

Case Studies

for Non-Invasive Spinal Decompression
for Low Back and
Cervical Pain



HiDT
DECOMPRESSION THERAPY

Hill DT Cervical Decompression

#1 **18-year-old male involved in a motor vehicle accident in which his SUV was totaled suffering from significant neck pain, headaches, and bilateral parathesia.**

The above captioned patient complained of neck pain, headaches, and numbness and tingling in his arms and hands. Upon examination, he had a positive cervical compression test, restricted ROM in the cervical spine with significant trigger point pain identified at multiple sites in the cervical and upper thoracic spine. Cervical x-rays were ordered and revealed a reversal of the normal cervical lordosis, paradoxical motion at the posterior motor units of C1, C3, C5, C6 and C7 in flexion and at C1, C3, C5 and C6 in extension. Cervical subluxation was confirmed through a correlation of motion palpation, x-ray and computer assisted motion analysis utilizing an adjusting instrument. Pain indices were noted at an 8-9 out of 10 for neck pain and a 5-6 out of 10 for headaches. The bilateral numbness was noted as intermittent and mild to slight.

The patient was recommended a 6-8 week treatment plan of chiropractic adjustment or CMT, exercise therapy or muscle rehab, and 8-10 visits of non-surgical axial spinal decompression using the Hill DT Decompression Table.

All of his symptoms abated within 4-6 weeks. Due to the significant level of improvement, a follow-up lateral cervical film was ordered to determine if a cervical posture pump or similar device should be recommended as ongoing support for postural improvement of the loss of the cervical curve. Upon re-evaluation it was noted however, that the patient had fully recovered from his symptoms. His ROM was normal, he had no positive orthopedic or neurological signs, and on x-ray his cervical spine had returned to the normal lordosis. Pre and post cervical films confirm the patient's structural correction.

Summary

The Hill DT Decompression table played a significant role in the patient's treatment plan. It is my opinion that using a dual treatment program at each decompression visit of protocol 2 for 15 minutes at 12 pounds and protocol 3 for 7 minutes at 10 pounds was key to the patient's recovery.

Case study authored by Timothy Burkhart, DC, BCIM



Pre -Treatment



Post -Treatment

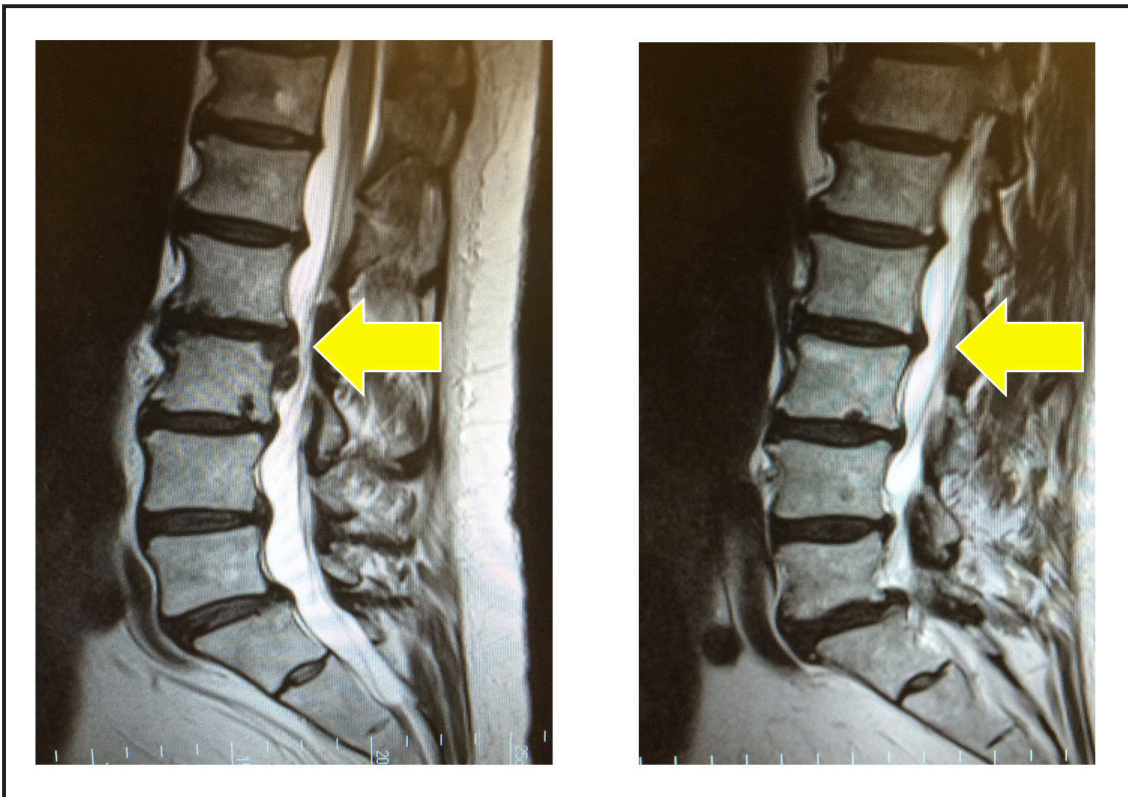
Case Study #1

Hill DT Lumbar Decompression

#2 A 57 year old male patient involved in a work related injury from repetitive lifting. The patient presented with severe mid to lower back pain and pain down the left leg.

