Don’t Say “Boost”!

Chiropractic Leadership – The Good, the Bad & the Ugly

Matthew McCoy DC, MPH
Free Human Being
Phone: 800.219.9090
FAX: 800.219.9619
drmccoy@chirofutures.org



“Dr. McCoy, you need to dial down your passion because some people interpret it as a micro-aggression”



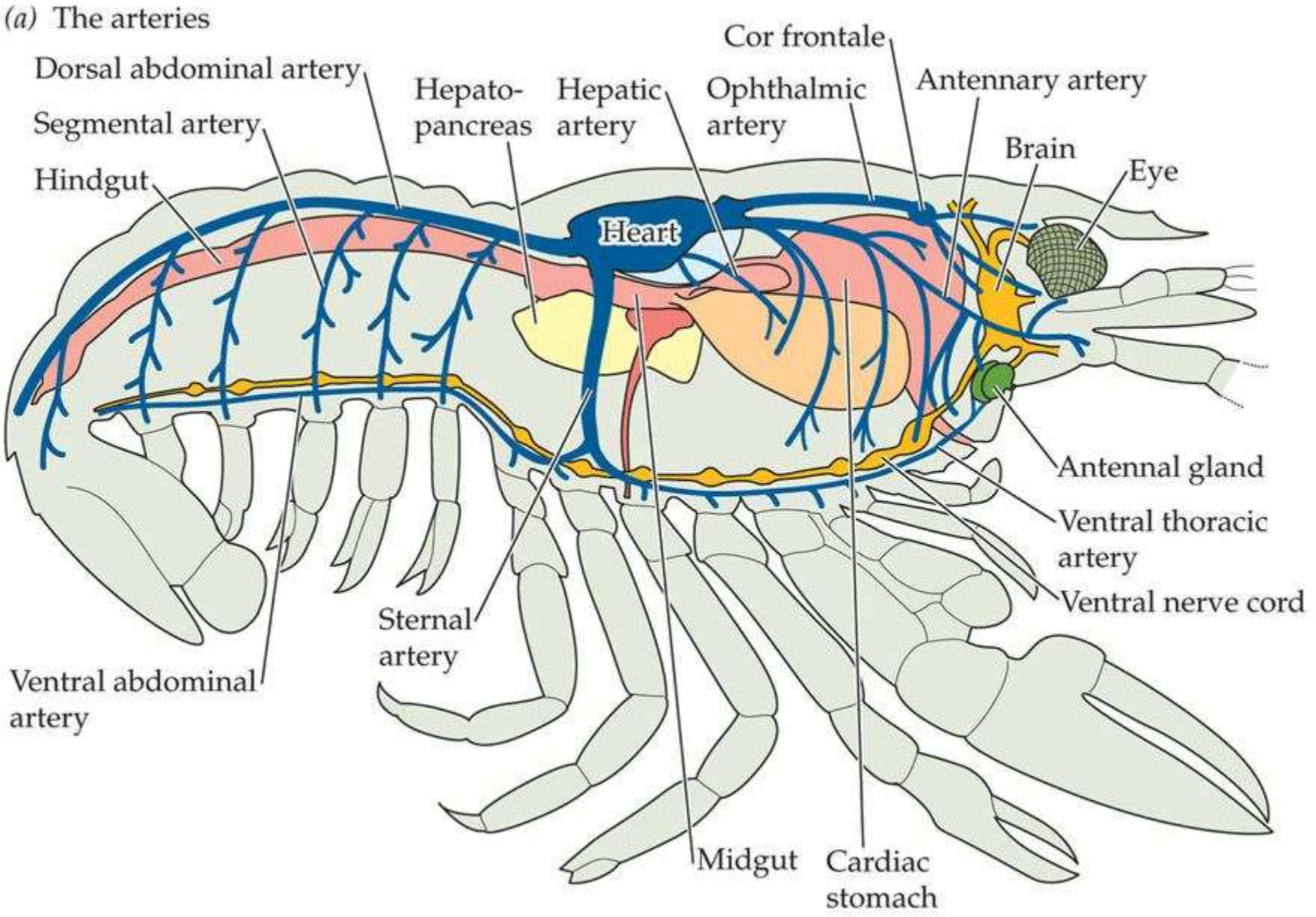
“I’d love to wear a rainbow every day and tell the world that everything’s okay”

DEBRIEFING

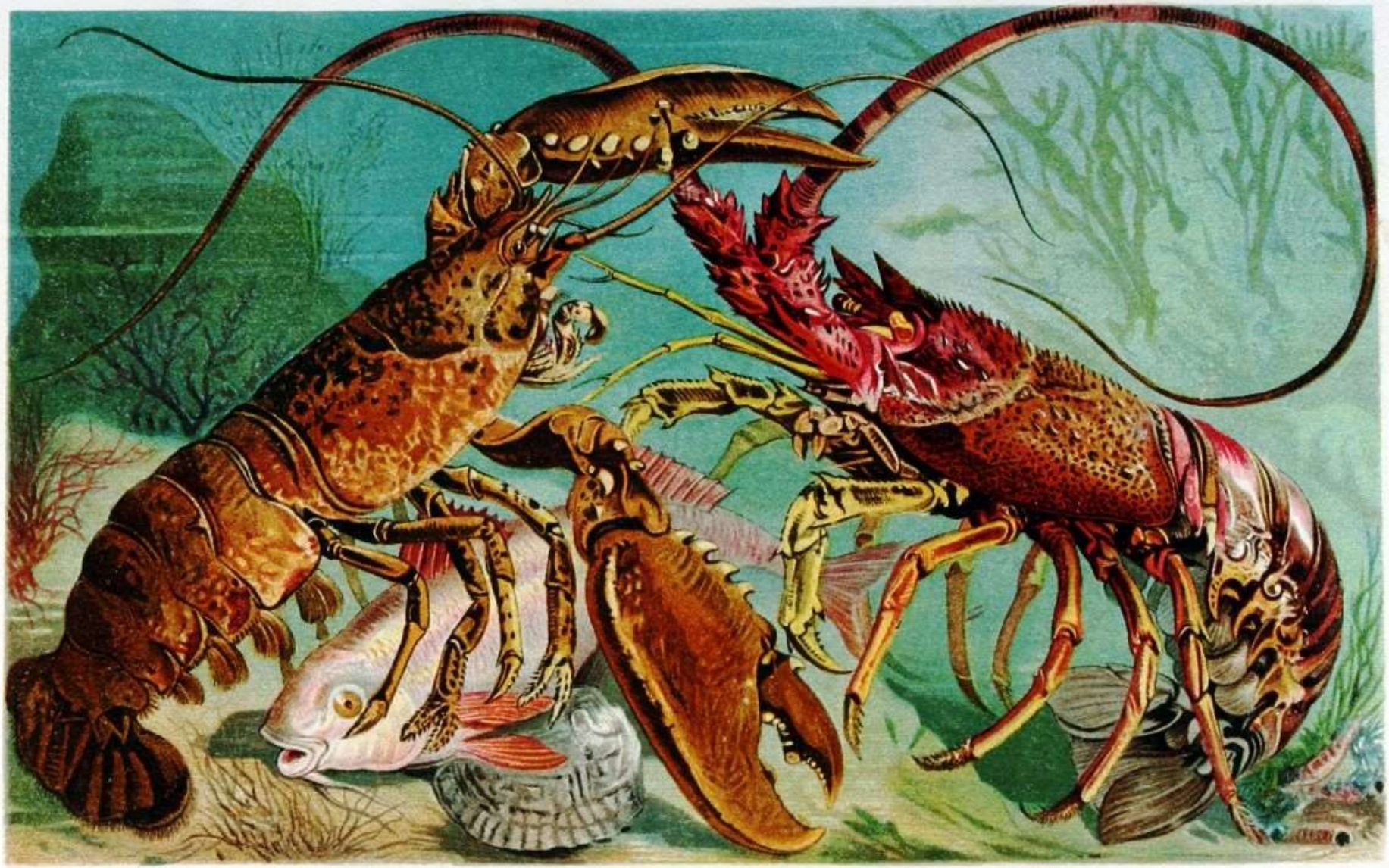
- But first . . .



Figure 23.22 Circulation through the body of a crayfish or lobster (Part 1)



ANIMAL PHYSIOLOGY, Figure 23.22 (Part 1) © 2004 Sinauer Associates, Inc.



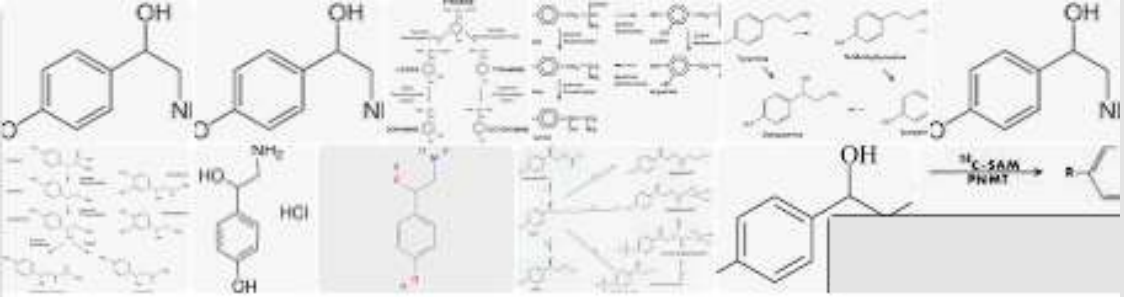
HUMMER UND LANGUSTE.

Chemistry

- Serotonin
- Octopamine

- Ratio of two brain chemicals that modulate communication between lobster neurons

- Winning increases the ratio of serotonin to octopamine



Octopamine

Octopamine is an organic chemical closely related to norepinephrine, and synthesized biologically by a homologous pathway. Its name derives from the fact that it was first identified in the salivary glands of the octopus. In many types of invertebrates octopamine is an important neurotransmitter and hormone.

Molar mass: 153.178 g/mol

CAS ID: 104-14-3

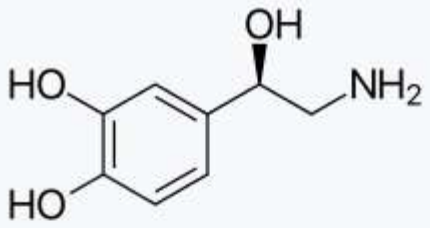
Classification: Organic compound

Receptors: TAAR1 (mammals); OctαR, OctβR, TyrR (invertebrates), Oct-TyrR

Source tissues: invertebrate nervous systems; trace amine in vertebrates

Agonists: Formamidines (amitraz (AMZ) and chlordimeform (CDM))

Norepinephrine





Clinical data	
Other names	NE, NA, Noradrenaline, (*R*)-(−)-Norepinephrine, l-1-(3,4-Dihydroxyphenyl)-2-aminoethanol
Physiological data	
Source tissues	locus coeruleus; sympathetic nervous system; adrenal medulla
Target tissues	system-wide
Receptors	α_1, α_2, β_1, β_3
Agonists	sympathomimetic drugs, clonidine, isoprenaline
Antagonists	Tricyclic antidepressants, beta blockers, antipsychotics
Precursor	dopamine
Biosynthesis	dopamine β-monooxygenase
Metabolism	MAO-A; COMT

Serotonin

Serotonin or 5-hydroxytryptamine is a monoamine neurotransmitter. Its biological function is complex and multifaceted, modulating mood, cognition, reward, learning, memory, and numerous physiological processes such as vomiting and vasoconstriction. Wikipedia

Formula: $C_{10}H_{12}N_2O$

Molar mass: 176.215 g/mol

Boiling point: 780.8°F (416°C)

Melting point: 333.9°F (167.7°C)

Metabolism: MAO

IUPAC ID: 3-(2-aminoethyl)-1H-indol-5-ol, 5-Hydroxytryptamine

Lobster Posture

- A lobster with high levels of serotonin and low levels of octopamine is a cocky, strutting shellfish
- This is because serotonin helps regulate postural flexion.
- A flexed lobster extends its appendages so it can look tall and dangerous
- When a loser lobster is given seratonin it will strecth itself out and advance itself on former victors and fight longer and harder.

Lobsters

- If the dominant lobster is defeated its brain basically dissolves and it grows a new subordinate brain.

- Its original brain is not sophisticated enough to manage the transition from dominator to dominated.

ChiroFutures
Malpractice Insurance Program
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Lobtsers

140 Million Years

ChiroFutures
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Office for Scholarly Communication

The Benefit of Power Posing Before a High-Stakes Social Evaluation

Citation

Cuddy, Amy J.C., Caroline A. Wilmuth, and Dana R. Carney. "The Benefit of Power Posing Before a High-Stakes Social Evaluation." Harvard Business School Working Paper, No. 13-027, September 2012.

Permanent link

http://nrs.harvard.edu/urn-3:HUL.InstRepos:9547823

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Share Your Story

Couple forced to wear ankle monitors to self-isolate after Kentucky woman tests positive for COVID-19

National Desk Staff






#yoloacres

The Bad & The Ugly


POLITIE

Rabbit Holes



THE JOURNAL OF ALTERNATIVE AND COMPLEMENTARY MEDICINE
Volume 14, Number 6, 2008, pp. 000–000
© Mary Ann Liebert, Inc.
DOI: 10.1089/acm.2007.0803

Paradigms

Autonomy, Consent, and Medical Paternalism: Legal Issues in Medical Intervention

Matthew McCoy, D.C.

Abstract

Patients are increasingly questioning their relationships with their doctors during a time when use of alternative health care approaches is rising, paternalistic models of health care are waning, and police powers related to health care are expanding. Focusing on the topics of mandatory vaccination and forced medical treatment of children with cancer, this paper reviews issues related to autonomy, informed consent, medical paternalism, forced medical treatment, the police powers of the state, and related legal issues. Based upon this review, it becomes clear that the fight over personal autonomy and paternalism in health care is far from over.

Introduction

nations in life expectancy, ranks 28th in infant mortality among 39 industrialized nations, has the highest incidence

The Model State Emergency Health Powers Act[1]

Draft as of December 21, 2001

A Draft for Discussion Prepared by:

The Center for Law and the Public's Health
at Georgetown and Johns Hopkins Universities

For the Centers for Disease Control and Prevention [CDC]

To Assist:
National Governors Association [NGA],
National Conference of State Legislatures [NCSL],
Association of State and Territorial Health Officials [ASTHO], and
National Association of County and City Health Officials [NACCHO]

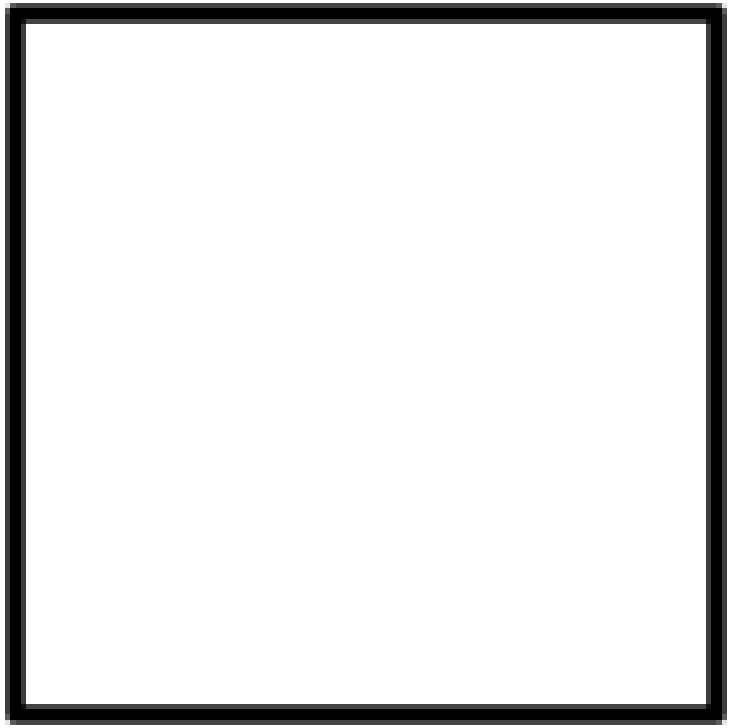
Contact Information:

Lawrence O. Gostin, J.D., LL.D (Hon.)
Professor and Director,
Center for Law and the Public's Health
Georgetown University Law Center
600 New Jersey Avenue, N.W.
Washington, D.C., 20001
(202) 662-9373
gostin@law.georgetown.edu



Admiral Rachel Levine

This is a Circle






21
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NO SMOKING
NO FUMAR
PLEASE KEEP YOUR
SOCIAL
DISTANCE
6 FEET



ChiroFutures
Malpractice Insurance Program
www.chirofutures.org

The Current Landscape

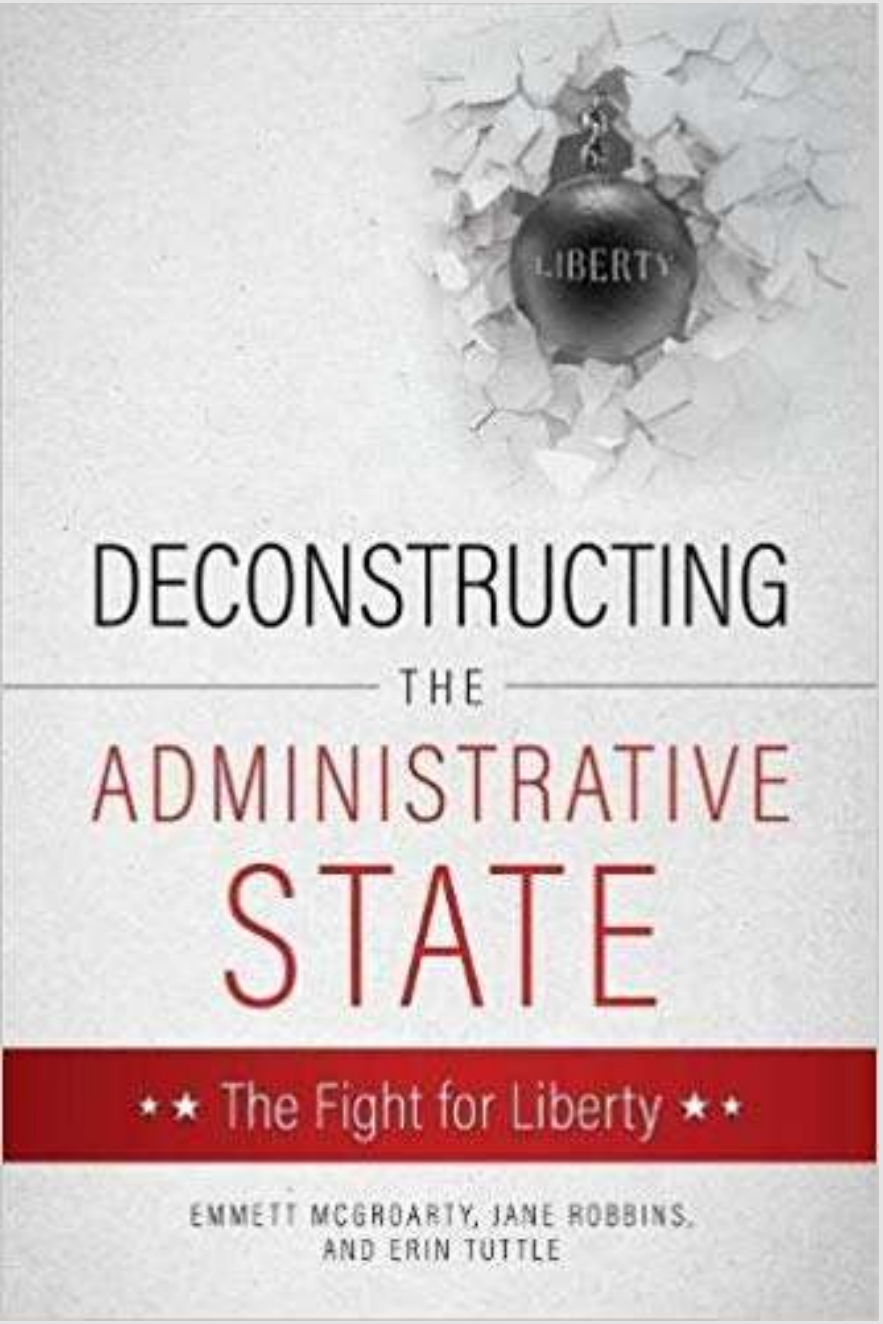
- Scope & Purpose of Clinical Care
- Personal Autonomy & Consent
- Free Speech
- Compelled Speech
- Evidence Informed Practice
- The Chiropractic Cartel



The Chiropractic Cartel

- Remove CCE Only Language
- Remove NBCE Only Language
- Dismantle the FCLB




LIBERTY
DECONSTRUCTING
THE
ADMINISTRATIVE
STATE
The Fight for Liberty
EMMETT MCGROARTY, JANE ROBBINS,
AND ERIN TUTTLE

WIMBLEDON MAGISTRATES' COURT

SUMMONS

To: Mr Richard Lanigan

Address: Spinal Joint, 7 Lime Tree Avenue, Thames Ditton, KT7 0NA and Spinal Joint, 157 Park Road, Kingston-Upon-Thames, KT2 6DQ.

YOU ARE HEREBY SUMMONED to appear on **6 January 2022 at 10a.m.** before the **Magistrates' Court sitting at Wimbledon, The Court House, Alexandra Road, SW19 7JP**, to answer the following information laid by Victoria Sheppard-Jones, Legal Director and Barrister at Capsticks Solicitors LLP, on behalf of the General Chiropractic Council: -

Alleged offence:

Charge 1

Between 26 April 2021 and 29 April 2021, Mr Richard Lanigan, whilst unregistered with the General Chiropractic Council, did unlawfully describe himself, either expressly or by implication, as a chiropractor.

Contrary to Section 32 (1) of the Chiropractors Act 1994

DATED 6 December 2021

NOTE: **Any communication relating to this summons should be addressed to the Chief Clerk, Wimbledon Magistrates' Court, The Court House, Alexandra Road, SW19 7JP. Court reference number 2101752028.**

General
Chiropractic
Council

Strictly Private and Confidential

To: Richard Lanigan
By Email: richielanigan@gmail.com

29 April 2022

Dear Richard

Your Freedom of Information (FOI) request

I write further to your FOI request to the General Chiropractic Council (GCC) on 4 April 2022 as follows:

> *"... I also want to put in a FOI request asking how much the GCC spent on lawyers and private investigators to bring their private prosecution against me, is that your area or another GCC department."*

I confirm that the total amount the GCC spent on the above was £18,628 (eighteen thousand, six hundred and twenty-eight pounds).

Yours sincerely

Joe Omorodion
Data Protection Officer

COLORADO
Department of Regulatory Agencies
Division of Professions and Occupations

PERSONAL AND CONFIDENTIAL

7, 2021

RE: License Number:
Case Number:

Dear

The Colorado Board of Chiropractic Examiners ("Board") has received the attached complaint regarding your conduct in relation to the license listed above, more specifically, a possible violation of the Chiropractors Practice Act. The Board is required by law to investigate this complaint. The first step in this process is to obtain your response to the allegations raised in the complaint. At this point, no assumption has been made about the truth or validity of any information provided to the Board.

Please provide a written response to the enclosed materials as they pertain to the allegations made in the complaint AND any pertinent supporting documentation within 30 days of the date of this letter. An earlier response may expedite the Board's review of this matter. To facilitate an efficient and timely review, please type your response. If this is not possible, please legibly print your response. Be sure to include the case number listed above on all correspondence.

Colorado Chiropractors Now Able to Give COVID Vaccine Injections

Wednesday, January 13, 2021 - 23:30

NEWS STAFF



Decision Reflects Broad Changes in the Profession Since COVID Began

According to Emergency Rules now in effect for COVID-19 vaccinations in the State of Colorado, **chiropractors may now inject patients with the experimental COVID-19 vaccine in hospitals, inpatient and outpatient facilities.**

CLICK HERE to view the Order

National Board Says Very Few Chiropractors Will Be Able to Keep Doors Open in Colorado Amid Coronavirus

Sunday, March 29, 2020 - 17:43

NEWS STAFF



NBCE Executive Director Ouzts claims there are very few chiropractors that can treat their patients

In what amounts to a punch in the gut to Colorado Chiropractors who have been fighting desperately to be able to stay open to care for their patients amidst the Coronavirus pandemic - **Norman Ouzts DC, the Chief Executive Officer for the National Board of Chiropractic Examiners (NBCE)**, which is located in Greeley, said he concurs with the regulatory authority (DORA), that very few chiropractors will be able to keep their doors open.

Denver Demands Proof of Religious Beliefs for COVID Vax Exemption

Monday, November 22, 2021 - 15:53

NEWS STAFF

Also Demands Weekly Testing for Those Exempted - Both Go Beyond Orders

The **Public Health Investigations Division of the Denver Public Health & Environment** is contacting employers and demanding that they provide written documentation on their employees demonstrating:

". . . how specifically getting the COVID-19 vaccination conflicts with sincerely-held religious beliefs for all individuals with religious exemptions."

Further to this demand the Investigations Division is demanding that weekly Covid-19 testing be performed on all individuals with exemptions.

CORA Request

Contact Information	
First Name	Matthew
Last Name	McCoy
Street Address	4390 Bells Ferry Road
Address Line 2	
City	Kennesaw
State	GA
ZIP Code	30144
Phone Number	4049936768
Email	drmatthewmccoy@gmail.com
Please include a detailed description of the records you are requesting, including search terms, date ranges, and other applicable information.	Dear Custodian of Records - Pursuant to the Colorado Open Records Act § 24-72-201 et seq. I am requesting copies of any and all public records related to the following: The Department of Public Health and Environment is contacting employers in Denver and requiring them to provide COVID vaccination and exemption documentation to the Department and are being threatened with violations for non compliance. The Department is demanding that employers require detailed explanation from the employee as to how specifically getting the COVID-19 vaccination conflicts with sincerely-held religious beliefs for all individuals with religious exemptions and the Department is also requiring these "explanations" to be turned over to the Department along with the other documentation and if they do not do so will be in violation of the Order.

Pursuant to the Colorado Open Records Act § 24-72-201 et seq. I am requesting copies of any and all public records documenting that the request for detailed explanation from the employee as to how getting the COVID-19 vaccination conflicts with sincerely-held religious beliefs for all individuals with religious exemptions and that these "explanations" are to be turned over to the Department along with the other documentation is consistent with the Vaccination Mandate dated August 2, 2021 and signed by Robert McDonald.

If any of you are not the custodian of records for this request, please forward this letter to the appropriate person or let me know which person(s) has custody of these records.

I request a waiver of all fees for searching or copying these records in that the disclosure of the requested information is in the public interest and will contribute significantly to the public's understanding of your vaccination mandate.

If there are any fees for searching or copying these records, please inform me if the cost will exceed $200.00.

The statute requires a response to this request within three days following receipt of this letter. I ask that records available in electronic format be transmitted by email to drmatthewmccoy@gmail.com

If you deny any portion, or all, of this request, please provide me with a written explanation of the reason(s) for your denial, including a citation to each specific statutory exemption you feel justifies the refusal to release the information and notify me of the appeal procedures available to me under the law. If you conclude that portions of the records that I request are exempt from
disclosure, please release the remainder of such records for inspection and copying, redacting only the portion or portions that you claim are exempt.

Please contact me with any questions about my request. Thank you for your time.

Regards,

_____

Matthew McCoy DC, MPH
drmatthewmccoy@gmail.com

Gmail

Matthew McCoy <drmatthewmccoy@gmail.com>

RE: [EXTERNAL] CORA Request

1 message

DDPHE Information <DDPHEInformation@denvergov.org> Tue, Nov 23, 2021 at 10:22 AM
To: "drmatthewmccoy@gmail.com" <drmatthewmccoy@gmail.com>

Hello Matthew McCoy,

This is in response to your CORA request dated November 18, 2021, which states as follows: "*Pursuant to the Colorado Open Records Act § 24-72-201 et seq. I am requesting copies of any and all public records documenting that the request for detailed explanation from the employee as to how getting the COVID-19 vaccination conflicts with sincerely-held religious beliefs for all individuals with religious exemptions and that these "explanations" are to be turned over to the Department along with the other documentation is consistent with the Vaccination Mandate dated August 2, 2021 and signed by Robert McDonald.*" DDPHE does not have any records responsive to this request.

Diana Altermatt
Follow us @DDPHE



TELL US HOW WE'RE DOING – CLICK HERE TO TAKE OUR CUSTOMER SATISFACTION SURVEY TODAY!

News

New public health order requires the CCBC to record vaccination status of registrants

March 8, 2022 8:45 am CCBC News, COVID-19

A new Order of the Provincial Health Officer (PHO) has been issued "to prevent or reduce the risk of the transmission of infection with SARS-CoV-2 by health professionals."

The *Health Professionals COVID-19 Vaccination Status Information and Preventive Measures Order* requires the College of Chiropractors of BC (CCBC) to record the COVID-19 vaccination status of all its registrants by March 31, 2022. On request by the CCBC, registrants must provide proof if they are vaccinated or have an exemption. It also requires the College to disclose to the PHO or medical health officer, on request, registrant information regarding vaccination status and place of work, either in aggregate or by individual.

Canadian Chiropractic Association Endorses Vaccination - Now Considers it "Safe and Effective"

Wednesday, December 4, 2019 - 15:02

NEWS STAFF

Canadian Chiropractic Association

Move Designed to Promote Chiropractic as a "Trusted and Respected Healthcare Profession"

The Canadian Chiropractic Association (CCA) has doubled down on its efforts to align the chiropractic profession with organized medicine, abandon the profession's roots and gain acceptance within the public health community in regards to its promotion of universal vaccination.

Chiropractors in Quebec To Give COVID Vaccine Injections After Training

Thursday, December 10, 2020 - 19:56



Health Minister Says Purpose is to Increase Vaccination Capacity

Following in the footsteps of the **United Kingdom** where chiropractors can sign up to be **"vaccinators"** the **Quebec Health Minister Christian Dubé has stated that students and a variety of Quebec health professionals, such as chiropractors and veterinarians, will be able to help give COVID-19 and flu vaccines.**

CLICK HERE for the UK Story

Canadian Chiropractors Helping Inject COVID Vaccines into Thousands of Canadians

Thursday, July 22, 2021 - 14:26



Canadian Chiropractic Association Says its "Proud" of its Members Who Have Volunteered to Inject Canadians

In one of the most bizarre and surreal developments in chiropractic, members of the **Canadian Chiropractic Association** (CCA) and its leaders are bragging and virtue signaling about their involvement in the injection of the experimental, novel molecular COVID machine into thousands of Canadian citizens.

In an article titled: **"The door of hope – Chiropractors step up to accelerate COVID-19 vaccinations"** **Joannie Dupont** DC, a Canadian chiropractor stated:



Many chiropractors answered the call to help vaccinate Canadians.

