

Integrative Healthcare Symposium

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Chiropractic 2018

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Chiropractic by the numbers

- 70,000 practicing chiropractors in the U.S
- 16 chiropractic degree programs in the U.S. with 19 campus locations
- 10,000 students enrolled chiropractic degree programs in the U.S.
- The top three states for the number of licensed chiropractors are:
 - California
 - Florida
 - Texas
- U.S. : 1 chiropractor per 4,250 population
- Highest chiropractors to population ratio in the U.S.
 - Iowa; 1/1,703

Chiropractic patients by the numbers

- Lifetime prevalence of chiropractic care in the U.S.
 - 24%-50% (Adams, 2017; Gallup, 2015)
- Annual prevalence of chiropractic care in the U.S.
 - 8.4%-14% (Adams, 2017; Gallup, 2015)
- Primary reasons for care:
 - Back pain: 63.0%
 - Neck pain: 30.2%
- Reasons to use chiropractic care
 - For general wellness or general disease prevention 43.3% (41.4–45.2)
 - To improve energy 16.3% (14.9–17.7)
 - To improve athletic or sports performance 15.4% (14.0–16.8)
 - To improve immune function 11.% (10.2–12.6)
 - To improve memory or concentration 5.3% (4.5–6.2)

Chiropractic patients' perceived outcomes

(Adams, SPINE 2017) Did chiropractic care lead to:

- Give a sense of control over health 32.5% (30.7–34.3)
- Help to reduce stress level or to relax 40.2% (38.4–42.1)
- Help to sleep better 41.9% (40.0–43.8)
- Helps to feel better emotionally 27.4% (25.7–29.1)
- Make it easier to cope with health problems 38.5% (36.6–40.4)
- Improve overall health and make you feel better 66.9% (65.1–68.7)
- Improve your relationships with others 13.3% (12.0–14.6)
- Improve attendance at job or school 17.0% (15.4–18.6)

Chiropractic patients' perceived outcomes

- How important was chiropractic for maintaining health and well-being:
 - Very important 47.9% (45.9–49.8)
 - Somewhat important 29.6% (27.8–31.3)
 - Slightly important 13.9% (12.6–15.2)
 - Not at all important 8.7% (7.6–9.8)
- Chiropractic helped for specific health problem:
 - A great deal 64.5 (62.3–66.8)
 - Some 25.8 (23.8–27.9)
 - Only a little 6.1 (5.0–7.2)
 - Not at all 3.5 (2.7–4.4)

Chiropractic patients' perceived outcomes

- Has received the following for the specific health problem (for which chiropractic care was sought)
 - Prescription medication 23.2% (21.2–25.1)
 - OTC medication 35.2% (32.9–37.4)
 - Surgery 4.7% (3.7–5.7)
 - Physical therapy 22.9% (20.9–24.9)
 - Mental health counseling 2.1% (1.4–2.7)

Chiropractic patients' perceived outcomes

- Chiropractic practitioner was seen because:
 - Medical treatments were too expensive 6.3% (4.7–7.9)
 - Therapy combined with medical treatment would help 64.8% (61.7–67.9)
 - Medical treatments do not work for your specific health problem 33.8% (30.7–36.9)
 - Medications cause side effects 18.1% (15.4–20.7)
 - It is natural 37.5% (35.6–39.3)
 - It focuses on the whole person, mind, body, and spirit 24.9% (23.2–26.5)
 - It treats the cause and not just the symptoms 61.9% (60.1–63.8)
 - It was part of your upbringing 10.6% (9.4–11.8)

Chiropractic referral and information sources

- Chiropractic was recommended by
 - A medical doctor 17.7% (16.2–19.2)
 - A family member 32.2% (30.4–34.0)
 - A friend 25.9% (24.2–27.6)
 - A coworker 11.0% (9.8–12.2)
- Information sources on chiropractic:
 - Internet 8.1% (7.1–9.2)
 - Books, magazines, or newspapers 4.1%(3.3–4.9)
 - DVDs, videos, or CDs 0.9% (0.6–1.3)
 - Television or radio 2.0% (1.4–2.5)
 - Scientific articles 3.7% (2.9–4.4)
 - Health food stores 1.3% (0.9–1.7)

(Adams, SPINE 2017)

