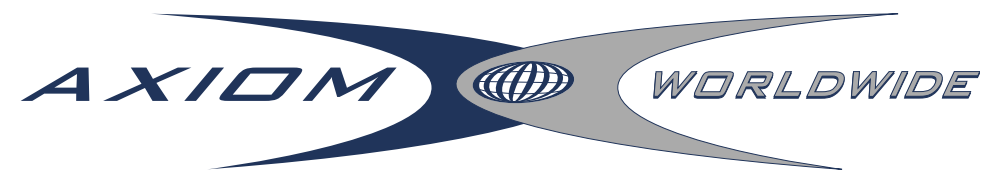


# PILOT: Effectiveness & Safety of Non-Surgical Spinal Decompression



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## ABSTRACT

**OBJECTIVE:** Prospective, multicenter, phase II, non-randomized, clinical study to evaluate the effectiveness and safety of the Axiom Worldwide DRX9000™ for active treatment of chronic LBP utilizing a standardized clinical research multimodal protocol.

**METHODS:** 20 patients with chronic LBP based on a diagnosis of musculoskeletal or mechanical LBP, herniated discs, bulging or protruding discs, degenerative disc, pain from failed back surgery more than 6 months previously, posterior facet syndrome or sciatica underwent a series of 20 DRX™ treatments (28 mins each) for 6 weeks with 5 sessions the first week tapering to 1 session/wk. Treatment multimodal protocol included ice after DRX™ sessions, lumbar stretching exercises, and adjunct analgesics as required. Assessments of pain, analgesic use, functionality, satisfaction, activities of daily living and safety were collected through examinations, questionnaires and patient diaries.

**RESULTS:** 18 evaluable subjects (33.3% female, 83.3% white, mean age 46.6, 77.8% employed) had mean pain score 6.4 on a 0 to 10 scale (0=no pain 10=worst pain) prior to first DRX™ treatment that decreased to 0.8 after last DRX™ treatment. 88.9% of patients (16 out of 18) reported an improvement in back pain, and better function as measured by activities of daily living. On a 0 to 10 scale (0=Not satisfied 10=Very satisfied) patients rated the DRX9000 an 8.1. No patient required any invasive therapies (e.g., epidural injections, surgery).

**CONCLUSION:** Overall, patients' pain improved after DRX™ treatment, requiring fewer analgesics, with better function. There were no safety issues identified with the multimodal treatment routine. Non-treatment or control groups were not included making efficacy outcome versus placebo or spontaneous recovery difficult to determine. Randomized double-blinded or comparative long-term outcome trials are needed to further prove the efficacy of the DRX9000™ non-surgical spinal decompression system for the routine treatment of chronic LBP.

## BACKGROUND

- Paucity of literature on benefits of non-surgical spinal decompression over other non-surgical treatments
- Previous studies are poorly designed
- Results are descriptive in nature
- Efficacy versus placebo or spontaneous recovery difficult to determine
- Over 1,200 DRX9000™ in use today

## MATERIALS AND METHODS

METHODS
<ul style="list-style-type: none"> <li>• Prospective, multi-center, phase II, non-randomized clinical trial</li> <li>• 3 free-standing clinics (2 MDs and 1 DC)</li> <li>• Diagnosis: Low back pain &gt; 12 weeks</li> <li>• Outcome measures assessed:                             <ul style="list-style-type: none"> <li>- Daily Pain Diary</li> <li>- Verbal Rating Scale (VRS)</li> <li>- Oswestry Pain Questionnaire</li> <li>- Adverse Events</li> <li>- Satisfaction Survey</li> </ul> </li> </ul>

TREATMENT PROTOCOL
<ul style="list-style-type: none"> <li>• DRX9000™ sessions                             <ul style="list-style-type: none"> <li>- 28-minute sessions for 6 weeks</li> <li>- Total of 20 treatments                                     <ul style="list-style-type: none"> <li>• 5 sessions week 1 &amp; 2</li> <li>• 3 sessions week 3 &amp; 4</li> <li>• 2 sessions week 5 &amp; 6</li> </ul> </li> </ul> </li> <li>• Additional Therapy                             <ul style="list-style-type: none"> <li>- Ice therapy post DRX™</li> <li>- Back exercises after week 2</li> </ul> </li> </ul>

## RESULTS

DEMOGRAPHICS			
Total Number of Subjects = 18			
Male	66.7%	Mean Age	46.6 yrs
LBP Symptom Duration (mean)	526 weeks	Mean Height	175 cm
Employed	77.8%	Mean Weight	102 kg
Retired	16.6%	White	83.3%
Other	5.6%	Hispanic	16.7%

