

## Tai Chi enhances biopsychosocial management of chronic LBP

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Chronic low back pain (cLBP) is a complex, multi-factorial condition that despite research efforts and innovative interventions remains a prevalent, disabling and costly challenge. Factors that play into cLBP include age, gender, location and cause of symptoms, co-morbidities, physical fitness, cultural beliefs, and socioeconomic, legal and psychological factors. This case study (poster) illustrates a specific mind-body intervention, the Tai Chi Fundamentals(TCF) training program, as a potential intervention to address the complex multi-faceted problems associated with cLBP.

Low back pain (LBP) is so prevalent globally that most people will experience at least one episode of it over their lifetime. The 1-year incidence of first-ever LBP has been estimated to be between 6.3 and 15.4%, and the 1-year incidence of any episode of LBP range from 1.5 to 36% . The majority of people who experience activity-limiting LBP have recurrences. The first incidence of LBP occurs most frequently in the third decade of life and prevalence increases until 65 years, whereupon the rate decreases . Tertiary prevention of LBP aims at reducing the negative impact of pain, disability, and functional loss through rehabilitation . The main goals of rehabilitation for LBP patients are to control pain, restore function, assure no future functional deficits occur, preserve employment and productivity, and in the case of acute LBP to prevent chronification . The great challenge in LBP rehabilitation is the broad, heterogeneous population it affects, making it impossible to arrive at any basic general rehabilitation care paradigms that would apply to all or even most LBP subpopulations . Numerous biological factors contribute to LBP, ranging from injury (disk herniation, trauma), structural deficits (spinal deformities), age- or occupation-related changes (nerve root compression, spinal stenosis), and even indirect biological factors such as obesity , but psychological and social factors may play an unexpectedly large role in LBP in some patients. These factors include low educational status, stress, depression, anxiety, dissatisfaction with a job or work situation, and poor social support ]. Recently, post-traumatic stress disorder (PTSD) was associated with incident chronic LBP (cLBP) .

LBP may be treated with pharmacological therapy, surgical interventions, or rehabilitation, which we are defining to include physical therapy, exercise, spinal manipulation, and other practices. Combination therapy and interdisciplinary approaches to LBP are considered helpful in many cases. The goal of this narrative review is to present rehabilitation strategies for patients suffering from acute or chronic LBP. This article is based on previously conducted studies and does not contain any studies with human participants or animals performed by any of the authors.

Result-

The numerous forms of LBP make diagnosis challenging. Acute LBP is new-onset LBP of short duration, often from an identifiable cause such as an injury. Nonspecific LBP (which may also be acute) has no known anatomical cause. The anticipated trajectory of acute LBP is several days or weeks of pain and limited function as the underlying injury or tissue damage heals. LBP is often described in temporal terms: acute LBP is pain that persists less than 4 weeks, sub-acute LBP lasts more than four but less than 12 weeks, and cLBP is defined as pain that lasts more than 12 weeks. These temporal delimiters are far from clear-cut. A less systematic (but arguably more realistic) paradigm states that, for some individuals, LBP may be episodic, characterized by remissions and relapses with periodic flares. Such LBP might be described as persistent LBP. For the purposes of this narrative review, persistent LBP will be considered as a type of cLBP. The transition of acute LBP to cLBP involves central sensitization or windup, an aberrant neurological process

Patient expectations appear to play a role in treatment outcomes. In a study of 593 chiropractic patients, those who expected improvements were 58% more likely to report an improved condition by their fourth visit (relative risk 1.48, 95% confidence interval 1.28–1.95) compared to those who did not expect good results. Bio psychosocial interventions for LBP were found to be more effective than education/advice for LBP patients. The most effective forms of bio psychosocial interventions were those that focused on psychosocial factors (understanding the nature of pain, coping skills, goal setting, and pushing aside unhelpful thoughts). Incorporating bio psychosocial aspects to physiotherapy is recognized as being important but there are limited guidelines to encourage how this can be integrated in clinical practice.

Discussion-

In a systematic review of non-pharmacological treatments for cLBP, four types of treatments were evaluated in 12 randomized clinical trials: total disk replacement, fusion, cognitive behavioral therapy, and physical therapy. Each of these four treatments conferred specific benefits and no treatment was devoid of benefits. However, reviewers could not make clear-cut statements as to which treatment was best for cLBP . Studies suggest that surgical procedures offer the best outcomes in terms of improved function and reduced pain when compared to rehabilitation, but sometimes the difference is modest and it is unclear if specific patient populations might respond differently . In other words, not every cLBP is a suitable candidate for surgery—or for rehabilitation. Individualized care and shared decision-making paradigms may lead to different choices for similar patients.

Conclusion-

Chronic LBP is a prevalent and surprisingly complex condition that may respond to a range of nonpharmacological treatments. The difficulty in rehabilitation for cLBP is the fact that patient populations are heterogeneous and individualized therapy is appropriate. Physical and occupational therapy as well as other forms of exercise can be valuable; many patients derive benefit from cognitive behavioral therapy as cLBP has a psychosocial dimension as well. Further, cLBP is a dynamic condition that may require changes in therapeutic approach over time.

References-

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