Chiropractic patients and PCP input

- Chiropractic care disclosed to personal health care provider: 59.8% (57.7–61.9)
- Not disclosed because:
 - Not used at the time 29.1% (26.0–32.2)
 - They discouraged use of it in the past 5.0% (3.5–6.5)
 - Being worried they would discourage it 4.8% (3.3–6.2)
 - Being concerned about a negative reaction 5.4% (3.9–7.0)
 - Did not think they needed to know 44.2% (40.8–47.6)
 - They did not ask 56.3% (52.9–59.7)
 - Do not think they know as much about it as you do 7.8% (6.0–9.7)
 - They did not give enough time to tell them 3.0% (1.8–4.2)

What patients want

- 78% prefer to try other ways to address their physical pain before they take pain prescribed medication (Gallup, 2017)
- 22% of U.S. adults prefer to take pain medication prescribed by a doctor to treat their physical pain (Gallup, 2017)
- (health care that is) “more congruent with their own values, beliefs, and philosophical orientations toward health and life. (Astin, 1998)

Factors predicting alternative health care (Astin) and chiropractic utilization (Adams)

Astin, 1998

- More educated
- Poorer health status
- Holistic orientation to health
- Having had a transformational experience that changed the person's worldview
- Back pain, chronic pain
- Classification in a cultural group related to environmentalism or feminism

Adams, 2017

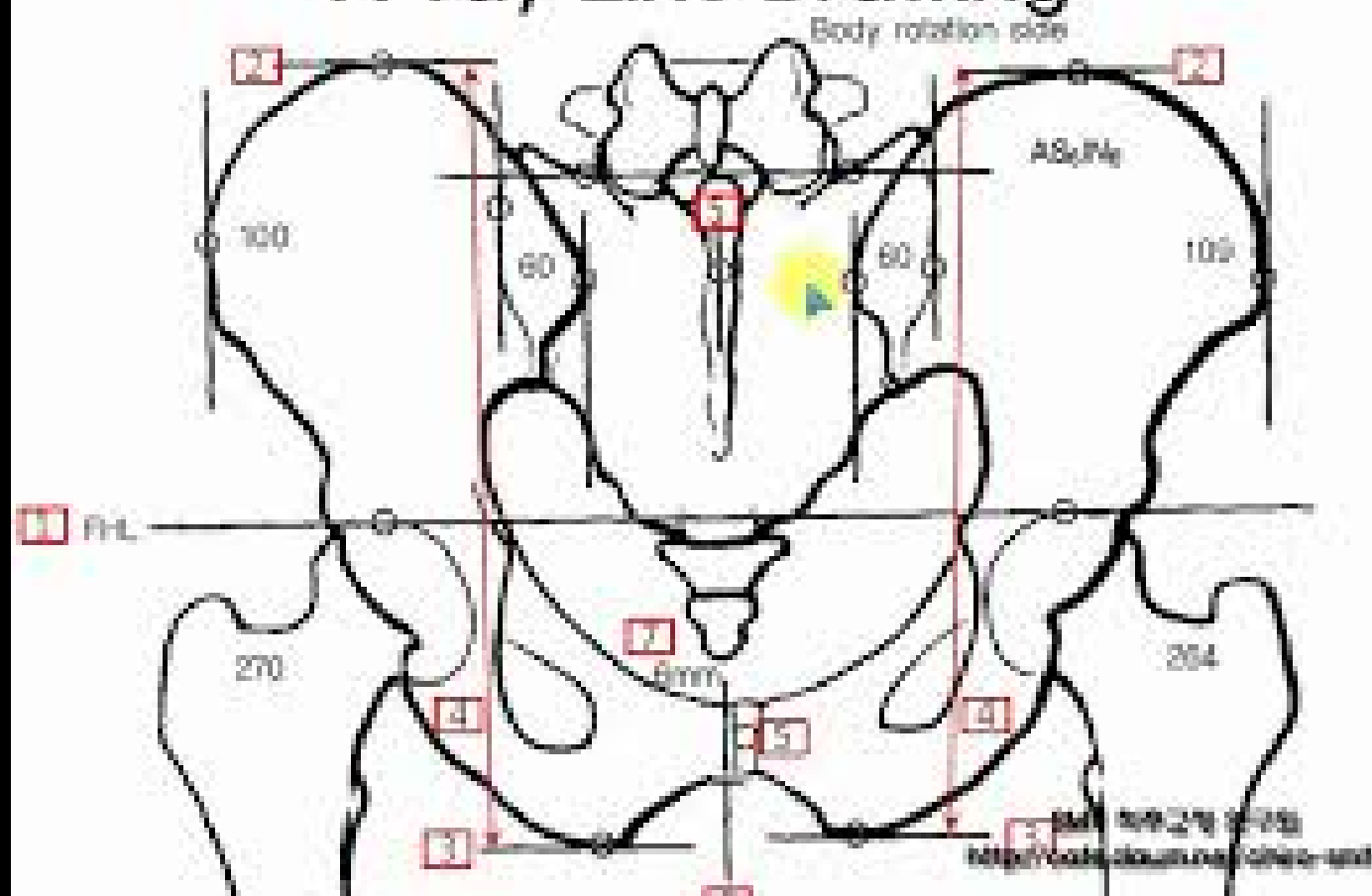
- Adults older than 30 years
- More likely to be college educated than non-users
- Adults living in a relationship
- Adults diagnosed with spinal pain, headache or migraine
- Living in the Midwest