Canadian Chiropractic Association Board member Dr. Gerald Olin (left) and CCA member Dr. Tim Pethrick (right) are seen here at a vaccination clinic in Winnipeg, MB.



"Sometimes chiropractors are perceived as being on the outskirts of healthcare, and this time we are participating in the centre of it"

Canadian Chiropractic Association Member **Marie-Josee Bernier at** a vaccination clinic in Winnipeg, MB

Administering the jabs isn't the only important job in the process. The vaccine must be drawn into the vials at the correct dose and dilution. That's where chiropractors in Manitoba, like **Dr. Marie-Josée Bernier**, come in.



Canadian Chiropractic Association Member **Marie-Josee Bernier at** a vaccination clinic in Winnipeg, MB



In addition to administering the vaccine, she has also been tasked with preparing doses.

The clinic aims to immunize one person every 60 seconds, so she estimates she has already helped thousands of Manitobans.

Canadian Chiropractic Association Member **Marie-Josee Bernier at** a vaccination clinic in Winnipeg, MB



"Helping with vaccinations is a way to fuel the impatience in my belly of moving on. It was an action I could actually have control over. As soon as they asked chiropractors to help, I knew it was my cue."

Canadian Chiropractic Association Member Joannie Dupont DC at a vaccination clinic in Montreal, QC.

By her estimates, she has vaccinated more than **5,000 people**. “Depending on the day, it’s between 80 – 120 people. Some days it feels like a drop in the bucket, but each jab counts,”



Canadian Chiropractic Association Member **Joannie Dupont DC** at a vaccination clinic in Montreal, QC.

UK's Chiropractic Regulatory Board Promotes COVID Vaccine - Warns Chiropractors They Must Do the Same

Sunday, December 6, 2020 - 16:47

NEWS STAFF



Regulatory Board Threatens Chiropractors for Telling the Public the Truth

The United Kingdom's General Chiropractic Council (GCC) has issued a threat and a warning to UK Chiropractors: **Promote the COVID vaccine narrative that we approve or else.**

The **General Chiropractic Council** is the only regulatory and licensing board overseeing chiropractic in the United Kingdom and **has a long history of anti-chiropractic policy making** that targets those chiropractors practicing the management of vertebral subluxation in a salutogenic, vitalistic model.

Royal College of Chiropractors Urges Chiropractors to Help Vaccinate UK Citizens

Sunday, December 6, 2020 - 16:32

NEWS STAFF

The Royal College of Chiropractors

College Wants Chiropractors to Help the Large Scale Vaccination Program

The **Royal College of Chiropractors** in the United Kingdom is urging chiropractors to sign up with the National Health Service (NHS) of England as **"vaccinators"** as the NHS begins its recruiting of thousands of people to help inject citizens with the rushed vaccine.

The Department for Health and Social Care recently **changed the law to allow a wider group of people to inject the rushed vaccine** against the CCP virus. These are paid roles.

Northwestern Chiropractic Program Mandates COVID Testing of all Students

Thursday, December 3, 2020 - 13:44

NEWS STAFF



Is Mandated Vaccination Next for These Students?

According to an announcement from **Katie Burns Ryan DC, Director of Clinical Services at the College of Chiropractic at Northwestern Health Sciences University**, students will be **mandated to undergo COVID testing** after the first of the year. The school instituted voluntary testing following Thanksgiving break so they could work out the kinks and be ready once the new year begins and students return to campus.

Please Let Us Vaccinate - Michele Maiers of Northwestern's President's Cabinet Begs Federal Government

Thursday, September 23, 2021 - 12:54

NEWS STAFF



Maiers is Executive Director at Northwestern & President of the American Chiropractic Association

Michele Maiers DC, MPH, Ph.D a Member of the **President's Cabinet at Northwestern University of Health Sciences (Formerly Northwestern Chiropractic College)** and Executive Director of Research & Innovation there, begged the federal government to **add chiropractors to the list of eligible providers so they can inject the COVID vaccine**.

Allow Chiropractors to Give COVID Vaccine Injections Urges the American Chiropractic Association

Wednesday, September 22, 2021 - 15:58

NEWS STAFF



ACA Urges HHS to Allow Chiropractors to Give COVID Vaccine Injections & Says Chiropractors Meet Criteria to Give Vaccine

According to the The 2021 Q1 Lobbying Report filed by the **American Chiropractic Association (ACA)** The ACA stated that it was lobbying the U.S. Department of Health and Human Services and **"urging"** them to allow doctors of chiropractic to administer COVID-19 vaccines.

Western States is Latest Chiropractic School to Push for Chiropractors to Inject COVID Vaccine - Will Do "Whatever is Necessary"

Friday, October 1, 2021 - 15:49

NEWS STAFF



Oregon Board Says Chiropractors Can Volunteer to Inject

According to the University of Western States (Formerly **Western States Chiropractic College**) the Oregon Board of Chiropractic Examiners (OBCE) released a statement that **chiropractic physicians and chiropractic students are authorized to administer COVID-19 vaccinations.**

The announcement is posted on Western states website. CLICK HERE to

50% of Chiropractors in Oregon Have Been Injected With Experimental COVID Vaccine

Friday, July 16, 2021 - 12:19

NEWS STAFF



45% of Chiropractic Assistants Have Also Taken the Injections

According to just released data from the Oregon Health Authority (OHA), **50% of chiropractors and 45% of chiropractic assistants** have received injections of the experimental emergency use COVID vaccine in that state.



Richard Brown @UK_Richard... · 13h

No one is safe until everyone is safe.

> **NHS** @NHSuk · 1d
>
> The COVID-19 vaccine protects you and those around you.
>
> Don't delay in getting your vaccine when it is offered to you. Find out if you're eligible here: nhs.uk/CovidVaccine



The Deniers Attack





Immunity & Chiropractic

NEWS

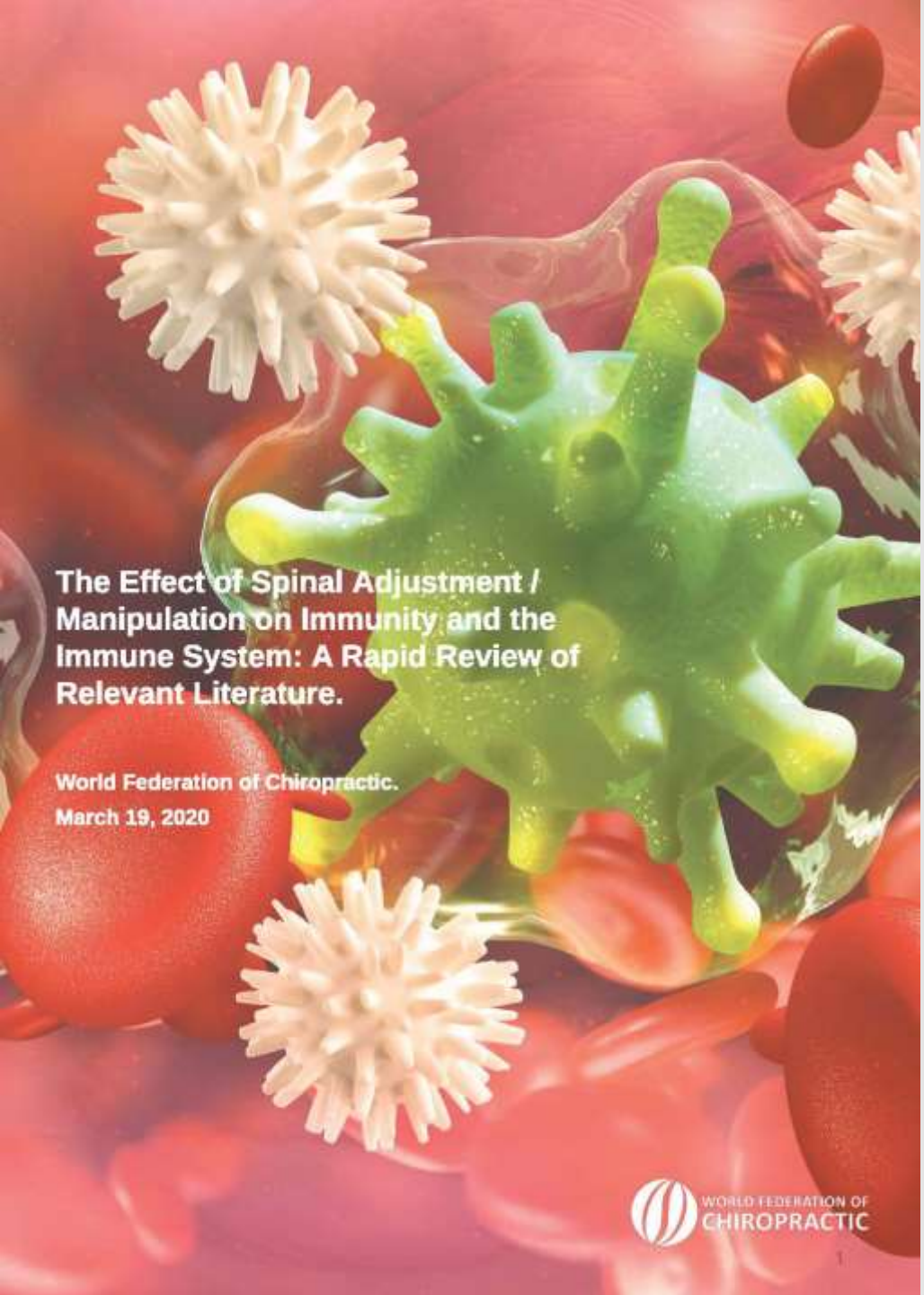
Boost your immunity through **chiropractic** care

Lahaina News

How **chiropractic** care boosts your immunity: The upper cervical region consists of the head, the C1 and C2 neck vertebrae and the spinal cord.



Flag as irrelevant

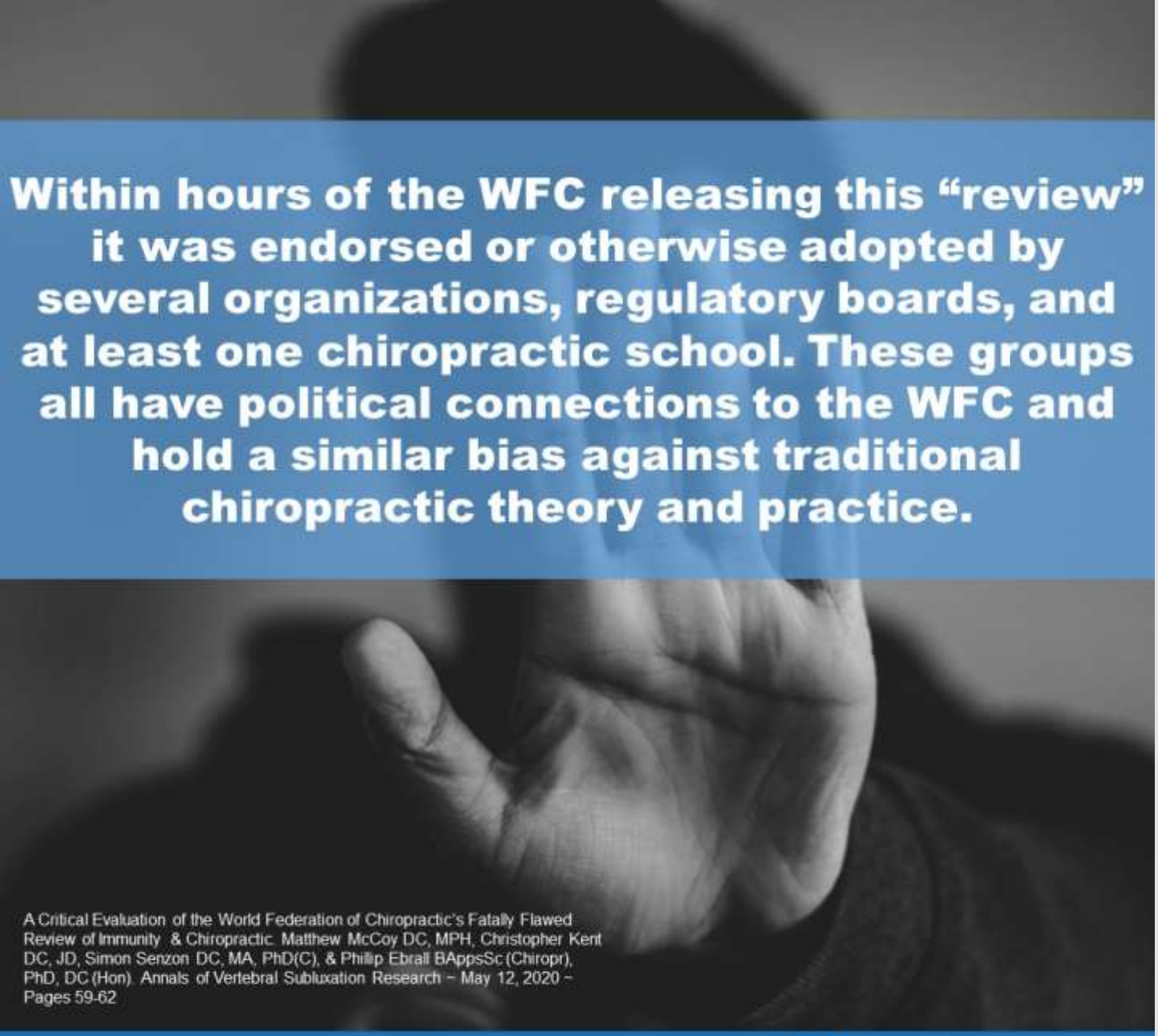


The Effect of Spinal Adjustment / Manipulation on Immunity and the Immune System: A Rapid Review of Relevant Literature.

World Federation of Chiropractic.

March 19, 2020

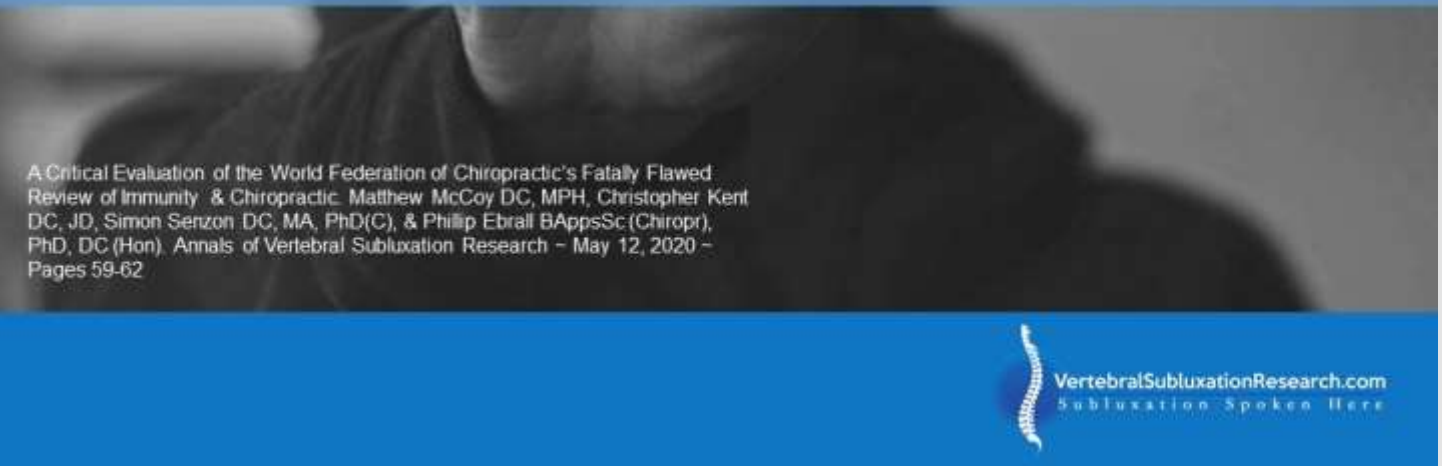
WORLD FEDERATION OF CHIROPRACTIC



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The regulatory boards then used the document as a rationale to outright threaten their licensees for communicating any inference that chiropractic plays a role in immunity.



A Critical Evaluation of the World Federation of Chiropractic's Fatally Flawed Review of Immunity & Chiropractic. Matthew McCoy DC, MPH, Christopher Kent DC, JD, Simon Senzon DC, MA, PhD(C), & Phillip Ebrall BAppsSc(Chiropr), PhD, DC(Hon). Annals of Vertebral Subluxation Research ~ May 12, 2020 ~ Pages 59-62

VertebralSubluxationResearch.com
Subluxation Spoken Here

ChiroFutures
Malpractice Insurance Program
www.chirofutures.org



"We are aware that some chiropractors are claiming that chiropractic adjustments confers or enhances immunity. We are fortunate to have a research committee containing the worlds leading chiropractic researchers to call upon who have undertaken a rapid review of available evidence and formed our key message that there is no credible scientific evidence supporting these claims of effectiveness"

Vivian Kil DC
President – World Federation of Chiropractic

The Chiropractic Chronicle
Be Informed. Ignorance is not bliss.
ChiropracticChronicle.com

AMERICAN CHIROPRACTIC ASSOCIATION

"There is no quality research, data or evidence that suggests that a spinal manipulation itself will support the immune system"

Keith Overland DC
American Chiropractic Association

Interview on FOX News

The Chiropractic Chronicle
Be Informed. Ignorance is not bliss.
ChiropracticChronicle.com

“There’s no credible evidence and it breaks my heart to say it”



https://www.screencast.com/t/GdohqUFE

“No evidence, my ass”

Amy Haas DC, Ph.D

"You Will be Under the Hand of the Law"



Côté et al. Chiropractic & Manual Therapies (2020) 28:21
https://doi.org/10.1186/s12998-020-00312-x

Chiropractic & Manual Therapies

COMMENTARY Open Access

A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity

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Abstract

Background: In the midst of the coronavirus pandemic, the International Chiropractors Association (ICA) posted reports claiming that chiropractic care can impact the immune system. These claims clash with recommendations from the World Health Organization and World Federation of Chiropractic. We discuss the scientific validity of the claims made in these ICA reports.

Main body: We reviewed the two reports posted by the ICA on their website on March 20 and March 28, 2020. We explored the method used to develop the claim that chiropractic adjustments impact the immune system and discuss the scientific merit of this claim. We provide a response to the ICA reports and explain why this claim lacks scientific credibility and is dangerous to the public. More than 150 researchers from 11 countries reviewed and endorsed our response.

Conclusion: In their reports, the ICA provided no valid clinical scientific evidence that chiropractic care can impact the immune system. We call on regulatory authorities and professional leaders to take robust political and regulatory action against those claiming that chiropractic adjustments have a clinical impact on the immune system.

Keywords: Chiropractic, Spinal manipulation, Immunity, Pseudoscience, Coronavirus

Background

We are currently facing the greatest global public health crisis in a century. Fighting the coronavirus pandemic has required that we change the way we live and observe strict public health guidelines. This is necessary because, at this time, there are no effective vaccines, treatments or cures for COVID-19 [1, 2]. Chiropractors, as members of the health care system, should disseminate the best available public health information to the public [3]. Any attempt to behave otherwise can be misleading and potentially dangerous to individual patients and the public at large.

On March 20, 2020, the International Chiropractors Association (ICA), a US based chiropractic organization, posted a report claiming that chiropractic adjustments can boost immune function with the implication that it might be helpful in preventing COVID-19 [4]. In their

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Review

The Potential Mechanisms of High-Velocity, Low-Amplitude, Controlled Vertebral Thrusts on Neuroimmune Function: A Narrative Review

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Abstract: The current COVID-19 pandemic has necessitated the need to find healthcare solutions that boost or support immunity. There is some evidence that high-velocity, low-amplitude (HVLA) controlled vertebral thrusts have the potential to modulate immune mediators. However, the mechanisms of the link between HVLA controlled vertebral thrusts and neuroimmune function and the associated potential clinical implications are less clear. This review aims to elucidate the underlying mechanisms that can explain the HVLA controlled vertebral thrust–neuroimmune link and discuss what this link implies for clinical practice and future research needs. A search for relevant articles published up until April 2021 was undertaken. Twenty-three published papers were found that explored the impact of HVLA controlled vertebral thrusts on neuroimmune markers, of which eighteen found a significant effect. These basic science studies show that HVLA controlled vertebral thrust influence the levels of immune mediators in the body, including neuropeptides, inflammatory markers, and endocrine markers. This narrative review discusses the most likely mechanisms for how HVLA controlled vertebral thrusts could impact these immune markers. The mechanisms are most likely due to the known changes in proprioceptive processing that occur within the central nervous system (CNS), in particular within the prefrontal cortex, following HVLA spinal thrusts. The prefrontal cortex is involved in the regulation of the autonomic nervous system, the hypothalamic–pituitary–adrenal axis and the immune system. Bi-directional neuro-immune interactions are affected by emotional or pain-related stress. Stress-induced sympathetic nervous system activity also alters vertebral motor control. Therefore, there are biologically plausible direct and indirect mechanisms that link HVLA controlled vertebral thrusts to the immune system, suggesting HVLA controlled vertebral thrusts have the potential to modulate immune function. However, it is not yet known whether HVLA controlled vertebral thrusts have a clinically relevant impact on immunity. Further research is needed to explore the clinical impact of HVLA controlled vertebral thrusts on immune function.

Keywords: high-velocity; low-amplitude thrust; HVLA; chiropractic; spinal manipulation; central nervous system; prefrontal cortex; immune system; endocrine system

check for updates

Citation: Haavik, H.; Niazi, I.K.; Kumari, N.; Amjad, I.; Duehr, J.; Holt, K. The Potential Mechanisms of High-Velocity, Low-Amplitude, Controlled Vertebral Thrusts on Neuroimmune Function: A Narrative Review. *Medicina* **2021**, *57*, 556. https://doi.org/10.3390/medicina57060536

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1. Introduction

The COVID-19 pandemic has resulted in significant global morbidity and mortality [1,2], especially amongst individuals who are immunocompromised, such as older people and those with underlying medical conditions [2,3]. The current pandemic and

"It is not yet known whether HVLA controlled vertebral thrusts have a clinically relevant impact on immunity."

The Good



Chiropractic Regulatory Boards May be Restraining Trade During COVID-19 Crisis

Wednesday, April 1, 2020 - 00:00

CHIROFUTURES MALPRACTICE PROGRAM

Are Active Market Players Attempting to Hurt their Competition?

ChiroFutures Malpractice Insurance Program is aware that several chiropractic regulatory boards in the United States have endorsed and/or adopted a policy statement published by the World Federation of Chiropractic (WFC) on the role that chiropractic clinical management has on immune function.

The WFC claims that, based upon their "review", chiropractors may not communicate claims of effectiveness for conferring or enhancing immunity. Some of these boards, and at least one chiropractic college President, have used this policy to directly threaten licensed chiropractors.

Every regulatory board in the United States is made up of active market players - meaning those chiropractors who serve on the board are in competition with all other chiropractors in the state. These active market players, who have the authority to discipline and sanction their competitors, endorsed and/or adopted this flawed policy that appears to restrain the trade of their competitors. To our knowledge they also did this without any formal process, hearing or input from their competition in the marketplace or from the public. To our knowledge they also did this without active oversight of the state.

ChiroFutures has reviewed the document these Boards relied upon and endorsed to potentially restrain the trade of their competitors and have determined that it is methodologically flawed and scientifically invalid.

Anyone receiving communication from a chiropractic regulatory board regarding this issue is urged to preserve that communication along with all other communications, emails, letters, website posts and any other material related to this issue from the regulatory board. Victims of any regulatory boards' attempt to restrain chiropractic trade related to these issues are urged to consult with legal counsel to explore the various remedies available to them.

The United States Supreme Court has held that active market players involved in anti-competitive and unfair methods of competition may be found liable for unreasonably restraining trade in violation of antitrust law.



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It is the individual's decision whether or not to undergo a health care intervention. That decision comes about through an open, patient centered, evidence informed, consent driven process where the individual makes that decision knowledgeable about the evidence, comfortable with the intervention as safe, effective and consistent with their values.

Sherman College Addresses Mandatory Vaccination & Consent Issues

Thursday, August 5, 2021 - 14:45

NEWS STAFF



States College Respects the Right to Freedom of Choice in Healthcare

As vaccination mandates for students and health care workers spread throughout the United States, chiropractors and chiropractic college students are increasingly becoming caught up in the fight for their personal autonomy. At the time of this writing, Oregon, California and Denver have mandated COVID vaccines for all health care workers. Oregon is home to the **University of Western States** which houses a chiropractic college and California is home to two chiropractic Colleges: LIFE **West and Palmer West.** Thus far none of those schools have issued any statements on the vaccination issue or how it will impact their faculty and students.



Sherman College of Chiropractic embraces the ethical principles of informed consent and personal autonomy in making health care decisions. Individuals have the right to make informed decisions concerning whether to accept or reject medical and other healthcare interventions. All medications and procedures carry an element of risk, and individuals are entitled to decide whether to accept or reject the potential benefits and risks of any drug or intervention without fraud, duress, or coercion. In acknowledging patient autonomy, Sherman College of Chiropractic adheres to the ethical principles of maintaining respect, integrity, and veracity. Sherman College of Chiropractic has not and does not require vaccination of students or staff. The college acknowledges that this is a personal decision for each individual. Furthermore, the college respects the right to freedom of choice in healthcare on the basis of personal, philosophical and religious beliefs.

Over 200 British Columbia Chiropractors Threaten Legal Action Against Board Over Proposed Mandatory Vaccination Policy

Thursday, December 9, 2021 - 14:45

NEWS STAFF



Group Sends Notice of Liability to Chiropractic Board: "Ignorance of the law is no excuse"

In an extremely detailed and thoroughly referenced 33 page notice sent to the College of Chiropractors of British Columbia, **227 licensed chiropractors warn the individual members of the regulatory board of their personal liability should they mandate COVID vaccination as a condition of licensing.**

CLICK HERE to review the document

Critical Evaluation

A Critical Evaluation of the World Federation of Chiropractic's Fatally Flawed Review of Immunity & Chiropractic

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Abstract

The objective of this paper is to provide a critical evaluation of the World Federation of Chiropractic's (WFC) "Rapid Review" of the role of chiropractic in immunity and their conclusions. The WFC claims to have reviewed 7 items including an unpublished report with no citation, four studies involving enhancement of immune markers following chiropractic intervention (including enhanced respiratory burst, increased interleukin 2, and increased CD4 cell counts), a review of literature on the evidence supporting stimulation of the neuroimmunoendocrine system and a review of one hundred thousand cases of influenza managed by osteopathy during the 1918 flu pandemic.

All of the reports they reviewed demonstrated positive findings in support of manual methods such as chiropractic adjustments and manipulation in effecting a positive immune response.

Despite these positive findings, the WFC Research Committee came to the opposite conclusion that no credible, scientific evidence exists that spinal adjustment / manipulation has any clinically relevant effect on the immune system.

Our critical evaluation reveals that their conclusion is based on flawed methodology, a grossly incomplete review of the literature, unfounded interpretations of the results of the studies, and bias demonstrated by the authors. It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system. Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care. The scientific literature reviewed here, while limited, demonstrates a positive, salutogenic effect from chiropractic on the human immune system.

Key Words: *World Federation of Chiropractic, immunity, chiropractic, adjustment, manipulation, vertebral subluxation, coronavirus, COVID-19*

Background

The World Federation of Chiropractic (WFC) has issued what they call a "rapid review" of materials that they are ". . . aware have been cited in support of claims of effectiveness for spinal adjustment/manipulation in conferring or enhancing immunity."[1]

The "rapid review" was conducted by the World Federation of

- Greg Kawchuk DC, PhD - Canadian Memorial Chiropractic College Adjunct
- Christine Goertz DC, PhD - Palmer College of Chiropractic Honorary Alumna
- Iben Axén DC, PhD - Institut Franco-Européen de Chiropratique
- Martin Descarreaux DC, PhD - Université du Québec

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ILLINOIS PRAIRIE STATE CHIROPRACTIC ASSOCIATION REJECTS STATEMENTS BY WFC (PDF)



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PORTUGUESE CHIROPRACTIC ASSOCIATION REJECTS WFC STATEMENTS (PDF)



CONNECTICUT CHIROPRACTIC COUNCIL REJECTS WCF STATEMENTS (PDF)



AUSTRALIAN SPINAL RESEARCH FOUNDATION REJECTS WFC STATEMENT (PDF)



FOUNDATION FOR VERTEBRAL SUBLUXATION
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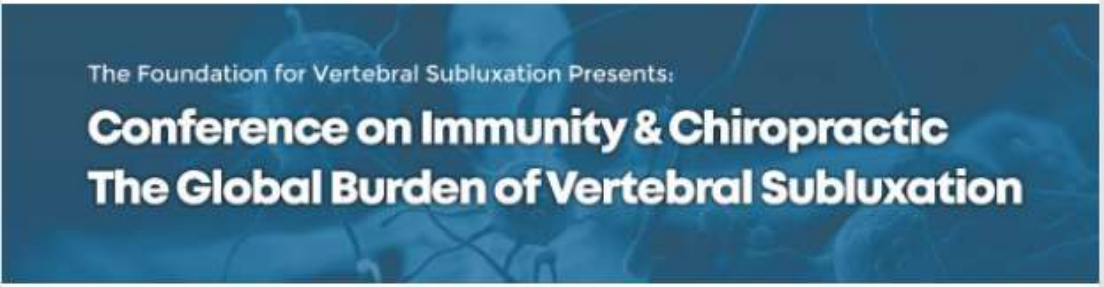
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- **Amy Haas MS, DC, Ph.D** - Coordination, Integration & Cytokines - Oh MY!-

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Secondary analysis of a dataset to estimate the prevalence of vertebral subluxation and its implications for health promotion and prevention

By

Christie Kwon

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An abstract of
A thesis submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
Master of Public Health
in Prevention Science
2020

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Abstract

Secondary analysis of a dataset to estimate the prevalence of vertebral subluxation and its implications for health promotion and prevention.

By Christie Kwon

Objective Vertebral subluxation (VS) is a clinical entity defined as the misalignment of the spine affecting biomechanical and neurological function. The identification and correction of VS is the primary focus of the chiropractic profession. The purpose of this study is to estimate the prevalence of VS using a sample of individuals presenting for chiropractic care and to explore the public health implications.

Methods A brief review of the literature was conducted to support an operational definition for VS that incorporated neurologic and kinesiologic exam components. A retrospective, quantitative analysis of a multi-clinic dataset was then performed using this operational definition. Patient demographic data included age, gender, and past health history characteristics. In addition to estimating overall prevalence of VS, age- and gender-stratified estimates in the different clinics were calculated to observe for potential variations.

