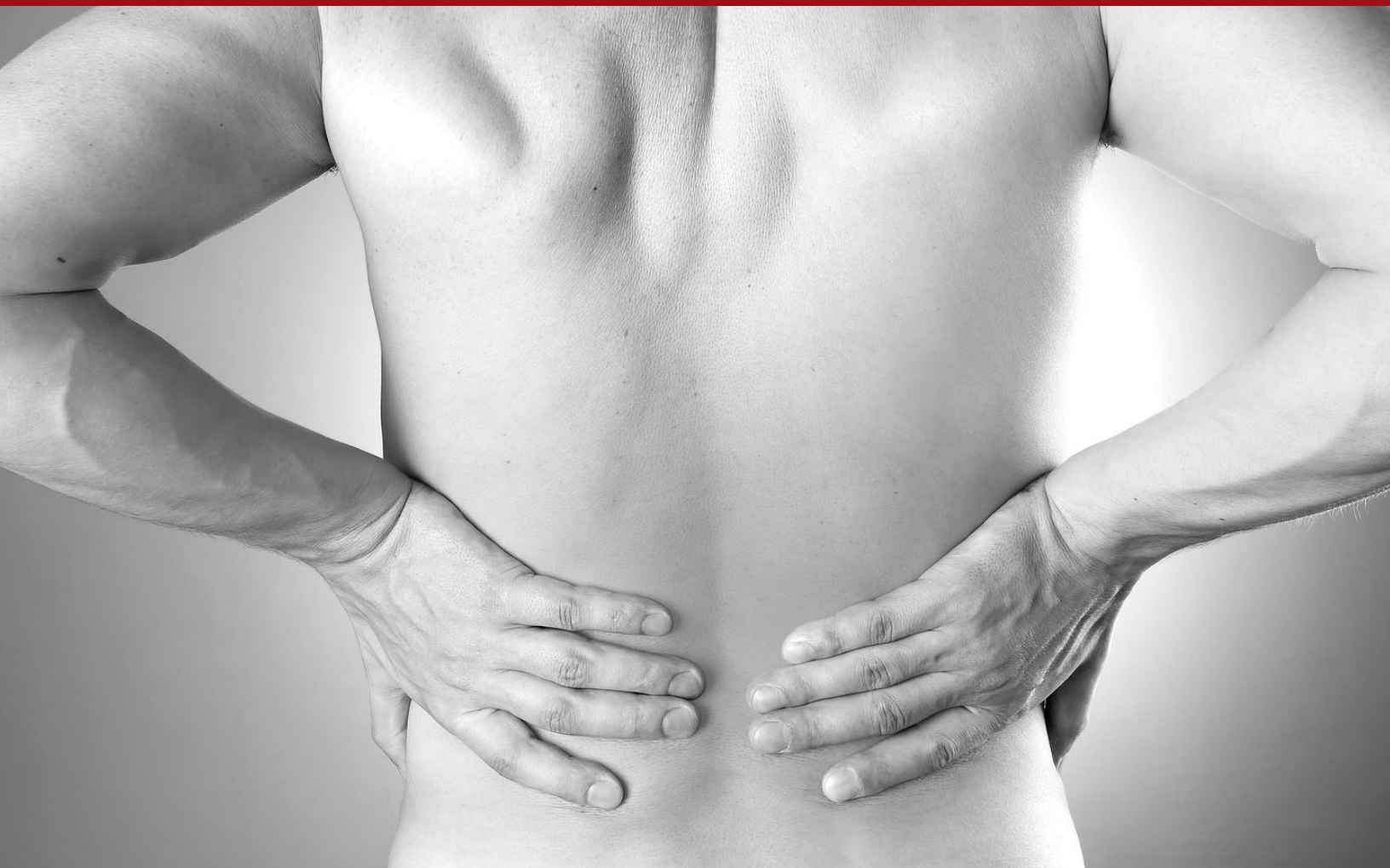


NATURAL AND DRUG-FREE WAYS TO END YOUR BACK PAIN AND SCIATICA



DR. JUSTIN SCHALLMANN

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INTRODUCTION

Thank you for downloading this e-book and I hope that you will find practical and actionable information to help you find hope and healing. My name is Dr. Justin Schallmann, and I have been helping people with low back pain and sciatica find natural and drug-free relief for many years.