The Explanatory Models Associated with Chiropractic Care



The Mechanical Models

X-ray Line Drawing

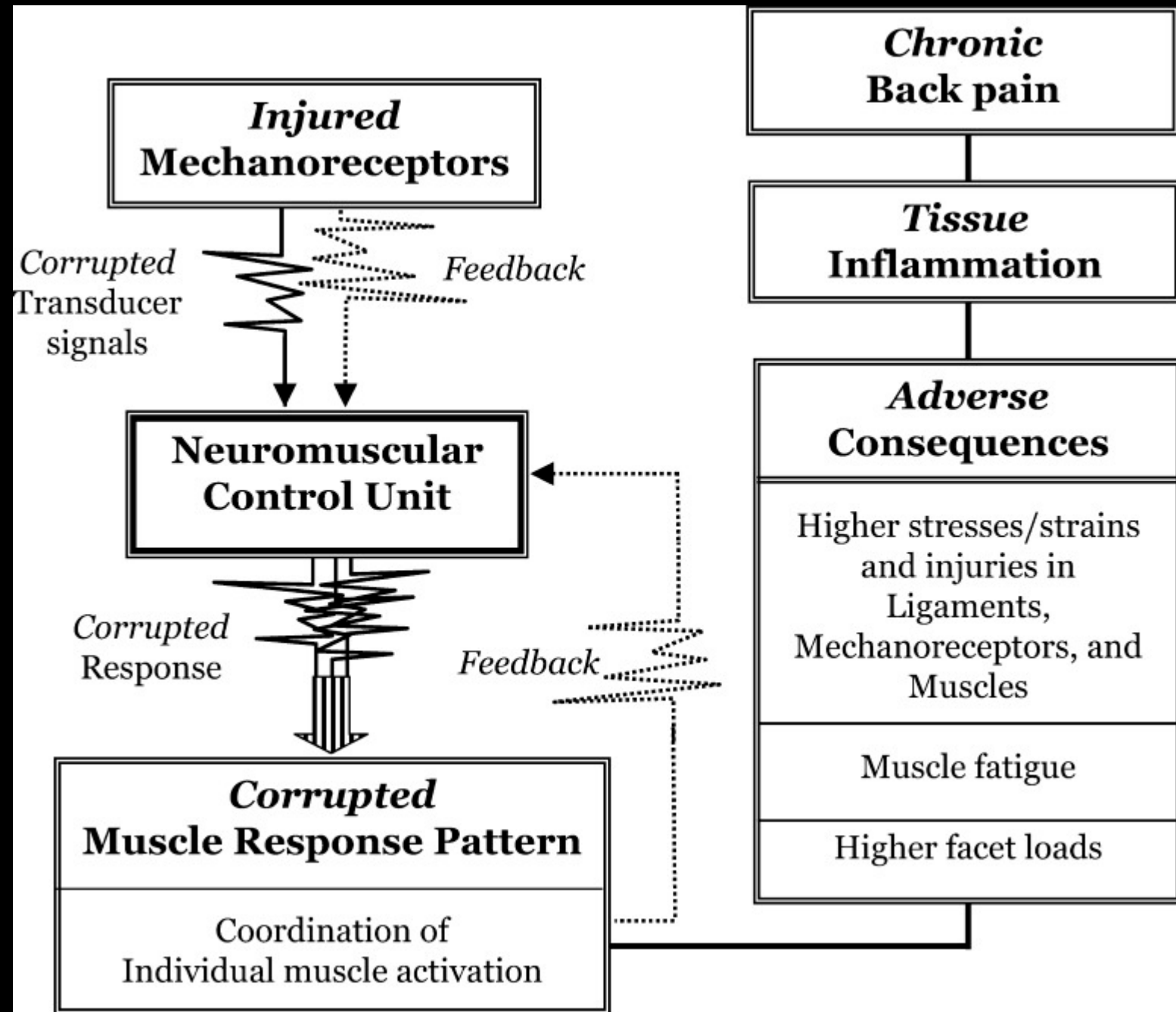


The Explanatory Models Associated with Chiropractic Care

The Bio-Mechanical Models



M. Panjabi
Eur Spine J. 2006 May;
15(5): 668–676.



