

## **Chiropractic Research**

### **Evidence for the Effectiveness of Chiropractic**

Numerous studies throughout the world have shown that chiropractic treatment, including manipulative therapy and spinal adjustment, is both safe and effective. Many other studies have shown that chiropractic care can contain costs and get workers back on the job in less time than other treatments. The following are excerpts from a few of the more recent studies:

#### **For Acute Low-Back Problems**

"For patients with acute low-back symptoms without radiculopathy, the scientific evidence suggests spinal manipulation is effective in reducing pain and perhaps speeding recovery within the first month of symptoms." – Clinical Practice Guidelines, AHCPR (1994)

#### **For Long-Term Low-Back Problems:**

"There is strong evidence that manipulation is more effective than a placebo treatment for chronic low-back pain or than usual care by the general practitioner, bed rest, analgesics and massage." – Spine, Van Tulder and Bouter et al. (1997)

"...improvement in all patients at three years was about 29% more in those treated by chiropractors than in those treated by hospitals. The beneficial effect of chiropractic on pain was particularly clear." – British Medical Journal, Meade et al. (1995)

"Manipulative therapy and physiotherapy are better than general practitioner and placebo treatment. Furthermore, manipulative therapy is slightly better than physiotherapy after 12 months." – British Medical Journal, Koes et al. (1992)

#### **For Pain:**

"...patients suffering from back and/or neck complaints experience chiropractic care as an effective means of resolving or ameliorating pain and functional impairments, thus reinforcing previous results showing the benefits of chiropractic treatment for back and neck pain." – Journal of Manipulative and Physiological Therapeutics, Verhoef et al. (1997)

"...for the management of low-back pain, chiropractic care is the most effective treatment, and it should be fully integrated into the government's health care system." – The Magna Report (1993)

**For Headaches:**

“Cervical spine manipulation was associated with significant improvement in headache outcomes in trials involving patients with neck pain and/or neck dysfunction and headache.” – Duke Evidence Report, McCrory, Penzlen, Hasselblad, Gray (2001)

“The results of this study show that spinal manipulative therapy is an effective treatment for tension headaches... Four weeks after cessation of treatment... the patients who received spinal manipulative therapy experienced a sustained therapeutic benefit in all major outcomes in contrast to the patients that received amitriptyline therapy, who reverted to baseline values.” – Journal of Manipulative and Physiological Therapeutics, Boline et al. (1995)

**For the Elderly:**

“[Elderly] chiropractic users were less likely to have been hospitalized, less likely to have used a nursing home, more likely to report a better health status, more likely to exercise vigorously, and more likely to be mobile in the community. In addition, they were less likely to use prescription drugs.” – Topics in Clinical Chiropractic, Coulter et al. (1996)

**For Containing Costs and Getting Workers Back on the Job:**

“The overwhelming body of evidence” shows that chiropractic management of low-back pain is more cost effective than medical management, and that “many medical therapies of questionable validity or are clearly inadequate.” – The Magna Report (1993)

First contact chiropractic care for common low back conditions costs substantially less than traditional medical treatment and “deserves careful consideration” by managed care executives concerned with controlling health care spending. – Medical Care, Stano and Smith (1996)

Synopsis of Cost Effectiveness Research

**Magna, Pran. “Enhanced chiropractic coverage under OHIP (Ontario Health Insurance Plan) as a means for reducing health care costs, attaining better health outcomes and achieving equitable access to health services.” Report to the Ontario Ministry of Health, 1998.**

This study demonstrates the ways in which individuals in Ontario are deterred from the use of chiropractic care because it is not covered under OHIP. Greater chiropractic coverage under OHIP would result in a greater number of individuals visiting chiropractors and going more often. The study shows that despite increased visits to the DCs, this would result in net savings in both direct and indirect costs. It is very costly to manage neuromusculoskeletal disorders using traditional medicine. If individuals were able to visit chiropractors under OHIP a great amount of money would be saved by the government. Direct savings for Ontario's healthcare system could be as much as \$770 million and at the very least \$380 million.

**Manga, Pran; Angus, Doug; Papadopoulos, Costa; Swan, William. "The Effectiveness and Cost-Effectiveness of Chiropractic Management of Low-Back Pain." Richmond Hill, Ontario: Kenilworth Publishing, 1993.**

This study demonstrates that an increase in use of chiropractic care to manage low back pain would save an enormous amount of money. The study reveals that if management of low back pain was taken from physicians and given to chiropractors there could be a potential savings of millions of dollars every year. The study also revealed that spinal manipulation is both safe and more effective than drugs, bed rest, analgesics, and general practice medical care for managing low back pain.

**Mosley, Carrie; Cohen, Ilava; Arnold Roy. "Cost-effectiveness of chiropractic care in a managed care setting." The American Journal of Managed Care 1996; 2: 280-282.**

In this study the cost of health care for back or neck pain for individuals belonging to an HMO who used chiropractic care or other methods of treatment were evaluated. In this study the cost of surgery, use of diagnostic imaging, and the satisfaction of patients were evaluated. Claims that were paid from October 1, 1994 through October 1, 1995 were evaluated and analyzed. The cost of healthcare for back and neck pain was much lower for patients using chiropractic care than those using other treatments. Surgical costs and the satisfaction of patients was nearly the same for those who used chiropractic care and those who did not. The conclusion of the study is that chiropractic care yields similar outcomes to other forms of care at a much lower cost.