Results A total of 1,851 patient records from 7 chiropractic clinics in 4 states were obtained. The mean age of patients was 43.48 (SD = 16.8, range: 18-91 years). There were significantly more females (n = 927, 64.6%) than males presented for chiropractic care. Patients reported various spinal or extremity pain, numbness, or tingling; headaches; ear, nose, and throat-related issues; visceral symptoms; mental health concerns; neurocognitive issues; and concerns about general health as well as overall wellness as their reasons for seeking chiropractic care. The overall prevalence was 78.55% (95% CI: 76.68-80.42). Female and male prevalence were 77.17% and 80.15%, respectively; notably, all per-clinic, age, or gender-stratified prevalence were ≥ 50%.

Conclusion Albeit nonrandom, the sample has a broad geographic distribution. The results of this study suggest a high rate of prevalence of VS in a sample of individuals who sought chiropractic care. Further investigation into the epidemiology of vertebral subluxation and its role in health promotion and prevention is warranted.

Keywords: *vertebral subluxation, chiropractic, epidemiology, prevalence, prevention science*

"The authors quote Gray's Anatomy about the idea that the nervous system controls and coordinates all organs and structures. This is not relevant to the study and is **untrue.** Many organs function well without nervous system control"

Credible Evidence?



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Review

A Scoping Review of Chiropractic, Vertebral Subluxation and Immune Function with Implications for Development of a Protocol for Measurement of Immune Biomarkers in Chiropractic Research & the Development of Related Policy

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Abstract

Objective: To discuss the existing literature on chiropractic, vertebral subluxation and immune function in order to inform the development of an integrative review of the literature, a review of immune biomarkers in relation to chiropractic, development of a research protocol, the implementation of future studies and the development of related policy.

Methods/Results: We conducted a scoping review of existing literature available to the authors and conducted further searches and gathering of documents based on that available literature. 125 papers were gathered and included in this review.

Conclusions: This is a scoping review of the literature regarding chiropractic and its relationship to neuroimmunology. It is intended to inform a larger project and give that team as much background as possible in a short period of time. The results of the already available research demands that we further explore the neuro-immuno-regulatory effects of chiropractic, adjustment and spinal manipulation and it provides a starting point for doing so. While adjustments reduce pain and inflammation, they also improve immune-regulatory function. How and to what extent is the subject of this current multi-pronged project.

Key Words: *Chiropractic, immunity, neuroimmunity, neuroimmunology, psychoneuroimmunology, neuroimmunoendocrine system, immune biomarkers, supersystem, vertebral subluxation, adjustment, spinal manipulation*

Introduction

It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system.[1] Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care.[2-4]

Recent events related to the Coronavirus Pandemic have brought this relationship to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening the immune system and that there is no credible, scientific evidence that spinal adjustment and/or manipulation has any clinically relevant effect on the immune system.[5]

As a result of the assertions by these researchers, some chiropractic regulatory boards, chiropractic trade organizations and chiropractic educational institutions from around the world are claiming that there exists no credible, scientific evidence that would permit claims of effectiveness for conferring or enhancing immunity through spinal adjustment and/or manipulation to be made in communications by chiropractors.[6] Essentially, chiropractors have been effectively muzzled and banned from discussing any connection between the nervous and immune systems.

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Scoping Review

A Scoping Review of Salivary Tests for Immunoglobulin A, Cortisol, and C-Reactive Protein in Consideration of Their Use as Immune Biomarkers in Chiropractic Research

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Abstract

Objective: To perform a scoping review of the existing literature on salivary tests for immunoglobulin A (IgA), cortisol and C-reactive protein (CRP) to inform researchers in regards to their use as measurements of immune biomarkers following chiropractic intervention.

Methods/Results: We conducted a scoping review of existing literature available to the authors and conducted further searches and gathering of documents based on that available literature. 46 papers were gathered and included in this scoping review.

Conclusions: This is a scoping review of the existing literature on salivary tests for immunoglobulin A, cortisol and C-reactive protein. Its purpose is to inform researchers on the existing science in order to inform their use as measurements of immune biomarkers following chiropractic intervention. It is intended to inform larger projects and give that team as much background as possible in a short period of time. The results of this scoping review reveal the potential use and utility of salivary tests as measurements of immune biomarkers to explore the neuro-immuno-regulatory effects of chiropractic, adjustment and spinal manipulation.

Key Words: Chiropractic, immunity, neuroimmunity, neuroimmunology, psychoneuroimmunology, neuroimmunoendocrine system, immune biomarkers, supersystem, vertebral subluxation, adjustment, spinal manipulation, Immunoglobulin A, C-Reactive Protein, cortisol, salivary tests

Introduction

Salivary testing has gained in popularity as a monitoring tool for human health. Saliva is a rapidly and easily available biological fluid, its analysis is non-invasive and is utilized in disciplines including medicine, dentistry, psychology, pharmacotherapy and epidemiology.[1] Saliva is a safe and low-cost alternative to the use of serum and research has shown that levels of some salivary markers correlate well with those in serum.[2]

Saliva refers to the clear, slightly acidic, hypotonic and mucoserous exocrine fluid synthesized and secreted by the salivary glands.[1] The major salivary glands include the parotid, submandibular and sublingual glands and produce 90% of saliva. Whole mouth saliva, as opposed to saliva produced by specific glands, is a mixture of oral fluids made up of 99% water, inorganic salts, enzymes, polypeptides and proteins. Alterations in the composition of blood may be mirrored by changes in the biochemical composition of saliva because blood-based molecules enter the highly vascularized salivary glands. Whole mouth saliva has also been proposed to resemble plasma in its composition.[3,4]

Salivary compounds can derive from plasma by passive diffusion or active transport and because of this, salivary analysis has great potential as a diagnostic tool as several

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Proposal

Chiropractic, Vertebral Subluxation and Immune Function: A Multi-Pronged Project to Address Fundamental Questions in an Evidence Informed Framework

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Abstract

Objective: To briefly outline a multi-pronged project to address fundamental questions regarding chiropractic, vertebral subluxation and immune function.

Background: Recent events related to the coronavirus pandemic have brought the relationship between the nervous and immune systems to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening the immune system and that there is no credible, scientific evidence that spinal adjustment and/or manipulation has any clinically relevant effect on the immune system.

Methods: An ad hoc team made up of individuals with experience in research, law, public health, and chiropractic from the Foundation for Vertebral Subluxation and Sherman College of Chiropractic developed a rapid outline to serve as a guideline for the development of projects related to chiropractic and immunity.

Discussion: This outline describes a multi-pronged approach to complete a scoping review of chiropractic, immunity and biomarkers, a comprehensive, integrative review of the scientific literature on chiropractic and immunity, the development of research protocols, feasibility studies, development of a prospective longitudinal health outcomes study, and the development of policy and best practice statements for practitioners and patients in an evidence informed framework.

Conclusion: It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system. Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care. The chiropractic profession is encouraged to further explore these relationships.

Key Words: *Chiropractic, immunity, neuroimmunity, neuroimmunology, psychoneuroimmunology, neuroimmunoendocrine system, immune biomarkers, supersystem, vertebral subluxation, adjustment, spinal manipulation, best practices, health policy*

Background

It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system.[1] Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care.[2-4]

Recent events related to the Coronavirus Pandemic have brought this relationship to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening

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Critical Evaluation

A Critical Evaluation of the World Federation of Chiropractic's Fatally Flawed Review of Immunity & Chiropractic

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2. *President – Foundation for Vertebral Subluxation*
3. *Research Fellow – Foundation for Vertebral Subluxation*
4. *Health and Wellbeing Research Group, Southern Cross University*

Abstract

The objective of this paper is to provide a critical evaluation of the World Federation of Chiropractic's (WFC) "Rapid Review" of the role of chiropractic in immunity and their conclusions. The WFC claims to have reviewed 7 items including an unpublished report with no citation, four studies involving enhancement of immune markers following chiropractic intervention (including enhanced respiratory burst, increased interleukin 2, and increased CD4 cell counts), a review of literature on the evidence supporting stimulation of the neuroimmunoendocrine system and a review of one hundred thousand cases of influenza managed by osteopathy during the 1918 flu pandemic.

All of the reports they reviewed demonstrated positive findings in support of manual methods such as chiropractic adjustments and manipulation in effecting a positive immune response.

Despite these positive findings, the WFC Research Committee came to the opposite conclusion that no credible, scientific evidence exists that spinal adjustment / manipulation has any clinically relevant effect on the immune system.

Our critical evaluation reveals that their conclusion is based on flawed methodology, a grossly incomplete review of the literature, unfounded interpretations of the results of the studies, and bias demonstrated by the authors. It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system. Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care. The scientific literature reviewed here, while limited, demonstrates a positive, salutogenic effect from chiropractic on the human immune system.

Key Words: *World Federation of Chiropractic, immunity, chiropractic, adjustment, manipulation, vertebral subluxation, coronavirus, COVID-19*

Background

The World Federation of Chiropractic (WFC) has issued what they call a "rapid review" of materials that they are ". . . aware have been cited in support of claims of effectiveness for spinal adjustment/manipulation in conferring or enhancing immunity."[1]

The "rapid review" was conducted by the World Federation of Chiropractic's Research Committee made up of the following individuals:

- Greg Kawchuk DC, PhD - Canadian Memorial Chiropractic College Adjunct
- Christine Goertz DC, PhD - Palmer College of Chiropractic Honorary Alumna
- Iben Axén DC, PhD - Institut Franco-Européen de Chiropratique
- Martin Descarreaux DC, PhD - Université du Québec à Trois-Rivières
- Simon French B.App.Sci (Chiro), MPH, PhD - Macquarie University

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The Genotoxic Aspect of the Vertebral Subluxation: Transcript of Lecture Given by Ronald W. Pero Ph.D

Ronald W. Pero, Ph.D[1]

ABSTRACT

This is looking at life at the chemical level. There are, basically, three main events that organize information. Duplication, transcription, of that information that's present in the DNA molecule, and then translation of that material into protein which carries out the metabolic functions in the cell. The crucial event is in duplication. That is really genetic toxicology. If the cell can't do that, it's the end. It can live with a lot of abnormalities in translation and transcription, it can't live with abnormalities in the DNA duplication. So that is what Harry Truman says, "The buck stops here". The responsibility stops here. That's it. The DNA molecule. You can't go back any further. That's what I'm offering you as a basic from which to look at the scientific basis of chiropractic. That's chemically speaking. Now this is kinetically speaking. What happens is this is just taking the human cells, the cell division cycle, it's usually about 8 hours, and this is what happens, these are different phases. We can recognize the phases in the cell very nicely. "M' is the mitosis, when the cell actually divides and the chromatin is very condensed."G1" is when the cell is preparing to replicate its DNA, "S" is when the replication actually takes place. "G2" is it begins to condense, and "MI", it actually comes apart. The events themselves are very nicely seen and very important in the duplication of cell information.

Keywords: *chiropractic, subluxation, adjustment, manipulation, oncogenes, genotoxicity, stress, immunity, cancer, mutagenesis, neuropathophysiology*

Publication Note: This paper is a reprint of the transcript from a lecture given by Ronald W. Pero Ph.D circa 1980.

Introduction

By Dr. Joseph Flesia

Every one of you knows Dr. Pero. His introduction will consist mostly of some of the new things he is doing. He is, as you all know, a member of the Chiropractic Advisory Board of Renaissance.

He is the Chairman of the newly founded Chiropractic Basic Science Research Foundation, the fund granting foundation we talked about earlier, and he is on the Peer Review Committee who will be giving out the funds to the various scientists for more conclusive research.

He is also the director of Molecular Genetics at the University of Lund in Lund, Sweden. Director of the Division of Cancer Research at the Preventive Medicine Institute, Strang Clinic, downtown Manhattan. He is the Director of the PMI Research Center for Preventive Medicine, and a Scientific Editor for the Keyser/Strang Lung Research Center.

Dr. Pero is a friend of Renaissance and, therefore, a friend of chiropractic. He will be one of the two men receiving a partial grant from the donations upstairs, to immediately begin large amounts of genetic testing of patients in Phases I and III of subluxation degeneration under long term chiropractic care.

Dr. Ronald Pero

Okay, are we ready? (A loud "Yes" from the audience). (Dr. Pero is standing with his back to the camera). Lights! Camera! Action! Let's get the camera in focus. We should get it on the right people- the audience. They're the ones who've got to be

1. Director of Molecular Genetics University of Lund, Sweden

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Biochemical & Endocrinological Changes Due to Neuropathologic States That Can Lead to Gentoxic Consequences: A Testable Hypothesis for Health Effects Induced by Spinal Pathomechanics

Desmond B. Johnson, B.Sc., Ph.D[1], Ronald W. Pero, Ph.D[1], J.M. Flesia Jr., D.C.[1]

ABSTRACT

Anatomical, histopathological and neuropathological consequences of spinal cord injury have been reviewed previously. The present review concentrates on literature published since then, and is particularly concerned with the molecular events following spinal cord injury, with the emphasis on such events that relate to genotoxicity. Modern theories relating to oncogenes, to initiation and promotion, and to co-carcinogens are dealt with. There is overwhelming evidence in the literature for the role of hormones in the etiology of cancer.

As co-carcinogens, or agents of promotion, hormones have a prominent role in tumorigenesis through their influence on cellular environment and on the expression of growth capacity. In addition, some writers have suggested that hormones may also be important as initiators of neoplasia as well as being promoters of neoplasia initiated by other agents.

Because of the chronic nature of the results of many spinal injuries, to whatever degree of debilitation, the impact of stress on the human organism must be considered. Hormonal changes elicited by physical and psychological stress are summarized. While pain is included in the general context of stress, it is also treated from other viewpoints: recent literature on pain perception, on endogenous opiates, and on pain control are included in the review. In addition, attention is drawn to the side effects of some drugs, including analgesics as it is clear that some drugs are closely connected with carcinogenesis.

Key words: *chiropractic, subluxation, adjustment, manipulation, oncogenes, stress, immunity, cancer, mutageneis, neuropathophysiology*

Publication Note: This paper is a reprint of the original with the addition of an abstract and key words.

Background

Anatomical, histopathological and neuropathological consequences of spinal cord injury have been reviewed previously (Stiga & Flesia, ref.1). The present review concentrates on literature published since then, and is particularly concerned with the molecular events following spinal cord injury, with the emphasis on such events that relate to genotoxicity.

Because cancer is a main research thrust today in the health care sciences as a measure of genotoxic events, this report has an oncological orientation. Modern theories relating to oncogenes, to initiation and promotion and to cocarcinogens are dealt with. There is overwhelming evidence in the literature for the role of hormones in the etiology of cancer. As cocarcinogens, or agents of promotion, hormones have a prominent role in tumorigenesis through their influence on cellular environment and on the expression of growth capacity. In addition, some writers have suggested that hormones may also be important as initiators of neoplasia as well as being promoters of neoplasia initiated by other agents. Because of the chronic nature of the results of many spinal injuries, to whatever degree of debilitation, the impact of stress on the human organism must be considered. Hormonal changes elicited by physical and psychological stress are

1. Chiropractic Basic Science Research Foundation

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Best Practices/Practice Guidelines

Immunity & Chiropractic Clinical Practice

Matthew McCoy DC, MPH[1], Christopher Kent DC, JD[2], Anquonette Stiles DC, MPH[3], Christie Kwon DC, MS, MPH[3], Amy Haas DC, Ph.D[3], Jon Chung DC[4], Ian Shtulman DC, DAACP[5], Suzzanne M. Candelaria-Perez BSc[3], Christopher Long BS[3], Brooke Mills AA[3], Veronica Gutierrez DC[6]

RECOMMENDATION

Rating: Established
Evidence: E, L

A growing body of evidence supports our understanding of the role of the nervous system in immune system function. Basic science studies and clinical reports in the scientific literature provide supportive evidence of the beneficial effects of chiropractic care in improving function, including immune system function and quality of life. These guidelines support chiropractic practice in an evidence-informed, patient centered model. Evidence-informed practice involves the integration of the knowledge and experience of the chiropractor, the best available research evidence, and the needs and preferences of individual patients. Furthermore, chiropractors must be free to discuss, publish, and otherwise disseminate the best available evidence, and in practice, apply it to the needs of individual patients.

Foundation for Vertebral Subluxation Best Practices Initiative

Introduction

It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system.[1] Consistent with this simple maxim of human physiology, many chiropractic practitioners hold that the impacts of chiropractic adjustment on the nervous system can confer overall salutogenic benefits in people undergoing chiropractic care.[2-4] Indeed, for well over a century, chiropractors around the world have accrued a significant body of collective clinical experience establishing that patients under chiropractic care often experience health improvements not limited to simple musculoskeletal complaints or resolution.

Recent events related to the Coronavirus Pandemic have brought this relationship between chiropractic care and overall promotion of health and wellness to the forefront, both within and outside of the chiropractic profession. Within the chiropractic profession, broad stroke assertions by researchers to the effect that no "credible" published scientific evidence supports claims of clinically relevant effectiveness of spinal adjustment and/or manipulation in boosting or strengthening the immune system.[5]

As a consequence of the assertions of the small cadre of researchers, certain chiropractic regulatory boards, chiropractic trade organizations and chiropractic educational institutions from around the world are claiming that there exists no credible, scientific evidence that would permit claims of effectiveness for conferring or enhancing immunity through spinal adjustment and/or manipulation to be made in communications by chiropractors.[6] Essentially, chiropractors have been effectively muzzled and throttled from discussing

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Best Practices/Practice Guidelines

Best Practices for the Chiropractic Care of Children

Joel Alcantara, DC[1], Joey D. Alcantara, DC[2], Junjoe Alcantara, DC[3], Christopher Kent DC, JD[4], Matthew McCoy DC, MPH[5], Christie Kwon DC, MS, MPH[6], Anquonette Stiles DC, MPH[6], Jeanne Ohm DC[7], Veronica Gutierrez DC[8], Andrew Rupp DC[8], Shannon O'Brien DC[8], Anne Bishop DC[8], Stacey Rainey DC[8], Bethany Carilli DC[8] Hui Zhen Lim DC[6], Gabriel Hrebien BA[6], Justin Bedrosian DC[6], Suzzanne M. Candelaria-Perez BSc, DC[6], Christopher Long DC[6]

RECOMMENDATION

Rating: Established
Evidence: E, L

Since vertebral subluxation may affect individuals at any age, chiropractic care may be indicated at any time after birth. As with any age group, however, care must be taken to select adjustment methods most appropriate to the patient's stage of development and overall spinal integrity. Parental education by the chiropractor concerning the importance of evaluating children for the presence of vertebral subluxation is encouraged as are public health initiatives geared toward screening of children for vertebral subluxation beginning at birth.

Introduction

Since its inception, the chiropractic care of children has been an integral part of the practice of chiropractic.[1] Today, the chiropractic care of children remains an important aspect in chiropractic practice. In 2007, Barnes and colleagues[2] estimated the complementary and alternative medicine (CAM) use among U.S. adults and children from the 2007 National Health Interview Survey (NHIS), conducted by the Centers for Disease Control and Prevention's (CDC) National Center for Health Statistics (NCHS). Barnes and colleagues[2] found that approximately one in nine children used some type of CAM therapy with children having a greater likelihood of using biologically based therapies, mind-body therapies or manipulative and body-based therapies than other alternative healthcare approaches. Of the practitioner-based CAM therapies, the investigators found that chiropractic was the most popular form of non-allopathic healthcare for children. Overall, CAM therapies were used by children to address complaints associated with the musculoskeletal complaints, head or chest colds, anxiety or stress and ADHD/ADD. In a follow-up study, Black et al.[3] found similarly among 4-17 year-olds in terms of motivation for care and the utilization of chiropractic by parents for their children. In 2000, Lee et al.[4] characterized the chiropractic care of children in a survey of Boston chiropractors. Lee et al.[4] examined socio-demographics, practice characteristics, and fee structures involved in the care of children. In addition, chiropractor responders were asked about their recommendation of childhood vaccinations and their approach to care in a child with a fever. Based on the response of 90 predominantly white male chiropractors, Lee et al.[4] found an average weekly visit of 122 patients of which 11% involved the care of children and adolescents. The average visit fees were $82 and $38 for the

1. *Director of Research International Chiropractic Pediatric Association*
2. *Private Practice of Chiropractic Alberta, Canada*
3. *Private Practice of Chiropractic Pasig City, Philippines*
4. *President Foundation for Vertebral Subluxation & Director of Center for Scholarly Activity Sherman College of Chiropractic*

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CHIROPRACTIC- RELATED RESEARCH PAPERS
ASPECTS OF BIOCHEMISTRY AND PHYSIOLOGY

Anaphylaxis [200]
ACTH [201]
ß-endorphins [201-204]
Biophotons [205]
Blood pressure [206-208]
Calcetonin [202]
Catecholamine [209]
CD 4 cells [210]
Chemiluminescence [211]
Conjunctival nevi [212]
Cortisol [201,213,214]
Endocrine [215]
Endotoxic shock. [200]
Heart rate [209]
Immune complex deposition [216]
Immune response [215,217]
Immunoglobulin M (IgM) [218]
Immunohistochemistry [212]
Immunoreactive ACTH [201]
Inflammatory cell changes [215]
Interleukin-2 [219]
Lectins [220]
    Helix pomatia agglutinin (HPA)
    Phaseolus vulgaris leucoagglutin (PHA-L)
Killer cells [221,222]
Lymphocytes [223]
Macrophages [224]
Melanomas [212]
Melatonin [225]
Neuroimmunomodulation [226]
Neutrophils [211,227-229]
Oxygen radicals [224]
Phagocytosis [227,230]
Prostaglandin [231,232]
Respiratory burst [228-230,233]
Serum aldosterone [234]
Substance P [227,228]
Tumor necrosis factor [226]

This table demonstrate s the wider aspects of chiropractic research. (Note: Many of these studies concern an immunological response. More than one term may appear in a single paper. Papers are not necessarily related to spinal manipulation but more the broad nature of chiropractic research.)

- From Rome . . .

Induce & Enhance

Studies demonstrate evidence indicating that chiropractic and spinal manipulation may influence immune system response.

Studies suggest that manipulation consistently reduces the production of pro-inflammatory mediators associated with tissue damage and pain from articular structures.

Other studies provide evidence that manipulation may induce and enhance production of the immune-regulatory cytokine IL-2 and the production of immunoglobulins.

Boost?

- Attenuates
- Reduces
- Down regulates
- Ameliorates
- Decreases
- Modifies
- Reverses
- Normalizes
- Inhibits
- Enhances
- Influences
- Increased capacity
- Modulates

Similar and opposite words

boost

verb

help or encourage (something) to increase or improve.

Similar

improve raise uplift increase augment magnify swell amplify enhance encourage heighten help promote foster nurture arouse stimulate invigorate revitalize inspire perk up support bolster buttress shore up buck up jack up give a shot in the arm to

- push from below; assist.

  Similar

  lift raise hoist push thrust shove heave elevate help aid assist hoick give someone a leg up upheave

noun

a source of help or encouragement leading to increase or improvement.

Similar

uplift lift spur encouragement help inspiration stimulus pick-me-up fillip support bolster shot in the arm

- an increase or improvement.

  Similar

  increase expansion upturn upsurge upswing rise elevation escalation augmentation improvement development advance growth boom spurt hike step up jack up



Evidence Informed Practice

Hierarchy of Research Designs & Levels of Scientific Evidence



APPENDIX “N”



College of Chiropractors of British Columbia

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College of Chiropractors of British Columbia

Policy Title – Efficacy Claims **Responsible Office: College of Chiropractors of British Columbia ("CCBC")** **Contact:** registrar@chirobc.com	**Reference Information:** *TBD*
	Replaces former policy: NA
	Date Effective: October 1, 2018
	Last Update: NA
	Next Review Date: September 30, 2019
Keywords	**E.g. efficacy, marketing, advertising, acceptable evidence**

1. **Policy Rationale & Purpose:**

   As stated in section 14(1)(f) and Appendix "N" of the CCBC's *Professional Conduct Handbook* ("PCH"), chiropractors must not advertise health benefits of their services when there is no acceptable evidence that those benefits can be achieved. The Board is concerned registrants may be making claims in marketing or directly to patients that chiropractic care has beneficial effects on some diseases, disorders and conditions when there is no acceptable evidence for those claims.

   This policy identifies efficacy claims that are not supported by acceptable evidence, and therefore, must not be made.

2. **Policy Scope**

   This policy applies to all registrants who market or advertise their services.

3. **Policy Statement:**

   Due to the absence of acceptable evidence supporting such claims, **registrants must NOT represent** to patients or the public that chiropractic:

   (a) can be used to treat diseases, disorders or conditions such as: Alzheimer's disease, cancer, diabetes, infections, infertility, or Tourette's syndrome, or

   (b) has any beneficial effect on childhood diseases, disorders or conditions such as: ADHD (or ADD), autism spectrum disorders including Asperger syndrome, cerebral palsy, Down syndrome, fetal alcohol syndrome, or developmental and speech disorders.

   The above list of diseases, disorders or conditions is neither final nor conclusive. Absent acceptable evidence, registrants are not free to make claims about the effectiveness of chiropractic in treating a disorder, disease or condition simply because it is not included in the list.

British Columbia

Efficacy Claims Policy

1. Policy Rationale & Purpose:

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"has ***any beneficial effect*** on childhood diseases, disorders or conditions such as: ADHD (or ADD), autism spectrum disorders including Asperger syndrome, cerebral palsy, Down syndrome, fetal alcohol syndrome, or developmental and speech disorders."

Acceptable Evidence?

6. **Definitions:**

- "acceptable evidence" means objective, clear evidence based on accepted principles of good research that support the therapeutic claim (see Appendix "N" of PCH)

APPENDIX "N": Acceptable Evidence

It is the duty of a registrant, when requested by the college or Inquiry Committee to verify statements and claims made in their marketing materials

The College of Chiropractors of British Columbia (CCBC) recognizes that chiropractic care may offer relief for persons experiencing neuro-musculoskeletal symptoms. Chiropractors must not make statements or claims that create an unjustified expectation of the potential benefit of chiropractic treatment and care.

Under section 85 of the College Bylaws, registrants must not engage in marketing that is false, inaccurate, unverifiable, misleading or misrepresentative of the effectiveness or a technique, procedure, instrument or device. Both specific claims and the overall impression of marketing must be considered. Marketing violates section 85 if it is likely to create unjustified expectations for treatment in the mind of patients or the public.

In addition to more traditional advertisements and printed materials, marketing also includes the use of websites, email newsletters, social media, promotional activities and public appearances. Chiropractors are strongly encouraged to regularly review their marketing to ensure compliance with section 85 of the Bylaws and Part 14 of the College's Professional Conduct Handbook.

What is acceptable evidence?

Adopted from the Australian Health Practitioner Regulation Agency

Chiropractors must not advertise health benefits of their services when there is not acceptable evidence that these benefits can be achieved.

When assessing whether there is acceptable evidence for therapeutic claims, the issues to consider include:

- Is the evidence relied on objective and based on accepted principles of good research? Is the evidence from a reputable source? For example a properly peer-reviewed journal.
- Do the studies used provide clear evidence for the therapeutic claims made or are they one of a number of possible explanations for treatment outcomes?
- Have the results of the study been replicated? Results consistent across multiple studies, replicated on independent populations, are more likely to be sound.
- Has the evidence been contradicted by more objective, higher quality studies? (For example, evidence from a single study would not be acceptable evidence if it is contradicted by a systematic review) Statements and claims in marketing that are contrary to higher-level evidence are not acceptable.

The following types of studies may not be considered sufficient acceptable evidence for advertising claims:

Back to Top

British Columbia

"Acceptable" Evidence

What is acceptable evidence?

Adopted from the Australian Health Practitioner Regulation Agency

Chiropractors must not advertise health benefits of their services when there is not acceptable evidence that these benefits can be achieved.

When assessing whether there is acceptable evidence for therapeutic claims, the issues to consider include:

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- Do the studies used provide clear evidence for the therapeutic claims made or are they one of a number of possible explanations for treatment outcomes?
- Have the results of the study been replicated? Results consistent across multiple studies, replicated on independent populations, are more likely to be sound.
- Has the evidence been contradicted by more objective, higher quality studies? (For example, evidence from a single study would not be acceptable evidence if it is contradicted by a systematic review) Statements and claims in marketing that are contrary to higher-level evidence are not acceptable.

- Studies involving no human subjects;
- before and after studies with little or no control or reference group (eg. case studies);
- self-assessment studies;
- anecdotal evidence based on observations in practice; and,
- outcome studies or audits, unless bias or other factors that may influence the results are carefully controlled.

The evidence base for clinical practice is constantly developing so it is important that chiropractors make sure that any scientific information they rely on is current.
Chiropractors must take care to not mislead or create false impressions when using scientific information in marketing. Scientific information in marketing must be presented in a manner that is accurate, balanced and not misleading and using wording that will be readily understood by the intended recipients. The source of the information must be accurately cited.



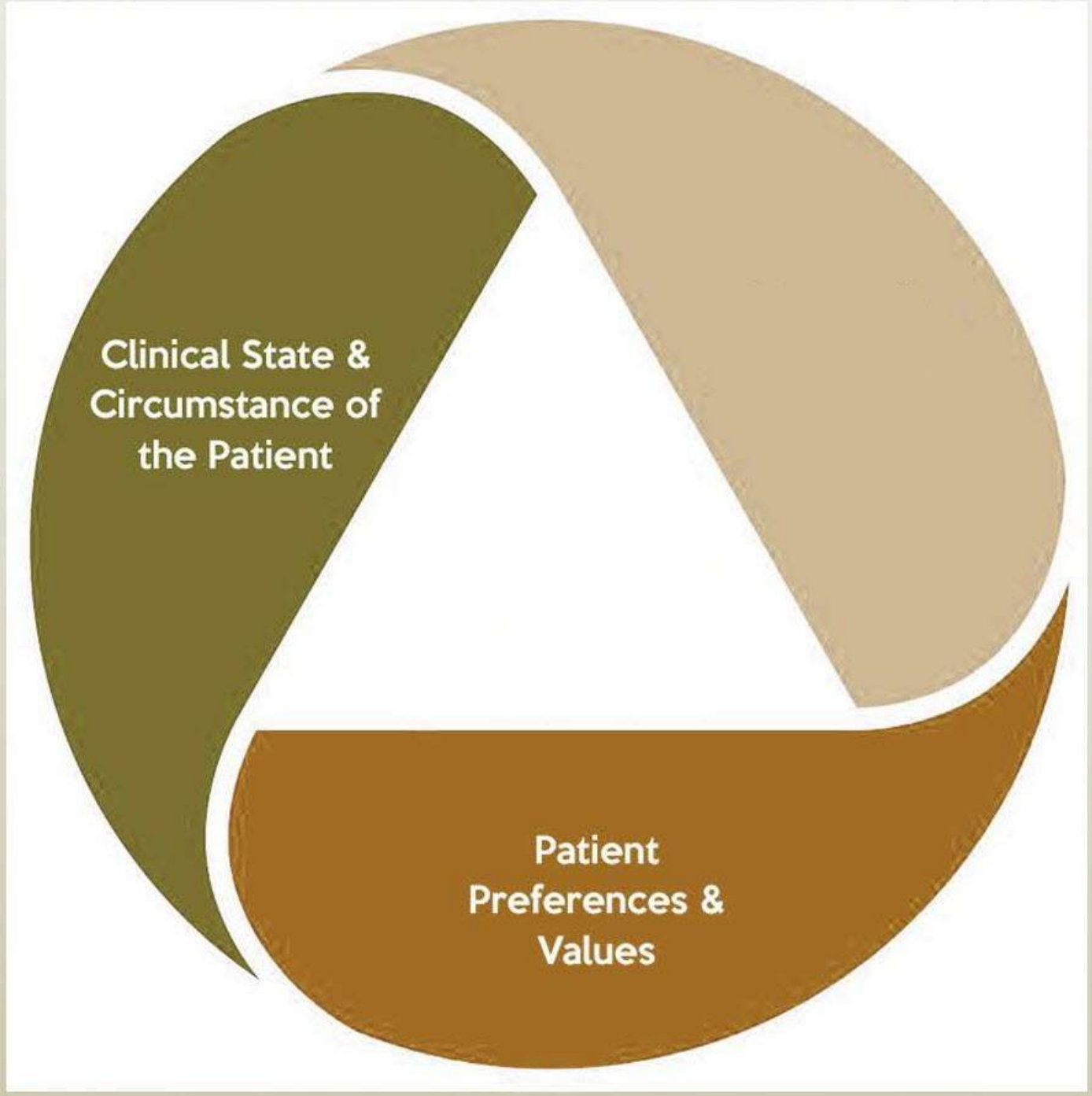
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Sufficient Evidence

There is sufficient evidence to support the management of vertebral subluxation in a vitalistic, salutogenic model.