The Explanatory Models Associated with Chiropractic Care

The Neuro-bio-mechanical Model

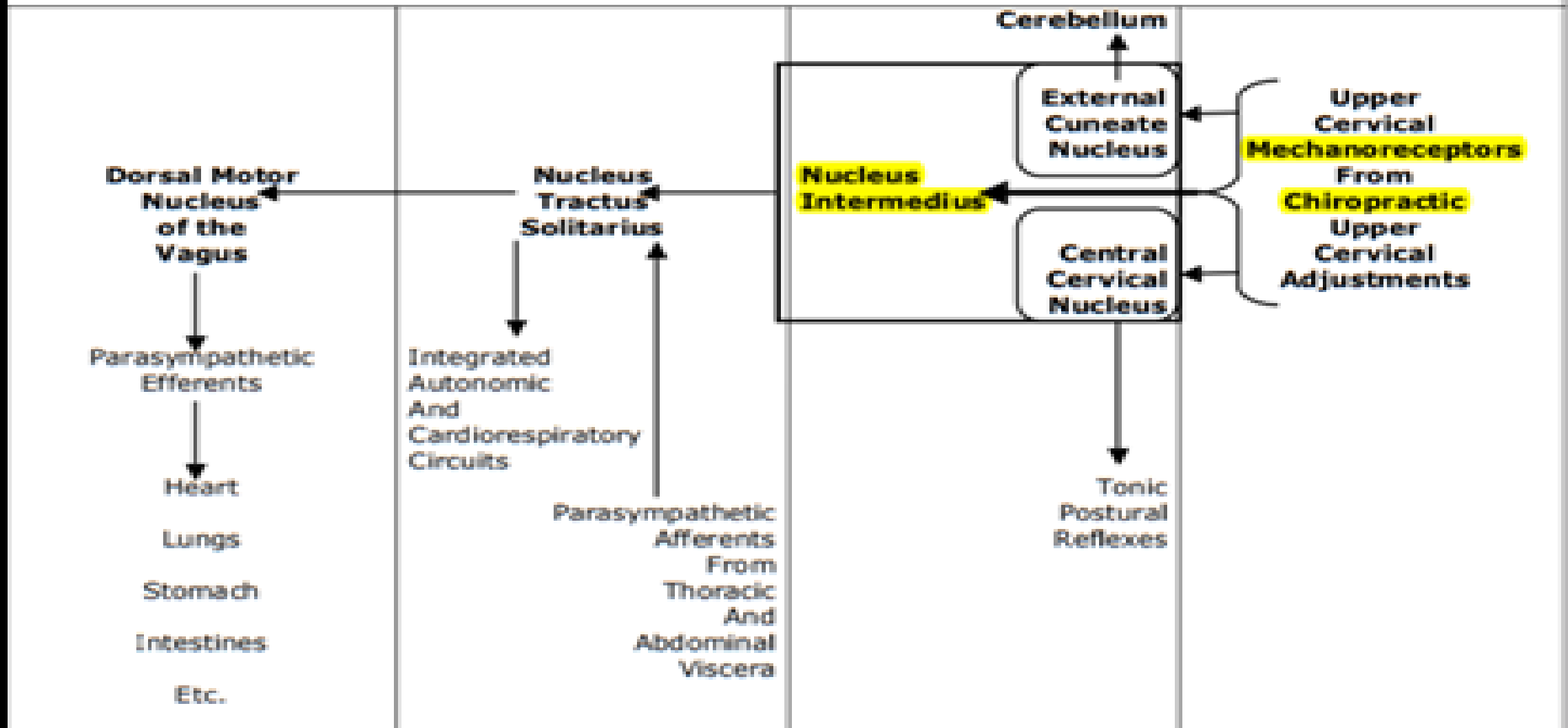


The Neurochemically Diverse Intermedius Nucleus of the Medulla as a Source of Excitatory and Inhibitory Synaptic Input to the Nucleus Tractus Solitarius

