



West Hartford Group, Inc.

West Hartford Group – Position Paper

TOPIC: Diagnostic Radiography* in Chiropractic Practice

Introduction

Chiropractors diagnose and manage spine and musculoskeletal disorders, which may involve ordering and interpreting radiographs (x-ray studies). The West Hartford Group (WHG) recognizes the usefulness and importance of diagnostic radiography in evaluating some patients with spinal and musculoskeletal disorders and has developed, by consensus, the following positions with regard to diagnostic radiography. A list of relevant publications supporting these positions follows.

Position

- ❖ It is appropriate for chiropractors to use diagnostic radiography in patients with clinical indications based on the best available scientific evidence.¹⁻⁴
- ❖ Adverse health risks accompany many diagnostic procedures including diagnostic radiography.⁵⁻¹⁰ The WHG supports and encourages the widely accepted principle of exposures to ionizing radiation that are “as low as reasonably achievable” (ALARA) and chiropractors must abide by all government laws, regulations and statutes pertaining to the safe use of ionizing radiation. When used appropriately, the small adverse health risks associated with radiography are significantly outweighed by the positive benefits.¹¹⁻²¹
- ❖ The best available scientific evidence supports diagnostic radiography in patients with red flags that may indicate potentially serious and even life-threatening disorders.²²
- ❖ It is inappropriate to use diagnostic radiography primarily for determining the need for manipulation/adjustment or posture analysis, either as a routine screening procedure, or as a routine serial or repeat procedure.²³
- ❖ The use of 14” X 36” full-spine radiographs is appropriate for the evaluation of scoliosis and its progression according to indications based on the best available scientific evidence, but inappropriate when used primarily for determining the need for manipulation/adjustment or posture analysis.²⁴
- ❖ It is unethical and inappropriate to advertise free or reduced-fee radiographs to actual or potential patients.

* This position paper refers only to the use of conventional diagnostic radiography (plain film radiographs), and does not address the use of advanced imaging methods such as CT, MRI, ultrasound or bone scan.

References

1. Bussi eres AE, Peterson C, Taylor JAM. Diagnostic imaging practice guidelines for adult musculoskeletal complaints: An evidence-based approach: Introduction. *J Manip Phys Therap* 2007;30(9):617-83. PMID: 18082742
2. Bussi eres AE, Taylor JAM, Peterson C. Diagnostic imaging practice guidelines for adult musculoskeletal complaints: An evidence-based approach. Part 1: Lower Extremity Disorders. *J Manip Phys Therap* 2007;30(9):684-717. PMID: 18082743
3. Bussi eres AE, Peterson C, Taylor JAM. Diagnostic imaging practice guidelines for adult musculoskeletal complaints: An evidence-based approach. Part 2: Upper Extremity Disorders. *J Manip Phys Therap* 2008;31(1):2-32. PMID: 18308152
4. Bussi eres AE, Taylor JAM, Peterson C. Diagnostic imaging practice guidelines for musculoskeletal complaints: An evidence-based approach. Part 3: Spinal Disorders. *J Manip Phys Therap* 2008;31(1):33-88. PMID: 18308153
5. Health Risks from Exposure to Low Levels of Ionizing Radiation : BEIR VII – Phase 2. <http://books.nap.edu/catalog/11340.html> National Academy of Sciences 2005. <http://www.nap.edu>
6. Evans BF, Wennberg, McNeil BJ. The influence of diagnostic radiography on the incidence of breast cancer and leukemia. *N Eng J Med* 1986; 315:810–15.
7. Berrington de Gonzalez A, Darby S. Risk of cancer from diagnostic x-rays : estimates for the UK and 14 other countries. *Lancet* 2004; 363:345–51.
8. Bussi eres AE, Ammendolia C, Peterson C, Taylor JAM. Commentary: Ionizing radiation exposure – more good than harm? The preponderance of evidence does not support abandoning current standards and regulations. *J Can Chiropractic Assoc* 2006; 50(2):103-6.
9. Mootz RD, Hoffman LE, Hansen DT. Optimizing clinical use of radiography and minimizing radiation exposure in chiropractic practice. *Topics in Clinical Chiropractic* 1997;4(1):34–44.
10. Shiralkar S, Rennie A, Snow M, Galland RB, Lewis MH, Gower-Thomas K Doctors' knowledge of radiation exposure: questionnaire study. *BMJ* 2003; 327:371–2.
11. Ammendolia C, Taylor JAM, Pennick V, Cote P, Hogg-Johnson S, Bombardier C. Adherence to guidelines for spine radiography: A survey of chiropractic schools world-wide. *J Manipulative Phys Therap* 2008;31(6):412-8.
12. Taylor JAM, Resnick D. Imaging decisions in low back pain. In: Lawrence DL ed: *Advances in Chiropractic*, 1(1), Year Book Medical Publishers, 1994.
13. Thornbury JR. Clinical efficacy of diagnostic imaging: love it or leave it. *AJR* 1994; 162:1–8.
14. Kendrick D, Fielding K, Bentley E, Kerlake R, Miller P, Pringle M. Radiography of the lumbar spine in primary care patients with low back pain: randomised controlled trial. *BMJ* 2001; 322:400–5.

15. Kerry S, Hilton S, Dundas D, Rink E, Oakeshott P. Radiography for low back pain: a randomised controlled trial and observational study in primary care. *Br J Gen Pract* 2002 Jun; 52(479):469–74.
16. Owens JP, Ruth G, Keir MJH, Richardson D, Richardson A et al. A survey of general practitioners opinions on the role of radiology in patients with low back pain. *Br J Gen Pract* 1990; 40:98–101.
17. Halpin SF, Yeoman L, Dundas DD. Radiographic examination of the lumbar spine in a community hospital: an audit of current practice. *BMJ* 1991; 303:813–15.
18. Ferriman A. UK rate of x-ray examination less than half the US rate. *BMJ* 2001; 322:384.
19. Russo R, Cook P. Diagnosis of Low Back Pain: Role of Imaging Studies. *Occupational Medicine: State of the Art Reviews*. 1998; 13(1):83–97.
20. Miller P, Kendrick D, Bentley E, Fielding K. Cost effectiveness of lumbar spine radiography in primary care patients with low back pain. *Spine* 2002; 27(20):2291–7.
21. Ammendolia C, Bombardier C, Hogg, Johnson S, Glazier R. Views on x-ray use in patients with acute low back pain among chiropractors in an Ontario community. *J Manipulative Physiol Ther* 2002;25:511-20
22. Murphy DR, Letz G, Morris CE. Red flags for serious disease in low back syndromes. In: Morris CE, ed. *Low Back Syndromes: Integrated Clinical Management*. New York: McGraw-Hill, 2006:277-286.
23. Haas M, Taylor JAM, Gillette RG. Commentary: The routine use of radiographic displacement analysis: A dissent. *J Manip Phys Therap*, 1999; 22(4):254-259. PMID: 10367763.
24. Taylor JAM: Full-spine radiography: a review. *J Manipulative Physiol Ther* 1993; 6(7):460-474. PMID: 8228649

Approved by the West Hartford Group, Inc. Board of Directors August 3, 2010