**Dean, David; Schmidt, Robert. "A comparison of the cost of chiropractors versus Alternative Medical Practitioners." Richmond, VA: Virginia Chiropractic Association, 1992.**

This study is an assessment of the difference in the cost of treatment between chiropractors and other practitioners in dealing with individuals who have similar back-related problems. This study analyzed individuals who had medical visits in 1980 and had a combination of eleven health problems including arthritis, disc disorders, bursitis, low back pain, spinal related sprains, strains and dislocations. Chiropractic care had a lower cost option for many back ailments.

**Wolk, Steve. "An Analysis of Florida's Workers' Compensation Medical Claims for Back-Related Injuries." *Journal of the American Chiropractic Association*, 1988; 27(7): 50-59**

This study is an analysis of workers' compensation claims in Florida from June through December of 1987. All of the claims analyzed were related to back injuries. The greater purpose of this study was to compare the cost of osteopathic, medical and chiropractic doctors. The cost of drugs were not included in the analysis. The results of the study lead to the finding that individuals who had compensable injuries and were treated by chiropractors often times were not forced to be hospitalized. It was also revealed that chiropractic care is a "relatively cost-effective approach to the management of work-related injuries."

**Johnson, Marjorie. "A Comparison of Chiropractic, Medical and Osteopathic Care for Work-Related Sprains/Strains." *Journal of Manipulative and Physiological Therapeutics* 1989; 12(5): 335-344.**

This study analyzed data on Iowa state record from individuals in Iowa who filed claims for back or neck injuries in 1984. The study compared benefits and the cost of care received by individuals from MDs, DCs, and DOs. There was a focus on individuals who missed days of work and were compensated because of their injuries. Individuals who visited DCs missed on average at least 2.3 days less than individuals who visits MDs and 3.8 days less than individuals who saw DOs. Less money was dispersed as employment compensation on average for individuals who visited DCs. On average, the disability compensation paid to workers for those who visited DCs was \$263.66, \$617.85 for those who visited MDs, and was \$1565.05 for those who visited DOs.

**Nyiendo, Joanne, Lamm, Lester. "Disability Low Back Oregon Workers' Compensation Claims. Part I: Methodology and Clinical Categorization of**

**Chiropractic and Medical Cases.” *Journal of Manipulative and Physiological Therapeutics* 1991 14(3): 177-184.**

This study examined 201 randomly selected workers' compensation cases that involved low back injuries that were disabling. Study found individuals who visited DCs less often initially went to the hospital for their injuries for their injuries than those visiting MDs. Those who visited DCs often had a history of chronic back pain.

**Nyiendo, Joanne. “Disability Low Back Oregon Workers' Compensation Claims, Part II: Time Loss.” *Journal of Manipulative and Physiological Therapeutics* 1991 14(4): 231-239.**

Report on loss of time for individuals who visited DCs and those who visited MDs for treatment of low back pain. Median missed days of work for individuals with similar severity of injury was 9.0 days for those visiting DCs and 11.5 for individuals visiting MDs. Individuals visiting chiropractors more often returned to work having missed one week or less of work days. There was no difference in time lost for individuals visiting DCs and MDs with no previous history of low back pain. The median of days missed of work for individuals who had chronic back pain and visited MDs was 34.5 days while the median of days missed of work for those visiting DCs was 9 days.

**Branson, Richard. “Cost Comparison of Chiropractic and Medical Treatment of Common Musculoskeletal Disorders: A Review of the Literature after 1980.” *Topics in Clinical Chiropractic*. 1999; 6(2): 57-68.**

Comparison of costs of care provided by DCs and general and specialist MDs for individuals with musculoskeletal conditions. Study found that the majority of retrospective studies had positive results for chiropractic care.

**Jarvis, Kelly; Phillips, Reed; Morris, Elliot. “Cost Per Case Comparison of Back Injury Claims of Chiropractic versus Medical Management for Conditions with Identical Diagnostic Codes.” *Journal of Occupational Medicine* 1991; 33(8): 847-852.**

Comparison of cost between MD and DC providers for injuries related to the back. The average number of treatments for medical claims was 4.93 as compared to 12.89 for chiropractic claims. Average days of care was 34.25 for medical claims and 54.49 for chiropractic claims. Average compensation cost for work time lost was \$668.39 for

medical claims and \$68.38 for chiropractic claims. Average cost of care for medical claims was \$684.15 and \$526.84 for chiropractic claims. This study demonstrates that although individuals who receive chiropractic care usually have a greater number of visits to DCs than those who visit MDs the cost of care and the workers' compensation dispersed is lower for those visiting DCs.

