



# LOWER BACK PAIN: AN ACTIVE APPROACH TO RECOVERY

OSTEOARTHRITIS & DEGENERATIVE DISC DISORDER

# propel

## physiotherapy

Propel Physiotherapy provides personal and professional treatment for people of all ages whether you have suffered a stroke or traumatic brain injury; experienced a complex orthopedic injury caused by a motor vehicle accident, workplace accident or sports; are recovering from childbirth, illness, a simple strain or sprain; or you are looking to improve your performance in your daily activities.

Our integrated healthcare team serves the Greater Toronto Area from our two convenient locations in Etobicoke and Pickering, and also provides mobile services that will come to your home, place of business or other location in the community that best suits your needs.



INTEGRATED HEALTHCARE  
PROGRAMS



EVIDENCE-BASED TECHNIQUES



PROFESSIONALLY TRAINED  
THERAPISTS



COMPREHENSIVE CLIENT-  
CENTRED CARE



# LOWER BACK PAIN TREATMENT: AN ACTIVE APPROACH TO RECOVERY



By Registered Physiotherapist Hoong Phang

Hoong holds a Bachelor Honours Health Sciences from the University of Western Ontario (2008). He has also completed a Master of Science in Health and Exercise Psychology (2010) from McMaster University, and Master of Physiotherapy (2012) from McMaster University.

Hoong is currently published in the academic journals “Disability and Rehabilitation” and “Spinal Cord.” His education has continued post-graduation with additional certifications in manual therapy, soft tissue release, neuro-developmental treatment, therapeutic functional athletic taping, and contemporary medical acupuncture.



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# INTRODUCTION

Up to 85 percent of working people can expect to experience some form of lower back pain during their lifetime.<sup>1</sup> Specifically in Canada, the lower back medical costs are a significant strain on our workforce's productivity and a massive cause of missed workdays.<sup>2</sup>

We see clients with a wide variety of issues—everything from an acute injury such as a lower back strain or sprain to more chronic issues like degenerative disc disorder or facet joint osteoarthritis. As physiotherapists, we take into account the mechanism of injury, pathophysiology, and anatomical or physiological structures involved, the chronicity of the injury, and other pertinent past medical history when providing an assessment.

The evidence suggests that regardless of the type of lower back injury or condition, appropriate movement or mobilizations, strengthening, and loading (at the correct timeline) are one of the best forms of treatment.



# THERAPEUTIC OPTIONS & GOALS

We see clients with a wide variety of issues—everything from an acute injury such as a lower back strain or sprain to more chronic issues like degenerative disc disorder or facet joint osteoarthritis. As physiotherapists, we take into account the mechanism of injury, pathophysiology, and anatomical or physiological structures involved, the chronicity of the injury, and other pertinent past medical history when providing an assessment and developing a personalized treatment plan.

While we recommend an active approach to treating lower back issues, not all lower back issues will respond to the same exercises or mobilizations. For instance, facet joint osteoarthritis may respond poorly to repeated extension exercises, while a lower back with a disc bulge may actually respond positively. Also, depending on the person's spinal attributes, that person may require different cues for achieving a neutral spine during exercises.

Having an assessment conducted by a registered physiotherapist is the best way to ensure the movements and exercises one performs are ideal for their specific lower back issues.





