

The wide-angle lens: Patient education, evidence, and the Pandemic.

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Introduction

My practice partner and I have been complying with the safety recommendations of our national and local health agencies in operating our practice. We also include information about the benefits of the chiropractic adjustment for systemic health as well as relief from musculoskeletal pain in our practice newsletter. Our attention to patient safety does not disrupt our focus on patient education. We find we can (and must) do both.

The Chiropractic-Immune Connection: A brief answer to deniers

I mention the above towards explaining the importance of answering aspects of the recent paper by Axen et al. (1) The authors' central theme is stated in their abstract:

'During this time of crisis, some chiropractors made claims on social media that chiropractic treatment can prevent or impact COVID-19. The rationale for these claims is that spinal manipulation can impact the nervous system and thus improve immunity. These beliefs often stem from nineteenth-century chiropractic concepts. We are aware of no clinically relevant scientific evidence to support such statements.'

The idea that nineteenth-century concepts are afoot when chiropractors discuss the relationship between the nervous system and the immune system is puzzling and disturbing. The nineteenth century has no exclusive claim on the concept of neurological-immunological linkage. Neither does the chiropractic profession. Indeed, the multi-disciplinary scientific specialty of neuro-immunology is much more a creature of the late twentieth and early twenty-first century than the nineteenth. Further, the idea that the chiropractic adjustment benefits nervous system function is not controversial. In fact, it is central to the well-known 1996 consensus statement by the presidents of North American chiropractic colleges. (2)

Putting aside for now the direct influence of the chiropractic adjustment on neuro-immunology, it first needs to be mentioned that even studies demonstrating the musculoskeletal

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benefits of chiropractic are relevant to the immune system. This relevance lies in the importance of the muscle pump for lymphatic flow. The contraction and relaxation of skeletal muscle facilitate the movement of lymph through lymph nodes and other lymphatic tissue – the muscle pump. This is an essential component of our general defense against infection, sometimes referred to as innate immunity.

The scientific literature on the musculoskeletal benefits of chiropractic is voluminous, and only a few examples need be cited here. Several studies published over a period spanning decades have shown injured workers lose fewer days from work and generate lower costs per case than injured workers under orthodox medical care. (3, 4, 5, 6, 7, 8, 9). While these studies were criticized in some publications, the objections were ably answered by Rosner, 2003. (10) Other researchers have reported rapid return to sport among injured athletes under chiropractic care. (11, 12) Back pain patients reported better participation in activities of daily living when under chiropractic care, compared to hospital-based physiotherapy. (13)

When our chiropractic adjustments help people get past their post-injury sedentary period and back into the activities of work, sport and daily living, we are also helping to re-establish good function of their muscle pump. Speeding the return of efficient innate immunity is nothing miraculous – it is an ordinary day at the office.

A particularly important aspect of the muscle pump involves the muscles of respiration. For example, lymph vessels from the lower part of the body must be conducted through the left and right hemidiaphragm to reach the thoracic duct. Not only do the contractions and relaxations of the diaphragm milk these vessels, but the decreased intrathoracic pressure during inspiration further moves the lymph. (14) The relevance of this respiratory pump to the chiropractic adjustment lies in a number of studies indicating that chiropractic care improves breathing function. (15, 16, 17, 18, 19)

A number of reports have presented data consistent with improved immune function in cases of infection, cancer and auto-immunity (20-24). A small scale but fascinating paper reported improved CD4 response of HIV-positive patients following a regimen of upper cervical adjustments when compared to controls. (25)

In addition to these clinical studies, laboratory research studies, while not especially numerous, have been quite instructive. For example, cellular respiration of polymorphonuclear neutrophils under particulate challenge has been shown to increase after a chiropractic adjustment (26).

Dangerous postings?

Axen et al, in their eleven days of social media surfing, uncovered ninety-nine examples of chiropractic postings they consider to be dangerous: *'Misinformation about adjustments and immunity taints public understanding of viral prevention, undermines the coordinated efforts of health authorities, and has become a cause for concern among researchers and public health authorities.'*

Of course, I agree that chiropractors must never post misinformation. Certainly, we have no basis to state, for example, that chiropractic adjustments will cure COVID-19 infection. However, I do not agree that drawing attention to the chiropractic-neurological-immunological connection constitutes misinformation, as long as it is done clearly. Disseminating this information in no way undermines the coordinated efforts of health authorities.

Let us look at one of the social media posts pointed out by Axen et al as tainting public understanding. Figure 3 in their paper illustrates several bullet points following the title, *'How to Catch the Coronavirus'*:

- ▶ Eat a poor diet.

- ▶ Avoid adequate rest.
- ▶ Become dehydrated.
- ▶ Stop exercising.
- ▶ Think negative thoughts.
- ▶ Rarely wash your hands.
- ▶ Skip your chiropractic adjustments.

Certainly, nothing in these bullet points undermines the coordinated efforts of health authorities. Indeed, the importance of hand-washing is one of the staples of such efforts. The only problem I see here is that some readers could mistakenly see the posting as an implied promise (do not follow these bullet points, and you will not catch the virus). This could be easily remedied, not by pressuring the author of this material to take down the post, but merely by recommending a change in title. I invite you to re-read the bullet points after imagining a new title, *'How to Stress Your Immune System.'*

Chiropractic colleagues and regulators could potentially achieve much good for our practitioners and our patients by taking the approach illustrated above. Censorship stops communication; good-faith editing facilitates communication. Why coerce when you can communicate?

Absence of recognition is not absence of evidence

At this point, I can imagine Axen et al objecting that I have still presented no evidence that chiropractic care benefits the immune system. I believe they would maintain that if you restrict your review of the literature to randomized controlled trials (RCTs) of a certain quality, you find 'no evidence' that the chiropractic adjustment benefits the immune system. I must point out that the original concept of evidence-based medicine did not contemplate washing our brains of all information not derived from RCTs. (27) I am well aware that the RCT offers a very high quality of evidence, but that does not mean that we should refuse to recognize the evidence of case reports, case series, quasi-experimental studies such as time-series designs, surveys and small-scale laboratory experiments. In fact, Sackett et al maintained that this information, plus the practitioner's judgement and experience, plus insights from the basic sciences should all play a role in evidence-based practice. It is not "scientific" for us to refuse to recognize the non-RCT evidence – the form of evidence most available to an alternative health care profession.

As Rome and Waterhouse aptly stated: *'Far too often critics have claimed there is an absence of chiropractic evidence. We consider this a weak, unsubstantiated excuse to avoid recognition of the chiropractic model and its concepts. Essentially, such a claim constitutes a persistent denial of the chiropractic evidence that does exist.'* (28)

Please remember: Absence of recognition is not absence of evidence.

An invitation

In this time of pandemic, I invite every practitioner to educate their patients in a clear and responsible way to view chiropractic with a wide-angle lens, while at the same time cooperating whole-heartedly with public health authorities. I further invite Axen et al and those of like mind to devote their energy and talent to the constructive project of building on the evidence of the chiropractic-immunology connection and helping practitioners discuss it clearly, rather than insisting we drop the shroud of silence on it.

In my next paper I hope to discuss a few ideas about chiropractic in the post-pandemic world.

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