



Chiropractic Care and Back Pain

The Burden of Back Pain

Back pain is a major health problem in today's society. It is one of the most common complaints of individuals, with Canadians reporting a point prevalence of almost 30% and a lifetime prevalence of 84%.¹ Well over 90% of individuals experiencing back pain suffer from uncomplicated mechanical back pain and its course is generally recurrent or fluctuating in nature.¹

Despite numerous studies, the etiology of back pain continues to be poorly understood. In addition, some studies have reported gender differences as predictors of back pain.² In men, the onset of chronic back pain is associated with low self-reported health, greater height, heavy physical work, stress, and age between 45 to 64 years. Self-reported restrictions in activity, arthritis, stress, and history of psychological trauma have been associated with chronic back pain among women.²

Reducing Pain and Restoring Function

Back pain can be classified into main and minor etiologies. The main etiologies include muscular, osseous, disc related, and neural causes.³ All pain-sensitive tissues in the back are potential pain generators. These tissues include the facet joint capsule, the outer annular fibers of the intervertebral disc, the anterior and posterior longitudinal ligaments, and the lumbar paraspinal muscles.⁴ Chiropractors are well trained to assess, diagnose, and treat the various causes of back pain, as well as identifying those with red flags that require appropriate referral.⁵

Prior to commencing treatment, chiropractors conduct a thorough patient history followed by a relevant physical examination that typically includes neurological, orthopedic and special chiropractic tests such as posture analysis, soft tissue palpation, and motion and static palpation of the spine. In addition, X-rays or referrals for special imaging are performed if indicated.

The goal of chiropractic treatment for back pain patients is to reduce the duration of the symptomatic period, improve functional status, and facilitate early return to work and normal activity.⁶ Research has demonstrated that chiropractic therapy is effective for pain reduction, improving functional status, and return to work.^{6,7} This overview focuses primarily on uncomplicated back pain and disc-related back pain; however, there are several other causes of back pain which are effectively treated by chiropractors. These include costovertebral joint pain, facet irritation, simple muscle strains, and postural syndromes.⁵

A Multimodal Approach

Best evidence supports the use of a multimodal approach for the management of back pain. Chiropractors are highly trained to deliver this approach which includes the following:

- Education/reassurance;
- Spinal manipulative therapy (SMT)/mobilization;
- Soft-tissue therapy/myofascial release therapy;
- Therapeutic exercise prescription;
- Physical modalities such as heat, ice, electrotherapy, and ultrasound.

Mechanical Back Pain

Patients presenting with mechanical back pain typically report specific aggravating and relieving positions and activities. These patients may also frequently report referred pain into regions such as the buttocks, thighs, or shoulder regions.⁸ The majority of patients with uncomplicated back pain will be improved within 4 to 12 weeks. Even so, due to the episodic nature of back pain it is not uncommon for patients to experience periods of exacerbations.^{8,9} Although this form of back pain may be self-resolving, pain levels, radiculopathy, and disability often lead to functional limitations and an altered quality of

life.¹⁰ In addition to pain management, chiropractic care of mechanical back pain focuses on improvement of functional outcomes, mobility and behavior and return to work and normal activities as quickly as possible.

Disc Herniation

The prevalence of symptomatic disc herniations is uncertain, although it has been reported that internal disc disruptions may account for up to 40% of low back pain.^{11,12} The clinical presentation of nerve root compression following disc herniation includes dermatomal lancinating pain or paresthesia into a lower limb(s) with or without back pain.^{8,11} The clinical course of symptomatic lumbar disc herniations is generally quite varied. However, within the first two months following therapy such as rest, exercises, bracing, and NSAIDs, 60% of patients report a reduction in back and leg pain. Still, at six months to one year, between 20% and 30% of patients continue to suffer from some symptoms.^{13,14}

The goal of chiropractor treatment is to reduce the duration of the symptomatic period while improving function. Chiropractic care for disc herniation is considered conservative therapy and practitioners may choose a variety of modalities to treat this complaint. In addition to spinal manipulation, chiropractors may utilize mobilizations, electrotherapy, soft tissue therapy, and exercises as methods of pain control and functional improvement.^{15,16} These therapies provide periods of decreased pain, allowing patients to perform their daily activities. One study notes that 90% of symptomatic disc patients improved with a course of chiropractic care, while 75% of patients demonstrated significant clinical improvements.¹⁵ Co-management of these patients with pharmaceutical pain agents may also be indicated.⁸

Chiropractors are trained to refer to medical doctors when appropriate and in a timely manner. Referral for further investigation is indicated if there is a progression in neurological symptoms, evidence of cauda equina syndrome, or poor response to conservative care.

Individualized Exercise

Chiropractors receive training in rehabilitation and exercise prescription in order to assess and devise appropriate exercise programs for patients. In relation to back pain, core stabilization programs are a vital component of back pain therapy. Irrespective of the presenting complaint, recent literature has highlighted the effectiveness of exercise and the need for individualized exercise therapy for back pain patients.^{5,17,18,19} New perspectives in the area of exercise research are focusing on motor control problems in addition to strength, endurance, and fitness. Segmental stabilization training is based on research in the fields of biomechanics, neurophysiology, and physiotherapy. Research in this area is now being applied to back pain patients in order to develop an individualized approach to neuromuscular dysfunction.^{20,21}

A recent meta-analysis of exercise therapy for non-specific low back pain concludes that exercise therapy confers some clinical benefit in terms of pain reduction and improved function for adults with chronic low back pain.¹⁷ This benefit is likely to be enhanced when combined with other chiropractic therapy such as SMT.²²

Efficacy, Safety and Satisfaction

The effects of spinal manipulative therapy and chiropractic have been extensively investigated. Numerous systematic reviews have concluded that for acute and chronic low back pain, chiropractic care and SMT provide greater benefits than other forms of conservative therapy.^{6,22,23} In addition, spinal manipulation followed by exercise was found to confer a significant clinical benefit to patients at both three months and twelve months.²² Patients typically report clinical improvement in their uncomplicated and disc-related back pain.^{7,13}

Chiropractic care for back pain and lumbar disc herniations is a safe and effective form of therapy. It has been calculated that less than one in 3.7 million manipulations may result in a disc herniation or cauda equina syndrome (CES).¹³

Research in the area of utilization patterns and cost-effectiveness of chiropractic care has demonstrated that those patients with

chiropractic insurance coverage have lower total health care expenditures and lower average back pain episode-related costs.²⁴ The WSIB of Ontario recently reported that acute low back pain patients had lower levels of pain and disability and a faster return to work when treated by chiropractors.⁶

In addition to the physical benefits related to chiropractic care, it is important to consider patient expectations and satisfaction with care. Individuals treated by chiropractors repeatedly report very good to excellent levels of satisfaction with care and a greater level of satisfaction of care compared to other health care providers.^{25,26}

Summary

Among the multitude of musculoskeletal problems that chiropractors treat, back pain

makes up the largest part. Chiropractors are highly trained to assess, diagnose and manage back pain using a rational and evidence-based approach, and when indicated, to refer to medical doctors in a timely manner. Chiropractors incorporate effective forms of therapy such as spinal manipulation, exercise, electrotherapy and advice to improve patients' pain and mobility. Patients with back pain have demonstrated higher levels of satisfaction and earlier return to work and activities with chiropractic care compared to other approaches. Medical doctors can be confident that chiropractors have the knowledge and skills to effectively manage the significant problem of back pain in our society today.

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