## CLIENT CASE

65-YEAR OLD MALE, RETIRED, OSTEOARTHRITIS, DEGENERATIVE DISC DISORDER

# PROBLEM LIST

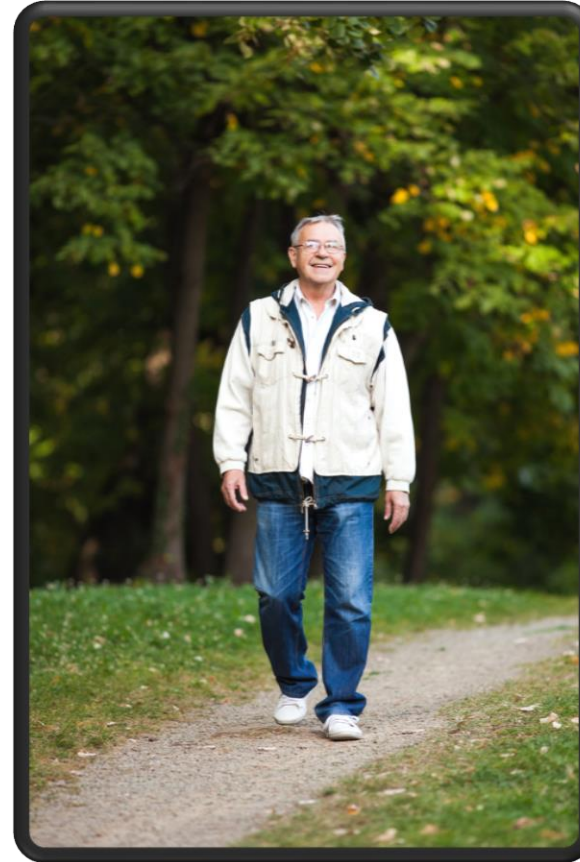
- Soreness, stiffness, and pain in the lower back after waking up in the morning
- Soreness, stiffness, and pain after sitting for prolonged periods of time
- Soreness, stiffness, and pain after walking for 20 minutes





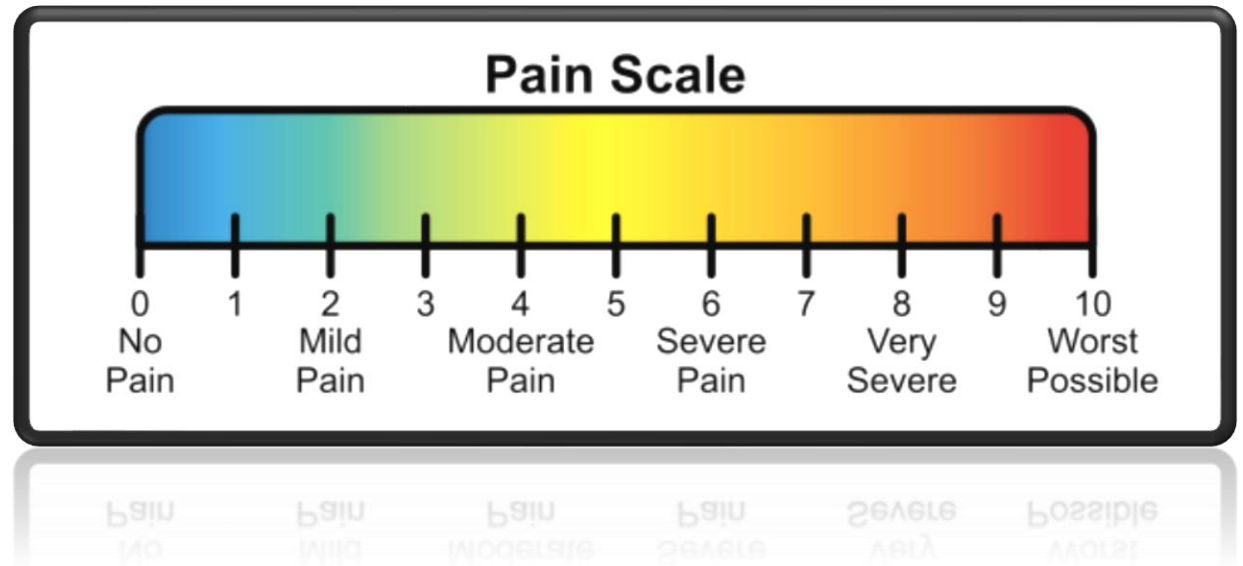
# GOALS

1. Decrease stiffness and pain in lower back
2. Improve range of motion and mobility in lower back
3. Improve tolerance to walking
4. Improve lower back function



# OUTCOME MEASURES

- Numeric Pain Rating Scale
- Roland Morris Disability Questionnaire
- Active range of motion observations
- Self-reported tolerance to walking



# INTERVENTIONS

The basis of our programs at Propel are movement, and we have a host of skilled professionals that we use to incorporate movement – kinesiologists, exercise physiologists, registered massage therapists, yoga therapists and mindfulness practitioners. We provide comprehensive client-centered care programs based on the most current, evidence-based techniques, and implemented in the most cost-effective manner possible. Once a program is tailored to the client's specific goals, treatment is delivered where it suits them best, whether that is in the home, at work, in a local pool or recreation centre, or in one of our specially-designed clinic spaces.