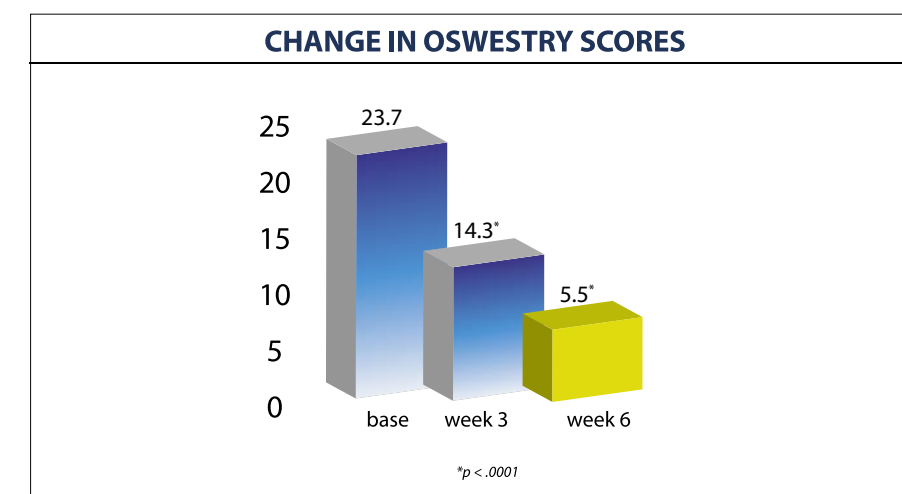
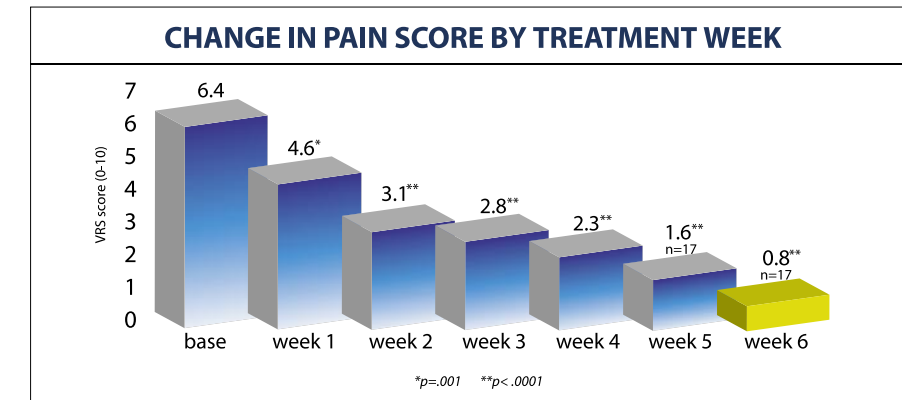
FAILED THERAPY PRIOR TO DRX9000™			
Procedure	#	Procedure	#
Chiropractic	16	TENS	5
Muscle Stimulation	10	Acupuncture	3
Ice Therapy	9	Lumbar support	3
Massage Therapy	9	Epidural Injections	3
Exercise	6	Facet Injections	1
Heat	5	Ultrasound	1
Physical Therapy	5	Other Decompressive Therapy	1

SUMMARY OF LOW BACK PAIN			
DIAGNOSIS		LOCATION	
Bulging/Protruding Disc	15	L1-L2	1
Degenerative Disc	8	L2-L3	3
Herniated Disc	6	L3-L4	4
Posterior Facet Syndrome	2	L4-L5	14
Failed Back Surgery	1	L5-S1	12

ADVERSE EVENTS			
Adverse Event	Related to device	Adverse Event	Related to device
Neck Pain	Possibly	Shoulder Pain	No
Head Cold (2)	No	LBP/flu-like symptoms	No
Sinus headache (2)	No	Vertigo	No
Sinus infection	No	Adrenal Insufficiency	No

Disclaimer: This study was funded by Axiom Worldwide, LLC.

## RESULTS



SATISFACTION SURVEY			
Satisfaction by Week		Would you recommend DRX9000™ to anyone else?	
Week 3	Week 6	Yes	No
7.6	8.1	88.9%	11.1%

## CONCLUSION

- A 6-week course of 20 DRX9000™ treatments significantly reduced the severity of chronic LBP in 89% (16 of 18) of treated patients from 6.4 to 3.1 after 2 weeks and to only 0.8 (scale 0-10) after completion of treatment
- Oswestry Disability scores improved from 23.7 to only 5.5 at end of therapy
- Adjunctive pain medication consumption was decreased by DRX9000™ treatments
- No significant adverse events or safety issues resulted from DRX9000™ treatments
- The DRX9000™ shows great promise in treating chronic LBP arising from multiple causes
- Comparative outcome trials utilizing a set of standardized and validated multiple outcome variables, as was utilized in this study, are being planned to document the value of DRX9000™ non-surgical spinal decompression system in routine treatment of chronic LBP