the low back is pinched or compressed, causing a radiculopathy (sciatica). Typical causes of nerve root pinching include a lumbar herniated disc, spondylolisthesis and spinal stenosis.

#### Non-specific

Mechanical back pain in the lumbar spine. This type of lower back pain is the most common presentation, and includes pain for which there is no identifiable cause.

Following a diagnosis of a serious condition, the chiropractor typically refers the patient to a physician, nurse practitioner or emergency department. When appropriate, the chiropractor may co-manage the patient's care with other back pain specialists.

Following a diagnosis of a nerve root problem causing sciatica and/or non-specific causes of low back pain, chiropractors typically categorize the symptoms in the following ways:

- **Acute** - symptoms lasting less than 6 weeks
- **Subacute** - symptoms lasting 6–12 weeks
- **Chronic** - symptoms lasting 12 weeks or more
- **Recurrent/flare up** - symptoms are similar to original symptoms, and return sporadically or as result of exacerbating circumstances

These lower back pain or sciatica symptoms may be further broken down into mild, moderate or severe.

### CHIROPRACTIC TREATMENT

- Education
- Spinal Manipulative Therapy
- Mobilization
- Self care
- Soft tissue therapy
- Exercises

### Case study: the patient's story

Pam Damoff, a town councillor in Oakville, has always enjoyed an active lifestyle, especially cycling and the feeling of freedom that she experiences when she is out for a ride. However, all it took was the simple, innocuous act of putting on her socks one day for this to quickly change.

Pam felt something shift in her lower back when she bent over, and a little while later when she was out for a walk she realized something was terribly wrong: the pain, she said, was excruciating. She tried applying heat when she got home, but it was an effort just sitting on the couch to do this. Pam was also extremely concerned about her upcoming trip to Italy and the agony of sitting on a plane for seven hours.

Pam immediately sought treatment at her chiropractic clinic. Her chiropractor performed a thorough evaluation, which included a verbal questionnaire, mobility tests, blood pressure check, and balance and range of motion assessments.

Based on her assessment, Pam's chiropractor recommended as treatment a combination of massage, acupuncture and manual therapy, as well as a series of exercises to strengthen Pam's back. As her condition improved, the exercises were modified to maximize their benefit. Throughout Pam's care, her chiropractor provided her with clear, detailed instructions about the treatment she was receiving, and also educated her about managing expectations around what treatment could and couldn't do.

After a few visits to the clinic, the combination of treatment and self-care strategies significantly improved Pam's symptoms, and she was able to enjoy her trip to Italy without pain or discomfort. Her experience with low back pain has helped her appreciate how much of an impact it can have on everyday life, and how routine activities can all of a sudden become huge obstacles. She is also very relieved that her chiropractor was able to assess and diagnose her situation quickly and provide effective treatment in time for her trip.



#### New series

"Low Back Pain: Integrating Care" is the first in a series of four articles focusing on chiropractic expertise in the assessment, diagnosis and treatment of LBP and MSK conditions.

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