Most people cannot appreciate the devastating impact of low back pain and sciatica. This type of pain can disrupt every aspect of life since you lose the ability to do anything normally, especially when movement is involved. It can totally incapacitate you, often confining you to bed.

Many people who have some form of illness or chronic pain that has plagued them for years have had numerous doctors' visits and promises, often without long-term results. Unfortunately there is no magic bullet or pill that will simply heal you! The realization of this has led many people to our door.

The process of getting well requires a doctor that is willing to get to the cause of the illness and/or pain and not just mask the problem with meds; a doctor that understands how to reverse years of degeneration; and lastly, a doctor that can create a success plan incorporating ALL of the fundamental facets of health care, not just one. TRUE healing has occurred when you get your body back to the place it once was (or maybe even better) before you acquired the troubles you have today! Yes, that is possible but it takes hard work and consistency.

The fundamentals of upper cervical care re-empower the nervous system so that you can heal properly. It is truly a "miracle" system when done to its fullest potential but it is not enough to create full health. Full health requires the adoption of a proactive healthcare model; doing what it takes to get healthy and stay healthy, not just treating symptoms. This includes a nervous system free of interference, good nutrition, regular exercise and plenty of rest. This recipe will remove the obstacle of "no hope". It is a success system that heals the ONLY effective way...from the "inside out". This is what we will explore in this e-book.



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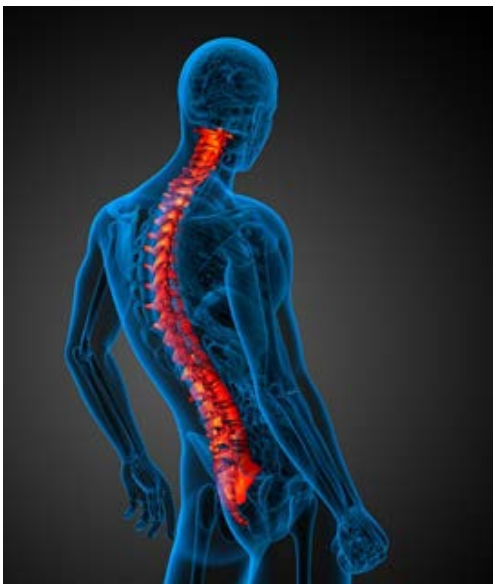
LOW BACK PAIN OVERVIEW

Low Back Pain (LBP) is a problem that is all too common for many Americans. LBP is rapidly becoming a health epidemic globally.

- 80% of adults experience some form of LBP at some point in their lives¹
- LBP is the most common chronic pain condition²
- LBP the #1 cause of disability worldwide³
- On average Americans spend \$50 billion annually on LBP⁴



The typical starting age for LBP is between the 30 and 40 years of age, it happens in a similar manner, often after a physical trauma or overexertion. In some cases it may be a nagging, lingering pain that people overcome or ignore to get through daily living. Unfortunately, too many cases are debilitating and bring life to a screeching halt. LBP can limit not only the ability to make a living or perform strenuous work, but the ability to do the things we love whether it be hobbies, sports, or playing with our children.



LBP is something that not only leaves many people crippled in pain but also severe economic deficit. It can lead to decreased productivity and missed days at work. It has an economic impact of missed work days ranging from \$11.6 to \$12.6 billion and missed work hours totaling \$95.2 to \$96.5 billion. Furthermore LBP costs workers an estimated total of \$190 billion to \$226.3 billion in lost wages.⁵ When evaluating the total economic impact of LBP which totals **\$631 billion annually**, in comparison this is **more than cancer and diabetes** combined.

Low Back Pain is not a technical disease or proper diagnosis. It is often misunderstood as anything to do with the back. There are many components that make up the low back. LBP is typically classified as any pain that is below the ribs and as low as the buttocks.

This region of the body is extremely complex and consists of some of the following: thoracic and lumbar spine, pelvis, hips, intervertebral discs, muscles, ligaments, the

nervous system (consisting of both the spinal cord and nerves), major arteries and veins, organ systems (gastrointestinal system, kidneys, and reproduction organs) just to name a few... Many of these systems are pain generators that can refer to the low back region. It is crucial to know what the cause of LBP is for a proper recovery. The majority of low back pain is usually a mechanical problem involving the spinal bones, intervertebral discs, and/or muscles. LBP is often the cause of a physical trauma, resulting in a strained muscle and inflammation.