MRI confirmed a significant disc herniation at L2/L3 and was recommended surgery. However, the patient declined to do the spinal surgery and sought spinal decompression therapy as their first option. Pain reduced from an 8 out of 10 to a 4 out of 10 in 12 visits.

After 24 visits the patient returned to work with an average pain level of 1-2. After 36 decompression treatments and several months between MRI studies a second MRI was obtained and revealed a complete regression of the previously diagnosed disc herniation at L2/L3. The patient returned to work pain free and required no surgery or further follow-up.



MRI SPINE LUMBAR WITHOUT CONTRAST Status: Final result
11/26/2014 10:10 PM

Results

Patient Demographics

Patient Name	Sex	DOB	Address	Contact Numbers
Engelshoven, Thomas Brian	Male	1/27/1953	5293 BURGIS AVE SE KENTWOOD MI 49508	616-338-5267 (Home Phone) *Preferred* 616-802-4055 (Mobile) 616-802-4055 (Work Phone)

Primary phone: 616-338-5267

PACS Images
Show images for MRI SP

Study Result

Examination: MRI Spine

Examination date: Nov 2014
Clinical History: pain s
Technique: MR study of
Comparison Exam: S027

Findings:
There is abnormal alignment on S1. There is a scoliotic curve of the spine at the L2-L3 level. Between L2-L3 level, there is a small residual extruded component is seen in the left lateral recess but this is somewhat equivocal. No neural compromise is present.
Degenerative marrow signal segment or possibly infection. Correlate clinically. Recent surgery intervention at the L3-L4 level is provided. Flexion and extension views are recommended. The opus is unremarkable.

L1-2: Diffuse disc bulge with mild central or foraminal stenosis.
L2-3: Interval regression of the large disc herniation seen previously extruding into the left lateral recess of L2-L3. A small residual extruded component is seen in the left lateral recess but this is somewhat equivocal. No neural compromise is present.
L3-4: Extensive disc fluid, MKI surrounding marrow edema and fatty endplate change. Edema extends into the facet joints more on the left than right. Severe left and mild right foraminal stenosis.
L4-5: Disc desiccation and diffuse disc bulge with moderate left and severe right foraminal stenosis.
L5-S1: Posterior disc unroofing and crowding of the inferior foraminal worse on the right than left.

Impression:
1. Severe degenerative disease with degenerative scoliosis.
2. Interval regression of the L2-L3 level disc herniation seen previously.
3. Extensive fluid signal at the L3-L4 interspace. If there is a history of prior recent intervention this may be postoperative appearance however no history of such intervention is provided and concern for infection is raised. Correlate clinically.
4. Critical results were reported to significant findings live at the time of dictation.

Dictated By: DeLano, Mark Charles MD, 11/26/14 15:42
Images and Interpretation Reviewed and Electronically Signed By: DeLano, Mark Charles MD, 11/26/14 15:56
Transcriptionist, Technologist: RJJ
Resident:
BY: ... [Signature] ...

Referred Provider
BEGROW, LEE P

Exam Information	Study Status	Begin Time	End Time
Performed Procedure MRI SPINE LUMBAR WITHOUT CONTRAST	Final	N/A	N/A

Technologist	Transcriptionist	Assigned Physician(s)	Assigned Pool(s)
N/A	N/A	N/A	N/A

Verification Information

Signed By Mark C Delano, MD	Signed On Nov 26, 2014
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Imaging CC Recipients

L2-3: Interval regression of the large disc herniation seen previously extruding into the left lateral recess of L2-L3. No neural compromise is present.

Summary

Results of decompression was verified by MRI.

Case study authored by Timothy Burkhart, DC, BCIM

Case Study #2

Hill DT Cervical Decompression

#3

A 50 year old female presented in my office with the chief complaints of: neck pain, dizziness, headache and painful arms, which have been worsening. Her past treatments have included medication and physiotherapy. The significant examination findings before and after treatment were as follows.

