

# Spinal Manipulation For Symptomatic Lumbar Disc Herniation

*Evidence Since AHCPR*

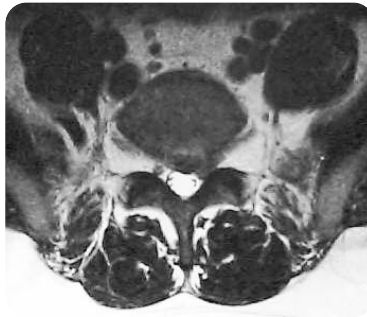
The Agency for Health Care Policy and Research guidelines on the management of acute low back pain were perhaps the most objective look at the management of this disorder in the past several decades. There has been, however, almost a decade of newer research into the huge problem of back disorders, and some of the AHCPR recommendations have been functionally changed by new evidence. One of the areas where such evidence has changed thinking is that of patients with sciatica secondary to lumbar disc herniation.

Prior to the early 1990's, only a few clinical trials examined the use of spinal manipulation for sciatica or radicular pain from disc herniation. While those trials favored this treatment, their methodology was poor leaving more questions than answers about their validity. Interestingly, however, no trial had suggested that spinal manipulation was ineffective in this patient population. More recently, a well-designed clinical trial has helped to clarify this issue.<sup>1</sup> Spinal manipulation was compared to chemonucleolysis in forty patients with sciatic pain secondary to disc herniation, which was confirmed by MRI or CT. Chemonucleolysis was chosen as

the comparative treatment as it has been studied in placebo controlled trials and found to be effective. It is also often used as a pre-surgical alternative.

Outcome measures included lumbar range of motion, straight leg raising, the Roland Disability Questionnaire, and back and leg pain scales. Outcomes were reassessed at 2 weeks, 6 weeks, and 12 months. Patients receiving manipulation had significant reductions in back pain levels at both 2 and 6 weeks, while no change occurred with chemonucleolysis. Both groups had significant reductions in leg pain at all intervals, but the trend was for slightly greater improvement with manipulation. Disability scales demonstrated significant improvement with manipulation at 2 weeks and further improvement by 6 weeks, but not with chemonucleolysis. Both groups demonstrated significant improvement on all outcome measures at 12 months.

Spinal manipulation resulted in superior outcomes in the first 6 weeks of treatment. The reduction in disability scores was perhaps the most significant as disability



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## BRONSTON CHIROPRACTIC CLINICS

Leo J. Bronston, DC, FACO, DABCN  
Onalaska  
608-781-2225

Bryan Varichak, DC  
Sparta  
608-269-8145

William Sterba, DC  
LaCrosse  
608-782-2225

Paul Morovits, DC  
Holmen  
608-526-3343

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[continued from other side]

costs have been found to be greater than treatment costs. The treatment costs were almost 4 times greater for the 20 patients receiving chemonucleolysis compared to the 20 receiving manipulation.

## Outcomes with Lumbar Disc Herniation Comparison of Two Treatments

	Initial	2 wks	6 wks	12 mos
<b>Leg Pain</b>				
SM	4.00/10	3.20*	2.68*	2.13*
CNL	3.65/10	3.26*	2.72*	2.27*
<b>Back Pain</b>				
SM	3.79/10	3.16*	2.68*	2.27*
CNL	4.05/10	4.00	3.58	2.87*
<b>Disability Scale</b>				
SM	11.90	10.15*	7.79*	5.87*
CNL	11.95	13.90	11.00	7.27*

SM – Spinal manipulation

CNL – Chemonucleolysis

(\*) Denotes statistically significant change

No complications occurred with spinal manipulation. This is consistent with the prior trials that have examined over 2600 total patients without reporting a single complication.<sup>2</sup> The authors commented that most of the patients in this trial

had chronic pain, and this has been shown to diminish the expected conservative treatment results. They suggest another trial exploring the possibility that earlier intervention with manipulation would produce even greater benefit. The authors of the trial concluded that for patients with sciatica secondary to disc herniation, spinal manipulation is effective, safe and results in important cost savings.

## REFERENCES

1) Burton, AK, Tillotson KM, Cleary J. SINGLE-BLIND RANDOMISED CONTROLLED TRIAL OF CHEMONUCLEOLYSIS AND MANIPULATION IN THE TREATMENT OF SYMPTOMATIC LUMBAR DISC HERNIATION. *Eur Spine J.* 2000;9:202-207.

2) Bronfort G., Haldeman S. SPINAL MANIPULATION IN PATIENTS WITH LUMBAR DISC DISEASE. *Sem Spine Surg.* 1999; 11:97-103.

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# Spinal Manipulation For Symptomatic Lumbar Disc Herniation

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summary

- One area in which such evidence has changed thinking is the use of spinal manipulation for patients with sciatica secondary to lumbar disc herniation.
- Prior to the early 1990's...few clinical trials examined the use of spinal manipulation for sciatica or radicular pain from disc herniation. Interestingly, however, no trial had suggested that spinal manipulation was ineffective...
- More recently...Spinal manipulation was compared to chemonucleolysis...Patients receiving manipulation had significant reductions in back pain levels at both 2 and 6 weeks, while no change occurred with chemonucleolysis.
- The authors of the trial concluded that for patients with sciatica secondary to disc herniation, spinal manipulation is effective, safe and results in important cost savings.