

# CHIROPRACTIC IN THE COVID-19 PANDEMIC ERA: THE CLINICAL COMPASS

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## Contextualisation

The Clinical Compass (formerly the *Council on Chiropractic Guidelines and Practice Parameters* or CCGPP) was originally formed by the U.S. organisation, the *Congress of Chiropractic State Associations* (COCSA), to address issues regarding guidelines affecting the profession. It is made up by the Council, comprised of representatives from COCSA, major national associations and other chiropractic leaders, and the Scientific Commission, represented by various leaders and experts in research.

Council members have served in leadership positions in their respective state associations (most as president). They well understand the confluence of science, politics and policy, and that pragmatic knowledge informs the purpose of the Clinical Compass:

*'The mission of the Clinical Compass is to improve patient outcomes by advancing evidence-based care in an effort to transform healthcare through knowledge translation.'*

When the COVID epidemic struck, we noticed that some of our colleagues were promoting evidence-based recommendations while others were not, leading to a contradictory message to the public which could be confusing to patients, and potentially embarrassing to the profession. Accordingly, we decided to try to provide a document which we felt would be supported by the majority of the profession, focusing not on what chiropractic care can *not* do in the COVID epidemic, but rather how we might be able to contribute to our communities' health through evidence-based approaches.

Here we summarise what we know, what we don't know, and what we as a profession can do to help.

... Clinical Compass is chiropractic's Evidence Centre, providing research, education and empowerment for the chiropractic community. This is their understanding of chiropractic and COVID-19'

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## Introduction

Coronavirus disease 19 (COVID-19) has had dramatic effects on many aspects of life, as the world struggles to deal with its ramifications. As of late-April 2020, nearly 3.2 million around the world have been infected, and 226,000 have died. In the U.S., more than one million people are confirmed to be infected according to the *Johns Hopkins Coronavirus Resource Center*. (1)

Doctors of Chiropractic want to help, but the role of DC's has been the subject of controversy both within and outside of the profession. This is a consequence of claims made by some DC's about the capacity for manipulation to prevent or treat COVID-19, as well as a lack of understanding of the role DC's can play in this crisis. As of this writing (late-April 2020), though there are some promising approaches, there are no reliably confirmed treatments or preventive strategies of any kind for Coronavirus -19 infection except social (physical) distancing and practices such as wearing masks, hand washing, and other hygiene measures. There are no medical treatments or chiropractic treatments shown to have any reliable efficacy.

The purpose of this exposition is to help define what role, if any, the chiropractic profession can play in this global pandemic. It is not intended to be an exhaustive literature synthesis and to the extent feasible will attempt to avoid classic internal political disagreements among factions of the profession. Rather the goal is to outline what we know, what we don't know, and how we can best help in this critical moment.

## What We Know

Many in the profession argue that some basic science research shows manipulation has an effect on the immune system, and some then make the logical leaps that if manipulation can influence immune function, it can improve immune function, and therefore help COVID-19 either as a treatment or as a preventative strategy, or perhaps both.

There is a small body of literature that appears to support spinal manipulation as having an effect on immune function. For example, Columbi recently reported that high velocity low amplitude manipulation of the spine had a measurable effect on the neuroendocrine system, but a biologically plausible mechanism was mixed and conflicting. (2) Wirth et al conducted a recent systematic review that found evidence of an effect for HVLA manipulation on autonomic nervous system activity, specifically heart rate variability and skin resistance. However, the clinical utility of these findings has not been demonstrated and the authors recommend additional studies. (3)

Another systematic review found evidence that spinal manipulation has an effect on cortisol, interleukin, substance P, oxytocin, and neurotensin, but could not make any reliable conclusions about the clinical applicability of these changes. (4) Another widely cited study demonstrated an effect of manipulation on antibody synthesis following manipulation, but again noted the clinical significance was 'unclear.' (5)

Similarly, a study from 2012 looked at the effects of repeated massage and light touch on the hypothalamic- pituitary-adrenal axis and immune function and found evidence of changes in circulating markers. There were methodological problems with the study, including a small sample size and use of only normal volunteers. (6) Other studies have also demonstrated metabolic and physiologic effects of spinal manipulation. (7, 8, 9)