Before Treatment

Her pain scale was 6 of 10 and her Oswestry Index Questionnaire score was 24 of 50. All cervical ROM were within normal limits except extension with significant bilateral trigger point pain in the cervical spine. She had a positive cervical distraction test and positive Triad of Dejerene test. Reflex testing included: triceps (rt) grade 2, triceps (lt) grade 1, biceps (b) grade 1 and brachioradialis (b) grade 1. Sensory (2 point discrimination): C7 (lt) decreased, T1 (rt) decreased, T2 (rt) decreased. Motor strength was within normal limits. She presented with an MRI which revealed: C6-7 broad based disc protrusion, mild central canal stenosis and dorsal osteophyte formation. A full series of cervical x-rays were taken which revealed: decreased disc space at C6-7, C6 posterior inferior osteophyte and C7 posterior superior osteophyte formation.

After Treatment

Oswestry Index Questionnaire score was 7 of 50, Reflex: All reflexes grade 2. Sensory: within normal limits. Motor: All within normal limits. Cervical ROM: All within normal limits.

Treatment: An 8 week treatment protocol included: heat (10 minutes minimum), axial non-surgical spinal decompression using the Hill DT Decompression table, ice (10 minutes minimum), chiropractic adjustments or CMT (as needed), nutritional supplements, and home exercises. Spinal decompression protocol varied from 10 to 15 minutes, using programs 2 and 1, at a 6 degree angle (which created the best results) and weight of 8 to 10 lbs. Her symptoms continued with minimal changes until the 10th treatment when her pain dropped instantaneously to 0 of 10 with decreasing stiffness thereafter.



Summary

This patient was discharged with stretches and exercise to be done daily and strict adherence to limited lifting above the shoulders for the next year. Increasing weight without developing pain was encouraged. Spinal decompression maintenance treatment is recommended if needed. Her progress, although limited during the first half of the treatment, significantly improved in the later half, indicating the complexity of the condition. At discharge, this patient was experiencing no pain and had resumed most of her activities of daily living with the intent of resuming all activities within a few years as strength increases. Her outcome was increased as a result of the Hill DT Spinal Decompression table, the treatment plan and the patient's dedication and strict adherence to the protocol guidelines.

Case study authored by Donald Geisler, DC

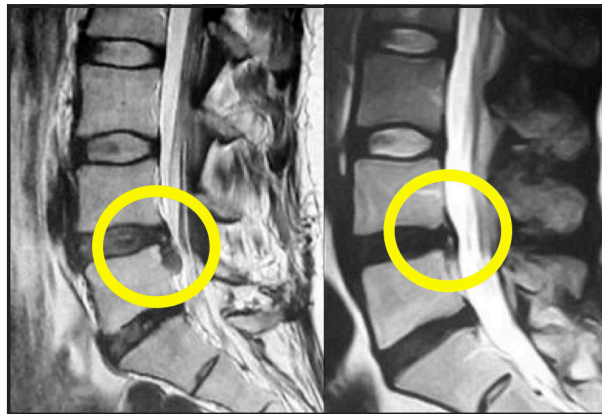
Case Study #3

Hill DT Lumbar Decompression

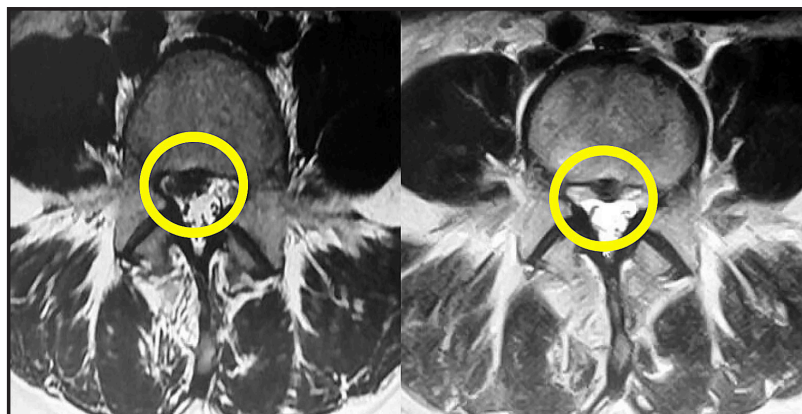
#4

42 year old female teacher presented to clinic in a wheelchair with history of recurrent Low Back Pain. She underwent discectomy L5-S1 2 years prior to her visit. Now she was suffering from L4-5 Disc prolapse with severe pain radiating into her right leg.

HillDT + Physiotherapy treatment showed astonishing results; got rid of her wheelchair within 4-5 sessions and her pain went from 9 to nearly zero in about 10 sessions. She was able to walk and resume her duty after 12 sessions. Full recovery within 24 visits.



