One of the knocks against Spinal Decompression Therapy is that it supposedly has no Scientific Research backing it up. But is this really true? Although you will undoubtedly find a lot of unsubstantiated claims and outright hype in the field, research on Spinal Decompression Therapy is abundant — and has been for decades.

Do not let anyone dissuade you from trying to avoid surgery via Spinal Decompression Therapy on the basis that there is no research to back it up. This is simply not true!

Here are some shocking statistics about back pain:

- Back pain sends more patients to physicians than any ailment except the common cold (which they can do nothing for anyway), and it accounts for over one fourth of all workman's comp claims.
- One-third of people over the age of 18 have sought treatment for back pain in the past 5 years.
- Back pain is the leading cause of job disability in adults younger than 45 years — and a leading cause for those over 45 as well.
- The healthcare system spends over $100 billion annually on back pain treatments—much of that for CT SCANS, MRI'S (http://www.doctorschierling.com/1/post/2011/12/medical-doctors-overuse-mris-part-i.html), injections, and surgeries, which studies show are frequently premature or unnecessary.
- Speaking of surgeries, there are numerous studies over the past two decades that come to the conclusion that patients should be treated conservatively (chiropractic, therapy, exercises, etc) before any invasive treatment is performed (CORTICOSTEROID INJECTIONS (http://www.doctorschierling.com/1/category/corticosteroid%20injection/1.html), SPINAL SURGERIES.
As many as 4 in 10 imaging studies associated with lower back pain are unnecessary, and as many as two in three epidural steroid injections are avoidable, according to the National Committee for Quality Assurance, an organization that monitors healthcare quality and accredits health plans.

According to the National Institutes of Health (NIH), back pain is the fifth most common reason for hospitalization and the third most common reason for surgery.

BEFORE YOU MOVE ON TO THE SPINAL DECOMPRESSION STUDIES THEMSELVES, CHEW ON THIS FOR A MOMENT.

Yes, some of it is a bit technical, but follow along to the amazing end.

- “Herniation of the Nucleus Pulposus or protrusion of the disc is now firmly established as a pathological mechanism associated with low-back pain and sciatica.”
- “The majority will agree that the treatment of many of these cases by laminectomy and nerve-root decompression [SPINAL SURGERIES](http://www.spinaldecompressionmissouri.com/1/category/spinal%20surgery/1.html) has been disappointing.”
- “Destroy the disc and you destroy spinal mechanics. Therefore, in disc derangement, we are dealing with a dual problem:” (Deranged spinal mechanics AND the effects of spinal nerve-root irritation and compression.)
- Both aspects of “deranged spinal mechanics,” above cause nerve root irritation, AND nerve root compression that can cause pain.
- Patients with “deranged spinal mechanics” should not be surgically managed. [“Deranged spinal mechanics” appears to be synonymous with the chiropractor’s decades-old definition of “SUBLUXATION (http://www.doctorschierling.com/what-is-chiropractic.html)”]. Vertebrates that are either out of place or not moving properly in relationship to each other,
- The normal Nucleus Pulposus is a semifluid substance, being 80% water and, thus, is “incompressible.” [When it is compressed too much, something has to give. Because fluid cannot be compressed (think of hydraulics here), the ligaments that make up the Anulus Fibrosis begin to tear]
- The normal semifluid nucleus transmits forces to the elastic spinal ligamentous structures [The Anulus Fibrosis]. “The critical feature in the disturbance of spinal mechanics and in the production of pain is the effect on the ligamentous structures, caused by the loss of water or nuclear substance following injury or degeneration.”
- “An individual getting up in the morning is taller than when he [she] goes to bed at night.” men by ¾ inch, women by ½ inch. This is because the nucleus loses fluid in an upright gravity environment. This exchange of fluid helps the nucleus and annulus of the disc to remain healthy.
- With age, the cartilaginous end-plate becomes less permeable to fluid, the free exchange of water is suppressed, resulting in “progressive desiccation of the nucleus.”
- Small tears in the annulus allow the nucleus to escape, reducing fluid pressure and altering spinal mechanics, and pain.
- The resiliency of the spine and the motions permitted to it are primarily due to the elastic nature of the annulus fibrosis.
- “The loss of the fluid pressure in the Nucleus Pulposus leads to grave derangements in the physiology of the disc.”
- “The decrease in the vertical height of the intervertebral disc spaces leads to subluxation of the interarticular zygapophysial joints [FACET JOINTS](http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-facet-syndrome.html), in which degenerative changes develop as the result of the abnormal forces acting upon them.” [Interestingly enough, this has been the message of chiropractors for over 100 years. Abnormal Joint Motion causes degeneration, and degeneration causes loss of normal joint motion. Repeat Ad Infinitum].
• “The ligamentous structures of the body are the most sensitive to pain.” [The outer portion of the disc (Anulus Fibrosis) is made up of Ligaments]

• Ligaments can initiate pain from chemical irritants or from “mechanical displacement of the collagenous fibers.” This pain is deep, dull aching and poorly localized. [Again, a definition of Chiropractic Subluxation. By the way, Cold Laser Therapy (http://www.coldlasercur.com/) actually speeds up the body’s rate of collagen production]

• Ligament pain ebbs and wanes, and can be accompanied by “vasovagal responses, such as nausea, sweating, and fall in blood pressure.”

• Disc pain can occur in the absence of direct irritation of the peripheral nerve or nerve root.

• “The Annulus Fibrosus has been shown to possess a rich nerve supply,” allowing it to initiate pain.

• Distortion of the annulus and other spinal ligaments can cause not only local pain, but also sclerotomal pain that radiates down the posterior thigh. This is not true Sciatica (http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-sciatica.html), because there is no irritation to the nerve roots. [It is important to understand this point. It means that one can have "Disc Pain" without any tests such as an MRI being positive.]

