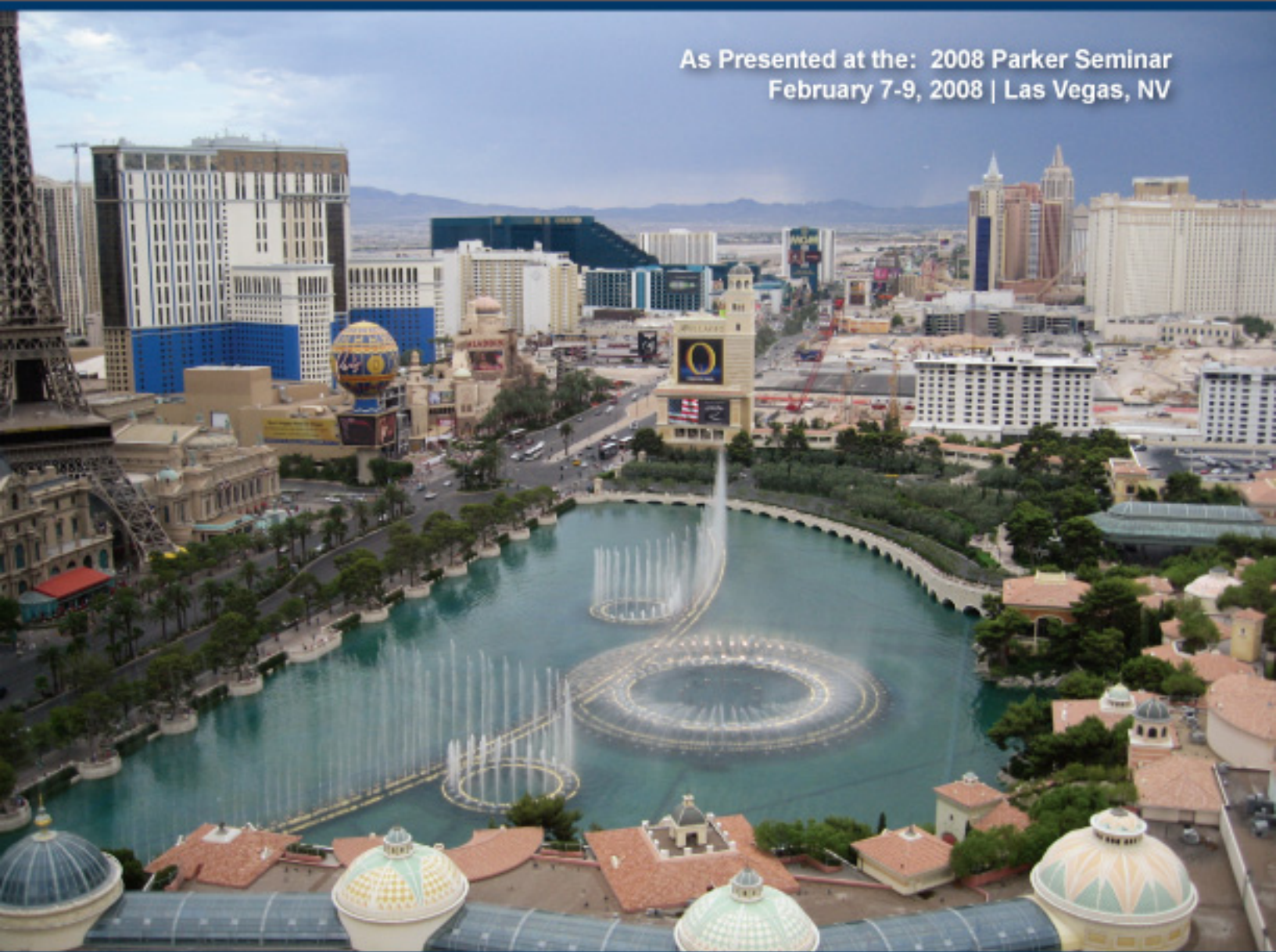


# Treatment of 94 Outpatients with Chronic Discogenic Low Back Pain with the DRX9000™ : A Retrospective Chart Review

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## ABSTRACT

**BACKGROUND:** This study's goal was a retrospective chart audit of 100 outpatients with discogenic low back pain (LBP) lasting more than 12 weeks treated with a 2-month course of motorized spinal decompression via the DRX9000 (Axiom Worldwide, Tampa, FL, U.S.A.).

**METHODS:** Patients at a convenience sample of four clinics received 30-minute DRX9000 sessions daily for the first 2 weeks tapering to 1 session/week. Treatment protocol included lumbar stretching, myofascial release, or heat prior to treatment, with ice and/or muscle stimulation afterwards. Primary outcome was verbal numerical pain intensity rating (NRS) 0 to 10 before and after the 8-week treatment.