Anatomy of the Lower Back

There is often much confusion where LBP actually happens, it is important to have a basic understanding of the anatomy. When referring to the low back, the proper name is the Lumbar Spine consisting of: 5 vertebrae separated by intervertebral discs riding on top of the sacrum. These are all grouped together as the Lumbo-Pelvic-Hip Complex which we will break down in to its individual components.

The lumbar spine is most often the affected area in LBP. Typically the 5 lumbar spinal bones should move freely and painlessly. The primary function of the lumbar spine is to provide stability, and still have a certain range of motion. Like all spinal bones the spinal cord passes through the lumbar, which ends at approximately the second lumbar and is anchored to the sacrum. The nerves that control the majority of lower body function derived from the spinal cord, exit from the lumbar vertebrae as well. The lumbar spine also plays a major role in the muscle groups responsible for posture, support and mobility of the entire spine and hips. And lastly we have the intervertebral discs which allow for movement to take place between each individual bone and the sacrum which is the cornerstone of the pelvis that articulates with the lumbar spine.





The pelvis is often misunderstood and the many joints involved. The sacrum which sits under the lowest lumbar is a large triangular bone that articulates with both the left and right iliums making up the Sacroiliac joint (SI joint). Where the sacrum and ileum (aka Hip bone) meet is often confused as the hip joint; however where the femur (the long bone in the upper leg) fits into the ilium is the hip joint. All of these components together are referred to as the pelvis. The main function of the pelvis is biomechanical and provides the ability to walk, run, and jump. The pelvis has a smaller role of neurological function as the nerves to the lower body intricately pass through/around the pelvis to the legs.

It is important to remember that all of these bony structures are intimately connected by several ligaments, numerous muscles, complex nerves (singular and multiple bundled together), and organs. If something goes wrong to any one of these, a physical pain can be felt. It is crucial to know what type of pain is happening for a proper prognosis.

WHAT GOES WRONG

There are a several types of LBP and we will look at the most common varieties: a mild constant pain, sharp and debilitating pain, and low back pain that also travels to the leg.

Mild Constant Pain

This type of pain typically happens as the result of overexertion or repetitive physical activity, this is the most common occurrence of back pain. This is the classical presentation of a strained muscle. Often there is muscular imbalance in the muscles that properly brace the low back due to the sedentary lifestyle that is becoming more and more standard. Sitting for long periods of time can lead to inactivity of the muscles necessary for proper stabilization of posture and strenuous activity. Often this injury happens after activities like moving heavy objects, followed by extreme tension in the muscles of the back.



The tension is the result of the muscles being stressed beyond their limits resulting in micro-tears which is the definition of a strain. As a result of these micro-tears, the body's natural response is inflammation. If the injury is not properly addressed allowing the muscles to return to the required strength the inflammation will remain for long periods of time. While the inflammation may subside to very low levels once aggravated again it can quickly escalate. This is very common once the primordial injury has occurred and seemingly resolved on its own, only to reoccur exactly the same weeks or months later.

Sharp Debilitating Pain

This type of LBP happens as a distinct event that would be seemingly harmless. Common scenarios include bending over to pick up an object or sneezing and only to be seemingly crippled as a result. Classically this is coupled with a loud noise or pop that is heard at the event. This injury is consistent with problems related to the intervertebral disc. The disc is responsible for maintaining proper motion to the bones

in the spine, but when the bones become fixated they are unable to function properly. The disc needs motion of the bones above and below it to properly hydrate itself, take in nutrients, and expel waste products. The loss of motion between spinal bones eventually leads to degeneration of the disc and the bones.

These types of injuries often occur “all of a sudden” with no forewarning; the disc is a stout structure that can withstand much abuse. The most common occurrence is known as a disc bulge that puts pressure on the spinal cord or nerve root. To sustain a disc injury after a benign movement or event is the last straw on a problem that has been present for a considerable amount of time. The structure of the lumbar spine has been affected and overloaded beyond the capacity that the discs can handle. The sharp pain is typically caused by the disc affecting the space around the spinal nerve root, also the disc itself is rich with neurological pain receptors. Discs are difficult to properly heal once the integrity of the structure has been compromised.