**Stano, Miron. "A Comparison of Health Care Costs for Chiropractic and Medical patients." *Journal of Manipulative and Physiological Therapeutics* 1993; 16(5): 291-299.**

Comparison of cost for patients who received chiropractic care for neuromusculoskeletal problems versus those who received medical and osteopathic care. A fourth of patients analyzed were treated by chiropractors. These patients had lower health care costs. "Total cost differences on the order of \$1000 over the two year period were found in the total sample of patients as well as in sub-samples of patients with specific disorders." Lower costs are attributed to lower inpatient utilization.

**Stano, Miron. "The Economic Role of Chiropractic Further Analysis of Relative Insurance Costs for Low Back Care." *Journal of the Neuromusculoskeletal System* 1995; 3(3): 139-144.**

Comparison of costs of care for common lumbar and low back conditions when a chiropractor is the first provider and when an MD is the first provider. Total payments for inpatient procedures were higher for MD episodes and especially episodes that lasted longer than a single day. Outpatient payments were much higher for MD initiated treatments as well.

**Stano, Miron; Smith, Monica. "Chiropractic and Medical Costs of Low Back Care." *Medical Care* 34(3): 191-204.**

Comparison of health insurance payments and patient utilization patterns for common lumbar and low back pain for patients who receive treatment from MDs and DCs. The results found that there were lower costs for episodes in which DCs were the first providers. The mean total payment when DC's were the first providers was \$517 whereas the mean payment for cases in which a MD was the first provider was \$1020.

**Smith, Monica; Stano, Miron. "Costs and Recurrences of Chiropractic and Medical Episodes of Low Back Care." *Journal of Manipulative and Physiological Therapeutics* 1997: 20(1): 5-12.**

Comparison of health insurance payments and patient utilization patterns for individuals suffering from recurring lumbar and low back pain visiting DCs vs. MDs. Insurance payments were higher for medically initiated episodes. Those who visited chiropractors paid a lower cost and were also satisfied with the care given. Because of this the study suggests that chiropractic care should be given careful attention by employers when using gate-keeper strategies.

**"Utilization, Cost, and Effects of Chiropractic Care on Medicare Program Costs." *Muse and Associates. American Chiropractic Association* 2001.**

Study examines cost, utilization and effects of chiropractic services on Medicare costs. The study compared program payments and service utilization for Medicare beneficiaries who visited DCs and those who visited other types of physicians. The results indicated that chiropractic care could reduce Medicare costs. Medicare beneficiaries who had chiropractic care had an average Medicare payment of \$4426 for all Medicare services. Those who had other types of care had an average of \$8103 Medicare payment for all Medicare services. The per claim average payment was also lower with chiropractic patients having an average of \$133 per claim and individuals who did not have chiropractic care had an average of \$210 per claim.

**Prescription Drug Information**

Using prescription drugs has become commonplace for many Americans. Because of the regular role prescription drugs play in daily life, few take the time to think of the seriousness of the problems that can arise from the use of such drugs. In 2000 reactions to drugs was the fourth leading cause of death in the United States. [1] This puts reactions to drugs in the ranks of lung cancer, heart disease and stroke. Lack of full knowledge of the effects of prescription drugs coupled with a somewhat lackadaisical approach to the use of prescription drugs is a volatile combination.

In their September newsletter, the Agency for Healthcare Research and Quality (AHRQ) released information regarding prescription drug costs. According to their newsletter, "prescription drug spending doubled from \$60.8 billion in 1995 to \$121.8 billion in 2000 and is expected to reach \$160.9 billion in 2002." [2] AHRQ is launching research projects that will seek to find instances in which, "older, less expensive drugs or no

drug treatment can work just as well as newer, more expensive drugs." Although prescription drugs are continuing to increase in price, AHRQ points out that, "very few studies have measured the cost benefits of new drugs." [2] Individuals are being forced to pay more for prescription drugs without truly knowing the benefits, and in regard to newer prescription drugs and older prescription drugs "little information is available to doctors to determine which therapy works best." [2] Billions of dollars are spent annually for treatments whose effects are not entirely clear.

The above is especially disturbing when one considers the May 1998 Journal of the American Medical Association study which stated that an estimated 106,000 hospital patient deaths and 2.2 million injuries occur each year as a result of adverse reactions to prescription drugs. [3] With prescription drug costs dramatically escalating and the safety of these drugs being questioned the time seems especially right to demonstrate the benefits of drug-free treatments and interventions, such as chiropractic care.

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*1 Robert H. Shmerling, M.D. A perspective from Harvard Medical School. January 22, 2003.*

*2. Kass-Bartelmes BL, Bosco, L, Rutherford MK. Prescription drug therapies: reducing costs and improving outcomes. Rockville (MD): Agency for Healthcare Research and Quality; 2002. Research in Action Issue 8. AHRQ Pub. No. 02-0045.*

*3. Thomas J. Moore; Bruce M. Psaty, MD, PhD; Curt D. Furberg, MD, PhD Time to Act of Drug Safety JAMA/ volume: 279 (page: 1571) May 20, 1998*