1. Walking tolerance guidelines
2. Lumbar spine mobility exercises and stretches (modified to address facet joint osteoarthritis and disc bulge)
3. Core stability exercises encouraging neutral and pain-free lumbar spine posture
4. Modalities: deep heating Thermaphore and Biofreeze for some topical pain relief
5. Manual therapy: soft tissue release applied to the client's lumbar and thoracic erector spinae complex, bilateral quadratus lumborum, multifidi, and thoracolumbar fascia
6. Exercise regimen performed for 8 weeks; 1X/day; 5X/week



# SUPPORTING MEDIA



Cat cow mobilization brings the spine (lumbar, thoracic, and cervical) into flexion and extension, and promotes an active range of motion within a pain free zone. It also help to enable the low back's erector spinae complex (muscles) to lengthen and shorten, improving blood flow to the area and enables activation of the low back muscles.

# SUPPORTING MEDIA



If/when appropriate, the spine and its muscles can be loaded in a functional manner to help progress return to sport and return to work.



# RESULTS

This client had every opportunity to lay at home with a heat pack, resting throughout the day, and could have avoided the positions that were correlated with his pain (re: walking for prolonged periods of time). Instead, he actively sought out physiotherapy guidance and was pleased to see that with some simple exercises and home routines, he was able to provided relief to him and improve his general function and abilities.

- Client's pain decreased significantly after performing exercises on a daily basis.
- Improved his pain free range of motion.
- Improved lower back mobility as observed through exercises performed.
- Walking tolerance improved to 45 minutes using a guided walking prompts, appropriate stretches and rest breaks.



# TAKEAWAYS

Contrary to pre-conceived notions, excessive resting (more than 2-3 days worth), protection of the lower back, and the application of pharmaceutical intervention, is not the gold standard of practice when recovering from the majority of back injuries. In general, we should not be in fear of moving our backs after injuring it. In fact, evidence suggests that, when pain levels have tapered off and inflammation is at a tolerable amount, early mobilization and guided lower back exercises are essential for a full recovery.

In addition, appropriate loading of a person's lower back muscles, discs, vertebrae, ligaments, and tendons after an injury are integral to improving overall function. Some studies even indicate that, after sustaining a back injury, the continuation of everyday activities within the tolerance of your pain may be an effective way of reducing pain intensity and improving lower back function.<sup>4</sup>

In summary, many lower back injuries can be addressed through early mobilization, appropriate spinal loading, exercising, and decreasing fear avoidance behaviours and beliefs. Encouraging a client's participation in an active physical therapy process is integral to longer lasting results and lower back resiliency.



# REFERENCES

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At Propel Physiotherapy we use a hands on approach to the treatment of musculoskeletal and sports injuries. We have extensive post graduate training in the latest manual treatment techniques to allow a speedy return to optimal function. Many injuries start as “nagging” because we often try to ignore them and put off addressing them for as long as possible. Although the pain might be manageable, these types of injuries can sometimes be the symptom or the cause of more serious issues down the road, especially if left untreated.

Our team consists of 15 health professionals including registered physiotherapists, kinesiologists, exercise physiologists, and massage therapists. We adopt a team-based approach to provide the best functional outcomes possible for our clients. We believe in helping our clients pursue optimal health and wellness through integrated health programs that include activity, education, and mindfulness.

Propel Physiotherapy provides comprehensive client-centered care programs based on the most current, evidence-based techniques, and implemented in the most cost-effective manner possible. Once a program is tailored to the client’s specific goals, treatment is delivered where it suits them best, whether that is in the home, at work, in a local pool or recreation centre, or in one of our specially-designed clinic spaces.





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