Back Pain That Travels Into The Legs

Many cases of LBP are accompanied by pain that travels into the leg/legs, the formal term is sciatica. The sciatic nerve is a large nerve that is derived from the lumbar plexus which is a web of nerves that come from the 4th & 5th lumbar and the sacrum. The sciatic nerve comes from the posterior (rear) of the spine, passes through a cavity in the pelvis, and then runs down the back of the femur. There are many moving components that can allow for restriction of the sciatic nerve.

Similar to the aforementioned conditions the problem starts with the alignment of





the spinal bones becoming affected. If any of the lumbar, sacrum, or pelvic bones becomes misaligned there is a possibility for the nerve to be affected. Nerves can be affected by misalignments of the bone, constriction by muscles, and pressure from inflammation. The most common adverse effects of a nerve being compressed are pain, numbness, tingling, and/or muscle weakness. The sciatic nerve has a hallmark presentation of tingling in the back of the leg. Due to the fact of the sciatic nerve coming from multiple sources and passing through many openings (both bony and muscular) the sciatic nerve can be easily affected. The bones in the pelvis have much more movement than the spinal bones, and in multiple directions making them susceptible to misalignment.

STANDARD TREATMENT PROTOCOL

There are several treatment methods that are commonly used with varying levels of success. With any treatment method it is critical to identify and address the cause of the issue for a proper prognosis. One of the major problems with treating LBP is that the condition is commonly self-limiting. This means that it can only get to a certain threshold of pain or disability and will resolve itself after a certain amount of time.

In the case of mild constant pain the most common practice is ice to reduce the inflammation. If pain persists the next stage is a muscle relaxer to reduce the discomfort and pain, however it does little to address the cause only mediate the pain. Physical therapy and rehabilitation is also prescribed to address the muscular imbalances and regain proper strength and stability. In severe cases some modalities to reduce pain and inflammation such as electric stimulation may be used. Many of these treatments only address the pain involved with the condition rather than correcting the issue.



Sharp debilitating pain is the type of condition that is most commonly results in surgery over time. The first line of treatment is managing pain through the use of muscle relaxers and/or pain medications. If little or no improvement is noted over time the next treatment is a Cortisone shot. Cortisone is a steroid that is directly injected to the affected area that provides temporary relief. Cortisone can only be used a few times before the injection itself can cause degradation to the joint and surrounding tissues due

to the acidity of the injection. Surgery is all too often the treatment method that is used in this case. Back surgery is intended to relieve the sharp pain. This is usually accomplished by removing a portion of the problematic disc, relieving any direct mechanical force affecting the spinal cord or nerves. There are several other surgeries that are also performed including: injecting the disc with a concrete like solution for stability, and Harrington rods to brace over multiple bones for stability. Back surgery has been shown to be very limited in its efficacy.⁶ Once surgery is performed it permanently alters the proper biomechanics of the body which can lead to future degeneration in other regions of the body.

