

A theoretical basis for maintenance spinal manipulative therapy for the chiropractic profession

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David N. Taylor DC, DABCN

KEY POINTS FROM THIS ARTICLE:

- 1) The purpose of this article is to discuss a theoretical basis for wellness chiropractic manipulative care.
- 2) A search of PubMed and of the Manual, Alternative, and Natural Therapy Index System was performed with a combination of key words: chiropractic, maintenance and wellness care, maintenance manipulative care, preventive spinal manipulation, hypomobility, immobility, adhesions, joint degeneration, and neuronal degeneration, 1970-2011.
- 3) The search revealed surveys of doctors and patients, an initial clinical pilot study, randomized control trials, and laboratory studies that provided correlative information to provide a framework for development of a hypothesis for the basis of maintenance spinal manipulative therapy.
- 4) "Maintenance care optimizes the levels of function and provides a process of achieving the best possible health. It is proposed that this may be accomplished by including chiropractic manipulative therapy in addition to exercise therapy, diet and nutritional counseling, and lifestyle coaching."
- 5) "It is hypothesized that because spinal manipulative therapy brings a joint to the end of the parapsychological joint space to encourage normal range of motion, routine manipulation of asymptomatic patients may retard the progression of joint degeneration, neuronal changes, changes in muscular strength, and recruitment patterns, which may result in improved function, decreased episodes of injuries, and improved sense of well-being."
- 6) "This article considers the scientific basis of the commonly practiced procedure of chiropractic maintenance care and whether a hypothesis of a physiological basis can be generated to explain findings and practice."
Dr. Taylor cites studies to support these concepts:
 - A)) Acute chiropractic care for the management of acute conditions.
 - B)) "Care for chronic/recurrent conditions is defined as medically necessary care for conditions that are not expected to completely resolve, but in which one can provide documented improvement."

[Chronic/recurrent care is **medically necessary**, even though the condition is not expected to completely resolve]

[Use **measurement outcomes** to document improvements]

C)) “Wellness or maintenance care may not be defined as being ‘medically necessary’ for a current condition.”

“However, this type of care optimizes the levels of function and provides a process of achieving the best possible function and health. This care includes chiropractic manipulative therapy in addition to exercise therapy, diet and nutritional counseling, and lifestyle coaching.”

[Use measurement outcomes to show **functional improvement** which may qualify such care as being **medically necessary**]

7) The purpose of chiropractic maintenance care is to optimize spinal function and decrease the frequency of future episodes of back pain.

8) Other definitions for chiropractic maintenance care include:

A)) “Appropriate treatment directed toward maintaining optimal body function. This is treatment of the symptomatic patient who has reached pre-clinical status or maximum medical improvement, where condition is resolved or stable.”

B)) “A regimen designed to provide for the patient's continued wellbeing or for maintaining the optimum state of health while minimizing recurrences of the clinical status.”

9) The medical profession uses “wellness” as providing diagnostic tests for “early detection of disease processes.”

10) For this article, “maintenance care and wellness care are used synonymously to represent the process of spinal manipulative therapy for an asymptomatic patient or a patient that has reached maximum therapeutic improvement.”

11) Some insurance companies have defined maintenance care as “care provided for a stable condition without any functional improvement of the patient net health outcome over a 4-week period and further determine it as not being medically necessary.”

12) In published surveys, 90+% of chiropractors opined that the purpose of maintenance care was to minimize recurrences or exacerbations; 80+% of chiropractors responded that it would optimize the patients' health.

13) 97% of American and 85% of the Australian chiropractors use manipulative therapy as a component of the maintenance care.

- 14) "95% of chiropractors recommended maintenance care to minimize recurrences or exacerbations of conditions and 90% recommended the care to optimize the health of the patient."
- 15) In a study 96% of elderly patients who received maintenance care believed that it was "either considerably or extremely valuable."
- 16) "It has been reported that 79% of patients in chiropractic offices are recommended maintenance care and nearly half of those patients elect to receive these services."
- 17) In animal studies, fixation of facet joints for 4-8 weeks causes degenerative changes and osteophyte formation of the articular surfaces. "These findings may provide an explanation to the anecdotal findings reported in clinical practice in which patients report increased well-being and decreased incidence of spinal complaints with once per month preventive wellness manipulation."
- 18) Sadly, facet articular surface degeneration began at less than 1 week. The "common clinical treatment frequency at every 4 weeks correlates with the findings of the threshold of 4 weeks for irreversible degenerative osteophyte formation." "This finding correlates with the common practice pattern of progressive decreasing of the frequency of manipulation as the patients progress in recovery from an acute incident. It also indicates that even when patients present for once per month asymptomatic preventive manipulation, the process of degeneration of the articular surfaces may have already begun."
- 19) Facet joint fixation also resulted in synovial fold fibrotic adhesions that "progressed to mild adhesions in 4 weeks, moderate adhesions in 8 weeks, and severe adhesions after 12 weeks." In humans, "it can be hypothesized that there is a period where the adhesions are forming without clinical symptoms. This would also support the common once per month maintenance spinal manipulation."
- 20) It has also been demonstrated that lumbar spinal manipulation gaps the facet joints which may break up adhesions. This "would lend additional support for the once per month clinically recommended spinal manipulative therapy."
- 21) Four weeks of joint immobilization has been found to cause a time dependent loss of neurons that becomes progressively worse thereafter. An increase in neurons occurs after release of the fixation.
- 22) Such immobilization also causes time dependent muscle weakness, atrophy and fatty deposition of the multifidi muscles. The time-dependent factor progressed from normal muscles to mild, moderate, and severe muscular atrophy.
- 23) "There may also be a possibility of reversal of the neuronal degeneration and muscular weakness through manipulation and remobilization of the joint."

24) These progressive adverse physiological consequences of joint immobility, create a "line of reasoning arises that generates a theoretical framework for a physiological hypothesis of the basis of maintenance manipulative therapy."

25) Evidence "clearly demonstrates that the clinical consensus of dosage of maintenance manipulative therapy has been found to be most beneficial at an average of once every 2 to 4 weeks. We also see here that it closely correlates with the studies that show onset of facet joint degeneration, neural degeneration, neuroplastic changes, and muscular atrophy and weakness at an average of 2 to 4 weeks."

26) "Taking into account the neurological and biomechanical consequences of manipulative therapy, it is plausible to hypothesize that monthly manipulative therapy retards the progression of adhesion formation, joint degeneration, neuronal changes, and changes in muscular strength and recruitment patterns. This could result in improved function, decreased episodes of injuries, and improved sense of well-being."

27) A 2004 chiropractic study of chronic low back pain showed that the group of patients who received 9 months of maintenance manipulation at the frequency of once per every 3 weeks maintained their initial clinical improvement while the control group returned to their previous levels of disability. The authors "concluded that there were positive effects of preventive maintenance chiropractic spinal manipulation in maintaining functional capacities and reducing the number and intensity of pain episodes after the acute phase of treatment of low back pain patients."

28) Swedish surveys of chiropractors find consensus on providing maintenance care to prevent disability relapses.

29) "There is a common thread of the time dependency noted in all the laboratory and clinical studies. The periods of onset of the anatomical and physiological changes ranged from 2 to 4 weeks. The clinical studies also provided MMT every 4 weeks and noted positive changes in the pain and disability measures. This time interval also correlates with the common recommendations found in the surveys of chiropractic physicians."