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# Study Finds Manual Therapy "Most Effective Treatment" for Neck Pain

By Michael Devitt

Although not as prevalent as back pain, neck pain is a common presentation in clinical practice. An estimated 10-15 percent of the general population suffers from neck pain and/or stiffness at any given time. Neck pain can be caused by a variety of factors, including stress; accidents; compressed nerves; disease; and degenerative changes in the discs that comprise the upper spine. While neck pain usually isn't life-threatening, it can cause a great deal of discomfort and dramatically impact quality of life.[1]

Neck pain also can lead to lost productivity at work. A 1996 survey by Louis Harris & Associates found that approximately 20 million American workers suffer from non-work-related neck pain. The same survey found that nearly 70 percent of employers believe pain influences a worker's job performance, and 61 percent believe it negatively affects employee morale.[2]

Among the most popular therapies for neck pain are manual therapy (including mobilization and manipulation); physiotherapy (usually performed by physical therapists); and pain-relief medications, which are often prescribed by medical doctors. A new study in the April 26 issue of the *British Medical Journal* compared the efficacy and cost-effectiveness of these forms of care, and concluded that manual therapy is "more effective and less costly for treating neck pain" than either physiotherapy or care provided by a general practitioner.[3]

| Costs | Mean Total Costs | | |
|---|---|---|---|
| | **Manual Therapy (n=60)** | **Physiotherapy (n=59)** | **General Practitioner (n=64)** |
| Direct health-care costs | €222 | €390 | €316 |
| Direct non-health care costs | €50 | €127 | €74 |
| Total direct costs | €271 | €517 | €390 |
| Indirect costs | €177 | €780 | €989 |
| Total costs | €447 ($514) | €1,297 ($1,492) | €1,397 (1,586) |

**Table 1:** *Mean total costs (in Euros) during 52-week follow-up for three interventions for neck pain.*

In the study, 183 adults were randomly selected to receive manual therapy, physiotherapy (PT) or care from a general practitioner (GP) for six weeks. All of the patients suffered neck pain for a minimum of two weeks; 66 percent had received some form of treatment for the condition prior to enrolling in the study.

Manual therapy consisted of a variety of interventions, including hands-on techniques such as low-velocity spinal mobilization, a technique the authors noted is utilized frequently by doctors of chiropractic. Spinal manipulation was not provided, however. Treatment sessions lasted 45 minutes once per week, for a maximum of six sessions.

Physiotherapy consisted of postural relaxation exercises, stretching and functional exercises, but the mobilization techniques offered in the manual therapy group were discouraged from use. PT treatments were offered twice a week (30 minutes per session) for a maximum of 12 sessions.

GP care consisted mainly of a "wait and see" approach that included advice offered by a general practitioner, along with an educational booklet. Drugs were prescribed if necessary, but patients were encouraged to await "spontaneous recovery." Patients had the option of 10-minute follow-up visits with the doctor every two weeks.

Each method of treatment was adapted to the patient’s condition. In addition to the treatment provided, patients were allowed to perform home exercises and to continue taking any drugs they were taking at the start of the study.

Outcomes of care were measured at the start of the study and at 3-, 7-, 13- and 52-week intervals. At 26 weeks' follow-up, patients received a mail-in questionnaire. Among the outcomes measured, patients rated their perceived recovery from neck pain; intensity of pain, functional disability and utility with questionnaires. The total costs of treatment also were tabulated in Euros (approx. $1.15 at press time).

**Results**

Manual therapy was considered "the most effective treatment" in the study. After seven weeks, recovery rates in the manual-therapy group were 68 percent, compared to 51 percent and 36 percent in the PT and GP groups, respectively. Differences in recovery rates remained statistically significant at the 26-week mark, and were still superior for manual therapy at 52 weeks.

The use of drugs to help relieve neck pain also was lowest in the group receiving manual therapy. During the 52-week follow-up period, 64 percent of patients in the GP group took prescription drugs; only 37 percent of manual-therapy patients did the same. Similarly, 37 percent of patients treated with manual therapy took over-the-counter drugs, compared to almost 50 percent of patients in the PT and GP groups.

In addition, manual therapy patients reported less time lost at work due to neck pain. Patients in the manual-therapy group missed an average of 1.3 days (from paid work) and 5.4 hours (from unpaid work) because of neck pain in the year after being treated; patients under the care of a general practitioner missed an average of 10.4 days (from paid work) and 15.7 hours (from unpaid work).

While manual therapy succeeded in providing greater relief of neck pain in physical terms, the most striking differences between treatments were seen in the area of cost-effectiveness. Manual therapy was easily the least expensive form of care; on average, the total direct costs of treating neck pain with manual therapy for one year were 119 to 246 Euros ($137 - $283) less per patient compared to PT or GP care. When direct and indirect costs were factored together, the difference was even greater. The average total cost of treating a person with neck pain for one year using manual therapy was €447 ($514). Treating a patient over the same time with physiotherapy cost €1,297 ($1,492); GP care cost €1,379 ($1,586).

"Manual therapy for the treatment of neck pain was more cost-effective than physiotherapy or care by a general practitioner," the researchers noted in their conclusion. "The clinical outcome measures showed that manual therapy resulted in faster recovery than physiotherapy and general practitioner care for up to 26 weeks."

In a related article published on WebMD.com, George McClelland, DC, member of the American Chiropractic Association's (ACA) Board of Governors, detailed the spinal mobilization techniques described in the study and their relation to the practice of chiropractic, particularly the high-velocity, low-amplitude (HVLA) adjustment:

"... the mobilization description in the study falls well within the adjustment procedures used by chiropractors," McClelland said. "The key here is working the joints through the range of motion but not taking it to the level that brings about an audible sound, or the cracking or popping sound typically associated with HVLA.

"What the patient should understand is that the health-care provider - whether it's a physical therapist, chiropractor, or whomever - will be able to enable them to get their pain down more quickly with manual therapy than compared to classical approaches with physical therapy or a family practitioner."[4]

*References*


1. Gore DR. The epidemiology of neck pain. *Medscape General Medicine* 1999;1(1). Available at **www.medscape.com/viewarticle/408487**.
2. Pain costs employers billions in lost wages for sick days. Ortho-McNeil Pharmaceuticals Web site; **www.ortho-mcneil.com/resources/reports/related_news_0301.html**.
3. Korthals-de Bos IBC, Hobing JL, van Tulder MW, et al. Cost-effectiveness of physiotherapy, manual therapy, and general practitioner care for neck pain: economic evaluation alongside a randomised controlled trial. *British Medical Journal* April 26, 2003.
4. Warner J. Manual therapy eases neck pain, cheaply. WebMD Health, April 24, 2003.


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