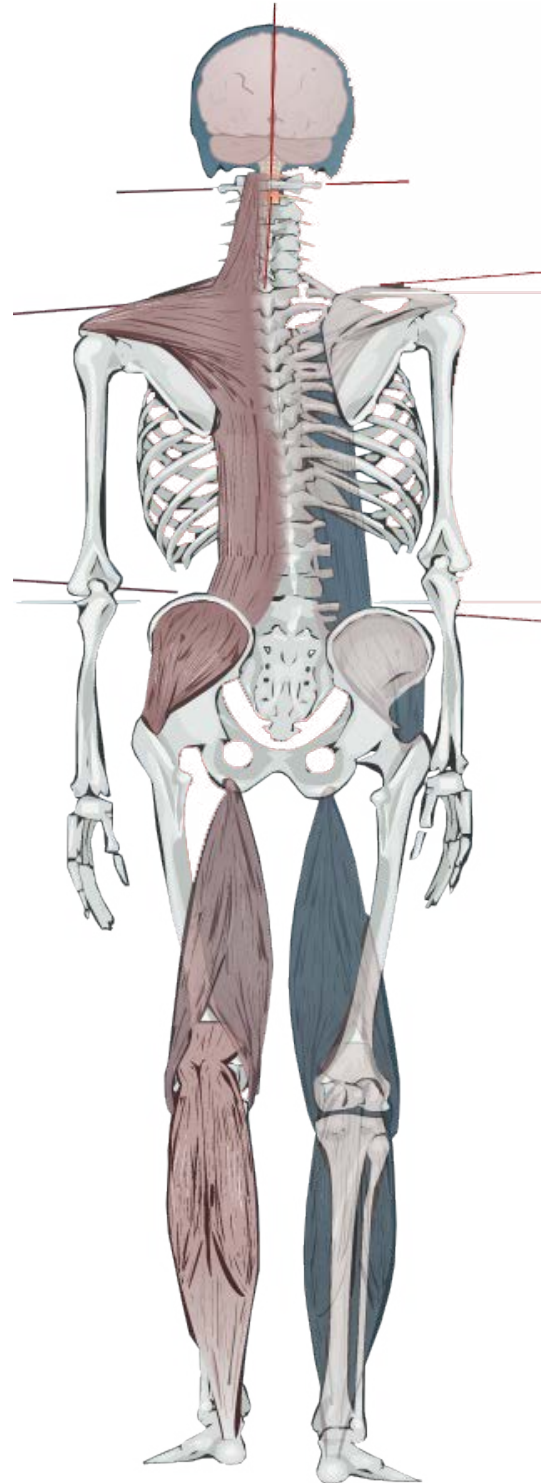
The challenge happening not only for healthcare providers and people suffering from LBP is how to overcome the condition in a timely and affordable manner to get back to living life free from pain.

STARTING AT THE TOP TO UNDERSTAND BACK PAIN

There is no doubt that LBP is serious business, not only to our bodies but also to our wallets. Many companies are now looking for ways to prevent employees from getting hurt to maintain productivity. Part of prevention deals with altering ergonomics of work environments that predispose the body to LBP this includes raising computer screens to eye level, chairs that make the back support itself, and standing work stations. Preventative measures are great to incorporate but they do not correct a preexisting issue, first let us look at the anatomy to understand how a problem can arise.

The spinal cord sits in the center of the spinal column. The spine plays a large role in movement of the entire body and maintaining proper position of the natural spinal curves. The most important role of the spine is to protect the brainstem, spinal cord, and surrounding nerves. The spinal cord is tethered to all the bones in the spine by tiny ligaments called the Dentate Ligaments on each side of the spinal cord. If the spine is not in the normal position it puts abnormal tension on one side of the spinal cord. When the spinal cord is under adverse tension it can cause pain as well as bodily dysfunction.⁷ The single most important area of the spine is the neck.

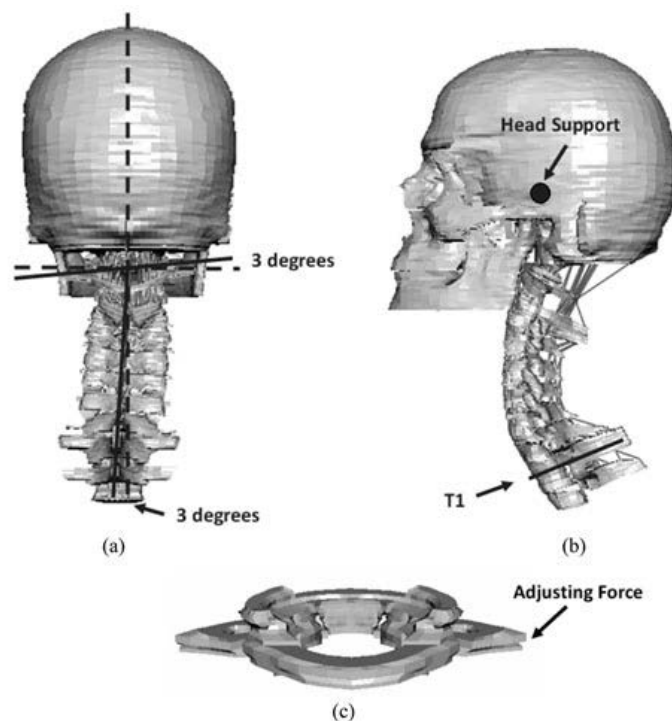
The neck has a great influence on the entire body especially if something goes wrong. Having a problem in the neck can directly affect the low back and pelvis. The area of the spinal cord that is commonly impinged when the spine is out of alignment is called the Spinocerebellar Tract. This tract which is a collection of nerve fibers



that run the length of the spinal cord responsible for controlling the muscles around the pelvis and spine. When one side of the spinal cord is improperly balanced, affecting the spinocerebellar tract causing contraction of the muscles in the pelvis and low back. Often the neck misalignment is painless without symptoms, but if left uncorrected can contribute to larger problem over a long period of time.



