



UNDERSTANDING LOWER BACK & SCIATICA PAIN

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ABOUT THE AUTHOR



Craig Zettergren, PT, MS, MBA, Dip. MDT has been a physical therapist since 1988 and has a number of post graduate qualifications that make him well qualified to teach and treat this common condition. Since 1992, Craig has specialized in the treatment of non-surgical spinal disorders with the use of Mechanical Diagnosis Therapy that allow treatments to be specific to the patient.

INCIDENCE OF LOWER BACK PAIN AND COST TO THE HEALTHCARE SYSTEM

Lower back pain and sciatica affects nearly everyone at some stage of their active adult life. It is commonly referred to as a slipped disc, herniated disc, arthritis, stenosis, degenerative joint disease and lumbago. Over 90 percent of active adults aged 25-80, will have at least one episode of lower back pain/ sciatica in their lifetime. The research shows that 60-75% of these people will have a recurring episode of lower back pain/ sciatica. These are the people we can help the most and what this eBook is geared towards.

Lower back pain/sciatica is a worldwide problem affecting millions of people annually. The cost for a lower back pain/ sciatica in the USA is over 100 billion dollars per year. Most of this is a result of lost wages and productivity. Getting proper care at FYZICAL Therapy and Balance Center is your first step in the right direction. We have 350 clinics across the nation and we are located in every state.

WHAT IS SCIATICA?

Sciatica, by definition from the Mayo clinic, is pain radiating along the sciatica nerve, which runs down one or both legs from the lower back. This happens usually from a disc bulge putting pressure on the nerve. In a nutshell, it is pain in the leg(s) as a result of a problem in the back. It is also known as sciatica neuritis or lumbar radiculitis. More than 3 million cases are reported in the US every year. This is one of the most common conditions we see in our clinic and it is treated most effectively by mechanical physical therapy. It affects most people between the ages of 19-70 years old. Sciatica is usually diagnosed with a mechanical examination with a trained physical therapist in MDT. We will discuss this in detail in the next section. Lab tests and imaging are rarely needed. Treatment can take 2-8 weeks to resolve. Most clients have a full recovery from these episodes.

MECHANICAL THERAPY VS TRADITIONAL THERAPY

Mechanical Diagnosis & Therapy is also known as the McKenzie Method. The examination consists of detailed history, evaluation, assessment, classification of problem, then treatment of that classification based on the assessment and research that has been proven to be most effective. The single biggest component of the assessment is to classify the patient then sort out which direction this patient wants to move for success. A research study by Audrey Long, PT, Dip. MDT in 2004, examined 200 people in several countries using MDT with trained clinicians in the McKenzie method. Patients with acute lower back pain were examined to determine which exercise or position centralized, reduced or eliminated their symptoms. One third of the people were given the exercise that eliminated their symptoms, one third were given the exact opposite exercise that eliminated their symptom's, and one third were told to be generally active. Two weeks later, the people with the directional preference exercise were reporting 90% improvement compared to 24%

with the opposite exercise. This is an important study as it clearly indicated that people with back and sciatica pain respond best to specific exercises. Mechanical treatment can consist of active ROM exercise, with or without patient overpressure, active ROM exercise with therapist overpressure, therapist mobilization, reassessment, functional training, home exercise program and lastly how to recover and move forward. Guidance is given on when to return to exercise and when to stop exercising.

Traditional therapy consists of modalities (moist heat, cold packs, ultrasound, electrical stimulation, TENS) and exercise. Traditional therapy then classifies back pain and sciatica into one and treats it the same with stretching and stabilization exercises. Common stretches include, pelvic tilt, bridging, knee to chest, lower trunk rotation and opposite arm and leg exercises. In my experience, using traditional therapy early on in my career, the success rate was not that good. In 1995, the United States Federal Government agency for Health Care Policy and Research published a list of recommendations to guide those health professionals involved in acute low back pain. Because there was no supportive scientific evidence, the agency could not recommend various forms of heat, short wave diathermy and ultrasound. To date there is no fresh evidence that would suggest the agency change its recommendations. Modern methods of treatment have advanced to mechanical diagnosis and therapy which we promote.

Four common causes of Lower Back and Sciatica pain

The four most common causes of LBP/Sciatica pain are: 1) Disc bulge or herniation 2) Degenerative Disc Disease, Stenosis and/or Arthritis, 3) Sacro Iliac joint problems, or 4) hip pathology. We classify each disorder because the treatment for each is different.

Disc- two types of disc problems can occur, a disc bulge and a disc herniation. In the disc you have the annulus fibrosis surrounding the nucleus pulposus. In a bulge, the nucleus begins to redirect into the fissure segments that are created by stress on the disc with our active lifestyles. It continues to creep down the fissure line then starts to put pressure on the exterior wall of the annulus fibrosis. For instance, if you are sitting in a flexed position in your car or at work over the course of hours, the disc material begins to shift backwards and put pressure in the posterior aspect of the spine. The posterior aspect of the disc is highly sensitive from the Sinu-Vertebral nerve that innervates the outside 1/3 of the discs in the low back. Pressure on this nerve is painful. When the bulge begins to bulge more and more it can contact the nerve and this is where sciatica symptoms are form. Disc bulges will typically respond to an extension-based exercise program.

