

# LOW BACK PAIN

4 out of 5 people will be affected throughout their lifetime

## LOW BACK PAIN IS THE NUMBER 1 CAUSE OF DISABILITY

Low back pain is the most common work-related disorder in North America and the number 1 cause of disability in the world. It is also a major cause of absenteeism from work. Around 85% of the population will experience back pain at least once in their lifetime<sup>1</sup>. Furthermore, years lived with disability caused by this problem has increased by 54% in 25 years (from 1990 to 2015)<sup>2</sup>. Low back pain affects all countries and income groups, from the poorest to the richest. The cause of this pain is explainable in only a small proportion of patients. For example, it may be due to vertebral fractures, malignancy, infection or spondyloarthritis. For others experiencing low back pain, imaging and advanced testing will not provide any answers. Most episodes are short lasting and have no long-term consequences (even if it is really painful in the short run). However, recurrence is frequent and some will become permanently disabled by this condition.

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Making a low back pain program available to more people is one way to help get them back on track faster and at a lower cost than the average approach. This means a lot to patients who are unable to maintain their normal activities. It also helps ease financial stress and emotional distress thereby lessening the impact these have on the whole family.

## GETTING PEOPLE BACK ON THEIR FEET WITH LOW BACK PAIN PROGRAM



The Centre de santé communautaire de l'Estrie's low back pain program is offered throughout the counties of Stormont, Dundas and Glengarry. It celebrated its fifth year in April 2020. To date, we have seen 919 different patients and 12,291 treatments have been given. The average number of visits to resolve a problem is 8.4. When the program is offered in a Community Health Centre (CHC), the potential cost saving over a 90-day period is between \$2,000 and \$6,000. Moreover, 77% of people who receive chiropractic care in a CHC visit their primary care provider (PCP) less frequently<sup>3</sup>. A literature review measured that out of 12 studies on cost effectiveness of chiropractic, the average saving

for an episode of low back pain was 36% with chiropractic compared to a traditional approach<sup>4</sup>.

## CHIROPRACTORS CAN PLAY A CRUCIAL ROLE IN CHCs

When chiropractors work in CHCs, it also affects the decision-making of PCPs. When faced with complex cases, they can seek advice from the chiropractor, which leads to fewer tests and/or referrals to specialists. One of the challenges with managing low back pain is that guidelines are not followed by many PCPs. It is becoming increasingly clear that combining exercise, education and going back to work as soon as possible (or remaining at work) is the best approach<sup>5</sup>. Unfortunately, a large portion of expenses in this field goes toward tests and treatments known to be unnecessary or ineffective. According to another study in the US, chiropractors are found to follow the guidelines better when it comes to low back pain. As a result, the costs of managing this problem are lowered and patient outcomes fare as well or better<sup>6</sup>.



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Since first-line treatments recommended for chronic back pain are remaining active, doing exercises, patient education and cognitive behavioural therapy, chiropractors, especially those in a community health setting, can play a crucial role because they often work alongside psychologists. Manual therapy is recommended for managing low back pain when applied as part of a multimodal package (e.g. along with exercises, education) for both acute and chronic back pain<sup>7</sup>.

## Since the beginning of the program, we have helped many patients with different problems. Here are some examples.

### CASE #1



A year ago, a patient in her fifties came to see her family doctor complaining of low back pain that lasted over 4 years. She worked as a nurse in a home for the elderly, which seemed to aggravate the problem over time. Since she had no private coverage and wanted to avoid taking painkillers or other medications, her PCP referred her to the low back pain program. The patient was under a lot of stress at work and was having difficulty doing her household chores. Though she travelled often in the past (17 times in 10 years), she was no longer able to do so due to the pain.

**“She is currently on a trip to Mexico and can do anything she wants around the house.”**

Both the chiropractor and the family doctor followed the patient. The chiropractic approach consisted of spinal manipulations, myofascial therapy, stretches and exercises. The pain level gradually decreased although very slowly. Her family doctor finally convinced her to take ibuprofen for a few weeks to reduce the inflammation and recommended daily exercises in the pool. Manual flexion was also added to her treatment protocol. In the end, combining both treatments proved to be most beneficial for this patient.

She is currently on a trip to Mexico and can do anything she wants around the house. She even shovelled a few times this winter without major issues, something she would not have considered last winter. Pain is still present at a low grade but it remains under control if she is careful.

### CASE #2

**“The pain in his leg disappeared after the first treatment. His low back pain gradually improved and was completely gone after the 4<sup>th</sup> or 5<sup>th</sup> treatment.”**

A patient in his mid-sixties consulted the nurse for low back pain radiating down his left leg. The problem started 2 to 3 weeks prior. He was referred to the low back pain program and the pain in his leg disappeared after the first treatment.



His low back pain gradually improved and was completely gone after the 4<sup>th</sup> or 5<sup>th</sup> treatment. It was at this time that the patient realized he had been unnecessarily living with a certain level of pain for years because he felt even better than before the problem arose. Now, he only experiences lower back pain when he remains stationary for too long, something he tries to avoid. Moreover, the pain no longer lasts for several days as it used to, it is gone by the next morning.

The patient was also seeing his family doctor for what appeared to be carpal tunnel syndrome. He was referred to a neurologist who recommended surgery. The chiropractor showed him some simple stretches to do daily and within a few weeks, the problem was completely gone. He never needed to undergo surgery.

### CASE #3



A newly arrived immigrant had an onset of acute back pain that appeared when he bent forward to brush his teeth. He felt a sharp pain across his back and was unable to do anything for 2 days. The pain subsided for a while then plateaued to a level that prevented him from working in a seated position. After a few treatments, the pain completely subsided and he was able to go back to his normal life. If it had not been for the low back pain program, financial obstacles would have prevented this man from receiving chiropractic care in a private setting, and he would have probably been back to see his family doctor for painkillers which did little to improve his condition the first time.