A recent study in the Journal of Neurosurgery gives an interesting look at the role of the neck compared to the low back. Researchers found that misalignments of the proper spinal curve in the neck is directly related to the low back and the quality of life in patients.⁸ The average human head weighs approximately 10 pounds, for every 1 inch that the head moves forward from the proper position a strain of 10 lbs is put directly on the low back.⁹ This can affect the muscles, bones and discs of the spine and low back leading to significant issues. Once this issue starts happening it will continue to get progressively worse over time, and lead to the common types of LBP if not properly addressed. A specially trained group of chiropractors are taking a radical approach to helping patients with LBP get relief through a counter intuitive approach.



The Problem is Where?

While many people struggle with LBP on a daily basis and struggle to find relief there is another way that some may consider unconventional. Upper Cervical Chiropractors are looking at the neck and helping people with their low back. While it is not new for anyone with LBP to see a chiropractor, Upper Cervical Chiropractors take a much different approach.

Chiropractors are somewhat synonymous with back pain because of their focus on the spine. Most people seek out a chiropractor only because they are in pain and looking to get their back “popped”, “cracked”, or “put back in”. Chiropractic is not founded on the premise of treating pain, rather the principle of the proper alignment of the spine to allow the brain and body to function normally thus heal itself.



Upper Cervical Chiropractors specialize in the neck bones specifically the Atlas (C1 vertebra), which has one of the most important roles in the body and is the only bone in the spine that does not have any bony structures that keep it fixed in the proper position. The brain which becomes the spinal cord as it exits the skull and passes through the Atlas bone to become the central nervous system (CNS). The CNS is very important as it is responsible for carrying all the information from the brain to the entire body; this includes touch, temperature, and pain just to name a few. If the Atlas bone is not in the proper natural resting position there can be negative affects potentially in several areas of the body including the low back.

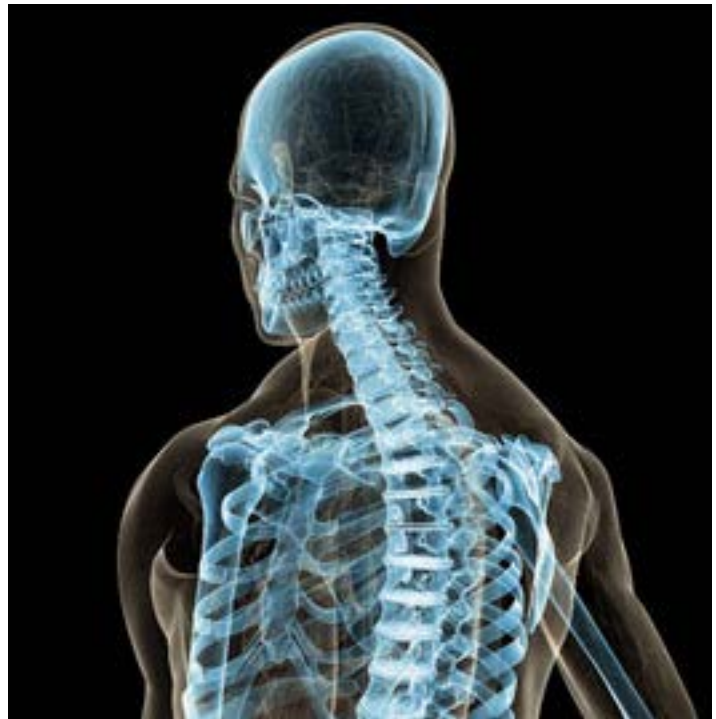
An upper cervical chiropractor looks very carefully at the Atlas bone as it relates to the entire spine, brain, and nervous system. In LBP cases the relationship between the position of the Atlas and pelvis is critical.