Ian Edwards

The Journal of Neuroscience

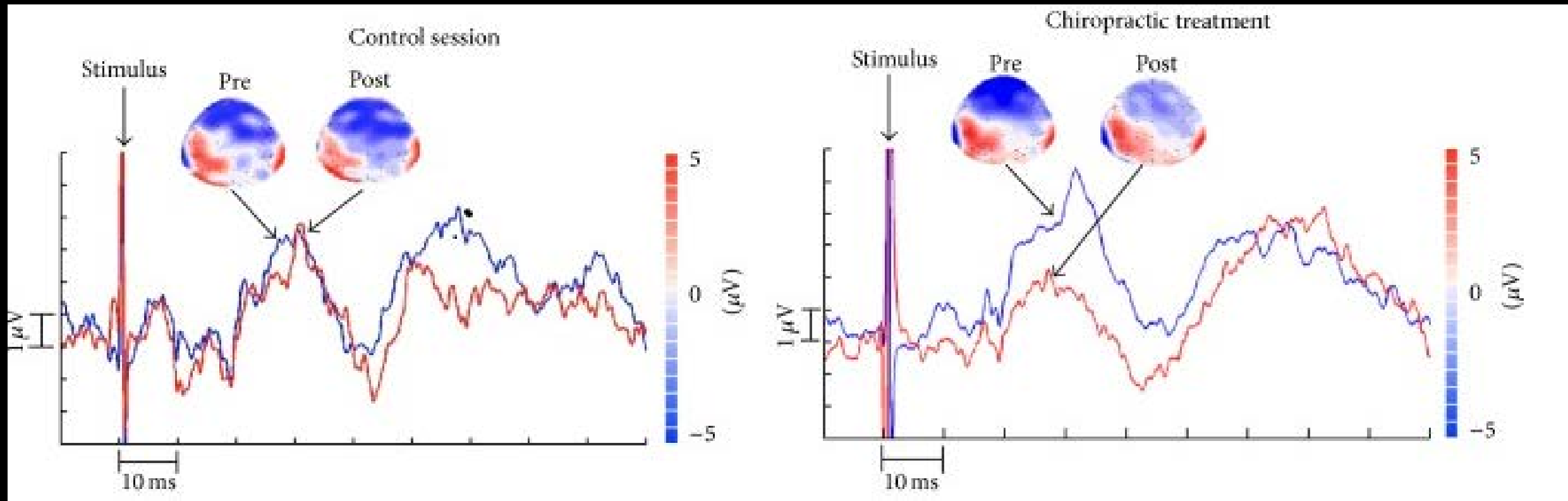
August 1, 2007



The Explanatory Models Associated with Chiropractic Care



The Neuroplastic Model



Neural Plast. 2016; 2016: 3704964.

“Manipulation of Dysfunctional Spinal Joints Affects Sensorimotor Integration in the Prefrontal Cortex: A Brain Source Localization Study”

Dina Lelic, 1 , * Imran Khan Niazi, 2 , 3 , 4 Kelly Holt, 2 Mads Jochumsen, 3 Kim Dremstrup, 3 Paul Yelder, 5 Bernadette Murphy, 5 Asbjørn Mohr Drewes, 1 , 3 and Heidi Haavik 2 , 5

The Safety of Chiropractic Care

- Cassidy, SPINE, January 8, 2015 Risk of Vertebrobasilar Stroke and Chiropractic Care
- Conclusion. VBA stroke is a very rare event in the population. The increased risks of VBA stroke associated with chiropractic and PCP visits is likely due to patients with headache and neck pain from VBA dissection seeking care before their stroke. **We found no evidence of excess risk of VBA stroke associated chiropractic care compared to primary care.**

The Safety of Chiropractic Care

- Kosloff, Chiropractic and Manual Therapies, June 16, 2015 Chiropractic care and the risk of vertebrobasilar stroke: results of a case–control study in U.S. commercial and Medicare Advantage populations

- Conclusions:

We found no significant association between exposure to chiropractic care and the risk of VBA stroke. We conclude that manipulation is an unlikely cause of VBA stroke. The positive association between PCP visits and VBA stroke is most likely due to patient decisions to seek care for the symptoms (headache and neck pain) of arterial dissection. We further conclude that using chiropractic visits as a measure of exposure to manipulation may result in unreliable estimates of the strength of association with the occurrence of VBA stroke.

The Safety of Chiropractic Care

- Church et al. CUREUS 2016 Systematic Review and Meta-analysis of Chiropractic Care and Cervical Artery Dissection: No Evidence for Causation
- “Our systematic review revealed that the quality of the published literature on the relationship between chiropractic manipulation and CAD is very low. A meta-analysis of available data shows a small association between chiropractic neck manipulation and CAD. We uncovered evidence for considerable risk of bias and confounding in the available studies. In particular, the known association of neck pain both with cervical artery dissection and with chiropractic manipulation may explain the relationship between manipulation and CAD. **There is no convincing evidence to support a causal link, and unfounded belief in causation may have dire consequences.**”

Thank you for your time and attention

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