**RESULTS:** Of the 100 initial subjects, three withdrew their protected health information, and three were excluded because their LBP duration was less than 12 weeks. The remaining 94 subjects (63% female, 95% white, age = 55 (SD 16) year, 52% employed, 41% retired, LBP median duration of 260 weeks) had diagnoses of herniated disc (73% of patients), degenerative disc disease (68%), or both (27%). Mean NRS equaled 6.05 (SD 2.3) at presentation and decreased significantly to 0.89 (SD 1.15) at end of 8-week treatment ( $P < 0.0001$ ). Analgesic use also appeared to decrease (charts with data = 20) and Activities of Daily Living improved (charts with data = 38). Follow-up (mean 31 weeks) on 29/94 patients reported mean 83% LBP improvement, NRS of 1.7 (SD 1.15), and satisfaction of 8.55/10 (median 9).

**CONCLUSIONS:** This retrospective chart audit provides preliminary data that chronic LBP may improve with DRX9000 spinal decompression. Randomized double-blind trials are needed to measure the efficacy of such systems.

## RESULTS

**SPINAL DECOMPRESSION PARAMETERS USED FOR TREATMENT**

	Mean	Low	High
Initial weights (lb)	57	17	100
Final weights (lb)	74	20	145

Table 1

## RESULTS

**PATIENTS STUDIED AT EACH SITE AND CHARACTERISTICS OF CLINICS**

	Clinic R	Clinic O	Clinic M	Clinic S
Number of patients studied	33	10	20	31
Total number of patients seen by clinic/year	850	6500	1000	New clinic
Annual DRX9000 case volume	212	300	800	New clinic
Year DRX9000 installed	2003	2002	2004	2005

Table 2

**DEMOGRAPHICS OF COHORT**

Mean age (years)	55 (SD 16)
Mean height (inches)	68 (SD 4)
Mean weight (kg)	90 (SD 20)
Mean BMI	30 (SD 7)
% female	63
% white	95
% African American	2
% Hispanic	2
% Asian	1
<b>Employment status</b>	
% employed	52
% retired	41
% other (eg, homemaker)	6

BMI, body mass index.

Table 3

**CLINICAL CHARACTERISTICS OF PATIENTS**

Primary Diagnosis	%
Herniated disc	73
Degenerative disc disease	68
Herniated disc and degenerative disc disease	27
Sciatica	12

Table 4

**MRI FINDINGS**

<b>Disc most involved (%)</b>	
T12-L1	2
L1-L2	1
L2-L3	8
L3-L4	14
L4-L5	39
L5-S1	36
Mean number of levels with degenerative changes	2.4
<b>Disc findings (%)</b>	
Degenerative changes	28
Bulge	37
Protrusion	29
Extrusion	5
<b>Other findings (%)</b>	
Neural foramen compromise	23
Nerve root compression /impingement	9
Central stenosis	15
Facet arthropathy	16
Endplate changes	5
Disc space narrowing	14
Annular tear	4

Table 5

Disclosure: This study was partially funded by Axiom Worldwide.

**ANALGESIC USE**

Analgesics	At time of Initial Presentation	After Last Treatment
Charts with data	n = 94*	n = 20
No medication (%)	43	75
NSAIDs (%)	39	15
Opioids (%)	24	10
Steroids (%)	3	5
Muscle relaxants (%)	13	5
Gabapentin (%)	3	0

\* Some patients are on more than one medication, so totals add up to more than 100%. NSAIDs, Non steroidal anti-inflammatory drugs.

Table 6

**ACTIVITIES OF DAILY LIVING**

Back Pain Interfered with ADL	At Time of Initial Presentation	After Last DRX Treatment
Charts with data	n = 85	n = 38
Bathing (%)	23	0
Dressing (%)	23	0
Transferring (%)	0	0
Walking (%)	52	1
Sitting (%)	50	2
Standing (%)	53	3
Sleep (%)	21	0
Other (%)	61	2

ADL, Activities of Daily Living; DRX, DRX9000 (Axiom Worldwide).

Table 7

**PAIN VRS**

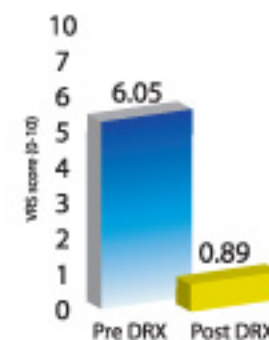


Table 8

**OSWESTRY LBP DISABILITY INDEX**

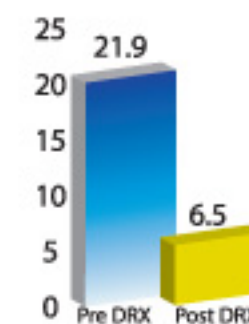


Table 9



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