



# Misconceptions About the Management of Low Back Pain: A Brief Note for Physiotherapists

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## Abstract

Low back pain (LBP) is one of the most frequently occurring conditions, affecting many individuals worldwide. The best ways to manage LBP usually contradict the thoughts of the professionals, the patients, and the general public. No musculoskeletal pain is more burdened with serious misconceptions than LBP and the persistence of these misconceptions can impede the way treatment is being administered, which may also impair recovery and promote unnecessary suffering and disability. Given the myths about low back pain, there is the need to acknowledge some of its riddles particularly those pertaining to treatment and look for positive solutions. As professionals, each physiotherapist uses his or her own guiding principles and choices as evidence. However, our guiding principles and choices are important, but they usually bring partiality in decision making. It is essential to examine and identify our core values so that they do not subdue other sources of evidence.

**Keywords:** Low Back Pain, Physiotherapy, Misconceptions

## 1. Introduction

Low back pain (LBP) is a serious public health problem and is one of the leading symptomatic causes of consulting the health care system (1). Low back pain affects approximately 84% of individuals at some point in their lives, leading to high rates of physical inactivity, work absence, and decreased quality of life (2). The economic burden of LBP is extremely high (3). Even though the prognosis for most individuals with sudden onset LBP is favorable, continuing or occurring pain and activity limitations are very usual (4-6). LBP is one of the most common musculoskeletal disorders seen in physical therapy practice (7).

LBP is managed using many interventions including surgical treatment (8), non-surgical treatment (9) and a number of many modalities combined (10). Perhaps the reason so many interventions exist for LBP is that none of them seems to be effective in all types of LBP (11). One of the main issues in managing individuals with LBP is the inability to identify which treatments to apply to which individuals (12). Why does manipulation work for some patients but not others? Why traction resolves some patients' symptoms and exacerbates others? Why surgery works for others and deteriorates others? Why some patients have pain and their radiological investigations showed normal

studies? While it is often thought by some physiotherapists (PTs) that there are no answers to these questions, precise answers do exist elsewhere (13-16).

The medical model tells us that diagnosis drives treatment and this is very true. For example, a patient with back pain due to lumbar disc herniation would receive a different form of treatment (9) as would a patient with lumbar spinal stenosis (17). A patient with back pain due to lumbar spondylolysis/spondylolisthesis would receive a different form of treatment (18) as would a patient with piriformis syndrome (19). A patient with non-specific low back pain would receive a different form of treatment (20) as would a patient with sacroiliac joint dysfunction (21). While often portrayed as homogenous, a pathoanatomical diagnosis is only available in a very few instances of LBP (22).

Several studies (23-25) have indicated that 80% - 90% of patients with low-back pain will spontaneously recover within 3 months. In light of this statement, one must question the odds of the spontaneous recovery of a ruptured anterior cruciate ligament or of a flexor tendon tear in the same time period. In addition, there seems to be no consensus regarding the issue of spontaneous recovery and this sounds unarguably very clear to any professional who had treated a number of patients who had defied the so-

called natural healing. While the gross exaggeration is obvious, one must question the validity of such statements instead of accepting them at face value.

Misconceptions regarding back pain can be unhelpful. Correcting unhelpful myths is a progressive step and therefore, it is important to acknowledge some of the misunderstandings that currently exist in the field of LBP and clarify them. In this article, the current misconceptions about the physiotherapy management of LBP have been examined and discussed.

## 2. The Misconceptions in the Literature

### 2.1. The use of Evidence-Based Practice

Physiotherapists (PTs) have justifiable concerns about the possibility of the current evidence to change the way they practice (26-28). While the concern about evidence-based practice is considered to be extremely high (29, 30), it is unlikely that PTs will ever have solid evidence for every technique they use, due to the research that would be required and the likelihood that techniques may work best combined with other techniques, rather than in isolation (31). But it is likely that PTs will have evidence that informs them of what techniques or approaches are most effective for a particular outcome or complaint, and be able to base their treatments around elements from that approach (32). However, it would be imprudent to abandon techniques with a long history of anecdotal evidence of efficacy but currently lacking in scientific support, for these techniques may well be effective for many patients and conditions. But when there is growing evidence of disproof, such as evidence of no therapeutic benefit, or the lack of reliability and validity of a diagnostic approach, PTs have an intellectual and ethical duty to reconsider their practice (32).

### 2.2. Prescription of Imaging

Schwartz and colleagues (33) indicated that the amount of money spent yearly on imaging for less worrisome back pains ranged from \$82 million to \$226 million. In addition, the authors also indicated that this amount does not cover costs attached to testing during follow-ups and treatments due to imaging results. Because of the fact that X-rays are not very sensitive in the identification of serious spinal problems, magnetic resonance imaging (MRI) and computerized tomography (CT) have been largely utilized for LBP. However, much of the utilization happens outside the scope of clinical practice guidelines (CPGs) (34).