Foundation for Vertebral Subluxation

Foundation for Vertebral Subluxation

The Fork in the Road



Proposal

Chiropractic, Vertebral Subluxation and Immune Function: A Multi-Pronged Project to Address Fundamental Questions in an Evidence Informed Framework

Matthew McCoy DC, MPH[1]
Christopher Kent DC, JD[2]
Anquonette Stiles DC, MPH[3]
Christie Kwon DC, MS, MPH(C)[3]
Suzzanne M. Candelaria-Perez BSc[3]
Christopher Long BS[3]
Brooke Mills AA[3]

1. *Vice President – Foundation for Vertebral Subluxation*
2. *President – Foundation for Vertebral Subluxation & Director of Center for Scholarly Activity Sherman College of Chiropractic*
3. *Research Fellow – Foundation for Vertebral Subluxation*

Abstract

Objective: To briefly outline a multi-pronged project to address fundamental questions regarding chiropractic, vertebral subluxation and immune function.

Background: Recent events related to the coronavirus pandemic have brought the relationship between the nervous and immune systems to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening the immune system and that there is no credible, scientific evidence that spinal adjustment and/or manipulation has any clinically relevant effect on the immune system.

Methods: An ad hoc team made up of individuals with experience in research, law, public health, and chiropractic from the Foundation for Vertebral Subluxation and Sherman College of Chiropractic developed a rapid outline to serve as a guideline for the development of projects related to chiropractic and immunity.

Discussion: This outline describes a multi-pronged approach to complete a scoping review of chiropractic, immunity and biomarkers, a comprehensive, integrative review of the scientific literature on chiropractic and immunity, the development of research protocols, feasibility studies, development of a prospective longitudinal health outcomes study, and the development of policy and best practice statements for practitioners and patients in an evidence informed framework.

Conclusion: It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system. Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care. The chiropractic profession is encouraged to further explore these relationships.

Key Words: *Chiropractic, immunity, neuroimmunity, neuroimmunology, psychoneuroimmunology, neuroimmunoendocrine system, immune biomarkers, supersystem, vertebral subluxation, adjustment, spinal manipulation, best practices, health policy*

Background

It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system.[1] Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care.[2-4]

Recent events related to the Coronavirus Pandemic have brought this relationship to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening

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Immunity Research Agenda

- Project Outline ✓
- Scoping Review of Chiropractic & Immunity ✓
- Scoping Review of Biomarkers ✓
- Conference ✓
- Best Practices Statement ✓
- Integrative Review – Dr. Haas
- Database & Website
- Development of Protocols
- Feasibility Studies
- Health Outcomes Studies
- Health Care Policy

Steering Committee

- Christopher Kent DC, JD
- Amy Haas DC, Ph.D
- Jon Chung DC
- Ian Shtulman DC DACCP
- Joel Alcantara DC, Ph.D (C)
- Matthew McCoy DC, MPH
- Anquonette Stiles DC, MPH
- Christie Kwon DC, MS, MPH

The Effects of the Chiropractic Adjustment on the Nervous System, Integrated Systems Immunology and Endocrine Function.

The immune system has been well-characterized with reductionist research approaches since the end of the nineteenth century. Only in recent years has a systems biology approach been employed towards an understanding of the coordinated and integrated function of the immune system in the human body as a whole.

An important influence on systems immunology is the neuroendocrine immune axis. This axis features reciprocal regulation between the nervous system, the immune system, and the endocrine system via multiple common small molecule cytokine and chemokine modulators.

Exploration of the putative effects of vertebral subluxation and the biological effects of the chiropractic adjustment on modulators common to the neuroendocrine immune axis provides a candidate framework for exploring the potentially extended effects of the chiropractic adjustment on the nervous system, integrated systems immunology and endocrine function.

Health Policy

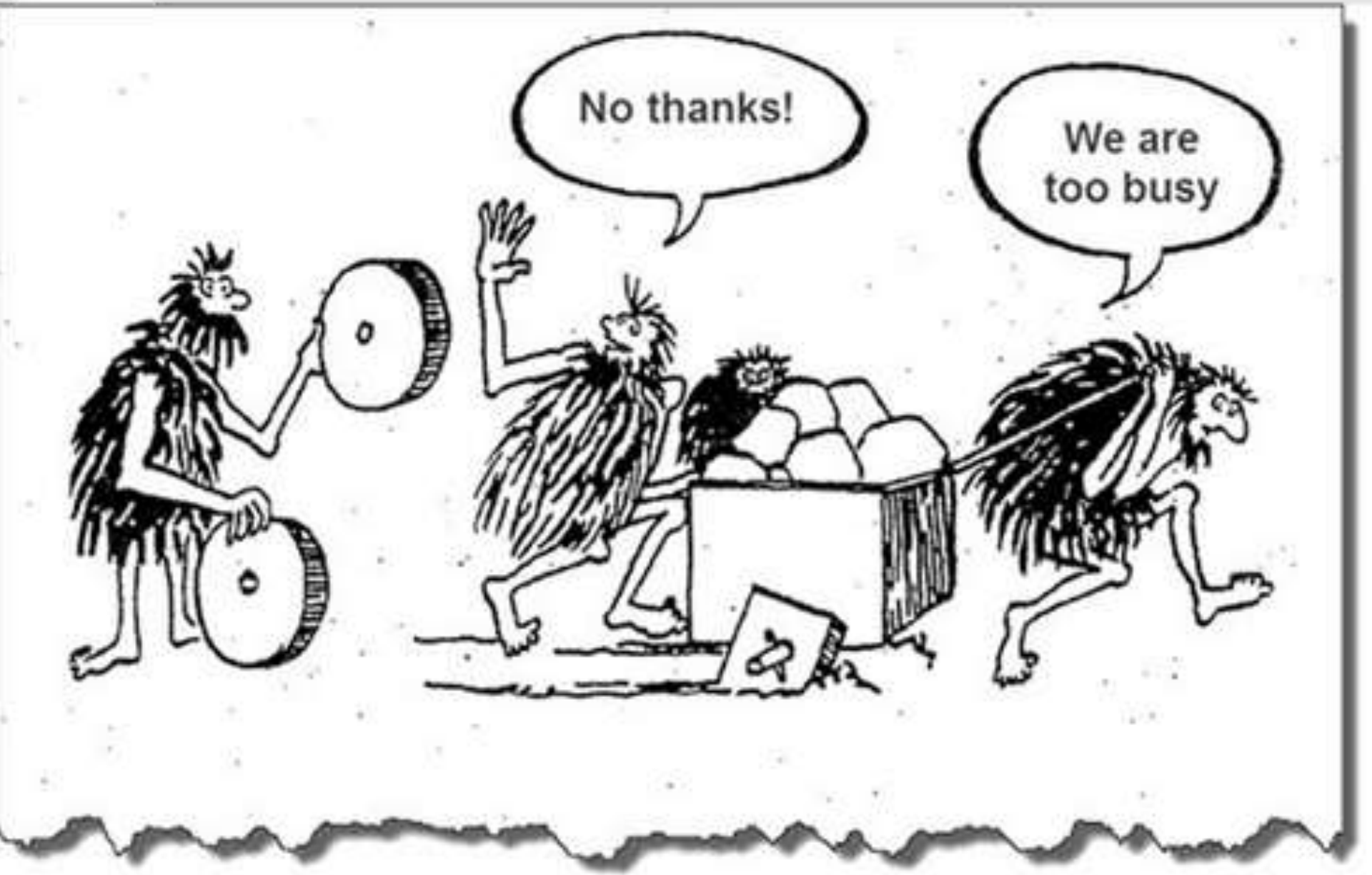


The Problem

- We do not have a “**research**” problem.
- We have a **political** problem
- We have a **marketing** problem


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PHILADELPHIA
NISI DOMINUS FRUSTRA
EDINBURGH


wiseGEEK


No thanks!
We are too busy

Questions?



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Ethics & Consent

Schloendorff v. Society of New York Hospital - 1914

The plaintiff, Mary Schloendorff, was admitted to New York Hospital and consented to being examined under ether to determine if a diagnosed fibroid tumor was malignant, but withheld consent for removal of the tumor.

The physician examined the tumor, found it malignant, and then disregarded Schloendorff's wishes and removed the tumor.

Schloendorff v. Society of New York Hospital, 211 N.Y. 125, 105 N.E. 92 (1914). New York Court of Appeals - 1914



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Persaud v. NY Presbyterian

SUPREME COURT OF THE STATE OF NEW YORK
COUNTY OF NEW YORK: IA PART 16

----------X

BRIAN PERSAUD,

Plaintiff,

Index No. 106011/2004

-against -

Motion Seq. No. 004

NEW YORK PRESBYTERIAN HOSPITAL,
ERIC M. MANIAGO, M.D., personally,
and "JOHN DOE" # 1-5, personally,

Defendants.

FILED
DEC 21 2007
COUNTY CLERK'S OFFICE
NEW YORK

----------X

SCHLESINGER, J:

Informed Consent

What is the Doctrine of Informed Consent?

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Informed Consent
Categories of Information

- What treatments involve (Broadly)
- Risks
- Benefits
- Alternatives
- Implications of declining treatment

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ARTICLE

Preventive Detention in American Theory and Practice

Adam Klein* and Benjamin Wittes**

Introduction

It is something of an article of faith in public and academic discourse that preventive detention runs counter to American values and law. This meme has become standard fare among human rights groups[1] and in a

*Adam Klein is a third year J.D. candidate at Columbia Law School and Articles Editor of the *Columbia Law Review*. He previously served as legislative assistant to U.S. Rep. C.W. "Bill" Young and as a staff member of the 9/11 Public Discourse Project, the nonprofit successor to the 9/11 Commission.

** Benjamin Wittes is a senior fellow in Governance Studies at The Brookings Institution. He is the author of *Detention and Denial: The Case for Candor After Guantanamo*, forthcoming from the Brookings Institution Press. He is also the author of *Law and the Long War: The Future of Justice in the Age of Terror*, published in June 2008 by The Penguin Press, and the editor of the 2009 Brookings book, *Legislating the War on Terror: An Agenda for Reform*. He co-founded and co-writes the Lawfare blog (http://www.lawfareblog.com/), which is devoted to non-ideological discussion of the "Hard National Security Choices," and is a member of the Hoover Institution's Task Force on National Security and Law. His previous books include *Starr: A Reassessment*, which was published in 2002 by Yale University Press, and *Confirmation Wars: Preserving Independent Courts in Angry Times*, published in 2006 by Rowman & Littlefield and the Hoover Institution. Between 1997 and 2006, he served as an editorial writer for *The Washington Post* specializing in legal affairs. Before joining the editorial page staff of *The Washington Post*, Wittes covered the Justice Department and federal regulatory agencies as a reporter and news editor at *Legal Times*. His writing has also appeared in a wide range of journals and magazines, including *Slate*, *The New Republic*, *The Wilson Quarterly*, *The Weekly Standard*, *Policy Review*, and *First Things*.

[1] *See, e.g.*, David Fathi, Op-Ed, *Dangers of a preventive detention law*, BOSTON GLOBE, Jan. 1, 2009, http://www.boston.com/bostonglobe/editorial_opinion/oped/articles/2009/01/01/dangers_of_a_preventive_detention_law/ (criticizing proposals for terrorist preventive detention statute and characterizing sex offender commitment laws as a "narrow exception" to the "rule" espoused by the Court in United States v. Salerno, 481 U.S. 739, 755 (1987), which held that "[i]n our society liberty is the norm, and detention prior to trial or without trial is the carefully limited exception").



CBS46.COM

Governor Kemp calls up 2,000 National Guard troops in response to coronavirus





New Jersey Accepts Rights for People in Quarantine to End Ebola Suit



Kaci Hickox at her home in Fort Kent, Maine, in 2014. She was held in quarantine for three days that year after returning from working with Ebola patients in West Africa. Spencer Platt/Getty Images

Rights Under Quarantine

- Anyone quarantined in New Jersey can contest the order
- Has the right to legal counsel
- Right to be given prior notice of any hearings
- Right to send and receive communications
- Guarantees a person the right to privacy *so long as it does not interfere with vital public health needs*

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To open links to citations, place your cursor over the citation and press Control+Click, or right click on the item and choose "open hyperlink". Most of the legal citations are hyperlinked to the Westlaw database. When you click on a link, you will be asked for your Westlaw sign on information. Once you are signed on, you should be able to retrieve all of the Westlaw hyperlinks you select. Some rules of court and statutes are linked directly to the primary source.

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Florida's Department of Health is equipped to use the special needs doctrine, or other applicable exigent circumstances as described above, under section 381.00315(1), Florida Statutes. This section governs a State Health Officer ordering testing, vaccinating, or treating diseases during a "public health

emergency" as defined by section 381.00315(1)(c):

> "Public health emergency" means any occurrence, or threat thereof, whether natural or man made, which results or may result in substantial injury or harm to the public health from infectious disease, chemical agents, nuclear agents, biological toxins, or situations involving mass casualties or natural disasters.

During such an emergency, section 381.00315(1)(c)4 allows the State Health Officer to order

> an individual to be examined, tested, vaccinated, treated, isolated, or quarantined for communicable diseases that have significant morbidity or mortality and present a severe danger to public health. Individuals who are unable or unwilling to be examined, tested, vaccinated, or treated for reasons of health, religion, or conscience may be subjected to isolation or quarantine.

Additionally, such orders by the State Health Officer are immediately enforceable by a law enforcement officer under section 381.0012, which empowers the department to, among other things, seek warrants. Thus, if the State Health Officer were to use these capabilities in a manner unrelated to the state's traditional interest in law enforcement, under the special needs doctrine the State Health Officer probably would not need a warrant to obtain samples by ordering an individual to be examined or tested.[15]

During a public health emergency, section 381.00315(1)(c)4, Florida Statutes, permits the State Health Officer to order examination, testing, treatment, or vaccination of individuals. If individuals so ordered do not comply, "for reasons of health, religion, or conscience," the State Health Officer may also order isolation or quarantine. If examination, testing, vaccination, or treatment is ordered, it must be performed by a "qualified person authorized by the State Health Officer." § 381.00315(1)(c)4.a, Fla. Stat. Pursuant to section 381.00315(1)(c)4.b, any individual who "poses a danger to the public health" that cannot be isolated or quarantined by any "practical method" may be vaccinated or treated by the State Health Officer using "any means necessary." Despite the extremely liberal language of this subsection, the State Health Officer should be bound to some standard of reasonableness. Finally, any order given by the State Health Officer "to effectuate [section 381.00315(1)(c)4] shall be immediately enforceable by a law enforcement officer." *Id.*

In summary, Florida presently has the necessary statutes to effectuate a mandatory vaccination program during a public health emergency. In the

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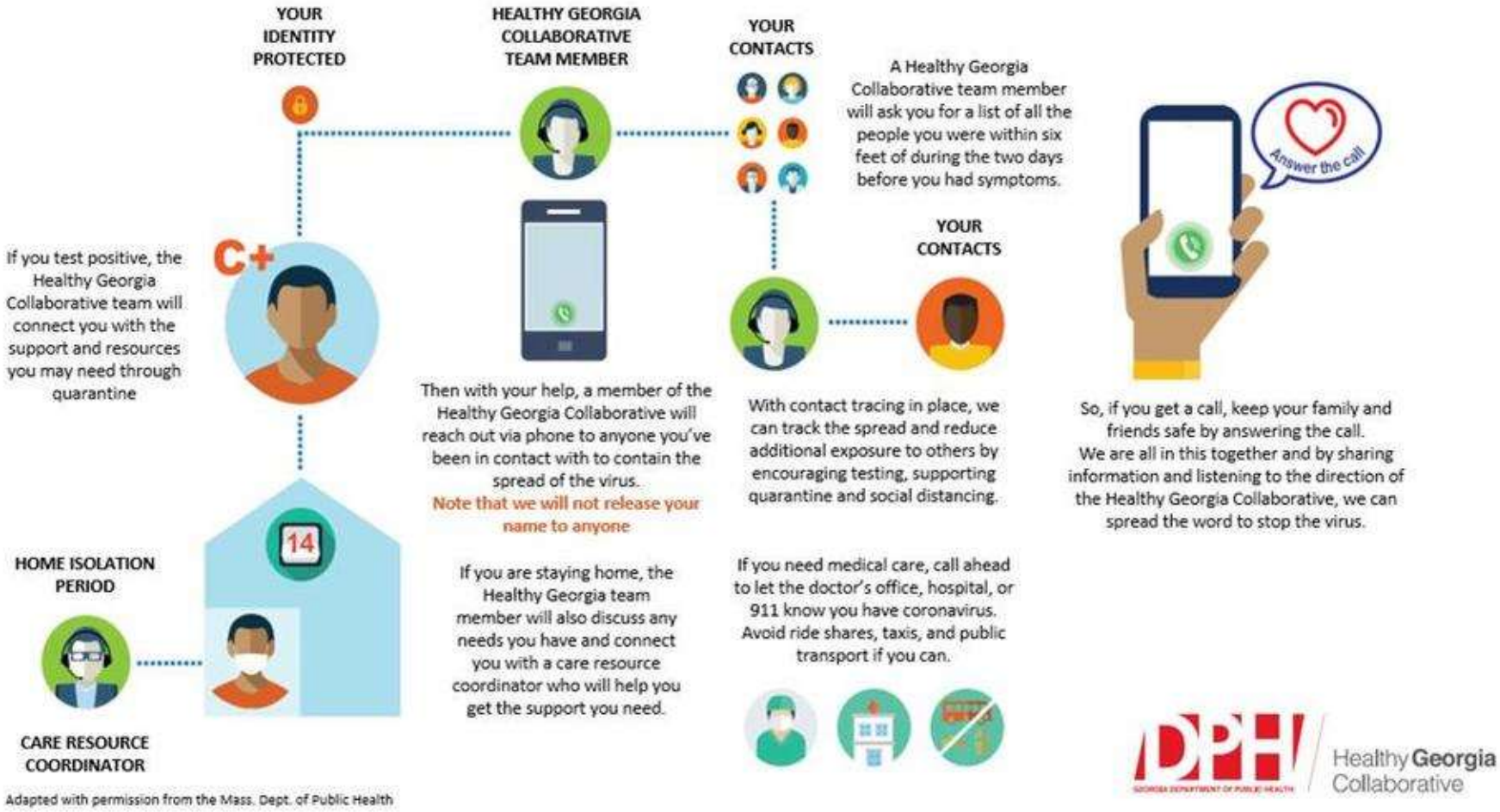
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Georgia prepares to launch new coronavirus tracing program





You are required to cooperate fully with all state and federal public health authorities, including the Georgia Department of Public Health, and to follow the measures outlined below.

Kathleen E. Toomey, M.D., M.P.H., Commissioner / Brian Kemp, Governor

2 Peachtree Street, NW, 15th Floor
Atlanta, Georgia 30303-3142

dph.ga.gov

STATE OF GEORGIA
DEPARTMENT OF PUBLIC HEALTH
SEVENTH AMENDED[1] ADMINISTRATIVE ORDER
FOR PUBLIC HEALTH CONTROL MEASURES

WHEREAS, on March 14, 2020, Governor Brian P. Kemp issued Executive Order 03.14.20.01, declaring a Public Health State of Emergency in Georgia due to the impact of Novel Coronavirus Disease 2019 (COVID-19); and

WHEREAS, on March 16, 2020, the Georgia General Assembly concurred with Executive Order 03.14.20.01 by joint resolution; and

WHEREAS, the Public Health State of Emergency has been extended through and including July 12, 2020; and

WHEREAS, the Centers for Disease Control and Prevention ("CDC") recommends that all states and territories implement aggressive measures to slow and contain transmission of COVID-19 in the United States; and

WHEREAS, the number of cases of COVID-19 in the state of Georgia continues to grow; and

WHEREAS, COVID-19 presents a severe threat to public health in Georgia; and

WHEREAS, COVID-19 is a severe respiratory disease that is transmitted primarily through respiratory droplets produced when an infected person coughs or sneezes; and

WHEREAS, although the vast majority of Georgians are complying with public health recommendations and guidance for the isolation of persons with symptoms of COVID-19, I have received reliable reports that a small number of persons may be behaving in a way that contributes to the spread of this disease in the community; and

WHEREAS, I have determined that it is necessary and appropriate to require persons who:

- have received a positive lab-confirmed test for COVID-19, or
- are suspected to have COVID-19 based on symptoms recognized by the CDC, or
- have been in close contact with a person with known or suspected COVID-19

to isolate or quarantine themselves at home, in order to slow the spread of COVID-19, reduce the number of people who will become infected, and avoid unnecessary strain on Georgia's healthcare system.

[1] This Fourth Amended Administrative Order amends and supersedes the prior Orders issued on March 21 and 23, April 3 and 15, May 5 and 12, and June 2, 2020.

The trouble with such civic mythology is that it is, ultimately, an inaccurate description of past practice, and thus a misleading indicator of the theory on which such practice rested.

Our purpose in this paper is to describe just how mythological this particular civic myth is — indeed, to show that nearly every aspect of it is false:

Preventive detention is not prohibited by U.S. law or especially frowned upon in tradition or practice.

The circumstances in which it arises are not isolated exceptions to a strong rule against it; rather, they are relatively frequent. The federal government and all 50 states together possess a wide range of statutory preventive detention regimes that are frequently used, many of which provoke little social or legal controversy.

The diverse statutes and regimes authorizing the preventive detention of individuals not convicted of a crime to prevent harms caused by that person range widely in purpose and subject matter:

- Wartime detention powers cover not merely prisoners of war and unlawful enemy combatants but also the nationals of countries against which the United States finds itself in a state of armed conflict;
- The Constitution's Suspension Clause specifically contemplates that Congress might in crises suspend normal constitutional presumptions limiting detention — a power which has been invoked several times in American history;
- Detention authorities ancillary to the criminal justice system include both pretrial detention and the detention of material witnesses not even facing criminal charges;
- The immigration law permits the detention of aliens facing deportation and "arriving aliens" denied entry to the United States;
- State and federal laws permit the detention of the seriously mentally ill, when they pose a danger to themselves or to the public at large, as well as the detention of sex offenders even after they have completed their criminal sentences;
- State and federal statutes provide broad authority to quarantine people who have communicable diseases; and
- States and localities have a variety of protective custody powers, permitting the noncriminal detention — often for their own protection — of, among others, the intoxicated, alcoholics, drug addicts, the homeless, and pregnant drug users.

Governor Ron Desantis declares public health emergency in Florida



The order says the "State Health Officer is authorized and directed to use his judgment as to the duration of this public health emergency." (CDC) (WJHG)

Published: Mar. 1, 2020 at 9:57 PM EST

FL National Guard called up in response to COVID-19 outbreak



Photo: The National Guard (KOSA)

Published: Mar. 29, 2020 at 1:49 PM EDT

By: WCTV Eyewitness News

March 29, 2020

News

Press Releases

2019 Press Releases

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Social Media

Kemp Declares Public Health State of Emergency

MARCH 16, 2020

Atlanta, GA – On March 14, 2020, Governor Brian P. Kemp signed a **public health state of emergency** to address novel coronavirus and COVID-19 in Georgia. Kemp gave a televised address to Georgians with the following remarks:

"My fellow Georgians: Over the past few weeks, our state has been facing an unprecedented public health threat with the spread of novel coronavirus. In only a matter of days, communities within the metro-Atlanta area and North Georgia have seen several cases, including hospitalizations, where the source of infection is unknown. Many of these cases have no connection to travel, and the capacity of our healthcare system remains at the forefront of my mind as we prepare for more local transmission. As of this morning, there are now sixty-four cases of COVID-19 in Georgia, which is our largest increase over a twenty-four period to date. This information will reflect on the Department of Public Health's new website shortly.

There are now fifteen cases in Cobb, eleven cases in Fulton, eight cases in DeKalb, seven cases in Bartow, five cases in Cherokee, four cases in Fayette, three cases in Floyd, two cases in Coweta, two cases in Gordon, two cases in Gwinnett, and one case each for Lee, Henry, Lowndes, Polk, and Charlton counties. In Bartow, Cobb,





The 2019 Florida Statutes

14.022 Governor; emergency powers to quell violence.—

(1) The Governor of Florida is hereby authorized and empowered to take such measures and to do all and every act and thing which she or he may deem necessary in order to prevent overt threats of violence or violence, to the person or property of citizens of the state and to maintain peace, tranquillity, and good order in the state, and in any political subdivision thereof, and in any area of the state designated by the Governor.

(2) The Governor when, in her or his opinion, the facts warrant, shall, by proclamation, declare that, because of unlawful assemblage, violence, overt threats of violence, or otherwise, a danger exists to the person or property of any citizen or citizens of the state and that the peace and tranquillity of the state, or any political subdivision thereof, or any area of the state designated by the Governor, is threatened, and because thereof an emergency, with reference to said threats and danger, exists. In all such cases when the Governor shall issue a proclamation as herein provided she or he shall be and is hereby further authorized and empowered, to cope with said threats and danger, to order and direct any individual person, corporation, association, or group of persons to do any act which would in the Governor's opinion prevent danger to life, limb, or property, prevent a breach of the peace or the Governor may order such individual person, corporation, association, or group of persons to refrain from doing any act or thing which would, in the Governor's opinion, endanger life, limb, or property, or cause, or tend to cause, a breach of the peace, or endanger the peace and good order of society, and shall have full power by appropriate means to enforce such order or proclamation.

(3) The Governor, upon the issuance of a proclamation as provided for in subsection (2), is hereby authorized and empowered to take and exercise any, either, or all of the following actions, powers, and prerogatives:

(a) Call out the military forces of the state (state militia) and order and direct said forces to take such action as in the Governor's judgment may be necessary to avert the threatened danger and to maintain peace and good order in the particular circumstances.

(b) Order any sheriff or sheriffs of this state, pursuant to a proclamation as herein provided, to exercise fully the powers granted them, and each of them, under s. 30.15(1)(f) (suppress tumults, riots, and unlawful assemblies in their counties with force and strong hand when necessary) and to do all things necessary to maintain peace and good order.

(c) Order and direct the State Highway Patrol, and each and every officer thereof, to do and perform such acts and services as the Governor may direct and in the Governor's judgment are necessary in the circumstances to maintain peace and good order.

(d) Authorize, order or direct any state, county, or city official to enforce the provisions of such proclamation in each and every and all of the courts in the state by injunction, mandamus, or other appropriate legal action.

(4) The Governor is hereby authorized and empowered to intervene in any situation where there exists violence, overt threats of violence to persons or property and take complete control thereof to prevent violence, or to quell violence or any disturbance or disorder which threatens the peace and good order of society.

2019 Florida Statutes

< Back to Statute Search

Title XVII MILITARY AFFAIRS AND RELATED MATTERS

Chapter 252 EMERGENCY MANAGEMENT

SECTION 36 **Emergency management powers of the Governor.**

252.36 Emergency management powers of the Governor.—

(1)(a) The Governor is responsible for meeting the dangers presented to this state and its people by emergencies. In the event of an emergency beyond local control, the Governor, or, in the Governor's absence, her or his successor as provided by law, may assume direct operationa emergency management functions within this state, and she or he shall have the power through proper process of law to carry out the provisions of this section. The Governor is authorized to delegate such powers as she or he may deem prudent.

(b) Pursuant to the authority vested in her or him under paragraph (a), the Governor may issue executive orders, proclamations, and rules and may amend or rescind them. Such executive orders, proclamations, and rules shall have the force and effect of law.

(2) A state of emergency shall be declared by executive order or proclamation of the Governor if she or he finds an emergency has occurred or that the occurrence or the threat thereof is imminent. The state of emergency shall continue until the Governor finds that the threat or dange that the emergency conditions no longer exist and she or he terminates the state of emergency by executive order or proclamation, but no state of emergency may continue for longer than 60 days unless renewed by the Governor. The Legislature by concurrent resolution may terminate Thereupon, the Governor shall issue an executive order or proclamation ending the state of emergency. All executive orders or proclamations issued under this section shall indicate the nature of the emergency, the area or areas threatened, and the conditions which have brought the em possible its termination. An executive order or proclamation shall be promptly disseminated by means calculated to bring its contents to the attention of the general public; and, unless the circumstances attendant upon the emergency prevent or impede such filing, the order or proclamati Department of State and in the offices of the county commissioners in the counties to which the order or proclamation applies.

(3) An executive order or proclamation of a state of emergency shall:

(a) Activate the emergency mitigation, response, and recovery aspects of the state, local, and interjurisdictional emergency management plans applicable to the political subdivision or area in question; and

(b) Be authority for the deployment and use of any forces to which the plan or plans apply and for the use or distribution of any supplies, equipment, and materials and facilities assembled, stockpiled, or arranged to be made available pursuant to ss. 252.31-252.90 or any other provis

(c) Identify whether the state of emergency is due to a minor, major, or catastrophic disaster.

1. For a major or catastrophic disaster, the proclamation is authority for a health care practitioner licensed in another state to assist in providing health care in the disaster area according to the provisions specified in the proclamation.