Nevertheless, we can reasonably conclude that there is limited basic science evidence of an effect of spinal manipulation on immune-function related changes, and the clinical utility of these observations is not clear. The *World Federation of Chiropractic (WFC) Research Committee* recently illustrated why the effect is not yet. (10) In a rapid review of seven oft-cited studies immediately after the onset of the pandemic, the WFC Research Committee concluded:

*'No credible, scientific evidence that spinal adjustment / manipulation has any clinically relevant effect on the immune system was found. Available studies have small sample sizes and a lack of symptomatic subjects. At the time of writing, there exists no credible, scientific evidence that would permit claims of effectiveness for conferring or enhancing immunity through spinal adjustment / manipulation to be made in communications by chiropractors. In the event that new scientific evidence emerges, it will be critically appraised using scientific methods of analysis.'*

Both the *American Chiropractic Association (ACA)* and the *International Chiropractic Association (ICA)* have issued statements indicating there is no evidence that chiropractic adjustments/manipulation can affect COVID-19 immunity. (11, 12)

Because it has not been established that spinal adjustment/manipulation has a *clinical* effect on the immune system, there is no basis to support a claim of clinical effectiveness. It is also short-sighted to further claim that chiropractors have no positive impact on patients' overall health and well-being, and no role to play in this pandemic.

### What Can We Do

Doctors of Chiropractic are recognised as primary portal of entry providers. We know that Chiropractic, as a profession, is much more than simply spinal manipulation. Manipulation/adjustments are one tool in the DC's clinical tool bag, but by no means defines their entire clinical role. Depending upon the state scope of practice, the DC's may provide a host of services to patients, and by extension to the communities in which they serve. These could include, but are not limited to:

- ▶ Broad diagnostic training, including cardiac and pulmonary assessment, but focusing primarily on musculoskeletal conditions by training and practice emphasis (CCE);
- ▶ Multiple manual therapy techniques to address neuromusculoskeletal issues;
- ▶ Ability to order laboratory and imaging studies;
- ▶ Nutritional and dietary advice;
- ▶ Exercise advice;
- ▶ Lifestyle and ergonomic advice;
- ▶ Stress reduction techniques; and
- ▶ Providing accurate information about avoiding exposure.

In addition to advice about avoiding exposure, DC's can recommend a common-sense approach to improving health and implementing the recommendations put forth by leading authorities, including the *Centers for Disease Control and Prevention (CDC)*. These include: eat nutritious food, get plenty of rest, remain well-hydrated, stay active, and manage your stress. (13) Indeed, Hawk et al demonstrated that a number of 'Wellness' best practices are routinely provided by most Doctors of Chiropractic, including:

- ▶ Screening for risk factors for disease and disability such as
  - ▷ Obesity/dietary issues;
  - ▷ Physical inactivity/sedentary lifestyle Tobacco use;
  - ▷ Hypertension;
  - ▷ Skin cancer;
  - ▷ Depression; and

- ▶ Counselling on what to do to maintain optimal health and wellness; and
- ▶ Empowering patients to be active partners in their care (14)

The US Preventive Services Task Force (USPSTF) has enumerated recommendations for screening and counselling for a wide variety of conditions, and many of these services are addressed by Doctors of Chiropractic, although there are some barriers including payment limitations. (15, 16) Recently the chiropractic profession, through the Council on Chiropractic Education (CCE) has added wellness-related core competencies to chiropractic college curricula. (17) Importantly, there is published evidence that many patients seek out chiropractors for help with a variety of conditions aside from musculoskeletal issues.

Pain, headache, and loss of functional ability to perform activities of daily living (ADLs) have become more prevalent during the past two months due to stress, lack of normal routine, de-conditioning, and poor ergonomics within home offices. Doctors of Chiropractic can address these issues with their patients and provide an alternative to overworked hospitals, urgent care centres, and PCP offices.

### Conclusion

While there is some preliminary basic science evidence linking spinal manipulation and improved immune function, there is no reliable evidence of clinical efficacy. As a consequence, there is no basis to support DC's claims to the public or their patients that there is any benefit in spinal manipulation/adjustments in the prevention or treatment of COVID-19. Clinical Compass strongly advises DC's refrain from making such claims.