• When the lumbar nerve roots exit the intervertebral foramen, they carry with it the spinal dura, doubling their diameter as compared to the cauda equina roots in the subarachnoid space.

• Nerve compression primarily affects large nerve fibers, which are associated with proprioceptive and motor function.

• Pain fibers are smaller, and are more likely to fire in response to chemical (inflammatory) stimulus than to mechanical pressure.

• Disc Herniation (http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-disc-herniations.html) without nerve compression is characterized first by pain and then a deep ache radiating into the leg in a sclerotomal pattern.

• Disc Herniation (http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-disc-herniations.html) with nerve compression is characterized by loss of vibratory sense, muscle weakness, reduced tendon reflexes, and hyperesthesia [increased pain] / pain in a dermatomal pattern. The pain is sharper from chemical inflammation in the region.

All of these points indicate that patients can be placed into two distinct categories:

A) Mechanical Spinal Derangement: [For over a century, Chiropractors have referred to this as "Subluxation (http://www.doctorschierling.com/what-is-chiropractic.html)"] Although there is nerve irritation, there is no actual nerve compression. These patients have "backache and local signs and symptoms of injury to the vertebral ligamentous structures, have radiating pain, deeper in character, extending down one or both extremities. The extent of the radiation is indicative in some measure of the degree of irritation or injury to the ligamentous structures."

B) Nerve Root Compression From Disc Herniation: The "pressure will interrupt nerve conductivity in a precise sequential fashion." The larger nerve fibers conveying proprioception and motor impulses are affected first. The nerve fibers conveying pressure, touch and fast pain are affected second. The nerve fibers conveying temperature sense and deep pain are lost last. These patients usually also have spinal ligamentous irritation that causes local backache and the "radiation of deep pain to the extremities." Surgery to decompress the nerve root will often leave the patient with the ligamentous back pain and deep extremity referred pain radiation, and the patient will often be disappointed.

• “Weakness should be considered a definite emergency and the patient should be operated upon at once. If the motor weakness is left untreated for a considerable time [6-12 months], the strength never returns.”

• 40% of disc herniation patients with nerve compression have only motor signs, they "possessed no deficit in the common sensory modalities of pain, light touch, heat and cold, or sense of position."

Here is the real kicker to this study. What you just read is not new information. This research all comes from a study that was published less than two years ago.

http://www.spinaldecompressionmissouri.com/research.html
after the end of WWII. It comes from the April 1947 issue of *The Journal of Bone and Joint Surgery* — a prestigious peer-reviewed scientific journal that is still in print today. By the way, the *Journal of Bone & Joint Surgery* recently published a study (2011) whose conclusions should not surprise us. They stated that DISC HERNIATIONS [http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-disc-herniations.html] when dealt with in the first six months have better outcomes than discs that are not dealt with quickly.

THE STUDIES

"Serial MRI of 20 patients treated with the decompression table shows in our study up to 90% reduction of subligamentous nucleus herniation in 10 of 14. Some rehydration occurs detected by T2 and proton density signal increase. Torn annulus repair is seen in all."


50 + TRACTION / DISTRACTION / SPINAL DECOMPRESSION ABSTRACTS ([more-research.html](http://www.spinaldecompressionmissouri.com/research.html))

"Eighty-six percent of ruptured intervertebral disc (RID) patients achieved 'good' (50-89% improvement) to 'excellent' (90-100% improvement) results with decompression. Sciatica and back pain were relieved." "Of the FACET SYNDROME [http://www.spinaldecompressionmissouri.com/1/post/2012/01/tell-me-more-about-facet-syndrome.html] patients, 75% obtained 'good' to 'excellent' results with decompression."


50 + TRACTION / DISTRACTION / SPINAL DECOMPRESSION ABSTRACTS ([more-research.html](http://www.spinaldecompressionmissouri.com/research.html))

"Results showed that 86% of the 219 patients who completed the therapy reported immediate resolution of symptoms, while 84% remained pain-free 90 days post-treatment. Physical examination findings showed improvement in 92% of the 219 patients, and remained intact in 89% of these patients 90 days after treatment."


50 + TRACTION / DISTRACTION / SPINAL DECOMPRESSION ABSTRACTS ([more-research.html](http://www.spinaldecompressionmissouri.com/research.html))

"All but two of the patients in the study improved at least 30% or more in the first three weeks."
the outcome measures, this form of decompression reduces symptoms and improves activities of daily living."

Bruce Gundersen, DC, FACO; Michael Henrie, MS II, Josh Christensen, DC. A Clinical Trial on Non-Surgical Spinal Decompression Using Vertebral Axial Distraction Delivered by a Computerized Traction Device. The Academy of Chiropractic Orthopedists, Quarterly Journal of ACO, June 2004

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"Distraction results in disc rehydration, stimulated extracellular matrix gene expression, and increased numbers of protein-expressing cells."


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Spinal Decompression Therapy “...allowed imbibition and complete reduction of the visualized herniation.” “Spinal decompression therapy provided an effective means of treatment for this patient’s symptoms resulting from discal herniation (extrusion) with associated impingement of the adjacent nerve root.”

"MR imaging proved to be a useful and non-invasive technique in monitoring the efficacy of decompression therapy as it applies to this case."

"Decompression of the spine proved to be superior to the other forms of conservative care when applied to our patient. The patients’ results were both subjectively favorable and objectively quantified."


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OVER FIFTY SCIENTIFIC STUDIES ON DECOMPRESSION / DISTRACTION / TRACTION (/more-research.html)

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GENERAL INFORMATION