2. For a catastrophic disaster, the proclamation constitutes a formal request for mobilization of the military, which shall be communicated to the President of the United States.

(4) During the continuance of a state of emergency, the Governor is commander in chief of the Florida National Guard and of all other forces available for emergency duty. To the greatest extent practicable, the Governor shall delegate or assign command authority by prior arrangeme executive orders or rules, but nothing herein restricts the Governor's authority to do so by orders issued at the time of the emergency.

(5) In addition to any other powers conferred upon the Governor by law, she or he may:

(a) Suspend the provisions of any regulatory statute prescribing the procedures for conduct of state business or the orders or rules of any state agency, if strict compliance with the provisions of any such statute, order, or rule would in any way prevent, hinder, or delay necessary actio

(b) Utilize all available resources of the state government and of each political subdivision of the state, as reasonably necessary to cope with the emergency.

(c) Transfer the direction, personnel, or functions of state departments and agencies or units thereof for the purpose of performing or facilitating emergency services.

(d) Subject to any applicable requirements for compensation under s. 252.43, commandeer or utilize any private property if she or he finds this necessary to cope with the emergency.

(e) Direct and compel the evacuation of all or part of the population from any stricken or threatened area within the state if she or he deems this action necessary for the preservation of life or other emergency mitigation, response, or recovery.

(f) Prescribe routes, modes of transportation, and destinations in connection with evacuation.

(g) Control ingress and egress to and from an emergency area, the movement of persons within the area, and the occupancy of premises therein.

(h) Suspend or limit the sale, dispensing, or transportation of alcoholic beverages, firearms, explosives, and combustibles. However, nothing contained in ss. 252.31-252.90 shall be construed to authorize the seizure, taking, or confiscation of firearms that are lawfully possessed, unle commission of a criminal act.

(i) Make provision for the availability and use of temporary emergency housing.

(j) Take effective measures for limiting or suspending lighting devices and appliances, gas and water mains, electric power distribution, and all other utility services in the general public interest.

(k) Take measures concerning the conduct of civilians, the movement and cessation of movement of pedestrian and vehicular traffic prior to, during, and subsequent to drills and actual or threatened emergencies, the calling of public meetings and gatherings, and the evacuation and provided in the emergency management plan of the state and political subdivisions thereof.

2010 Georgia Code
TITLE 38 - MILITARY, EMERGENCY MANAGEMENT, AND VETERANS AFFAIRS
CHAPTER 3 - EMERGENCY MANAGEMENT
ARTICLE 3 - EMERGENCY POWERS
PART 1 - GOVERNOR
§ 38-3-51 - Emergency powers of Governor; termination of emergency; limitations in energy emergency; immunity

O.C.G.A. 38-3-51 (2010)
38-3-51. Emergency powers of Governor; termination of emergency; limitations in energy emergency; immunity

(a) In the event of actual or impending emergency or disaster of natural or human origin, or pandemic influenza emergency, or impending or actual enemy attack, or a public health emergency, within or affecting this state or against the United States, the Governor may declare that a state of emergency or disaster exists. As a condition precedent to declaring that a state of emergency or disaster exists as a result of a public health emergency, the Governor shall issue a call for a special session of the General Assembly pursuant to Article V, Section II, Paragraph VII of the Constitution of Georgia, which session shall convene at 8:00 A.M. on the second day following the date of such declaration for the

Georgia Emergency Powers

Gives the state authority to commandeer private property and effectively take control of hospitals if “reasonable and necessary” for the emergency response.

2) To seize, take for temporary use, or condemn property for the protection of the public in accordance with condemnation proceedings as provided by law;

(3) To sell, lend, give, or distribute all or any such property among the inhabitants of the state and to account to the proper agency for any funds received for the property.



Christie signs Executive Order No. 164. Creates the Ebola Virus Disease and Response Team

October 22, 2014

Acting to ensure a unified, effective response to the Ebola virus, Governor Chris Christie today activated an Ebola preparedness plan to direct all activities of key state departments, hospitals and the medical community and homeland security apparatus to protect the public and create a strong line of defense against Ebola in New Jersey. Read the rest of the Governor's press release.

Part 3
Medical Error

“A medical error includes an inaccurate or incomplete diagnosis or treatment of a disease disorder, injury, syndrome, infection or other ailment”

Medical Error

- Inaccurate diagnosis
- Inaccurate treatment
- Incomplete diagnosis
- Incomplete treatment

. . . of a disease, disorder, injury, syndrome, infection or other ailment

Côté et al. Chiropractic & Manual Therapies (2020) 28:21
https://doi.org/10.1186/s12998-020-00312-x

Chiropractic & Manual Therapies

COMMENTARY Open Access

A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity

Pierre Côté[1,2,3*], André Bussières[4,5], J. David Cassidy[3], Jan Hartvigsen[6,7], Greg N. Kawchuk[8], Charlotte Leboeuf-Yde[9], Silvano Mior[2,10], Michael Schneider[11,12] and and more than 140 signatories# call for an end to pseudoscientific claims on the effect of chiropractic care on immune function

Abstract

Background: In the midst of the coronavirus pandemic, the International Chiropractors Association (ICA) posted reports claiming that chiropractic care can impact the immune system. These claims clash with recommendations from the World Health Organization and World Federation of Chiropractic. We discuss the scientific validity of the claims made in these ICA reports.

Main body: We reviewed the two reports posted by the ICA on their website on March 20 and March 28, 2020. We explored the method used to develop the claim that chiropractic adjustments impact the immune system and discuss the scientific merit of this claim. We provide a response to the ICA reports and explain why this claim lacks scientific credibility and is dangerous to the public. More than 150 researchers from 11 countries reviewed and endorsed our response.

Conclusion: In their reports, the ICA provided no valid clinical scientific evidence that chiropractic care can impact the immune system. We call on regulatory authorities and professional leaders to take robust political and regulatory action against those claiming that chiropractic adjustments have a clinical impact on the immune system.

Keywords: Chiropractic, Spinal manipulation, Immunity, Pseudoscience, Coronavirus

Background

We are currently facing the greatest global public health crisis in a century. Fighting the coronavirus pandemic has required that we change the way we live and observe strict public health guidelines. This is necessary because, at this time, there are no effective vaccines, treatments or cures for COVID-19 [1, 2]. Chiropractors, as members of the health care system, should disseminate the best available public health information to the public [3]. Any attempt to behave otherwise can be misleading and potentially dangerous to individual patients and the public at large.

On March 20, 2020, the International Chiropractors Association (ICA), a US based chiropractic organization, posted a report claiming that chiropractic adjustments can boost immune function with the implication that it might be helpful in preventing COVID-19 [4]. In their

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Sherman College of Chiropractic
April 8 at 11:51 AM ·

For nearly 125 years, the chiropractic profession has been committed to serving humanity. The focus of chiropractic care is allowing the body to function to its fullest potential. The nervous system is responsible for integrating and maintaining the functions of the entire body.

Chiropractic corrects spinal abnormalities called vertebral subluxations that result in interference with nervous system function. Since the nervous system controls all functions of the body — including the immune system — chiropractic care can have a positive effect on immune function. Doctors of Chiropractic recognize the importance of locating and gently correcting vertebral subluxations so that the body may function at its best.

A growing body of evidence supports the role of the nervous system in immune system function. Furthermore, basic science studies and clinical reports in the scientific literature provide evidence of the potential, beneficial effects of chiropractic care in improving function, including immune system function, and quality of life.

Sherman College of Chiropractic supports chiropractic practice in an evidence-informed, patient centered model. Evidence-informed practice involves the integration of the knowledge and experience of the chiropractor, the best available research evidence, and the needs and preferences of individual patients.

Sherman College of Chiropractic supports the right of chiropractors to discuss, publish, and otherwise disseminate the best available evidence, and in practice, apply it to the needs of individual patients. Chiropractors have stood ready to provide professional services in times of crisis. Furthermore, Sherman College of Chiropractic acknowledges that chiropractic is an essential health service, and should be available to all patients who request it.

Christopher Kent, D.C., J.D.
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FOR IMMEDIATE RELEASE

Sunday, April 5, 2020

FLORIDA CHIROPRACTIC SOCIETY

The FCS REJECTS STATEMENTS BY THE WFC AND THE ACA DENYING CONNECTION BETWEEN CHIROPRACTIC AND IMMUNITY

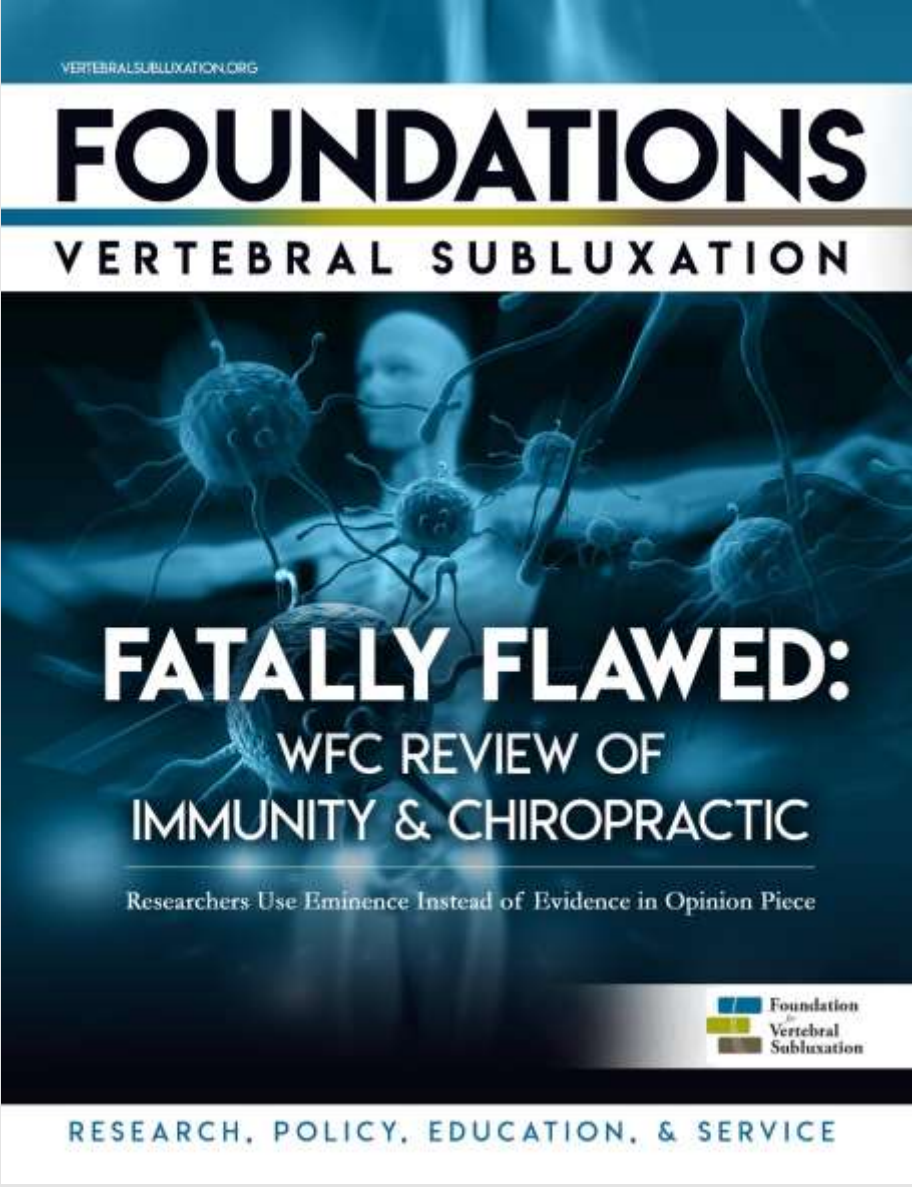
MIAMI, FLORIDA, April 5, 2020– The Officers and Board of Directors of the Florida Chiropractic Society (FCS), on behalf of its membership, reject recent statements of several organizations including the American Chiropractic Association (ACA) and the World Federation of Chiropractic (WFC) denying connection between chiropractic and immunity. On March 17, 2020 the WFC sent out an alert stating that, "*There is no credible scientific evidence that chiropractic spinal adjustment/manipulation confers or boosts immunity*". Subsequently on Monday, March 30, Dr. Keith Overland, past president of the ACA, issued a statement intended to address "misinformation" about any link between spinal adjustments and the immune system. *"There is no quality research, data or evidence that suggests that a spinal manipulation itself will support the immune system,"* stated Overland.

At a time when chiropractors have been deemed essential critical infrastructure workers by the US Department of Homeland Security and the Governor of Florida, (https://www.flgov.com/wp-content/uploads/orders/2020/EO_20-91.pdf) amidst a national health emergency and global pandemic, the FCS finds such statements to be untrue, misleading and harmful to the profession and the patients we are here to serve. Chiropractic care is a necessary procedure for millions of patients who lose function and stability or suffer in pain should care be denied. In particular, chiropractors care for patients with conditions they would otherwise manage with dangerous, addictive opioid drugs; and for those recovering from addiction chiropractic has been shown to improve recovery outcomes.

As portal-of-entry healthcare providers, doctors of chiropractic are educated and licensed to diagnose and care for patients and work in private practices, multi-disciplinary clinics and hospitals. They are trained to refer patients to other health care providers when necessary. Further, in regard to the current Covid-19 outbreak, chiropractors have been a valuable resource in caring for a segment of the population who may otherwise revert to the emergency rooms, which would create an unnecessary burden to the system.

We at the FCS feel strongly about the role of chiropractic as a staple in supporting the health and well being of the public along with other salutogenic measures to enhance health and well-being and assist the body in adapting to physical, chemical and emotional challenges. The active nature of chiropractic care confers health benefits, improves quality of life and optimizes physiology to create a state of wellbeing and optimize human potential. This is never more important than when your immune system needs to defend you.

It is a well known fact that the human body is a marvelous machine and that the "The nervous system controls and coordinates all organs and structures of the human body", therefore there is a factual relationship between the nervous system and the immune system. According to the Foundation for Vertebral Subluxation, ***"there is a growing body of clinical and basic science research demonstrating the relationship between the nervous system and the immune system and the beneficial role of chiropractic in that relationship."*** There is also



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FOR IMMEDIATE RELEASE

WFC Review of Immunity & Chiropractic Fatally Flawed

Researchers Use Eminence Instead of Evidence in Opinion Piece

MARCH 28, 2020 - Atlanta GA

The World Federation of Chiropractic (WFC) has issued what they call a "rapid review" of materials that they are ". . . aware have been cited in support of claims of effectiveness for spinal adjustment/manipulation in conferring or enhancing immunity."

The "rapid review" was conducted by the World Federation of Chiropractic's Research Committee made up of the following individuals:

Greg Kawchuk DC, PhD - Canadian Memorial Chiropractic College Adjunct
Christine Goertz DC, PhD - Palmer College of Chiropractic Honorary Alumna
Iben Axén DC, PhD - Institut Franco-Européen de Chiropratique
Martin Descarreaux DC, PhD - Université du Québec à Trois-Rivières
Simon French B.App.Sci (Chiro), MPH, PhD - Macquarie University
Mitch Haas MA, DC – University of Western States
Jan Hartvigsen DC, PhD - Nordic Institute of Chiropractic
Carolina Kolberg BSc (Chiro), PhD - Latin American Federation of Chiropractic
Michele Maiers DC, MPH, PhD – Northwestern Health Sciences University

The Flawed "Rapid Review"

The Research Committee of the WFC claims to have reviewed these "materials," which include 7 items. The first one is an unpublished report that they do not provide a citation for (Pero). Four studies involve enhancement of immune markers following chiropractic intervention; one study on enhanced respiratory burst, two studies on increased interleukin 2, and one on increased CD4 cell counts. They also cite a review of literature on the evidence supporting stimulation of the neuroimmunoendocrine system and a review of one hundred thousand cases of influenza managed by osteopathy during the 1918 flu pandemic.

All of the reports they reviewed demonstrated positive findings in support of manual methods such as chiropractic adjustments and manipulation in effecting a positive immune response.

Despite these positive findings, the WFC Research Committee came to the following bizarre, highly nuanced conclusion:

"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,

For immediate Release: **Joint Statement Response to the WFC**

(20.04.2020)

On behalf of the undersigned national and international organizations, professional associations, trade and professional organizations representing thousands of chiropractors globally, we collectively reject the recent statements of several organizations including the American Chiropractic Association (ACA), Parker University, and the World Federation of Chiropractic (WFC) denying scientific evidence of the connection between chiropractic and immunity. The perceived eminence of these institutions should not be exclusively relied upon without careful consideration of all available evidence. To release an opinion piece without labeling it as such, particularly at a time of fear and panic, is irresponsible. Contrary to its own conclusion, the research articles included in the WFC rapid review, though the sample size is small, actually demonstrate positive findings regarding spinal integrity and immunity. The persistent and specific exclusion of published, reputable scientific studies that validate the correlation between the spine, the nervous system, chiropractic care and immune function, downgrades the important role chiropractic care plays in healthcare. The opinion piece is methodologically flawed, as they have failed to define inclusion criteria, made unfounded assertions, and therefore, drawn flawed conclusions. This leads to a misguided model of evidence informed practice, and is not conducive to a model of patient centered care.

Credible evidence for a link between chiropractic adjustments and immune system function exists. We recognize the Foundation for Vertebral Subluxation's **collection of supporting evidence**, the International Chiropractic Association's **document**, the International Federation of Chiropractors and Organizations' **statement**, and Axiom Seminars **supporting evidence**, amongst others. The chiropractic profession does not claim to diagnose, treat, or cure Coronavirus or conditions caused by COVID-19.

As portal-of-entry healthcare providers, doctors of chiropractic offer an irreplicable component of healthcare which optimizes the body's inborn ability to heal and adapt. Chiropractic care is concerned with the totality of human experience. Timely and consistent access to chiropractic care is important to public health, as it allows people to successfully adapt, heal and improve performance. This is of particular significance now with increased physical and mental stress. Chiropractors are essential in reducing undue stress on the already overburdened healthcare system. For these reasons, chiropractors have been deemed essential critical infrastructure workers by the US Department of Homeland Security. The role of chiropractic is a staple in supporting the health and well-being of the public in a salutogenic model.

Autonomic dysregulation produced by vertebral subluxation compromises the adaptive capacity of the human body. We implore the WFC to acknowledge and respect the unique role of chiropractic and its impact on nervous system function, stress and immunity. Opinion statements such as that released on March 20, 2020 by the WFC, risk damaging the sanctity of the profession and its obligations to the general public. In the spirit of collaboration and professional betterment, we thereby recommend the WFC and ACA to recognize these consequences and consider revising or retracting their position, after a thorough review of the linked evidence. Until all professional bodies representing the profession can agree to uphold these crucial values and principles, funding and support for such institutions shall be reconsidered.

The Undersigned:

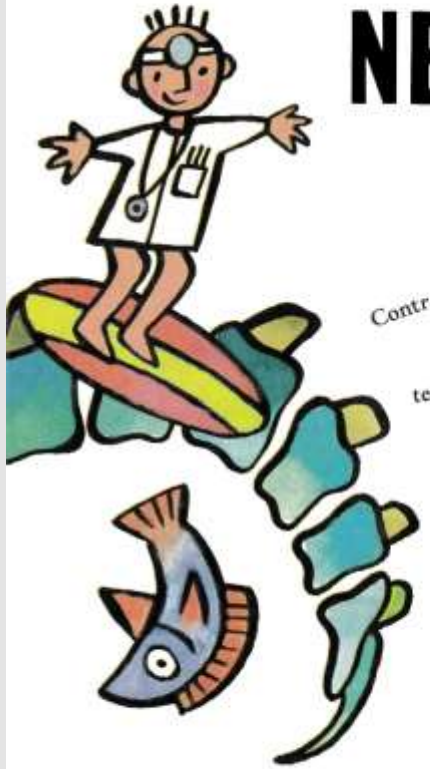
WFC & Pero

Numerous attempts have failed to retrieve this study. Without the original study to review, no scientific assessment of its claims can be made. Therefore, the "Pero and Flesia" study does not constitute credible, scientific evidence that spinal adjustment/manipulation enhances or confers immunity nor should it be used as a basis to provide care.

CHIROPRACTIC'S NEW WAVE

BY MARK N. MEAD

Controversial new ideas, tools, and techniques are transforming this spine-oriented therapy.



Lying motionless on her left side, Kay Kennedy scans a wall covered by anatomical and acupuncture charts and drawings. A man in white medical attire gently palpates her neck and spine, then reaches for a small black device that measures infrared heat given off from the spine. Holding the instrument perpendicular to and a half inch from her back, he slowly follows the entire spine from the tailbone to the base of the skull. Churning out a small ticker tape, the device graphs temperature readings which show a "cold area" in the upper back.

Next Kennedy stands before a high-tech x-ray machine and is asked to twist slowly in each direction. A nearby screen shows the vertebrae rotating as she moves, while video tape records the action for later review. Then, using a machine that projects curved lines on her back, the man Kennedy calls "Doc" checks the lines to determine muscle contour, hence structural asymmetries in her body.

After applying pressure to various points along the spine, the physician places his thumbs at the base of her neck and presses down hard. At this point, Kennedy gives a vigorous nod of approval. "That time you got those kinks in my brain too, Doc," she

Illustration by Mary Anne Lloyd

BOOSTING YOUR IMMUNITY THROUGH CHIROPRACTIC

In 1975, Ronald Pero, Ph.D., chief of cancer prevention research at New York's Preventive Medicine Institute and professor of medicine in Environmental Health at New York University, began developing scientifically valid ways to estimate individual susceptibility to various chronic diseases. Pero and his colleagues found strong evidence that susceptibility to cancer could be gauged by the activities of various enzymes involved in metabolic and genetic changes due to exposure to carcinogenic or "mutagenic" chemicals. An individual's immune system responsiveness, or "immune competence," also was directly linked to certain DNA-repairing enzymes, which provided an objective way to assess disease susceptibility. Lack of those enzymes, Pero said, "definitely limits not only your lifespan, but also your ability to resist serious disease consequences."

Pero was also fascinated by various hormones' synergistic relationship with other cancer-inducing agents to promote the disease. For example, thyroid hormones affect the early phases of radiation- and chemically-induced cancers. If the thyroid produces too much of either thyroxine or thyroid-stimulating hormone, cancer risk greatly increases. And since the nervous system regulates hormonal balances, it too can influence susceptibility to cancer. Along these lines, various kinds of spinal cord injury are accompanied by a high risk of developing cancer, particularly lymphomas and lymphatic leukemias. This connection led Pero to consider chiropractic as a potential alternative for reducing the risk of immune breakdown and disease.

In 1986 Pero collaborated with Joseph Flesia, D.C., chairman of the board of directors for the Chiropractic Basic Science Research Foundation, Inc. With a hefty grant from CBSRF, they began a research project at the University of Lund in Lund, Sweden. Using Pero's tests to gauge resistance to hazardous environmental chemicals, they hypothesized that people with cancer would have a suppressed immune response to such a toxic burden, while healthy people and people receiving chiropractic care should have a relatively enhanced response.

Measuring 107 individuals who had received long-term chiropractic care, Pero's team turned up some surprising findings. All chiropractic patients were "genetically normal"—that is, they had no obvious genetic reasons for increased resistance or susceptibility to disease. Any difference, therefore, had to be accounted for by environmental or therapeutic factors. The chiropractic patients also had 200 percent greater immune-competence than people who had not received chiropractic, and 400 percent greater immune-competence than people with cancer or other serious diseases. Surprisingly, despite a wide range of ages in this study, the immune-competence did not show any decline with age—it was uniform for the entire group.

Pero concluded that "chiropractic may optimize whatever genetic abilities you have" so that you can fully resist serious disease. "I'm very excited to see that without chemical intervention . . . this particular group of patients under chiropractic care did show a very improved response," he told CBSRF. "These changes occur from chiropractic treatment."

One shortcoming of this study, however, was its failure to distinguish the effects of dietary practice, which were also part of the treatment. When questioned on this point, Pero conceded that this would have to be answered in the next phase of the study. But he was unaware of any research showing that such differences could be accounted for by nutritional changes alone. Pero, who has published over 160 papers in peer review journals, firmly believes that chiropractic care was the critical factor in this study. —*M.N.M.*

findings at We Care Chiropractic Research Center in Dravosburg, Pennsylvania. "Anyone who practiced upper cervical work had the best track record."

Another theory, conceived by Logan Chiropractic College in Missouri, asserts that if the *base* of the spine is leveled, the rest will follow. Despite the apparent split between the Palmer and Logan schools, many chiropractors find merit in using both approaches interchangeably. Pierce says he practiced upper cervical strictly for nearly four years before beginning pelvic work. Today, however, almost all of Pierce's practice focuses on cervical adjustment, which he believes reflects how widespread upper cervical problems are in America.

Still other chiropractors are beginning to look beyond mechanical correction of body structure to explore more subtle problems of the spine and nervous system. This second school of thought, far less popular than the first, considers subluxations as one aspect of a more subtle problem involving the protective membranes of the brain and spinal cord, the meninges. Both schools, however, share a common emphasis on balanced nutrition and health-promoting lifestyle.

New Tools of the Trade

Among the many tools chiropractors use for assessing body structure and spinal alignment, the hands are the most fundamental. Palpation of the back enables one to detect muscular, mechanical, and anatomical abnormalities. Areas of tenderness or stiffness may suggest neurological problems. But touch is insufficient for giving chiropractors all they need to know about the condition of the spine—a realization Palmer arrived at through his experience with two types of patients: city people and country people. The urbanites came more frequently to Palmer's office because they lived close by. To Palmer's surprise, those who came three times a week—the city folks—had *poorer* results than those who came in once every three weeks. Eventually realizing that there were times to adjust and times not to adjust, Palmer invented the neurocalometer, which he said monitored heat given off by the nerves. With the device, Palmer took measurements of heat changes along the spine and correlated them with the success of chiropractic adjustments.

Although Palmer didn't realize it at the time, he was actually measuring infrared heat given off by the blood vascular system, not by the nerves themselves. When a misaligned vertebra impinges on

Pero

"It is clear from the literature review and the data presented above that spinal pathomechanics can cause hormonal changes that, in turn can lead to genotoxic responses, altered physiological states of health and disease. Hence it becomes imperative to research the possible scientific molecular basis for chiropractic."

Johnson D, Pero R, Flesia J. Biochemical and endocrinological changes due to neuropathologic states that can lead to genotoxic consequences. A testable hypothesis for health effects induced by spinal pathomechanics. Chiropractic Basic Science Research Foundation.

Review

A Scoping Review of Chiropractic, Vertebral Subluxation and Immune Function with Implications for Development of a Protocol for Measurement of Immune Biomarkers in Chiropractic Research & the Development of Related Policy

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Christopher Kent DC, JD[2]
Suzzanne M. Candelaria-Perez BSc[3]
Anquonette Stiles DC, MPH[3]
Christie Kwon DC, MS, MPH(C)[3]
Christopher Long BS[3]
Brooke Mills AA[3]

1. *Vice President – Foundation for Vertebral Subluxation*
2. *President – Foundation for Vertebral Subluxation & Director of Center for Scholarly Activity Sherman College of Chiropractic*
3. *Research Fellow – Foundation for Vertebral Subluxation*

Abstract

Objective: To discuss the existing literature on chiropractic, vertebral subluxation and immune function in order to inform the development of an integrative review of the literature, a review of immune biomarkers in relation to chiropractic, development of a research protocol, the implementation of future studies and the development of related policy.

Methods/Results: We conducted a scoping review of existing literature available to the authors and conducted further searches and gathering of documents based on that available literature. 125 papers were gathered and included in this review.

Conclusions: This is a scoping review of the literature regarding chiropractic and its relationship to neuroimmunology. It is intended to inform a larger project and give that team as much background as possible in a short period of time. The results of the already available research demands that we further explore the neuro-immuno-regulatory effects of chiropractic, adjustment and spinal manipulation and it provides a starting point for doing so. While adjustments reduce pain and inflammation, they also improve immune-regulatory function. How and to what extent is the subject of this current multi-pronged project.

Key Words: *Chiropractic, immunity, neuroimmunity, neuroimmunology, psychoneuroimmunology, neuroimmunoendocrine system, immune biomarkers, supersystem, vertebral subluxation, adjustment, spinal manipulation*

Introduction

It is well established that the nervous system controls and coordinates all functions and systems of the human body including immunity and the immune system.[1] Many in chiropractic consider that this relationship confers salutogenic benefits in people undergoing chiropractic care.[2-4]

Recent events related to the Coronavirus Pandemic have brought this relationship to the forefront within and outside of the chiropractic profession. This includes assertions by researchers within the chiropractic profession that there is no credible evidence supporting claims of effectiveness of spinal adjustment and/or manipulation in boosting or strengthening the immune system and that there is no credible, scientific evidence that spinal adjustment and/or manipulation has any clinically relevant effect on the immune system.[5]

As a result of the assertions by these researchers, some chiropractic regulatory boards, chiropractic trade organizations and chiropractic educational institutions from around the world are claiming that there exists no credible, scientific evidence that would permit claims of effectiveness for conferring or enhancing immunity through spinal adjustment and/or manipulation to be made in communications by chiropractors.[6] Essentially, chiropractors have been effectively muzzled and banned from discussing any connection between the nervous and immune systems.

Chiropractic & Impaired Immune Response

- Enhanced Respiratory Burst
- Increased CD 4 Counts
- Crohn's Disease
- Serum Thiol
- Cortisol
- Prostaglandins
- Immunoglobulins
- CD 4 Counts
- B-Lymphocytes
- Pulmonary effects
- Serum Thiol
- Decreased Colds & Flu

- Substance P
- Tumor Necrosis Factor
- Interleukin 2
- Killer Cells
- Macrophages
- Melanoma
- Serum Aldosterone
- Immunoreactive ACTH
- Catecholamines
- Calcitonin
- Adrenal glands
- Immunoreaction
- Autonomics & Lymphocytes

The Hypothesis

Rome contends that the hypothesis has four integrally linked steps:[8]

1. That there can be sufficient somatic disturbance to alter the normal sensory input at that segmental level.
2. That this aberration would primarily consist of a bombardment of noxious somatic sensory input, and resulting in modulation of normal autonomic (ANS) activity
3. That resultant altered efferent somatovisceral activity may then interfere with the physiology of the innervated structures(s) involving that reflex level. This may be via central processing, neurologically directly onto that structure – or other mechanisms.
4. That in the case of that structure being an organ, such interference may be in the form of physiologic dysfunction, with associated symptoms, simulated disease of that organ, or possibly degrees of, or predisposition to pathology.