There are many important steps, first performing a detailed history to fully understand each individual case and patient's needs. Next precise x-rays are taken of the spine and the position of the Atlas; these are unique x-rays that involve great skill to accurately acquire and to interpret. Once taken exacting measurements allow the exact degree of Atlas misalignment in 3 dimensions to be obtained. Once all the information

is obtained, an upper cervical chiropractic adjustment can be made. Each patient is unique and requires that each adjustment must be tailor made for that particular misalignment. Once the adjustment is given it is carefully monitored to promote the healing process.

When the atlas is restored to the proper position many changes start to take place. First the structural aspect of the spine is back in proper alignment allowing for the appropriate distribution of weight and gravity on the entire spine. Over time spinal curves can return depending on the extent of the prior damage to ligaments. This is crucial in the neck curvature due to the direct correlation to the low back.

Secondly, proper alignment of the bones allows for the normalization of the spinal cord and nerves exiting the spinal bones. This allows for the proper length of the ligaments that suspend the spinal cord, releasing excess tension applied to the cord itself. When the cord tension returns to normal, the spinocerebellar tract is no longer under stress bringing ease to the postural and pelvic muscles.¹⁰ Often this change can be sudden offering rapid relief and in other cases this takes time and consistency.



CONCLUSION



If your roof was leaking one of the first ways you would be able to tell is a large puddle on your floor. To help the puddle you can put a bucket on the floor but ultimately you have to fix the leak not just the effect of the leak. When you have lower back pain frequently it's the same situation.

Many treatments focus on the lower back when the actual cause of the problem may be in the upper spine.

Often times the solution we expect is much different than the one actually needed. In the case of lower back pain it is crucial to have the best treatment available to save time and money and get back to enjoying life. Upper Cervical Chiropractic offers care that is natural and effective. The Atlas plays a vital role in lower back pain and should be carefully evaluated to obtain the best results possible.

To schedule a complimentary low back pain consultation call [425-437-9974](tel:425-437-9974) or just click the button below.

[Schedule a Consultation](#)

Be Well,

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References

1. Vallfors B. Acute, Subacute and Chronic Low Back Pain: Clinical Symptoms, Absenteeism and Working Environment. *Scan J Rehab Med Suppl* 1985; 11: 1-98.
2. National Centers for Health Statistics, Chartbook on Trends in the Health of Americans 2006, Special Feature: Pain. <http://www.cdc.gov/nchs/data/hus/hus06.pdf>.
3. Bain P, Barendregt J, Blyth F, Brooks P, Buchbinder R, Burstein R, Hoy D, March L, Murray C, Smith E, Williams G, Woolf A, Vos T. The global burden of low back pain: estimates from the Global Burden of Disease 2010 study. *Ann Rheum Dis* 2014;73:6 968-974.
4. In Project Briefs: Back Pain Patient Outcomes Assessment Team (BOAT). In MEDTEP Update, Vol. 1 Issue 1, Agency for Health Care Policy and Research.
5. Gaskin DJ, Richard P. Relieving Pain in America: A Blueprint for Transforming Prevention, Care, Education, and Research. Institute of Medicine of the National Academies. 2011;301-315.
6. Nguyen TH, Randolph DC, Talmage J, Succop P, Travis R. . Long-term Outcomes of Lumbar Fusion Among Workers' Compensation Subjects: An Historical Cohort Study. *SPINE* 2011; 36(4): 320-321.
7. Breig A. Adverse Mechanical Tension in the Central Nervous System: An Analysis of Cause and Effect. 1978. Almqvist & Wiksell International, Stockholm, Sweden. Pg. 177.
8. Scheer JK, Tang JA, Smith JS, Acosta FL, Protopsaltis TS, Blondel B, ... & Ames CP. (2013). Cervical spine alignment, sagittal deformity, and clinical implications: a review. *Journal of Neurosurgery: Spine*, 19(2), 141-159.
9. Cailliet R. *Soft Tissue Pain and Disability*. Philadelphia: FA Davis Co.,1977
10. Grostic JD. Dentate Ligament-Cord Distortion Hypothesis. *Chiropr Res J*, 1988; 1(1):47-55.