A disc herniation is similar to a bulge, but what has happened is the disc material has broken through the exterior wall of the annulus fibrosis and is sitting on the neural canal. If it is sitting on the nerve, there will be constant pain as the disc is herniated and does not have the ability to bulge back in. Disc herniations typically will respond to a flexion-based exercise program being careful not to overstretch this structure to create more symptoms. Many times, medications oral or epidural steroid injection(s) are needed in this

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Degenerative Disc Disease/Stenosis/ Arthritis- all of these diagnoses are usually made by diagnostic test (X-ray or MRI). We lump them into the same category because these diagnoses typically respond to a flexion-based exercise program. People with these conditions are seen at the grocery store leaning over their grocery cart because it opens their spine into flexion which makes them feel better.

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Sacroiliac joint – the SI joint sits between you two pelvis bones. It does not move much; however, it needs to move in order for birth to occur and can move if you fall on your buttocks. This would create trauma moving the SI joint or causing inflammation. SI problems will respond to pelvic mobilizations and to spinal stabilization exercises.

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Hip problems -can mimic low back and sciatica symptom's in the leg. Hip problems are usually when putting weight on the hip, especially the first few steps after sitting for a period of time. Hip symptoms also tend to radiate into the groin area vs down the leg. Hip problems usually have reduced ROM in the hip and hip movements are painful when tested.

Common Mistakes and handling the symptoms

The two biggest mistakes people make are 1) they IGNORE the symptoms and 2) they attempt to alter the symptoms. When people try and ignore the symptoms they try and tough it out, go to bed and hope that a good night's rest will make it feel better. A good night's rest typically does make the body feel better and more energetic but if you have a mechanical issue it does not go away with just rest. When you drive your car home and the brakes are squeaking when you tap them, you shut the car off in the driveway and no longer here it. We all hope if we ignore it, the symptoms will just go away. Until the next day you get back into it and start to drive it again ad tap the brakes, there is that squeak again. The same thing with your back pain and sciatica. When we are young there is a chance it will go away with just some rest, however as we get older and we have these symptoms more frequently, the recovery process is going to be longer and longer. So, when we are 45 years old and we are sitting at a desk 8 hours a day, and have a 30 min drive to and from work we essentially sitting for at least 9 hours a day. We try and be active and hope to golf on the weekends with our friends for some rest and relaxation. We have had back pain on and off for 20 years that has been self-managed but this winter it was tough to get to the gym 3 x per week so it was more like 1-2 times per week on a good week. Now the pain is more consistent and won't let up, ignoring this pain is no longer an option and the frequency and intensity are getting worse. Time to get it checked out.

The second biggest mistake people make is that attempt to alter their symptom's. Altering may include pain medication, prescribed or over the counter, injections, surgery etc. These techniques alter symptom's but do not necessarily address the problem. If the problem in sciatica pain, then treatment needs to be directed to the tissue at fault. Taking an oral pain medication will go through your entire blood stream looking to fight pain, yes it may begin to feel better while on the pain medication, however once it wears off the pain returns. You are altering the pain generator, temporarily. The same goes with injections. The physician can put the injection into a specific region to help with the pain, but it will not resolve the mechanical disc displacement or degenerative joint disease.

The third thing people do when they have this problem is they HANDLE it. No more ignoring it or trying to alter it. They research and find what are the best methods and what has a high success rate with minimal cost. Our treatment programs on average are about 10 treatment sessions, some less some more but that is the average year to year for 2003–2018.

The Mechanical Physical Therapist, what is their job?

The job of a mechanical physical therapist is similar to the job of your trusted auto mechanic. The trained mechanical therapist is to sort out the problem based on your symptom history and with mechanical testing to determine where your symptoms are coming from, and then determine what kind of activity, stretching or positioning you need to go home with. So, when your car does not start your mechanic has determine is it your battery, is it your alternator, is it your starter? He goes through complex testing of each to determine the cause of the problem. Your mechanical trained therapist has to do the same with you back and sciatica pain. We have to test not only the back, but the hip and the SI joint. Typically, the back pain can fall into four categories as discussed in the previous section. We have to find where the source of the pain/symptoms are coming from. For instance, is the pain in your leg, coming from the back or the leg? We start by taking ROM measurements of your spine into flexion, extension and side gliding. After we do that, we get baseline symptoms of your condition, then do repeated testing to see what will happen to your ROM and symptoms. In a disc bulge, flexion in standing will increase the symptoms into the back and leg as we continue to do more. Once we stop the testing the symptoms will remain elevated from their baseline symptoms. We will then check ROM into extension and most likely it will be restricted more than before, confirming the mechanical diagnosis of disc bulge, worse with flexion-based activities. We would then test extension in standing to see what kind of response. Typically, patient have increased symptoms going into extension, but they are no worse with repetitions. Therefore, we need to unload the patient and perform extension in lying down to see if we can reduce the symptoms. When a client can then perform these activities with no pain and has full ROM, we determine a directional preference and now have a treatment plan. This is an example is for a typical lumbar disc displacement. For a client with a stenosis/ degenerative joint disease/arthritis the testing outcomes would be different as well as the treatment.

Conclusion

If you're reading this and want to discover for yourself the life-changing impact that physical therapy can have, then connect with us at www.fyzical.com to schedule your FYZICAL First appointment. There's no cost and in this session, we work with you to identify where your pain is centered and how we (or our medical partners) can help you with your pain relief. But, as our name implies, FYZICAL Therapy & Balance Centers is so much more. From pain management and balance training to pelvic health and more, our specialists and comprehensive referral network are here to help answer your immediate questions. Head to www.fyzical.com and take the first step to a pain-free life today.

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