DC's are encouraged to counsel their patients on appropriate avoidance behaviour (sheltering at home, hand washing, social distancing, use of masks) as well as general strategies for improving health including proper diet, adequate rest and sleep, and exercise.

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## References

1. Johns Hopkins University Coronavirus Resource Center. At <https://coronavirus.jhu.edu>
2. Colombi A, Testa M. The effects induced by spinal manipulative therapy on the immune and endocrine systems. *Medicina (Kaunas)*. 2019;55(8):448. Published 2019 Aug 7. DOI 10.3390/medicina55080448
3. Wirth B, et al. Neurophysiological effects of high velocity and low amplitude spinal manipulation in symptomatic and asymptomatic humans: A systematic literature review. *Spine (Phila Pa 1976)*, 2019;44(15):E914-E926.
4. Kovanur-Sampath K, et al. Changes in biochemical markers following spinal manipulation—a systematic review and meta-analysis. *Musculoskelet Sci Pract*. 2017;29:120-31.
5. Teodorczyk-Injeyan JA, McGregor M, Ruegg R, Injeyan HS. Interleukin 2-regulated in vitro antibody production following a single spinal manipulative treatment in normal subjects. *Chiropr Osteop* 2010;18:26.
6. Rapaport MH, Schettler P, Bresee C. A preliminary study of the effects of repeated massage on hypothalamic-pituitary-adrenal and immune function in healthy individuals: a study of mechanisms of action and dosage. *J Altern Complement Med*. 2012;18(8):789–97. DOI 10.1089/acm.2011.0071
7. Inami A, et al. Glucose metabolic changes in the brain and muscles of patients with nonspecific neck pain treated by spinal manipulation therapy: A [(18)F]FDG PET Study. *Evid Based Complement Alternat Med*. 2017: 4345703.
8. Lohman EB, et al. The immediate effects of cervical spine manipulation on pain and biochemical markers in females with acute non-specific mechanical neck pain: a randomized clinical trial. *J Man Manip Ther*. 2019;27(4):186-96.
9. Teodorczyk-Injeyan, JA, HS Injeyan, Ruegg R. Spinal manipulative therapy reduces inflammatory cytokines but not substance P production in normal subjects. *J Manipulative Physiol Ther*. 2006;29(1):14-21.
10. Kawchuk G, et al. The effect of spinal adjustment/manipulation on immunity and the immune system: A rapid review of the relevant literature. *World Federation of Chiropractic*. March 19, 2020. At [https://www.wfc.org/website/images/wfc/Latest\\_News\\_and\\_Features/Spinal\\_Manipulation\\_Immunity\\_Review\\_2020\\_03\\_19.pdf](https://www.wfc.org/website/images/wfc/Latest_News_and_Features/Spinal_Manipulation_Immunity_Review_2020_03_19.pdf)
11. American Chiropractic Association. Blog Post: Let's work together to protect and serve our patients, staff, families and communities – A message from the ACA Board of Governors. Paywall at <https://www.acatoday.org/News-Publications/Publications/ACA-Blogs/ArtMID/6925/ArticleID/1551/Let's-Work-Together-to-Protect-and-Serve-Our-Patients-Staff-Families-and-Communities>
12. Immune Function and Chiropractic— What Does the Evidence Provide? International Chiropractic Association. Open access at <http://www.chiropractic.org/covid/>
13. Centers for Disease Control and Prevention | Healthy Habits to Help Prevent Flu. At <https://www.cdc.gov/flu/prevent/actions-prevent-flu.htm>
14. Hawk C, Schneider M, Evans MW Jr., Redwood D. Consensus process to develop a best-practice document on the role of chiropractic care in health promotion, disease prevention, and wellness. *J Manipulative Physiol Ther*. 2012;35(7):556-67.
15. U.S. Preventive Services Task Force. Follow links at <https://www.uspreventiveservicestaskforce.org/uspstf/home>
16. Hawk C, Evans MW, A framework for chiropractic training in clinical preventive services. *Chiropr Man Therap*. 2013;21(1):28.
17. Evans MW Jr., Rupert R. The Council on Chiropractic Education's new wellness standard: a call to action for the chiropractic profession. *Chiropr Osteopat*. 2006;14:23.