- Rome P. Neurovertebral Influence on Visceral and ANS Function: Some of the Evidence To Date - Part II: Somatovisceral. Chiropr J Aust 2010; 40: 9-33

REVIEW OF THE LITERATURE

Objective Physiologic Changes and Associated Health Benefits of Chiropractic Adjustments in Asymptomatic Subjects: A Review of the Literature

Sean M. Hannon, BA, DC

ABSTRACT

Objective: To review existing literature documenting objectively measured physiologic changes and their associated health benefits subsequent to chiropractic adjustments, primarily in asymptomatic individuals.

Data Collection: "Asymptomatic" "normal" "pain-free" and "healthy" subjects were keywords used to search for articles pertaining to the objective. Data was collected directly from the bound journals of the Palmer College of Chiropractic library in Davenport, IA, Life University library in Marietta, GA, and the Sherman College of Chiropractic library in Spartanburg, SC. Some articles were downloaded from peer-reviewed journals accessible through campus Internet subscription.

Results: More than twenty studies were found documenting objective health benefits in subjects who were specifically described as "asymptomatic," "healthy," "normal," or "free from physical injury." Nearly an equal number of studies were found documenting objectively measured health benefits in subjects to which no symptomatic presentation was described.

Conclusion: The data reviewed lend support to the contention that chiropractic adjustments, often for the purpose of correcting vertebral subluxation, confer measurable health benefits to people regardless of the presence or absence of symptoms. A significant amount of preliminary evidence supports that people without symptoms can benefit from chiropractic care. Improved function can be objectively measured in asymptomatic individuals following chiropractic care in a number of body systems often by relatively non-invasive means. It is plausible that chiropractic care may be of benefit to every function of the body and have the potential for long-term, overall health benefit to those receiving chiropractic care.

Key words: *chiropractic adjustment, subluxation, objective measurement, health benefit*

Introduction

A recent survey of 658 randomly selected US chiropractors revealed some surprising data.[1] Eighty-eight percent (88.3%) of respondents agreed or strongly agreed that the purpose of maintenance care was "to maintain or optimize state of health." Eighty-percent (80.2%) of respondents agreed or strongly agreed that the purpose of maintenance care was to "determine and treat subluxation." Furthermore, US chiropractors agreed that "maintenance care was of value to all age groups, with the value increasing slightly with an increase in a patient's age." However, only forty-percent (40.2%) agreed that "adequate research existed to support the concept of maintenance care," and ninety-three percent (93.4%) agreed "there was a need for more research." It seems that US chiropractors agree and are of the opinion that correcting subluxation is of value to all people, but nearly 60% do not think there is sufficient evidence to verify their opinion. One chiropractor expressed this frustration in a Letter to the Editor in the August 6, 2000 issue of *Dynamic Chiropractic*, a trade journal of the chiropractic profession:

> "I try to encourage my patients who are open to continue maintenance care… However, I have yet to see a single research finding that indicates that those patients who do receive regular chiropractic care, regardless of symptomotology, benefit in any measurable way."
> -Scott Rogers, MA,DC

Others have expressed their opinions on the subject in peer-reviewed literature:

> "Many chiropractors will continue to adjust imaginary subluxations in the spines of perfectly healthy patients, perpetuating unsubstantiated claims and discouraging chiropractors who wish to specialize in the treatment of neck and back pain…[2] Chiropractors who believe that vertebral alignment has something to do with general health often encourage their patients to submit to regular and frequent manipulation, even when these patients are asymptomatic… I cannot personally justify manipulating the spine of a healthy, symptom-free patient… It is unfair to patients to allow them to believe that they must have regular spinal adjustments in order to stay healthy… I cannot see any basis or justification for routinely manipulating the spine of a healthy patient for the purpose of maintaining health or preventing disease."[3]
> *-Samuel Homola, DC*

Sean M. Hannon, BA, DC, Private Practice, Denver, CO

Objective Physiologic Changes and Associated Health Benefits of Chiropractic Adjustments in AsymptomaticSubjects: A Review of the Literature

Sean M. Hannon, BA, DC

- Statistically significant improvements in:
- Respiration
- Range of motion
- Heart rate variability
- Autonomic function
- Endocrine function
- Cardiovascular function
- Immune function
- Muscle strength
- Overall athletic ability

Hannon Con't…

- Neurocognitive functions
- Reaction-time
- Information processing,
- Visual acuity,
- Stress
- Reproductive hormones,
- Healing
- Recovery time,
- General health of senior citizens,
- Reduced labor times

Immune Biomarkers

medicina

MDPI

Review

The Effects Induced by Spinal Manipulative Therapy on the Immune and Endocrine Systems

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Received: 10 June 2019; Accepted: 2 August 2019; Published: 7 August 2019

check for updates

Abstract: *Background and Objectives*: Spinal manipulations are interventions widely used by different healthcare professionals for the management of musculoskeletal (MSK) disorders. While previous theoretical principles focused predominantly on biomechanical accounts, recent models propose that the observed pain modulatory effects of this form of manual therapy may be the result of more complex mechanisms. It has been suggested that other phenomena like neurophysiological responses and the activation of the immune-endocrine system may explain variability in pain inhibition after the administration of spinal manipulative therapy (SMT). The aim of this paper is to provide an overview of the available evidence supporting the biological plausibility of high-velocity, low-amplitude thrust (HVLAT) on the immune-endocrine system. *Materials and Methods*: Narrative critical review. An electronic search on MEDLINE, ProQUEST, and Google Scholar followed by a hand and "snowballing" search were conducted to find relevant articles. Studies were included if they evaluated the effects of HVLAT on participants' biomarkers. *Results*: The electronic search retrieved 13 relevant articles and two themes of discussion were developed. Nine studies investigated the effects of SMT on cortisol levels and five of them were conducted on symptomatic populations. Four studies examined the effects of SMT on the immune system and all of them were conducted on healthy individuals. *Conclusions*: Although spinal manipulations seem to trigger the activation of the neuroimmunoendocrine system, the evidence supporting a biological account for the application of HVLAT in clinical practice is mixed and conflicting. Further research on subjects with spinal MSK conditions with larger sample sizes are needed to obtain more insights about the biological effects of spinal manipulative therapy.

Keywords: spinal manipulative therapy; immune system; endocrine system; back pain; neck pain; physiotherapy

1. Introduction

Spinal disorders are conditions affecting an increasing number of people, and their associated

The aim of their paper was "to provide an overview of the available evidence supporting the biological plausibility of high-velocity, low-amplitude thrust (HVLAT) on the immune-endocrine system". Their search retrieved 13 relevant articles and two themes of discussion were developed. Nine studies investigated the effects of manipulation on cortisol levels and four studies examined the effects of manipulation on the immune system.

They concluded that spinal manipulation seems to trigger the activation of the neuroimmunoendocrine system and encouraged further research to obtain more insights about the biological effects of spinal manipulative therapy.[66]

"Trigger"

Cytokines

Cytokines are cell signaling protein molecules secreted by cells of the immune system and are a category of signaling molecules used in intercellular communication. Spinal manipulation has been shown to reduce the production of pro-inflammatory cytokines and increase the blood levels of cytokines that are immuno-regulatory in nature.

Over 30 of them – Examples . . .

Interleukin-1 (IL-1), IL-12, and IL-18
Tumor necrosis factor alpha (TNF-α)
Interferon gamma (IFNγ)
Granulocyte-macrophage colony stimulating factor (GM-CSF)

Clinical Trial > J Manipulative Physiol Ther. 1991 Sep;14(7):399-408.

Enhanced phagocytic cell respiratory burst induced by spinal manipulation: potential role of substance P

P C Brennan [1], K Kokjohn, C J Kaltinger, G E Lohr, C Glendening, M A Hondras, M McGregor, J J Triano

Affiliations + expand

PMID: 1719112

Abstract

The effect of spinal manipulation on the respiratory burst of polymorphonuclear neutrophils (PMN) and monocytes from treated adults was measured by zymosan-stimulated chemiluminescence (CL). Peripheral blood was collected 15 min before and 15 min after treatment (sham manipulation, thoracic spine manipulation, or soft tissue manipulation), the cells were isolated, challenged with a standardized, opsonized luminol-containing suspension of zymosan, and monitored for CL. Plasma from two subsets of subjects was radioimmunoassayed for Substance P (SP). PMN were also preincubated with SP in vitro over the dose range 5 x 10(-12) M to 5 x 10(-8) M and the CL response monitored. The CL responses of both PMN and monocytes from subjects who received spinal manipulation were significantly higher after than before treatment, and significantly higher than the response in sham or soft-tissue treated subjects. Measurement of the force applied by sham and spinal manipulation suggested a force threshold for the enhancement of the CL response. Plasma levels of SP before and after treatment in sham treated subjects did not differ significantly; however, elevated plasma SP was observed in subjects after spinal manipulation. Preincubation of PMN with 1 x 10(-11) M, 5 x 10(-11) M or 1 x 10(-10) M SP in vitro primed PMN for an enhanced respiratory burst when the cells were subsequently challenged.

Brennan, et al., demonstrated that upper thoracic spinal manipulation resulted in a significant increase in phagocytic activity of neutrophils and monocytes when compared to a sham manipulation or soft-tissue treatment.[67] In another study by Brennan, et al., they found that spinal manipulation results in viscero-somatic responses that affect the phagocytic activity of both neutrophils and mononuclear cells.[68]

"Enhancement"

Comment > J Manipulative Physiol Ther. 1992 Jun;15(5):334-5.

Enhanced neutrophil respiratory burst as a biological marker for manipulation forces: duration of the effect and association with substance P and tumor necrosis factor

B S Polkinghorn

PMID: 1377220

No abstract available

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The Effects Of Specific Upper Cervical Adjustments On The CD4 Counts Of HIV Positive Patients

Jeffrey L. Selano, Brett C. Hightower, Bruce Pfleger,
Karen Feeley Collins, John D. Grostic

THE EFFECTS OF SPECIFIC UPPER CERVICAL ADJUSTMENTS ON THE CD4 COUNTS OF HIV POSITIVE PATIENTS

Jeffrey L. Selano, D.C.
Brett C. Hightower, D.C.
Bruce Pfleger, Ph.D.
Karen Feeley Collins, D.C.
John D. Grostic, D.C.

ABSTRACT

The researchers of this project sought to demonstrate that upper cervical specific adjustments would have a profound effect on the physiology, serology and immunology of HIV positive individuals.

The effect of specific upper cervical adjustments on the immune system CD4 cell counts of HIV positive individuals was measured by CD4/mm3 in the blood. These tests were performed by the patients independent medical center where they were under medical supervision for the condition. The measured CD4 counts in the regular group were dramatically increased over the counts of the control group. A 48% increase in CD4 cells was demonstrated over the six month duration of the study for the adjusted group.

Key Indexing Terms: Chiropractic, atlas, subluxation, CD4 count, immunology, dentate ligament, HIV.

In a study of the effects of specific spinal adjustments on the immune system looking at CD4 cell counts of HIV positive Individuals, six subjects receiving real chiropractic adjustments experienced a 48% increase in CD4 cell levels over a period of six months.



Chiropractic and the Neuroimmune Connection. Ari Cohn, DC. Journal of Vertebral Subluxation Research – September 30, 2008 – Pages 1-5

Chiropractic & Immunity

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Subluxation Spoken Here

SPINAL MANIPULATIVE THERAPY REDUCES INFLAMMATORY CYTOKINES BUT NOT SUBSTANCE P PRODUCTION IN NORMAL SUBJECTS

Julita A. Teodorczyk-Injeyan, PhD,[a] H. Stephen Injeyan, PhD, DC,[b] and Richard Ruegg, PhD, DC

Teodorczyk-Injeyan showed that chiropractic treated subjects have also shown attenuation of lipopolysaccharide induced production of the inflammatory cytokines unrelated to systemic levels of the neurotransmitter substance P.[70]

ABSTRACT

Objective: To examine the effect of a single spinal manipulation therapy (SMT) on the in vitro product inflammatory cytokines, tumor necrosis factor α, and interleukin (IL) 1β, in relation to the systemic (in vivo) levels of neurotransmitter substance P (SP).

Methods: Sixty-four asymptomatic subjects were assigned to SMT, sham manipulation, or venipuncture control group. SMT subjects received a single adjustment in the thoracic spine. Blood and serum samples were obtained from subjects before and then at 20 minutes and 2 hours after intervention. Whole-blood cultures were activated with lipopolysaccharide (LPS) for 24 hours. Cytokine production in culture supernatants and serum SP levels were assessed by specific immunoassays.

Results: Over the study period, a significant proportion ($P \leq .05$) of sham and control subjects demonstrated progressive increases in the synthesis of tumor necrosis factor α and IL-1β. Conversely, in a comparable proportion of cultures from SMT-derived subjects, the production of both cytokines decreased gradually. Normalization of the observed alterations to reflect the changes relative to self-baselines demonstrated that, within 2 hours after intervention, the production of both cytokines increased significantly ($P < .001$ to $.05$) in both controls. In contrast, a significant ($P < .001$ to $.05$) reduction of proinflammatory cytokine secretion was observed in cultures from SMT-receiving subjects. In all study groups, serum levels of SP remained unaltered within 2 hours after intervention.

Conclusions: SMT-treated subjects show a time-dependent attenuation of LPS-induced production of the inflammatory cytokines unrelated to systemic levels of SP. This suggests SMT-related down-regulation of inflammatory-type responses via a central yet unknown mechanism. (J Manipulative Physiol Ther 2006;29:14-21)

Key Indexing Terms: *Manipulation; Spinal; Cytokines; Substance P; Inflammation; Spinovisceral Effect*

"Reduces"
"Attenuation"
"Down Regulation"

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Although the exact biologic mechanism(s) of systemic effects of spinal manipulative therapy (SMT) remain unclear, the current model of somatoautonomic or spinovisceral reflex provides a critical link between spinal manipulation, the autonomic nervous system, and various visceral functions.[1] Animal experiments have demonstrated that somatoautonomic reflex effects are apparent in multiple nonmusculoskeletal systemic responses, including those of the cardiovascular, digestive, urinary, endocrine, and the immune system.[2,3] On the other hand, similar studies in humans are still limited particularly with respect to the effect of SMT on the integrated biologic activities of the nervous and immune systems

Reduction in high blood tumor necrosis factor-alpha levels after manipulative therapy in 2 cervicogenic headache patients

Gábor Ormos [1], J N Mehrishi, Tibor Bakács

Affiliations + expand

PMID: 19748410 DOI: 10.1016/j.jmpt.2009.08.006

Erratum in

J Manipulative Physiol Ther. 2009 Oct;32(8):701

Abstract

Objective: This case report discusses the treatment of 2 patients with cervicogenic h
attending the Outpatient Clinic of the Hungarian National Institute for Rheumatology
Physiotherapy (Budapest, Hungary) and reviews the pathophysiology, therapeutic str
problems associated with the treatment of CHA.

Clinical features: Patient 1 was a 27-year-old female who sustained a whiplash injury
shooting headache developed, readily induced, and aggravated by just bending the neck backward or
by turning her head. Magnetic resonance imaging revealed a disk protrusion at C4-C5 pressing the anterior cerebrospinal space. Patient 2 was a 62-year-old female who sustained a whiplash injury; her cervical movements became restricted, which precipitated headaches. Magnetic resonance imaging revealed a paramedian disk hernia between the C4 and C5 vertebrae that intruded into the right ventral cerebrospinal space.

Intervention and outcome: After 4 weeks of manipulative therapy for patient 1, both active and passive range of motion returned to normal, and the high tumor necrosis factor-alpha (TNF-alpha) level (63 pg/mL) was substantially reduced (28 pg/mL). Patient 2 was started on manipulative therapy twice a week for 4 weeks; after 2 months, the patient became symptom-free, and high TNF-alpha level (72 pg/mL) was reduced greatly (35 pg/mL).

Conclusion: Two patients with whiplash injury and disk herniation developed CHA associated with very high TNF-alpha levels. After manipulative therapy, these patients became symptom-free, and their TNF-alpha levels decreased substantially.

Research has explored the relationship of spinal manipulation, spino-autonomic reflexes and their influence on activity of immune and inflammatory cells. This research has shown a reduction in pro-inflammatory cytokines after spinal manipulation. This is includes reduction of inflammatory cytokines, tumor necrosis factor and interleukin-1ß.[71]

Spinal manipulation down-regulates inflammatory-type responses via a central mechanism and manipulation ameliorates the physiological responses of blood cells to an inflammatory stimulus suggesting that spino-visceral reflexes alter the functional activity of cells in the immune and inflammatory systems.

"Ameliorates"
"Decreased"
"Reduced"

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ELSEVIER

JOURNAL of CHIROPRACTIC MEDICINE

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Inflammatory response following a short-term cours[illegible] chiropractic treatment in subjects with and without chronic low back pain☆

Richard A. Roy DC, MSc[a,b], Jean P. Boucher PhD, FACSM[c], Alain S. Comtois

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Received 19 November 2009; received in revised form 17 May 2010; accepted 9 June 2010

Key indexing terms:
Manipulation;
Spinal;
Diagnosis;
Interleukins;
C-reactive protein

Abstract

Objective: Inflammatory markers interleukin-6 (IL-6) and C-reactive protein (CRP[illegible] been evaluated in response to a short course of lumbar spinal manipulation. The p[illegible] this study is to observe the responses of inflammatory markers (IL-6 and CRP) after a series of 9 chiropractic spinal manipulations.

Methods: Twenty-one participants were assigned to a treatment or a control group. Only the treatment group received 9 chiropractic interventions. Pre- and postintervention measures were recorded for blood samples for detection of proinflammatory cytokines IL-6 and CRP.

Results: Mediators of inflammation (IL-6 and high-sensitivity CRP) were modified by the intervention received in the treatment group, and the effect size demonstrated a tendency toward the control group values.

Conclusion: A total of 9 chiropractic lower back manipulations caused the mediators of inflammation to present a normalization response in individuals suffering from chronic low back pain.

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☆ Disclaimer: Nothing of value related to this research was received from a commercial entity.

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Introduction

Many different outcome measures as a means of monitoring the treatment course of chiropractic adjust-

In 2010, Roy, et al., did pre- and post-intervention measures from blood samples and detected a reduction in pro-inflammatory cytokines interleukin 6 (IL-6) and C-reactive protein (CRP) after a series of nine chiropractic manipulations from T12-L5 using an adjusting instrument and related protocol in 10 chronic low back pain patients and 10 healthy subjects. Both IL-6 and CRP levels were lowered toward the values in healthy subjects showing that chiropractic is capable of attenuating the inflammatory response. The authors of the study suggest that it is plausible the inflammatory process can be reversed in those receiving adjustments.[72]

"Modified"
"Normalization response"
"Reversed"
"Attenuation"

PALMER

JOURNAL of CHIROPRACTIC MEDICNE

VOLUME 1 NUMBER 1

MARCH 2002



National

Interleukin-2 (IL-2)

Increased secretion of interleukin-2 (IL-2) has also been found following chiropractic care.

IL-2 is an important cytokine in T-cell-dependent immune responses.

It also plays a role in the development, maintenance and survival of regulatory T cells making it critically important in immune tolerance.

IL-2 is an immune-regulatory cytokine and signaling molecule necessary for the response to microbial infection as well as the body's ability to discriminate between self and non-self.

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Enhancement of *in vitro* interleukin-2 production in normal subjects following a single spinal manipulative treatment

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Abstract

Background: Increasing evidence supports somato-visceral effects of manual therapies. We have previously demonstrated that a single spinal manipulative treatment (SMT) accompanied by audible release has an inhibitory effect on the production of proinflammatory cytokines in asymptomatic subjects. The purpose of this study is to report on SMT-related changes in the production of the immunoregulatory cytokine interleukin 2 (IL-2) and to investigate whether such changes might differ with respect to the treatment approach related to the presence or absence of an audible release (joint cavitation).

Methods: Of 76 asymptomatic subjects, 29 received SMT with cavitation (SMT-C), 23 were treated with SMT without cavitation (SMT-NC) and 24 comprised the venipuncture control (VC) group. The SMT-C and SMT-NC subjects received a single, similar force high velocity low amplitude manipulation, in the upper thoracic spine. However, in SMT-NC subjects, positioning and line of drive were not conducive to cavitation. Blood and serum samples were obtained before and then at 20 and 120 min post-intervention. The production of IL-2 in peripheral blood mononuclear cell cultures was induced by activation for 48 hr with Staphylococcal protein A (SPA) and, in parallel preparations, with the combination of phorbol ester (TPA) and calcium ionophore. The levels of IL-2 in culture supernatants and serum were assessed by specific immunoassays.

Results: Compared with VC and their respective baselines, SPA-induced secretion of IL-2 increased significantly in cultures established from both SMT-C and SMT-NC subjects at 20 min post-intervention. At 2 hr post-treatment, significant elevation of IL-2 synthesis was still apparent in preparations from SMT-treated groups though it became somewhat attenuated in SMT-NC subjects. Conversely, IL-2 synthesis induced by TPA and calcium ionophore was unaltered by either type of SMT and was comparable to that in VC group at all time points. No significant alterations in serum-associated IL-2 levels were observed in any of the study groups.

Conclusion: The present study demonstrates that, the *in vitro* T lymphocyte response to a conventional mitogen (SPA), as measured by IL-2 synthesis, can become enhanced following SMT. Furthermore, within a period of time following the manipulative intervention, this effect may be independent of joint cavitation. Thus the results of this study suggest that, under certain physiological conditions, SMT might influence IL-2-regulated biological responses.

In one study, 76 asymptomatic subjects were randomized to receive an upper thoracic manipulation with cavitation or without cavitation, or were included in a control group. All subjects had their blood drawn before, 20 minutes and two hours after the intervention. Induced secretion of IL-2 increased significantly with the T-lymphocyte response becoming enhanced after spinal manipulation suggesting that manipulation may influence IL-2 immune regulated biological responses.[73]

"Increasing evidence supports . . ."
"Inhibitory effect"
"Can become enhanced following . . ."
"Influences"

Teodorczyk-Injeyan *et al. Chiropractic & Osteopathy* 2010, **18**:26
http://www.chiroandosteo.com/content/18/1/26

CHIROPRACTIC & OSTEOPATHY

RESEARCH Open Access

Interleukin 2-regulated *in vitro* antibody production following a single spinal manip treatment in normal subjects

Julita A Teodorczyk-Injeyan[1], Marion McGregor[2], Richard Ruegg[3], H Stephen Injeyan[4*]

Abstract

Background: Our recent investigations have demonstrated that cell cultures from subjects, who rec spinal manipulative treatment in the upper thoracic spine, show increased capacity for the producti immunoregulatory cytokine, interleukin-2. However, it has not been determined if such changes infl response of the immune effector cells. Thus, the purpose of the present study was to determine whether, in the same subjects, spinal manipulation-related augmentation of the *in vitro* interleukin-2 synthesis is associated with the modulation of interleukin 2-dependent and/or interleukin-2-induced humoral immune response (antibody synthesis).

Methods: A total of seventy-four age and sex-matched healthy asymptomatic subjects were studied. The subjects were assigned randomly to: venipuncture control (n = 22), spinal manipulative treatment without cavitation (n = 25) or spinal manipulative treatment associated with cavitation (n = 27) groups. Heparinized blood samples were obtained from the subjects before (baseline) and then at 20 minutes and 2 hours post-treatment. Immunoglobulin (antibody) synthesis was induced in cultures of peripheral blood mononuclear cells by stimulation with conventional pokeweed mitogen or by application of human recombinant interleukin-2. Determinations of the levels of immunoglobulin G and immunoglobulin M production in culture supernatants were performed by specific immunoassays.

Results: The baseline levels of immunoglobulin synthesis induced by pokeweed mitogen or human recombinant interleukin-2 stimulation were comparable in all groups. No significant changes in the production of pokeweed mitogen-induced immunoglobulins were observed during the post-treatment period in any of the study groups. In contrast, the production of interleukin-2 -induced immunoglobulin G and immunoglobulin M was significantly increased in cultures from subjects treated with spinal manipulation. At 20 min post-manipulation, immunoglobulin G synthesis was significantly elevated in subjects who received manipulation with cavitation, relative to that in cultures from subjects who received manipulation without cavitation and venipuncture alone. At 2 hr post-treatment, immunoglobulin M synthesis was significantly elevated in subjects who received manipulation with cavitation relative to the venipuncture group. There were no quantitative alterations within the population of peripheral blood B or T lymphocytes in the studied cultures.

Conclusion: Spinal manipulative treatment does not increase interleukin-2 -dependent polyclonal immunoglobulin synthesis by mitogen-activated B cells. However, antibody synthesis induced by interleukin-2 alone can be, at least temporarily, augmented following spinal manipulation. Thus, under certain physiological conditions spinal manipulative treatment might influence interleukin-2 -regulated biological responses.

In another study of 74 subjects the increased production of interleukin-2 as a result of thoracic manipulation was associated with increased antibody synthesis from monocytes. The study showed that there was increased synthesis of immunoglobulin G (IgG) and immunoglobulin M (IgM) antibodies in peripheral blood mononuclear cells in those subjects who received thoracic manipulation. This means that antibody synthesis (IgG and IgM) induced by interleukin-2 is increased after manipulation.[74]

"Increased capacity"
"Augmentation"
"Modulation"
"Increased"
"Elevated"

THE EFFECT OF CHIROPRACTIC SPINAL MANIPULATIVE THERAPY ON SALIVARY CORTISOL LEVELS

PETER J. TUCHIN B.Sc., Grad.Dip.(Chiro), Dip.(OHS).*

Abstract:
Objective: This study examines the effect of chiropractic spinal manipulative therapy on salivary cortisol levels.
Design: Prospective case series over six weeks duration. The trial consisted of establishment of each individual's baseline cortisol level, a two week treatment period (4 treatments), and a two week post treatment period.
Setting: Macquarie University Chiropractic Research Centre.
Participants: Nine subjects (six male, three female), employed in a large corporation, volunteered to the trial of spinal manipulative therapy.
Main Outcome Measures: Saliva samples were analysed using an Amerlex Radioimmunoassay Kit to determine the cortisol concentrations present.
Results: Statistical interpretation, after exclusion of an apparent outlying subject, revealed results of statistical significance ($p<0.001$) for reduction of salivary cortisol over the complete five week study. In addition, there was no apparent alteration in salivary cortisol levels immediately preceding and 15 minutes after spinal manipulative therapy.
Conclusion: The initial evidence is inconclusive, however, the potential relationship demands further investigation. Additional research is necessary in measuring the physiological effects of Chiropractic spinal manipulative therapy. This method is currently being used in a larger randomised controlled trial.

Key Indexing Terms (MeSH): Salivary cortisol, chiropractic, spinal manipulation.

INTRODUCTION

Stress, is a term which is gaining increasing notoriety in society today. Some doctors term stress the "RSI of the brain", as it is becoming more costly within our advancing society. Whether claims are legitimate or not, stress is already costing a lot in human resources and money. Compensation claims accepted for stress in public servants are increasing at a rate of 20% a year and are expected to cost $50 million by the end of this financial year (1). Since 1989, the number of claims accepted by the Commonwealth has almost doubled (2). In 1993/4 there were 1,600 claims

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which indicate a reduction of the body's ability to tolerate stress. These signs include irritability, hyperexcitation, depression, many other psychological distortions, insomnia, migraines, neck pain and/or tension and back ache (5).

Research into the effectiveness of chiropractic intervention for spinal conditions has shown good results in reduction of back and neck pain (6-22). The relationship of pain in the development of stress or stress related illness is area which remains uncertain. However, some studies have indicated a possible causative relationship (5,7,23).

A number of studies have analysed the relationship of salivary cortisol with stressful events (24-27). These studies have shown that salivary cortisol levels often increase in relation to increases in the level of stress. A possible mechanism for this is that stressors have shown to be able to override the feedback systems, which leads to enhanced frequency and amplitude of cortisol pulses being released from the adrenal glands (27). This prompts a higher heart rate, shaking, tremors, churning of the stomach and sweat glands working overtime. As a result, it can lead to a loss of ability to concentrate and solve problems. From this it has been demonstrated that the level of stress of a patient can be correlated with secreted cortisols levels (24).

Glucocorticoids have widespread effects on the body

In a study examining the effect of chiropractic spinal manipulative therapy on salivary cortisol levels by Tuchin, nine subjects received chiropractic over six weeks revealing reduction of salivary cortisol over the complete time frame of the study.[75]

"Reduction"

THE EFFECT OF CHIROPRACTIC MANIPULATION ON SALIVARY CORTISOL LEVELS

Tara L. Whelan, DC,[a] J. Donald Dishman, DC,[a] Jean Burke, PhD,[a] Seymour Levine, PhD,[b] and Veronica Sciotti, PhD[a]

ABSTRACT

Background: The stress response in humans is a healthy response and is necessary for life. ... of chiropractic manipulation (CM), if any, on stress are ill-defined. Cortisol has been used as a ... measure of the stress response system in humans. Salivary cortisol is a noninvasive technique ... accurately quantify biologically active cortisol.

Objective: To determine whether basal salivary cortisol levels can be properly detected and ... CM has any direct effect on basal salivary cortisol levels in humans.

Methods: Subjects were adult male students attending a chiropractic college. Salivary sample ... collected for 5 weeks. During Week 1, samples were collected by the students at home upon w... During Weeks 2 through 5, home samples were collected upon waking and were followed by a... additional time course of samples collected in a laboratory setting before and after CM. Salivar... was measured by enzyme-linked immunoassay.

Results: Chiropractic manipulative therapy did not significantly change basal salivary cortisol... The time course of acute changes to cortisol levels was independent of testing week and group. A decrease in salivary cortisol was detected over time on each trial testing day. Overall, cortisol levels significantly decreased from the time of the home samples until the pretreatment laboratory measurement ($P < .05$). Cortisol levels subsequently decreased from pretreatment to 15 minutes after treatment ($P < .05$). After treatment, there were progressive decreases in cortisol levels from the 15- and 30-minute time points to the 60-minute time point ($P < .05$).

Conclusion: The results of this pilot study suggest that there is no effect of CM on salivary cortisol levels in asymptomatic subjects. As such, we conclude that neither the anticipation of CM nor the spinal manipulative procedure itself induces a state of stress or anxiety. (J Manipulative Physiol Ther 2002;25:149-53)

Key Indexing Terms: *Chiropractic; Salivary Cortisol; Stress*

According to the study's authors chiropractic manipulative therapy did not significantly change basal salivary cortisol levels. A decrease in salivary cortisol was detected over time on each trial testing day. Overall, cortisol levels significantly decreased from the time of the home samples until the pretreatment laboratory measurement). Cortisol levels subsequently decreased from pretreatment to 15 minutes after treatment. After treatment, there were progressive decreases in cortisol levels. The authors concluded that neither the anticipation of manipulation nor the spinal manipulative procedure itself induces a state of stress or anxiety.[77]

INTRODUCTION

Chiropractic manipulation (CM), with its hallmark high-velocity, low-amplitude (HVLA) impulsive thrust, has been documented to be efficacious in the treatment of neck and back pain.[1] However, the literature is scarce with regard to the effects of CM on physiologic stress.[2-4] CM may indeed result in some degree of physiologic stress, as a result of paraphysiologic joint space excursion and moderate forces being applied to paraspinal soft tissues. Alternatively, CM may actually attenuate stress-induced physiologic changes to the spine that might otherwise contribute to back pain. Methodologic limitations of previous research warrant further investigation into the relationship between CM and physiologic stress.