Some findings, such as disc or facet joint pathologies have been identified as the causative agents for LBP; however, these problems are also present in asymptomatic individuals and they increase with age (35). The MRI is very sensitive in identifying senile problems in the spine but, literature has shown no association with LBP (36, 37). These issues have led to the production of CPGs about the use of imaging in individuals with LBP (38, 39). The Board of Internal Medicine's Choosing Wisely campaign indicated the use of MRI and CT imaging with caution (39). The American Academy of Family Physicians advised against imaging for LBP within the first 6 weeks of onset except when red flags exist (38). The American Association of Neurological Surgeons and Congress of Neurological Surgeons advised against imaging for mechanical LBP that is not accompanied by red flags (40). In addition, the majority of the scans involved exposure to radiations and only a few of them assist in the management of the patients (41). A quick and valid clinical evaluation is frequently sufficient to determine the few cases for whom imaging is needed (41).

### 2.3. Prescription of Surgery

Only a few numbers of individuals with LBP need surgery. An absolute indication for lumbar surgery is a progressive neurological deficit commonly associated with the cauda equina syndrome or severe vertebral collapse or fracture (42). There is also evidence to suggest that long-term outcomes after surgery and conservative management are generally similar and surgery should not be performed unless there are no other options (9). Individuals with LBP can decrease their suffering by active treatments and understanding what pain means, and what factors are contributing to their pain (20). This can help them manage themselves without undergoing surgery.

In most instances, the primary concern of surgery is to relieve nerve root compression; but other issues, such as muscle weaknesses tend to be difficult to treat using surgery. In this regard, the general consensus for LBP management is to start with conservative treatment for 6 - 12 weeks (23, 24). If the patient did not improve during this period, then surgery may be performed.

### 2.4. The Narrow Scope of Thought

Physiotherapists and other appropriately trained healthcare professionals, as a general rule, are able to treat patients more frequently and for longer durations than many other medical practitioners (7). For that reason, PTs tend to have a larger array of treatment options at their disposal which affords them the opportunity to use multiple techniques and/or interventions in their treatments and to use specific interventions in multiple ways (9, 17-21).

However, PTs treat spinal dysfunction as if it were an entity separate from the rest of the body which may be regarded as a narrow scope of thought.

Recently, Myers (43) demonstrated that the human body has network connections or continuities that function as one unit which are called myofascial meridians. According to Myers, fascial meridians are tensegrities with tensile myofascial bands that comprise a single continuous structure. If any part of this structure is deformed or distorted, negative stresses may be imposed on distant structures (body-wide), and on the structures that it divides, and connects (44). This evidence suggests that any tendency to think of a local dysfunction as existing in isolation should be discouraged as body structures are tightly and symbiotically interrelated, and given shape, cohesion and functional ability by the fascia (45). In addition, there is evidence to suggest that fascia accommodates to chronic stress patterns and deforms itself; something that often precedes deformity of osseous and cartilaginous structures in chronic diseases (44, 45).

Moreover, postural asymmetries caused by myofascial dysfunctions are among the most infrequently misdiagnosed situations in the physical therapy environment. While, this may sound very awkward to some highly trained/skillful PTs, but a significant number of others (mostly novice) would acknowledge that some prominent back conditions such as the piriformis syndrome and the crossed syndrome (upper and lower) patterns have been largely neglected. Piriformis syndrome produces ischemia of the lower limbs, sacroiliac joint dysfunction, and pain around the hip (second attachment) through relative fixation of the sacrum (first attachment) (46). Upper crossed syndrome (extensor muscles of the neck shorten and tighten as the deep neck flexors weaken-forward head posture) leads to cervical pain, referred pain to the shoulders, arm, and chest and a decrease in respiratory function (47). Lower crossed syndrome (tight erector spinae/iliopsoas and weak abdominals/gluteus) leads to forward pelvis tilt, hip flexion, increased lumbar lordosis and stress at L5-S1 accompanied by back pain and irritation (47). When these syndromes are not properly examined and corrected they may lead to serious regional interdependence which may ultimately lead to permanent postural deformities and/or bony dysfunctions (48).

### 2.5. The Use of Spinal Manipulation and/or Mobilization

A significant number of individuals with LBP may have facet joint problems and they, therefore, need spinal manipulation. However, LBP, especially in the acute stage, can be easily provoked using spinal manipulation. In addition, there is also evidence to withhold manipulation when neurological symptoms exist because the pathology may be

aggravated (12). On the other hand, spinal mobilization may also be used to treat LBP because it does not cause a flare-up of pain in many instances compared to manipulation and many studies (1, 49, 50) have indicated its therapeutic benefit.

However, despite the overwhelming literature reporting the therapeutic efficacy of spinal manipulation and mobilization individually, there seems to be a scarcity of evidence that compares the efficacy of both techniques in individuals with LBP, particularly those having neurological symptoms (12). Therefore, it is only when head to head comparison of spinal manipulation and mobilization is conducted, that patients who respond favorably to either of the techniques will be revealed. This will also give an insight into which technique to administer to individuals who have LBP with/without neurological symptoms.

### 3. Conclusions

Misconceptions about the management of low back pain can be very unhelpful and their persistence can impede the way treatment is being administered, which may also impede recovery and promote unnecessary suffering and disability. In addition, the importance of research in the physiotherapy profession is growing and because the academic environment in relation to health has changed over the years, there is the need for research to validate the efficacy of many low back pain interventions. Furthermore, there is also an academic quest to understand the nature of all types of low back disorders and why (or if) a particular treatment works.

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