**“If it had not been for the low back pain program, financial obstacles would have prevented this man from receiving chiropractic care in a private setting.”**

## CASE #4

**“He was once again able to sleep in his bed and no longer needed his cane to help him walk.”**

A 72-year-old man with low income consulted his nurse practitioner for hip pain that worsened over a 3-month period (second consultation). The pain forced him to walk with a cane and to sleep in a recliner for several weeks. Since the nurse practitioner could not find the source of



the problem, she referred him for an assessment with the chiropractor. Even though the pain seemed to come from the hip joint, treatment was attempted in an effort to improve the situation. After discussing the matter with the nurse practitioner, they decided to refer the patient to an orthopedic surgeon for an assessment. Just 5 days after the patient's first visit with the chiropractor, his pain level had improved by 50% and he refused to be referred out because he was once again able to sleep in his bed and no longer needed his cane to help him walk. After the second visit with the chiropractor, the patient felt good enough to stop the treatments and to continuing doing the recommended exercises.

**Now, here are the guidelines and therapeutic approaches utilized in our low back pain project as well as some scientific background.**

## GUIDELINE RECOMMENDATIONS

The Canadian Chiropractic Guideline Initiative (CCGI) states that chiropractic care in acute low back pain (duration of 0-3 months) is suggested. The treatment should include but not limited to spinal manipulative therapy (SMT), physical activity, self-management strategies, and other commonly used treatments. It has been shown that chiropractic care has aided in decreasing pain and disability in the short term.<sup>8</sup>

**“The treatment should include but not limited to spinal manipulative therapy (SMT), physical activity, self-management strategies, and other commonly used treatments.”**



The CCGI states that chiropractic care in chronic low back pain (duration of >3 months) is suggested. The guidelines suggest SMT over minimal intervention to decrease pain and disability in the short term. Pain relief is most effective within the first 6 months and functional improvement was more effective at 1 month. A multimodal approach is also deemed efficient; SMT treatment with exercise, myofascial therapy, advice, educational material.<sup>8</sup>

## EFFECTIVENESS AND SAFETY

There is moderate-quality evidence that manipulation and mobilization are likely to reduce pain and improve function for patients with chronic low back pain; manipulation appears to produce a larger effect than mobilization. Both therapies appear safe.<sup>9</sup>

## EFFECT OF TRANSVERSE FRICTION MASSAGE

Transverse friction massage is a form of complementary treatment performed by many chiropractors. A detection of increased excitation-contraction coupling from muscle itself would suggest that transverse friction massage applied over the tendon shows an influence on changing the neuromotor driving mechanism possibly via afferent pathways and therefore decreasing the active muscles stiffness.<sup>10</sup>

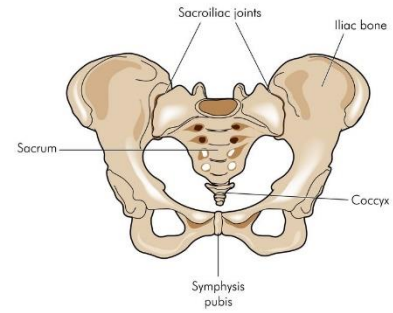
## EFFECT OF TENS / THUMPERS



A study by Guieu et al., considered the analgesic effects of vibration and transcutaneous electrical nerve stimulation (TENS) applied separately and simultaneously to 24 patients with chronic pain. The patients were subjected to 4 different 35-minute treatment sessions (vibration therapy at 100Hz; TENS at 100Hz; vibration therapy + TENS; sham stimulation—TENS without current). The assessment (McGill pain questionnaire) was completed immediately after any treatment, as well as at 4 hours and 24-hour post treatment. The results showed that dual stimulation (vibration therapy + TENS) alleviated the pain in more cases than either therapy alone, but also had a stronger and longer-lasting analgesic effect. Nonetheless, all three types of stimulation produced stronger analgesic effects than those obtained from the sham stimulation.<sup>11</sup>

## EFFECTIVENESS OF TREATING THE SACROILIAC (SI) JOINT

The literature lacks a best approach for SI dysfunction treatment. However, articles provided insight on the need to treat the joint and surrounding structures in the most effective way. Though treating the joint itself with manipulation is good in restoring symmetry, it may not be as effective at decreasing pain and disability in the long run if the surrounding structures are contributing to the dysfunction. Therefore, a global approach to addressing the SI joint dysfunction, including addressing the surrounding ligaments and muscles, would be the most effective manner to care for our patients. This would include releasing the sacrotuberous, interosseous, iliolumbar and sacrospinous ligaments along with musculature such as the hamstrings, the adductors, the iliopsoas, internal rotators, gluteus maximus and even the latissimus dorsi. Strengthening some of these muscles, such as the gluteus maximus and latissimus dorsi may also be beneficial, as it could theoretically contribute to the stability of the SI joint via their thoracolumbar fascial connection.<sup>12</sup>



## CONCLUSION

In conclusion, there is no miracle treatment to low back pain because many factors will influence the progress of the problem. It seems that having a multimodal approach is the effective way to shorten the duration of the events and to get people back on their feet as quickly as possible. Chiropractors can play a crucial role in CHCs with the management of low back pain as part of the team to give the most complete treatments to the patients, make sure they get better as quickly as possible and help to cut down health expenses for the province.

**“Chiropractors can play a crucial role in CHCs with the management of low back pain as part of the team to give the most complete treatments to the patients.”**



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**Every One Matters.**

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