The level of stress an individual has can be positively correlated with secreted cortisol levels.[5,6] Cortisol circulates in plasma primarily bound to plasma proteins and is physiologically active in its unbound form. Salivary cortisol has been shown to be a valid and reliable measure of unbound "free" cortisol levels, compared with the unbound hormone levels in blood.[5] Salivary cortisol concentration is also

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This research study was supported by the New York Chiropractic College Research Committee.
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Widespread

To be sure, the literature base supporting the clinical role of chiropractic in supporting immune function is widespread and it is buttressed by the expanded depth and breadth of the literature on those manual methods, in general, that are directed at improving the structure and function of the spine and nervous system.


OSTEOPATHY

JAOA ORIGINAL CONTRIBUTION

Impact of Osteopathic Manipulative Treatment on Secretory Immunoglobulin A Levels in a Stressed Population

Gregory Saggio, DO; Salvatore Docimo, DO; Jennifer Pilc, DO; Jennifer Norton, DO, RN; and Wolfgang Gilliar, DO

Context: High levels of human secretory immunoglobulin A (sIgA) have been shown to decrease the incidence of acquiring upper respiratory tract infections. Osteopathic manipulative treatment (OMT) has been shown to improve cardiac indices, increase lymph flow rates through the thoracic duct, and decrease sympathetic tone in postoperative patients and those in intensive care. Therefore, we hypothesized that OMT may also increase sIgA levels in people under high levels of emotional and psychological stress, thereby enhancing immunity and potentially preventing subsequent infections.

Objective: To determine if OMT increases sIgA levels in highly stressed individuals.

Methods: Twenty-five second-year osteopathic medical students were randomly assigned to an experimental group (n=12) or a control group (n=13). All participants were scheduled to take their national board examination (Comprehensive Osteopathic Medical Licensing Examination-USA) within 2 to 3 weeks after the experiment. After each participant submitted a saliva sample for a baseline sIgA level assessment, the experimental group received 20 minutes of OMT while the control group sat quietly and relaxed in a separate area for 20 minutes. Participants in both groups rested quietly for 1 hour after the 20-minute session and then submitted a second saliva sample.

Results: A 2 × 2 repeated measures analysis of variance revealed that the experimental group displayed a statistically significant greater increase in postintervention sIgA levels than the control group ($F_{1,23}$, 5.92; $P<.025$).

Conclusion: This study demonstrates the positive effect of OMT on sIgA levels in persons experiencing high stress. Results suggest that OMT may then have therapeutic preventive and protective effects on both healthy and hospitalized patients, especially those experiencing high levels of emotional or physiological stress and those at higher risk of acquiring upper respiratory tract infections.

J Am Osteopath Assoc. 2011;111(3):143-147

Secretory immunoglobulin A (sIgA, also r*salivary IgA*) is the major immunoglobulin the mucosal system[1] and is found in saliva, inte bronchoalveolar lavage fluid, and other muc Secretory IgA provides protection from pathoger by preventing attachment, replication, and co such organisms.[1,3]

Recent literature has indicated an inverse between stress and the level of mucosal immun increasing levels of stress—caused by either a p physical stress—cause a decrease in mucosal sIg sIgA in humans have also been shown to indi system potency. High levels of sIgA in humar shown to decrease the incidence of upper resp infections (URTIs).[6] Hospitalized patients, especially those under physiologic stress such as ventilated patients, have demonstrated lower levels of sIgA.[7] Lower levels of sIgA have been associated with an increased incidence of nosocomial pneumonia in critical care patients.[8]

Additional studies have demonstrated an indirect relationship between low levels of sIgA and high levels of stress. Jemmott and colleagues[9] found dental students who were exposed to high levels of stress were found to have decreased sIgA levels, and increased sIgA levels correlated with periods of relatively lower levels of stress. Bosch and colleagues[10] found that an increase in the amount of bacterial adherence to teeth accompanied low levels of salivary IgA following periods of increased stress.

In osteopathic patient care, OMT has been shown to improve lymphatic circulation and augment immunologic

From the New York College of Osteopathic Medicine of New York Institute of Technology in Old Westbury.

Financial Disclosures: None reported.

Address correspondence to Greg Saggio, DO, Department of Biomedical Sciences, New York College of Osteopathic Medicine, Room 138 Serota

In osteopathic studies of Immunoglobulin A (IgA) it has been shown that Osteopathic Manipulative Therapy (OMT) has a positive effect on IgA levels in persons experiencing high stress. Results suggest that OMT may then have therapeutic preventive and protective effects on both healthy and hospitalized patients, especially those experiencing high levels of emotional or physiological stress and those at higher risk of acquiring upper respiratory tract infections.[79]

"Positive effect"
"Therapeutic preventive"
"Protective"

Noll et al. Osteopathic Medicine and Primary Care 2010, 4:2
http://www.om-pc.com/content/4/1/2

OMPC OSTEOPATHIC MEDICINE AND PRIMARY CARE

RESEARCH Open Access

Efficacy of osteopathic manipulation as an adjunctive treatment for hospitalized patients with pneumonia: a randomized controlled trial

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Abstract

Background: The Multicenter Osteopathic Pneumonia Study in the Elderly (MOPSE) is a registered, doub
randomized, controlled trial designed to assess the efficacy of osteopathic manipulative treatment (OMT)
adjunctive treatment in elderly patients with pneumonia.

Methods: 406 subjects aged ≥ 50 years hospitalized with pneumonia at 7 community hospitals were ra
using concealed allocation to conventional care only (CCO), light-touch treatment (LT), or OMT groups. A
received conventional treatment for pneumonia. OMT and LT groups received group-specific protocols f
minutes, twice daily until discharge, cessation of antibiotics, respiratory failure, death, or withdrawal from
The primary outcomes were hospital length of stay (LOS), time to clinical stability, and a symptomatic and
functional recovery score.

Results: Intention-to-treat (ITT) analysis (n = 387) found no significant differences between groups. Per-p
(PP) analysis (n = 318) found a significant difference between groups (P = 0.01) in LOS. Multiple compar
indicated a reduction in median LOS (95% confidence interval) for the OMT group (3.5 [3.2-4.0] days) ver
CCO group (4.5 [3.9-4.9] days), but not versus the LT group (3.9 [3.5-4.8] days). Secondary outcomes of d
intravenous antibiotics and treatment endpoint were also significantly different between groups (P = 0.0
0.006, respectively). Duration of intravenous antibiotics and death or respiratory failure were lower for th
group versus the CCO group, but not versus the LT group.

Conclusions: ITT analysis found no differences between groups. PP analysis found significant reductions
duration of intravenous antibiotics, and respiratory failure or death when OMT was compared to CCO. G
prevalence of pneumonia, adjunctive OMT merits further study.

Background

Pneumonia is the fourth most common hospital discharge diagnosis in the US with a mean (SE) length of stay (LOS) of 5.1 (0.1) days [1]. The elderly are a vulnerable population: the majority of pneumonia-related hospital admissions occur in persons 60 years and older, and the elderly have a longer mean LOS, higher severity of illness, and greater mortality than younger age groups [2-5]. Adjunctive nonpharmacologic treatments for pneumonia may enhance conventional antibiotic therapy. Chest physiotherapy, early mobil
continuous lateral rotational therapy have been investigated with mixed results [6-11]. Osteopathic manipulative treatment (OMT) is a nonpharmacologic manual therapy developed in the late nineteenth century before the use of antibiotics. OMT includes a number of manipulative techniques intended to enhance host defenses and physiologic function [12-16]. Many of these techniques, such as rib raising, doming the diaphragm, and the thoracic lymphatic pump, were specifically developed to treat pneumonia [15]. Two small randomized controlled trials of OMT for pneumonia suggest OMT may reduce LOS in the elderly [17,18].

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18 Studies

OMT has also been shown to aid in the recovery from pneumonia by enhancing the functioning of the immune system, and maximizing the effects of antibiotics. In addition, OMT has been associated with decreased hospital-stay duration, decreased use of intravenous antibiotics, and decreased incidence of respiratory failure or death in elderly patients hospitalized with pneumonia.[80-98]

Reduce LOS
Reduced time to clinical stability
Decreased antibiotics
Decreased death
Decreased respiratory failure

(The following paper is published by order of the President of the American Osteopathic Association because of the unique importance of an "old school" medical convention admitting it to its program, also because of the vital psychological value to the general public of the fact that the statistics of such startling results from osteopathic treatment were officially presented before a national medical association. As this is the first time in the history of osteopathy that such a thing has occurred, it is urged that members distribute reprints enough to cover the entire country, in order to show the people that the medical profession is ignorant of the truth no longer, but has been officially informed of osteopathic conquest of diseases in which medicine has failed. These reprints may be obtained from the Orange office at $4.00 per hundred or $30.00 per thousand.)

One Hundred Thousand Cases of Influenza with a Death Rate of One-Fortieth of that Officially reported under conventional medical treatment

R. KENDRICK SMITH, M. D., D. O.,
Boston.

(Read at the Annual Convention of the American Association of Clinical Research, New York City, Oct. 18, 1919.)

THE leading article in the October 9th number of the Boston Medical and Surgical Journal is by J. Madison Taylor, M. D., professor of physical therapeutics of the medical department of Temple University, Philadelphia. "No one," says Doctor Taylor, "has a right to condemn, deprecate, or deny efficacy to reputable measures until he has honestly and adequately subjected them to fair trial under fair conditions. In the immediate future much revision of bio-kinetic therapeutic measures must come about, and to the vast advantage of medical potential."

While I know it is not necessary to preface the startling statements which will be made in this paper by an appeal to the members of this scientific organization to retain open minds for the consideration of novel procedures, I cannot refrain from the above quotation. I cite it in order to remind you of a precedent of a recognized authority of the "old school" in an official position in a medical school and writing the first article in a most conservative medical journal, therein vouching for the scientific aspect of some of the foundational principles underlying the therapeutics to be discussed in this paper.

Doctor Taylor had personal experience in the comparative treatment of influenza with and without drugs. Before reporting to you the amazing statistics of the 100,000 cases reported in this monograph, I again ask your permission to quote Doctor Taylor's brave words in condemnation of the medicinal treatment of influenza and in championing the physical and mechanical therapeutics of this and other diseases as follows:

"The resources of medication, large as they are, must have limitations. These limitations in grave exigencies impress us with a despairing sense of inadequacy. Moreover, instances are met of vast harm wrought by lack of wisdom in the manner of their use. This harm is occasionally fatal. Fatalities from medication are, however, not confined to misuse, but to fatuous confidence in them which fails to be justified.

"Never did this scientific groping so impress me as during the recent epidemic of influenza. I was guilty myself. The guilt of others, however, struck me often with even greater force. Perhaps the fatal cases were hopeless when met. Perhaps we groped in a slough of ignorance. A larger proportion died than was justified.

"Whereas, sharing equally with most of these colleagues grave doubts as to the efficacy of some standard drugs in fullest dosage, also graver doubts as to the by-effects of those drugs, I am absolutely certain that the remedial procedures, reconstructive or bio-kinetic measures employed, did no harm if perchance did no good. So much for squaring the account with my conscience.

"I postulate that: in striving to accomplish equilibration of the regulative energies in the cardio-vascular cycle, vastly greater safety resides in agencies exerted from outside, by attempts at influencing reflex response, vasoconstriction, also eliciting vagogenic and sympathetic helpfulness, readily applied and re-

JAOA EDITORIAL

The Coming Influenza Pandemic: Lessons From the Past for the Future

Michael M. Patterson, PhD

Fatality rates in diagnosed H5N1 victims are running about 50 percent. Even if that fell to 5 percent as the virus traded virulence for transmissibility among people, [Frederick G.] Hayden, [a University of Virginia virologist and an advisor to the World Health Organization] warns, "it would still represent a death rate double [that of] 1918, and that's despite modern technologies like antibiotics and ventilators."

—W. Wayt Gibbs and Christine Soares[1]

This dire warning echoes those of the experts monitoring the spread of influenza strain A, the avian influenza virus H5N1, out of Asia and now into Europe. This virus has many characteristics similar to the H1N1 virus that was responsible for the disastrous 1917–1918 influenza epidemic that killed at least 40 million people around the world in approximately 6 months. The 1917–1918 epidemic began in Kansas as a milder form of the virus and spread with military troops to Europe during the First World War, when it mutated to a virulent form that then swept around the globe.[2]

At present, H5N1 can only be spread easily from bird to bird or from birds to humans who have direct contact with birds or perhaps with bird droppings. However, there is a substantial probability that this avian virus will mutate again or that it will exchange genes with a more readily transmissible human influenza virus, beginning a new pandemic.[1]

Although such a virus requires an incubation period of a few days before symptoms become severe, carriers are infectious during that time and are actively, though unwittingly, spreading the disease. With present-day air transportation, human carriers of the virus could literally be around the globe before their symptoms develop and the "bird flu" pandemic could spread worldwide in days, not months.

Given this scenario, the US government has made plans to respond to an outbreak through the *US Department of Health and Human Service's Pandemic Influenza Plan*.[3] This plan—which was released on November 3, 2005, and supersedes the *Draft Pandemic Influenza Response and Preparedness Plan*[4]—provides guidelines to local, state, and national agencies as they prepare for a possible pandemic influenza outbreak. It is an appropriate and necessary guide that should be taken very seriously, here and abroad.

As the document notes, however, in the case of a true pandemic, hospital capacity may well be overwhelmed, and healthcare workers may themselves become ill.

Should the pandemic strike as some experts fear it will, nations around the globe could be thrown into chaos. In the United States, as in many other developed nations, we have a robust medical system, but how would such a crisis be managed by developing nations?

And yet, even in our own country, we have about 965,000 staffed hospital beds total and many fewer critical care beds.[5] Should a pandemic hit in the United States, it could easily affect more people than the total number of hospital beds available nationwide. Most likely, a large number of people would not be able to get into a hospital—let alone receive the gold standard of care, which would include ventilators, potent medications, blood transfusions, and private care. I would remind readers that the current estimate of the virus' fatality rate after infection—even with access to the best treatment possible—is 50%.[1]

In a recent article on this potential disaster, Bernadine Healy, MD,[5] cites Jim Bentley, Senior Vice President for Strategic Policy Planning at the American Hospital Association, who suggested that medical care in the United States would quickly regress to the level of care available in the 1950s as medical facilities and supplies are overcome by successive surges in demand.

As we saw in the aftermath of Hurricane Katrina, care for victims of large-scale natural disasters often requires that many victims be provided with medical care outside of the hospital setting. Victims of a coming pandemic may find themselves placed in schools, armories, sporting arenas, and other sites capable of housing large numbers of people temporarily.

Unfortunately, no plan, at this time, can address exactly how to deal with the illness itself; that step will be left to the healthcare providers managing the crisis.

There have indeed been many medical and public health advances in the treatment of patients with influenza since 1918, however.

Annual influenza vaccinations and antiviral medications such as oseltamivir phosphate (Tamiflu) and zanamivir (Relenza) are somewhat effective against current strains of

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JAOA EDITORIAL

Influenza Epidemic or Pandemic? Time to Roll Up Sleeves, Vaccinate Patients, and Hone Osteopathic Manipulative Skills

One single disease, in spite of the best in modern science and medical research, appears to be more lethal to our army than forty years of the most hellish preparation for wholesale destruction of human life made by the Huns.

C. P. McConnell, DO, October 1918[1]

For primary care physicians practicing in temperate regions of the United States, winter heralds the "flu season." And, we know that influenza epidemics can be deadly. During the period between 1990 and 1999, the average annual rate was 36,000 deaths attributed to influenza and its complications.[2] Moreover, influenza viruses are responsible for worldwide increased illness and death rates from complications of the flu.

Although no age group escapes influenza,[3-5] children have the highest rates of infection. Persons older than 65 years and persons who have increased risk for complications due to chronic medical conditions, however, have the highest rates of serious illness and death.[3,6-8] Fortunately, given these statistics, we have in our armamentarium a primary means—vaccination—to prevent influenza and its serious and sometimes fatal complications.

In its 2004 recommendations,[9] the Advisory Committee on Immunization Practices (ACIP) includes new or updated information regarding:

- ☐ influenza vaccine for children aged 6 to 23 months;
- ☐ vaccination of healthcare workers with live, attenuated influenza vaccine (LAIV);
- ☐ personnel who may administer LAIV;
- ☐ equivalent strains that may be used in the manufacturing of several 2004–2005 trivalent inactivated vaccine virus strains;
- ☐ the assessment of vaccine supply; and
- ☐ the timing of influenza vaccination.

The ACIP recommends the following groups as primary targets for annual vaccination:

- ☐ populations such as persons older than 65 years, children aged 6 to 23 months, pregnant women, and persons of any age with certain chronic medical conditions who are at increased risk for influenza-related complications;
- ☐ persons aged 50 to 64 years, a group that has an elevated prevalence of certain chronic medical conditions; and
- ☐ persons such as healthcare workers and household contacts who live, care for, or have frequent contact with persons at high risk and who can transmit influenza to those persons at high risk.

Further, the ACIP suggests such strategies as reminders and recall systems and standing orders to improve vaccine coverage among persons younger than 65 years who are at increased risk for flu-related complications among all racial and ethnic groups, among blacks and Hispanics older than 65 years, among children aged 6 to 23 months, and among healthcare workers.

Influenza viruses also can cause pandemics, during which rates of illness and death from influenza-related complications such as pneumonia can increase worldwide. In fact, during the last week of August, *The New York Times* and other news media announced that the US Department of Health and Human Services had drafted a proposal for planning and preparedness to respond to a flu pandemic. (The draft is available at *http://www.hhs.gov/nvpo/pandemicplan/finalpandemiccore.pdf.*)

The drafting of a preemptive plan for a global outbreak of influenza was prompted in part by the experience with anthrax exposure and severe acute respiratory syndrome. The Bush Administration warns that the death toll in the United States might reach 207,000 if an influenza pandemic were to hit.

"A pandemic virus will likely be unaffected by currently available flu vaccines that are modified each year to match the strains of the virus that are known to be in circulation among humans around the world," according to Tommy G. Thompson, secretary of Health and Human Services. Each year, currently available flu vaccines are modified to match virus strains that are known to be in circulation among humans globally. Of concern is that such strains will likely be ineffective against a pandemic virus.[10] Of primary concern, however, is the time required to produce a vaccine against a new virus strain, possibly one that is created by genes of the A(H5N1) strain of avian influenza combining with the genes of a human influenza strain.

Yes, vaccination is the cornerstone of prevention and treatment of influenza and its serious complications. And, antiviral medications are an effective adjunct to the vaccines we administer to our patients. But, as osteopathic physicians, we have another effective adjunctive mode of treatment—osteopathic manipulative medicine.

Osteopathy & 1918 Pandemic

Osteopathy has also been credited with providing improved health outcomes during the 1918 Flu Pandemic.

Smith reported that mortality among a total of 110,120 patients with influenza treated by the 2445 members who reported “authenticated detailed case reports” to the American Osteopathic Association was 0.25%.

Mortality due to influenza in patients receiving traditional medical care, however, was ultraconservatively estimated at 5% to 6%.

Among patients with pneumonia treated medicinally, mortality was estimated at 33%, and even as high as between 68% and 78% in some large centers.

The death rate due to pneumonia among 6258 patients cared for by osteopathic physicians was 10%.

Chiropractic & the Spanish Flu Pandemic of 1918

In Davenport, Iowa, 50 medical doctors treated 4,953 cases, with 274 deaths. In the same city, 150 chiropractors including students and faculty of the Palmer School of Chiropractic, treated 1,635 cases with only one death.

In the state of Iowa, medical doctors treated 93,590 patients, with 6,116 deaths - a loss of one patient out of every 15. In the same state, excluding Davenport, 4,735 patients were treated by chiropractors with a loss of only 6 cases - a loss of one patient out of every 789.

Rhodes W. The Official History of Chiropractic in Texas.
Texas Chiropractic Association 1978

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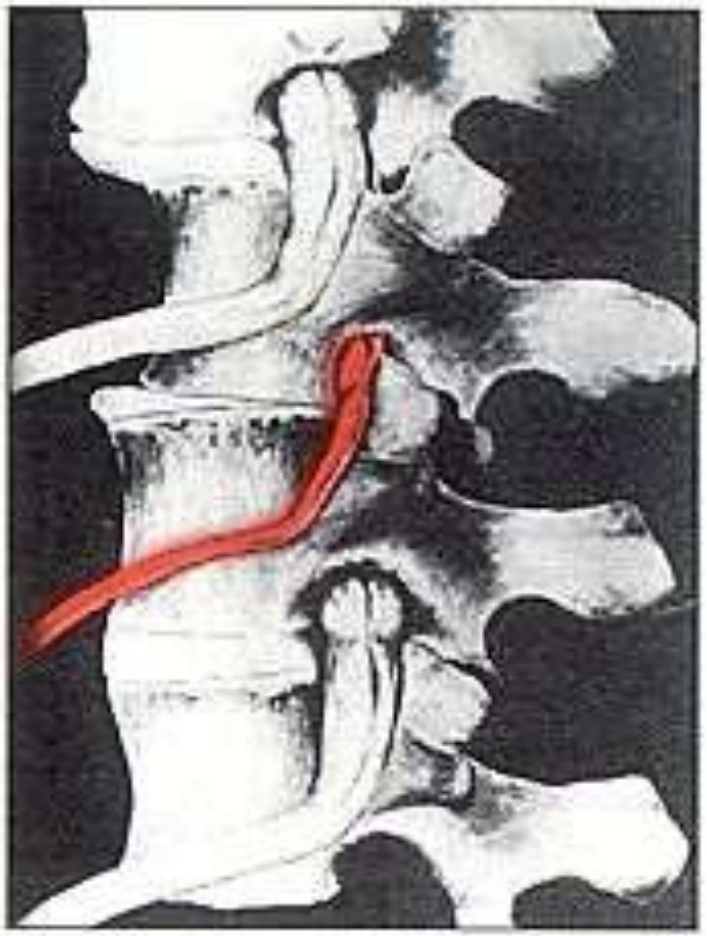
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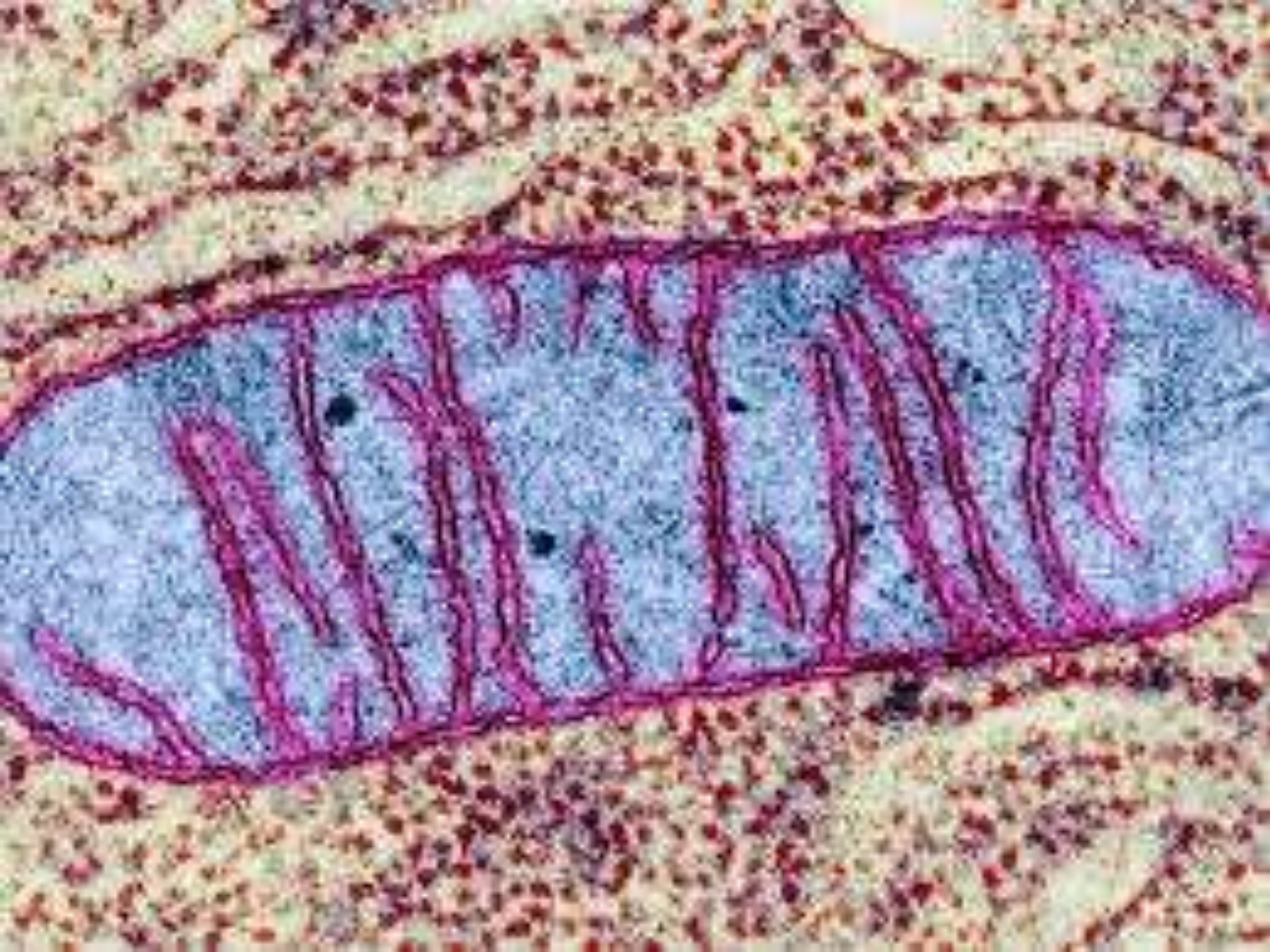
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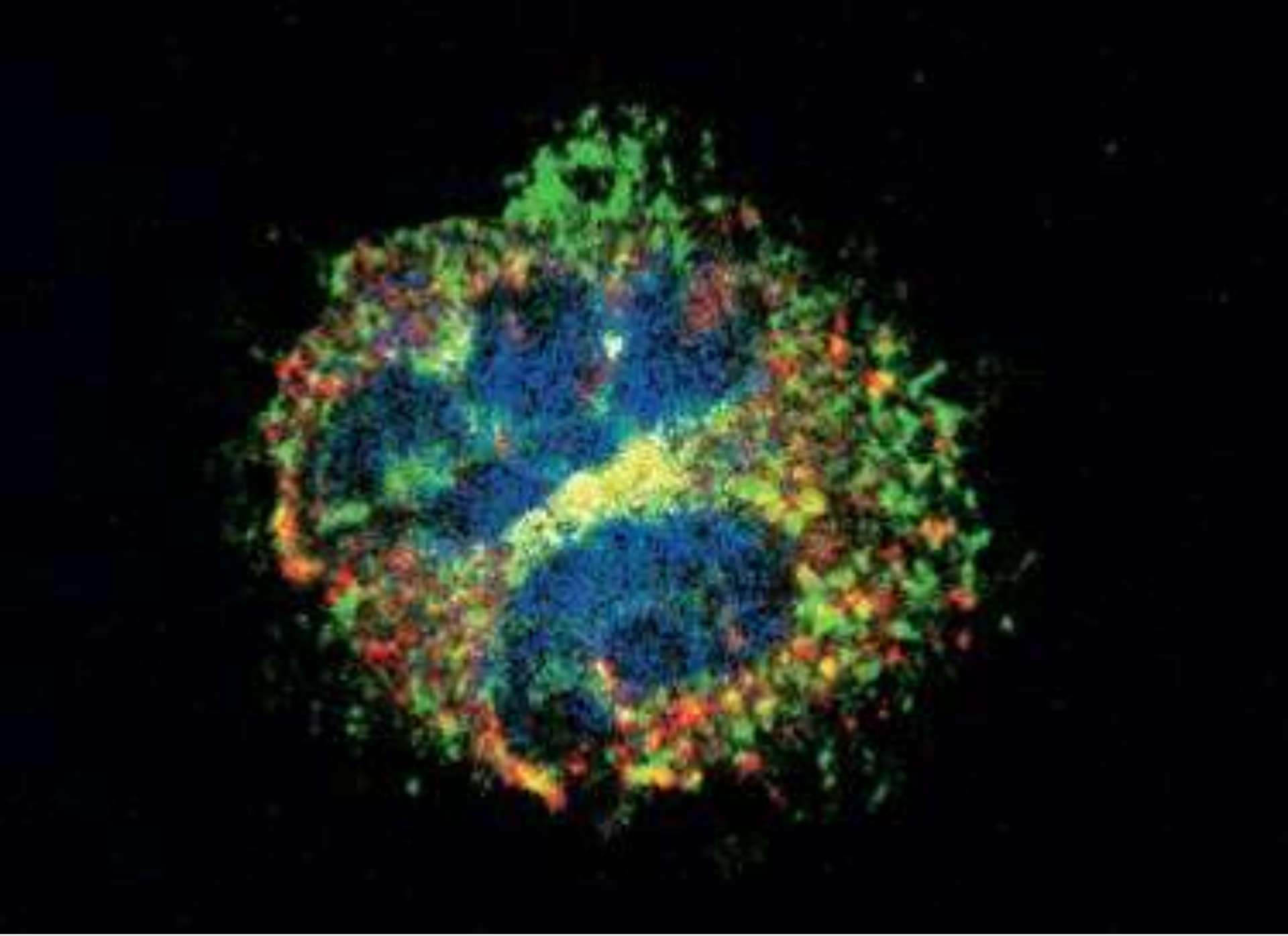
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So What About the Silent Killer?



This is one type of vertebral subluxation (nerve interference) – the "silent killer."





Comment > J Manipulative Physiol Ther. 1992 Jun;15(5):334-5.

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March 19, 2020

Introduction

The world is currently in the midst of a global health crisis due to the spread of Coronavirus Disease 2019 (COVID-19). The World Health Organization (WHO) has declared COVID-19 a pandemic, meaning that it is being spread uncontrolled across country borders. At the time of writing, COVID-19 is affecting some 143 countries worldwide and there have been over 200,000 reported cases. As testing for COVID-19 has been limited, it is estimated that the true prevalence of COVID-19 is far greater than the situation reports have stated.

WHO has issued information and guidance with a view to reducing the spread of COVID-19 and controlling the pandemic. This information has included correcting misinformation about COVID-19.