Case study authored by
Hani Azzouni, MD



#5

A 40 year old male who was suffering from low back pain for 2 years and sciatica for 6 months. Presented to clinic in May 2014 with severe pain, unable to stand or sit for more than 3 minutes & weak extensors of big toe with weak dorsiflexion of foot.

He received 22 sessions of HillDT with 1-2 co-modality on each session for 6-8 weeks.

His pain and claudication started to reduce after 10-12 sessions of therapy. On follow up after 6 months, during which the patient only continued 2-3 swimming sessions per week, he showed remarkable improvement from his initial condition to pain-free state.

Case study authored by
Hani Azzouni, MD

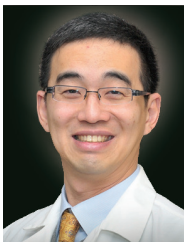


Hearing
from the

Doctors

“Treating patients in my Neurology practice with the HillDT spinal decompression system has improved my outcomes dramatically. Patients are consistently getting better and love the fact that the treatment is natural and drug free. Most importantly, it is the best treatment to promote healing of the disc and facets. Thank you HillDT!!!”

Alexander Smirnoff, M.D.



“As a conservative treatment option Non-Operative Decompression with the Hill DT has improved outcomes for procedures like epidural injections and has reduced or eliminated our patients need for oral pain medication.”

Hsiu-Hsien (Tom) Ling, M.D.

“The HillDT Table has been a tremendous addition to my practice. We are seeing dramatic improvement in disc herniation cases, including some that I thought would need surgery. We also see great response with headaches associated with neck pain and low back pain associated with severe arthritis.”

David Teitelbaum, D.O.



“Our Outcome Assessments show we are helping herniated and degenerated disc patients at an awesome success rate. The HillDT Spinal Decompression table gets results and I can’t imagine practicing without it.”

Randy Reed, D.C., C.C.S.P.

“Since integrating decompression into our practice, our patient results have been amazing. Our clinical outcomes consistently provide significant patient improvement. This equipment works... the patient’s results speak for themselves.”

Timothy Burkhart, D.C., B.C.I.M., D.A.A.I.M.



Decompression Research

Scientific research proves that decompression works.

Chiropractic Economics (Vol.61, No. 4, March 13, 2015)

Measured Success, Evaluating the Effectiveness of Spinal Decompression Therapy

CONCLUSION: Of 815 patients receiving spinal decompression therapy a random selection revealed a 91% success rate” Davenport University 2015.

Disc Distraction Shows Evidence of Regenerative Potential in Degenerated Intervertebral Discs, SPINE 2006

Disc repair fundamentally depends on the stage of disc degeneration

CONCLUSION: This study with respect to previous reports, confirms that disc distraction enhances hydration in the degenerated disc and may improve disc nutrition via the vertebral endplates. Thorsten Guehring, MD, et al; Department of Orthopedic Surgery, University of Heidelberg, Germany. SPINE (Vol. 31, Number 15, 2006)

Journal of Neurologic Research (Vol. 29, No. 3, March 2003)

Efficacy of Vertebral Axial Decompression on Chronic Low Back Pain

CONCLUSION: This 144 patient study showed 76% achieved remission of pain. Except in emergent conditions, Vertebral Axial Decompression should be used on all conditions before surgery is undertaken.

Orthopedic Technology Review (2003; 6 (5))

Surgical Alternatives: Spinal Decompression

CONCLUSION: 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. It was shown to be effective for herniated and degenerative discs.

American Journal of Pain Management (Vol. 7, No.2, April 1997)

Decompression, Reduction, and Stabilization of the Lumbar Spine: A Cost Effective Treatment

CONCLUSION: Eighty six percent of herniated intervertebral disc patients achieved ‘good’ (50-89% improvement) to ‘excellent’ (90-100% improvement) results with decompression. Sciatica and back pain were relieved. Facet arthrosis patients, 75% obtained ‘good’ to ‘excellent’ results with decompression.

Decompression Therapy has lasting results.

Archives of Physical Medicine and Rehabilitation Medicine February 2008

Protocols for Patients with Activity – Limiting Low Back Pain

A total of 296 patients with low back pain and evidence of a degenerative and or herniated disc at 1 or more levels were in this study. 8 Week course of treatment consisting of 5, 30 minute sessions of Decompression Therapy per week for 4 weeks and 1, 30 minute session for a week for 4 additional weeks.

CONCLUSION: Patients showed continued statistical improvement in both pain scores and functional movement scores after their treatment programs were completed for 180 days post-treatment.

Anesthesiology News, (Vol. 29, No. 3, March 2003)

Vertebral Axial Decompression Reduces Chronic Discogenic Low Back Pain-4 Year Study

CONCLUSION: Four year follow-up after Decompression method shows a sustained 86% reduction in pain and that 91% of patients had resumed their normal activities and has remained pain free.

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