The World Federation of Chiropractic (WFC) has supported WHO in its advice and recommendations and on March 17, 2020 issued an advice note to the worldwide chiropractic profession.

One of the key messages contained in the WFC advice note highlighted the lack of credible, scientific evidence supporting claims of effectiveness of spinal adjustment / manipulation in boosting immunity and strengthening the immune system. Immunity is defined as the ability of an organism to resist disease, either through the activities of specialized blood cells or antibodies produced by them in response to natural exposure or inoculation, or by the injection of antiserum, or the transfer of antibodies from a mother to her baby via the placenta or breast milk.

This rapid review considers materials the WFC is aware have been cited in support of claims of effectiveness for spinal adjustment / manipulation in conferring or enhancing immunity.

1. Pero R, Flesia J, (1986) University of Lund, Sweden

Citation: None available.

Overview: It has been reported that in 1986 Dr Ronald Pero, a Professor of Medicine in Environmental Health at New York State University, collaborated with Dr Joseph Flesia, a basic science researcher and chiropractor. Reports state that subjects receiving chiropractic care (n=107) had a 200% greater immune competence than those who had not received chiropractic care and a 400% greater immune system competence than those with cancer or other serious disease.

Response: Numerous attempts have failed to retrieve this study. Without the original study to review, no scientific assessment of its claims can be made. Therefore, the "Pero and Flesia" study does not constitute credible, scientific evidence that spinal adjustment / manipulation enhances or confers immunity nor should it be used as a basis to provide care.

2. Enhanced phagocytic cell respiratory burst

Citation: Brennan PC, Kokjohn K, Kaltinger CJ, Lohr GE, Glendening C, Hondras MA, McGregor M, Triano JJ. Enhanced phagocytic cell respiratory burst induced by spinal manipulation: potential role of substance P. J Manipulative Physiol Ther. 1991 Sep;14(7):399-408. PMID:1719112.
https://www.ncbi.nlm.nih.gov/pubmed/1719112

Overview: This study examined the effect of spinal manipulation on the respiratory burst of polymorphonuclear neutrophils (PMN) and monocytes in asymptomatic adults. The investigators found changes in levels of substance P in subjects who underwent spinal manipulation but not in subjects who underwent sham manipulation.

Response: The clinical meaning of the study's results regarding cellular activity is not known. No clinical research has been performed in this area. Therefore, it is not known if these observations have any effect on human health. This report does not constitute credible, scientific evidence that spinal adjustment /

manipulation enhances or confers immunity.

3. Enhanced *in-vitro* interleukin-2 production following spinal manipulation

Citation: Teodorczyk-Injeyan JA, Injeyan HS, McGregor M, Harris GM, Ruegg R. Enhancement of in vitro interleukin-2 production in normal subjects following a single spinal manipulative treatment. Chiropr Osteopat. 2008 May 28;16:5. doi: 10.1186/1746-1340-16-5. PMID: 18507834; PMCID: PMC2423359.https://www.ncbi.nlm.nih.gov/pubmed/18507834

Overview: The purpose of this study was to report on spinal manipulation-related changes in the production of the immunoregulatory cytokine interleukin 2 (IL-2) in asymptomatic adults. This study found a short-term increase in IL-2 with spinal manipulative intervention, with or without cavitation.

Response: The clinical meaning of these *in vitro* observations of cellular activity on human health is not known. No clinical research has subsequently been performed in this area.

4. Interleukin-2-regulated *in vitro* antibody production following single spinal manipulative treatment.

Citation: 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 Osteopat. 2010 Sep 8;18:26. doi: 10.1186/1746-1340-18-26. PMID: 20825650; Central PMCID: PMC2945351.https://www.ncbi.nlm.nih.gov/pubmed/20825650

Overview: The purpose of this study was to determine if spinal manipulation-related augmentation of *in vitro* interleukin-2 synthesis in asymptomatic adults is associated with the modulation of interleukin 2-dependent and/or interleukin-2-induced humoral immune response. While the augmentation of IL-2 induced IgG or IgM synthesis in subjects receiving spinal manipulation, the amount did not exceed the physiological range of normal human response.

Response: The clinical meaning of these *in vitro* observations of cellular activity on human health is not known. No clinical research has been performed in this area. Further, the authors state "The clinical significance of the elevated responsiveness to IL-2 demonstrated in this *in vitro* study is presently unclear."

5. Effects of specific upper cervical adjustments on CD4 counts in HIV positive patients.

Citation: Hightower BC, Pfleger B, Selano J. The Effects of Specific Upper Cervical Adjustments on the CD4 Counts of HIV Positive Patients. Chiropractic Research Journal 1994 ;3(1):32-39. No PubMed ID available – this publication is not indexed by PubMed https://www.chiroindex.org/?search_page=articles&action=&articleId=5619

Overview: This project sought to demonstrate if upper cervical specific adjustments have a profound effect on the physiology, serology and immunology of HIV positive individuals. No statistically significant differences between the treatment and control group were found.

Response: With only 5 subjects in the experimental treatment group, no description of how the study was conducted or analyzed, and no reporting of absolute change in CD4 values, these results are highly questionable. Further, the authors state "...it must be noted that we cannot generalize our findings to the general population." The clinical meaning of these *in vitro* observations of cellular activity on human health is not known.

6. Reports of decreased mortality in chiropractic/osteopathic patients during flu epidemics.

Citation: Kendrick Smith R. One hundred thousand cases of influenza with a death rate of one fortieth of that reported under conventional medical treatment. Proceedings of the Annual Convention of the American Association of Clinical Research, New York City (October 18,1919) Reproduced in J American Osteo Assoc. 2000 May; 100(5): 320-323.

Overview: It is claimed that the treatment of patients by chiropractors during the influenza pandemic of 1918 resulted in fewer deaths than those treated by medical doctors.

Response: These narrative reports of historical events do not equate to scientific studies. Their lack of methodological structure or data analysis is likely to have resulted in incomplete information and a high likelihood of bias. We note that even those who have written about these events in a positive light (https://doi.org/10.7556/jaoa.2013.036) concede that there is no way to tell if these observations can be attributed to manual medicine and care philosophy or "statistical issues of reporting". These various reports do not provide the necessary evidence to justify the use of spinal adjustment / manipulation for infectious diseases.

7. Effects induced by spinal manipulative therapy on the immune and endocrine system

Citation: Colombi A, Testa M. The effects induced by spinal manipulative therapy on the immune and endocrine systems. Medicina 2019; 53:448. doi 10.3390/medicina55080448.

Overview: This was a narrative review of the available literature that aimed to provide an overview of the available evidence supporting the biological plausibility of high-velocity, low-amplitude thrust on the immune-endocrine system. Following a search, 4 studies were retrieved studying the effect of spinal manipulation on the immune system.

Response: The authors concluded that "While spinal manipulation may stimulate the neuroimmunoendocrine system, the evidence supporting a biological account for the application of high-velocity, low-amplitude thrust manipulation in clinical practice is mixed and conflicting." It also concluded that the clinical relevance of most of the studies remained unanswered as they were conducted on healthy subjects. This study supports that there is no current basis for which to provide spinal adjustment / manipulation for the purpose of conferring or enhancing immunity.

Conclusion

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.

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Treatment

To date, there are no specific antiviral treatments or vaccines currently available for COVID-19. People with COVID-19 should receive care to relieve symptoms. People with serious illness should be hospitalized. Most patients recover due to supportive care. Possible vaccines and some specific drug treatments are under investigation and are being tested through clinical trials.

A healthy lifestyle will make all bodily functions work better, including immunity. Eating healthy diets, with plenty of fruit and vegetables, keeping physically active, quitting smoking, limiting or avoiding alcohol intake, and getting enough sleep are key components of a healthy lifestyle.

5 SCIENCE-BASED BENEFITS OF HUGS

1. Releases oxytocin, which reduces stress hormones cortisol & norepinephrine

2. A 2014 study linked more support shown in form of hugs to decrease chance of getting sick



3. Extended hugs boosts seratonin levels, the feel good hormone

4. Hugging shown to reduce blood pressure & heart rate

5. Hugs linked to improved pain tolerance

@MeowMeix

Kawchuk et al. Chiropractic & Manual Therapies (2020) 28:24
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Chiropractic & Manual Therapies

RESEARCH Open Access

The use of internet analytics by a Canadian provincial chiropractic regulator to monitor, evaluate and remediate misleading claims regarding specific health conditions, pregnancy, and COVID-19

Greg Kawchuk[1*], Jan Hartvigsen[2,3], Stan Innes[4], J. Keith Simpson[4] and Brian Gushaty[5]

Abstract

Background: Internet analytics are increasingly being integrated into public health regulation. One specific application is to monitor compliance of website and social media activity with respect to jurisdictional regulations. These data may then identify breaches of compliance and inform disciplinary actions. Our study aimed to evaluate the novel use of internet analytics by a Canadian chiropractic regulator to determine their registrants compliance with three regulations related to specific health conditions, pregnancy conditions and most recently, claims of improved immunity during the COVID-19 crisis.

Methods: A customized internet search tool (Market Review Tool, MRT) was used by the College of Chiropractors of British Columbia (CCBC), Canada to audit registrants websites and social media activity. The audits extracted words whose use within specific contexts is not permitted under CCBC guidelines. The MRT was first used in October of 2018 to identify words related to specific health conditions. The MRT was again used in December 2019 for words related to pregnancy and most recently in March 2020 for words related to COVID-19. In these three MRT applications, potential cases of word misuse were evaluated by the regulator who then notified the practitioner to comply with existing regulations by a specific date. The MRT was then used on that date to determine compliance. Those found to be non-compliant were referred to the regulator's inquiry committee. We mapped this process and reported the outcomes with permission of the regulator.

Results: In September 2018, 250 inappropriate mentions of specific health conditions were detected from approximately 1250 registrants with 2 failing to comply. The second scan for pregnancy related terms of approximately1350 practitioners revealed 83 inappropriate mentions. Following notification, all 83 cases were compliant within the specified timeframe. Regarding COVID-19 related words, 97 inappropriate mentions of the word "immune" were detected from 1350 registrants with 7 cases of non-compliance.

(Continued on next page)

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Chiropractic & Manual Therapies

COMMENTARY Open Access

A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity

Pierre Côté[1,2,3*], André Bussières[4,5], J. David Cassidy[3], Jan Hartvigsen[6,7], Greg N. Kawchuk[8], Charlotte Leboeuf-Yde[9], Silvano Mior[2,10], Michael Schneider[11,12] and more than 140 signatories# call for an end to pseudoscientific claims on the effect of chiropractic care on immune function

Abstract

Background: In the midst of the coronavirus pandemic, the International Chiropractors Association (ICA) posted reports claiming that chiropractic care can impact the immune system. These claims clash with recommendations from the World Health Organization and World Federation of Chiropractic. We discuss the scientific validity of the claims made in these ICA reports.

Main body: We reviewed the two reports posted by the ICA on their website on March 20 and March 28, 2020. We explored the method used to develop the claim that chiropractic adjustments impact the immune system and discuss the scientific merit of this claim. We provide a response to the ICA reports and explain why this claim lacks scientific credibility and is dangerous to the public. More than 150 researchers from 11 countries reviewed and endorsed our response.

Conclusion: In their reports, the ICA provided no valid clinical scientific evidence that chiropractic care can impact the immune system. We call on regulatory authorities and professional leaders to take robust political and regulatory action against those claiming that chiropractic adjustments have a clinical impact on the immune system.

Keywords: Chiropractic, Spinal manipulation, Immunity, Pseudoscience, Coronavirus

Background

We are currently facing the greatest global public health crisis in a century. Fighting the coronavirus pandemic has required that we change the way we live and observe strict public health guidelines. This is necessary because, at this time, there are no effective vaccines, treatments or cures for COVID-19 [1, 2]. Chiropractors, as members of the health care system, should disseminate the best available public health information to the public [3]. Any attempt to behave otherwise can be misleading and potentially dangerous to individual patients and the public at large.

On March 20, 2020, the International Chiropractors Association (ICA), a US based chiropractic organization, posted a report claiming that chiropractic adjustments can boost immune function with the implication that it might be helpful in preventing COVID-19 [4]. In their

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Chiropractic & Manual Therapies

LETTER TO THE EDITOR Open Access

More published full-time researchers, early career researchers, clinician-researchers and graduate students unite to call for actions against the pseudoscientific claim that chiropractic care boosts immunity

Pierre Côté[1,2,3*], André Bussières[4,5], J. David Cassidy[3], Jan Hartvigsen[6,7], Greg N. Kawchuk[8], Charlotte Leboeuf-Yde[9], Silvano Mior[2,10] and Michael Schneider[11,12]

On May 4, 2020 we published a commentary entitled: *"A united statement of the global chiropractic research community against the pseudoscientific claim that chiropractic care boosts immunity"* [1]. Our paper generated significant interest within the research community and several individuals contacted us to ask whether they could co-sign the commentary. We believe that it is important for members of the research community to formally add their voice to this important public health discussion.

On May 6, 2020, the authors of the commentary were asked to inform their networks of the opportunity to add co-signatories. This included an invitation made on social media. Specifically, we invited full-time researchers, early career researchers, clinician-researchers, graduate students and individuals who have published in the peer-reviewed literature during the course of their career to add their name to the list of co-signatories [2].

On May 20, 2020, 71 new individuals had responded to our call. Of those, 52 are affiliated with academic or research institutions, 15 are in private practice, two have retired and one is currently inactive. Therefore, 224 signatories are now calling for "regulatory authorities and professional leaders to take robust political and regulatory action against those claiming that chiropractic adjustments have a clinical impact on the immune system."

It is likely that other individuals in the research community would like to add their signatures to the commentary. Therefore, a webpage has been created (https://nikkb.dk/table/cmt-signatories/) to display the names of all signatories, and provide the opportunity to those who qualify (publication in the peer reviewed literature) to add their names to the list.

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Signatories‡.

‡ The views and opinions expressed herein are those solely of the authors and may not represent the views of their institution.
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Chiropractic & Manual Therapies

COMMENTARY Open Access

Chiropractic students call for action against unsubstantiated claims



Joshua Plener[1*], Ber Csiernik[1], Geronimo Bejarano[2], Iesper Hjertstrand[3] and Benjamin Goodall[4]

Abstract

Background: The 2019 coronavirus pandemic is a current global health crisis. Many chiropractic institutions, associations, and researchers have stepped up at a time of need. However, a subset of the chiropractic profession has claimed that spinal manipulative therapy (SMT) is clinically effective in improving one's immunity, despite the lack of supporting scientific evidence. These unsubstantiated claims contradict official public health policy reflecting poorly on the profession. The aim of this commentary is to provide our perspective on the claims regarding SMT and clinically relevant immunity enhancement, drawing attention to the damaging ramifications these claims might have on our profession's reputation.

Main text: The World Federation of Chiropractic released a rapid review demonstrating the lack of clinically relevant evidence regarding SMT and immunity enhancement. The current claims contradicting this review carry significant potential risk to patients. Furthermore, as a result of these misleading claims, significant media attention and public critiques of the profession are being made. We believe inaction by regulatory bodies will lead to confusion among the public and other healthcare providers, unfortunately damaging the profession's reputation. The resulting effect on the reputation of the profession is greatly concerning to us, as students.

Conclusion: It is our hope that all regulatory bodies will protect the public by taking appropriate action against chiropractors making unfounded claims contradicting public health policy. We believe it is the responsibility of all stakeholders in the chiropractic profession to ensure this is carried out and the standard of care is raised. We call on current chiropractors to ensure a viable profession exists moving forward.

Keywords: Chiropractic, Regulation, Student, Education, Public safety

Background

Chiropractic students are frequently reminded that it has never been a better time to be a chiropractor [1]. We the authors are excited at the prospect of joining the profession and making a difference, as we agree the future of chiropractic looks bright. However, we are questioning the above sentiment in light of the current global crisis of Coronavirus disease 2019 (COVID-19). The world is struggling to come to terms with COVID-19, chiropractic students are no exception. The delivery of education has changed, many campus clinics have closed, and future plans of graduating students have been placed in jeopardy. Despite these trying times, we appreciate and are encouraged by the initiative and collaborative spirit of the chiropractic profession. Chiropractic institutions have ensured the availability of quality education in an online format [2], associations have supported and advocated for their members [3], and researchers have appraised literature to assist with knowledge translation [4].

In spite of the above-mentioned efforts, a small minority of the profession has publicly claimed that chiropractic treatments have a role to play in the fight against COVID-19. Specifically, this minority of chiropractors,

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Chiropractic & Manual Therapies

RESEARCH Open Access

Misinformation about spinal manipulation and boosting immunity: an analysis of Twitter activity during the COVID-19 crisis

Greg Kawchuk[1*], Jan Hartvigsen[2,3], Steer Harstec[2], Casper Clissmann Nim[4,5] and Luana Nyirö[6]

Abstract

Background: Social media has become an increasingly important tool in monitoring the onset and spread of infectious diseases globally as well monitoring the spread of information about those diseases. This includes the spread of misinformation, which has been documented within the context of the emerging COVID-19 crisis. Understanding the creation, spread and uptake of social media misinformation is of critical importance to public safety. In this descriptive study, we detail Twitter activity regarding spinal manipulative therapy (SMT) and claims it increases, or "boosts", immunity. Spinal manipulation is a common intervention used by many health professions, most commonly by chiropractors. There is no clinical evidence that SMT improves human immunity.

Methods: Social media searching software (Talkwalker Quick Search) was used to describe Twitter activity regarding SMT and improving or boosting immunity. Searches were performed for the 3 months and 12 months before March 31, 2020 using terms related to 1) SMT, 2) the professions that most often provide SMT and 3) immunity. From these searches, we determined the magnitude and time course of Twitter activity then coded this activity into content that promoted or refuted a SMT/immunity link. Content themes, high influence users and user demographics were then stratified as either promoting or refuting this linkage.

Results: Twitter misinformation regarding a SMT/immunity link increased dramatically during the onset of the COVID crisis. Activity levels (number of tweets) and engagement scores (likes + retweets) were roughly equal between content promoting or refuting a SMT/immunity link, however, the potential reach (audience) of tweets refuting a SMT/immunity link was 3 times higher than those promoting a link. Users with the greatest influence on Twitter, as either promoters or refuters, were individuals, not institutions or organizations. The majority of tweets promoting a SMT/immunity link were generated in the USA while the majority of refuting tweets originated from Canada.

Conclusion: Twitter activity about SMT and immunity increased during the COVID-19 crisis. Results from this work have the potential to help policy makers and others understand the impact of SMT misinformation and devise strategies to mitigate its impact.

Keywords: Social media, Twitter, Spinal manipulation, Chiropractic, Misinformation, Immunity

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Chiropractic &
Manual Therapies

DEBATE Open Access

Vitalism in contemporary chiropractic: a help or a hinderance?

J. Keith Simpson[1] and Kenneth J. Young[2*]

Abstract

Background: Chiropractic emerged in 1895 and was promoted as a viable health care substitute in direct competition with the medical profession. This was an era when there was a belief that one cause and one cure for all disease would be discovered. The chiropractic version was a theory that most diseases were caused by subluxated (slightly displaced) vertebrae interfering with "nerve vibrations" (a supernatural, vital force) and could be cured by adjusting (repositioning) vertebrae, thereby removing the interference with the body's inherent capacity to heal. DD Palmer, the originator of chiropractic, established chiropractic based on vitalistic principles. Anecdotally, the authors have observed that many chiropractors who overtly claim to be "vitalists" cannot define the term. Therefore, we sought the origins of vitalism and to examine its effects on chiropractic today.

Discussion: Vitalism arose out of human curiosity around the biggest questions: Where do we come from? What is life? For some, life was derived from an unknown and unknowable vital force. For others, a vital force was a placeholder, a piece of knowledge not yet grasped but attainable. Developments in science have demonstrated there is no longer a need to invoke vitalistic entities as either explanations or hypotheses for biological phenomena. Nevertheless, vitalism remains within chiropractic. In this examination of vitalism within chiropractic we explore the history of vitalism, vitalism within chiropractic and whether a vitalistic ideology is compatible with the legal and ethical requirements for registered health care professionals such as chiropractors.

Conclusion: Vitalism has had many meanings throughout the centuries of recorded history. Though only vaguely defined by chiropractors, vitalism, as a representation of supernatural force and therefore an untestable hypothesis, sits at the heart of the divisions within chiropractic and acts as an impediment to chiropractic legitimacy, cultural authority and integration into mainstream health care.

Keywords: Chiropractic, Vitalism, Social contract, Legitimacy, Cultural authority, Fiduciary duties

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"We are aware that some chiropractors are claiming that chiropractic adjustments confers or enhances immunity. We are fortunate to have a research committee containing the worlds leading chiropractic researchers to call upon who have undertaken a rapid review of available evidence and formed our key message that there is no credible scientific evidence supporting these claims of effectiveness"

Vivian Kil DC
President – World Federation of Chiropractic

The Chiropractic Chronicle
Be Informed. Ignorance is not bliss.
ChiropracticChronicle.com

AMERICAN CHIROPRACTIC ASSOCIATION

"There is no quality research, data or evidence that suggests that a spinal manipulation itself will support the immune system"

Keith Overland DC
American Chiropractic Association

Interview on FOX News

The Chiropractic Chronicle
Be Informed. Ignorance is not bliss.
ChiropracticChronicle.com

ACA Says No Evidence That Chiropractic Supports the Immune Systen



https://www.screencast.com/t/TKuR6QDv



Categories

- In the Profession
- Association News
- Practice and Payment
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About the ACA Blog



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Monday, June 22, 2020

Navigating Difficult Times

A Message from the ACA Board of Governors

As we work to live life on adjusted terms during the ongoing coronavirus (COVID-19) outbreak, the American Chiropractic Association (ACA) continues to act as a trusted source of information and a force for change on behalf of our members, the chiropractic profession as a whole, and the public. We deeply value the support and encouragement we have received as we navigate these difficult times.

Recently, a few organizations have made false claims about our work in support of the profession. These claims include, strangely, that ACA does not support chiropractors. As the voice of the chiropractic profession, we pushed strongly to establish doctors of chiropractors as essential workers during this healthcare crisis. It was clear that the profession had a key role to play in helping to keep frontline workers on the job and to keep people in pain out of emergency rooms so that ER physicians could focus on COVID-19.

In April, ACA contacted the Cybersecurity and Infrastructure Agency (CISA) of the Department of Homeland Security requesting the addition of chiropractors to the federal list of essential healthcare providers. Shortly following pressure from ACA, CISA amended their list to include DCs as part of the essential critical infrastructure workforce. Examples of chiropractors who support the "front lines" are evident across the country, including this doctor in Hawaii.

Providing the profession with credible information as well as timely, detailed analyses of federal legislation and relief efforts has been a major focus of our efforts since the pandemic began. In the early weeks of the outbreak, we connected doctors with guidelines and recommendations, including advice from the World Federation of Chiropractic, to help them adapt, stay safe and, where possible, continue to serve their patients.

ACA is equally committed to protecting the interests of patients. In late March, we released a statement reiterating the association's commitment to providing reliable information about chiropractic care. It directly addressed claims that spinal adjustments can boost immunity and decrease the risk of contracting COVID-19, stating, "While spinal adjustments are effective for a number of conditions, there is no quality evidence to support that they can improve immunity to COVID-19."

At the same time, ACA has consistently and effectively established the fact that chiropractors across the country play a vital role in helping patients improve their health through their physician-level clinical practices, which includes guidance on preventing obesity, metabolic diseases like diabetes and heart disease, and tips on preventing injuries. ACA has worked with major media groups such as the *Wall Street Journal* and the *Washington Post* during the pandemic to provide the public with strategies to prevent injuries while working from home. Readership and media coverage of our work on our consumer website, HandsDownBetter.org, grows every month.

While pivoting to address the serious issues at hand, ACA continued to build support for the Chiropractic Medicare Coverage Modernization Act, or H.R. 3654. Congressional cosponsors continue to sign on to support the bill, which would allow beneficiaries to access all Medicare-covered benefits allowable under a chiropractor's state licensure. Visit HR3654.org for more information and to learn how you can contact your Members of Congress in support of this important legislation.

Together, we can keep the profession moving forward.

ACA Board of Governors

Robert C. Jones, DC
President

Michele Maiers, DC, MPH, PhD
Vice President

Kathy Boulet, DC
Governor

Leo J. Bronston, DC
Governor

Karen Konarski-Hart, DC
Governor

Hon. Steve C. Roberts, Esq.
Governor

World Federation of Chiropractic - WFC
March 21 at 3:29 PM ·

GCC ISSUES STATEMENT ON UNSUBSTANTIATED CLAIMS AROUND COVID-19. The UK statutory regulator for the chiropractic profession, the General Chiropractic Council (GCC) has issued a statement warning chiropractors about the consequences of marking unsubstantiated claims about the effect of spinal adjustment / manipulation on immunity and the immune system. The statement refers to the WFC statements issued earlier this week and can be read in full at https://www.gcc-uk.org/.../claims-made-about-the-effect-of-ch...

In response, the UK Royal College of Chiropractors and each of the four UK national chiropractic associations, including the WFC's UK member, the British Chiropractic Association, have unequivocally supported this statement, which can be read below. #BeEPIC #WFCmatters

Statement by the Chiropractic Profession *21 March 2020*

The UK chiropractic professional associations and the Royal College of Chiropractors support the UK General Chiropractic Council's statement of 20 March 2020 regarding claims made by some chiropractors that spinal adjustment and/or manipulation may protect patients from COVID-19, or will enhance their recovery, by boosting their immune system.

To date, there is no scientific evidence that supports these claims.

Our organisations and our members are fully committed to providing the very best chiropractic care and support to our patients and communities at all times.

Catherine Quinn	**Berni Martin**	**Ross McDonald**	**Paul McCrossin**	**Mark Gurden**
President British Chiropractic Association	*President* McTimoney Chiropractic Association	*President* Scottish Chiropractic Association	*President* United Chiropractic Association	*President* Royal College of Chiropractors

“There’s No Credible Evidence”



https://www.screencast.com/t/upfx4DVKUbz

“There’s no credible evidence and it breaks my heart to say it”



https://www.screencast.com/t/GdohqUFE

“We’re Making Claims We Can’t Back Up”



https://www.screencast.com/t/g2CoOLkk

“You Are Going to be Under the Hand of the Law”



https://www.screencast.com/t/aogGgV75b



Marc Bronson ▶ Evidence Based Chiropractors

Admin · 4 hrs ·

Last week we had a few brave volunteers step forward to gather and submits complaints in Ontario regarding false and misleading COVID-19 claims (mostly pertaining to immune boosts). A longstanding and vocal critic chiropractic in Canada posted images on their Twitter of Ontario and other chiropractors across Canada making dubious claims about adjustments and immunity. They sent me over 100 images.

I am calling for EBC volunteers across Canada to submit complaints in their home province. This is simply something I cannot do alone or keep up with. If you're interested, you can send me a PM if you want to keep it private.

The idea here is to this completely professional using a standardized template. No editorializing or moralizing, just the facts.

While the CBC here appears to have another hit piece that tarnishes the whole profession it was vitalists that gave them the bullets Hopefully our efforts here in Canada will at a minimum get results at the regulatory level. Maybe then, the CBC for once, or any other major Canadian news outlet will write something positive about the majority of the profession who are providing excellent spine/NMS care in both public and private sectors.

chiropractors from being licensed in this province. Simply review the position statements coming out of States with regard to chiropractic treatment and Covid-19. They are unfortunately all over social media. These position statements coming from the south of the border are dangerously contradictory to the world federation's position.

The unregulated circulation of such opinions, views, and non-scientific claims are unquestionably against the public's interest. A mandate that must be protected by the college. It is against public interest to license American chiros who do not follow the same clinical standards we have set in this province.

If the college is not going to act on this matter, then 145 colleagues and I who have written a position statement on this matter, will be approaching the ministry of health directly to discuss regulatory mechanisms that the college is currently failing to implement. Be smart. Act. Don't lose the capacity to self-regulate. It can easily be taken away during this current atmosphere.



Bobby Maybee ▶ Forward Thinking Chiropractic Alliance
Saturday at 1:39 PM ·

Here's a recipe for how to go about making a difference, online, in regards to false claims.

1. If your jurisdiction has made a directive, it's up to you to act. And you can. If your jurisdiction has no directive, your work ends here. Make them announce one!

2. When you witness someone making a false claim, or alluding to one, SAY NOTHING. Instead, access their social media/website and screen capture EVERYTHING related to violations. Have all of the info before you speak to them, or they will erase it all. (Which is technically okay too).

3. Share the directive with the chiro. They will argue with you. Just share directives and facts. You are now properly armed with FACTS thanks to WFC and Parker and ACA.

4. Once you have shared the directive and the facts, calmly ask them if they will rescind their false advertising. Let them know you have samples of all of it, if need be. If they're being difficult.

5. Once you have professionally done this. Shared the

Write a comment... GIF

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4. Once you have shared the directive and the facts, calmly ask them if they will rescind their false advertising. Let them know you have samples of all of it, if need be. If they're being difficult.

5. Once you have professionally done this. Shared the directive, politely admonished them and asked them to make a change as a peer, if they don't want to listen... then do your duty and report them. You tried.

6. If they aren't in your jurisdiction. If they won't listen to anything after that... Flame them out.

An example can be found in the Oregon DC Discussion group.

Write a comment... GIF



Marc Bronson
@MarcBronson13

I've been advised to put this *extremely* important message here. My wife and I will not tolerate any harassment or threats to our well being.



Marc Bronson
April 18 at 7:30 PM ·

I condemn on the strongest terms the bad actors who are deliberately trying to install fear and hate against me and my wife due to the untruths written by a fringe US chiropractor and "educator".

I cannot think of anything more vile and unethical than unorthodox chiropractors and their partisans attempting to bring my wife into professional matters.

This has crossed all normal boundaries and decency, it is unreasonable and I have notified the College of Chiropractors and the appropriate authorities.

These attempts to silence me or put a chill on our evidence-based chiropractic colleagues from reporting health misinformation by unethical and unscientific chiropractors in Ontario will not succeed.

I will not be making any further comments about this matter until I receive responses from the appropriate authorities.I nevertheless feel obligated to make a statement given the attempts at subterfuge that have accelerated in recent weeks and now include attempts at contacting my spouse.

Be well, stay safe,
Marc and Rachelle.

12:42 PM · Apr 20, 2020 · Twitter Web App



Greg Kawchuk
@GNK1

" A majority reported beliefs that the chiropractic profession should not advertise that spinal manipulation provides any immune system benefit."
researchsquare.com/article/rs-379...

9:05 PM · Jun 27, 2020 · Twitter for iPhone

Katherine A Pohlman Retweeted



Jan Hartvigsen @JanHartvigsen · Mar 18
Thank you to @WFCchiropractic for speaking out against dangerous nonsense!

> **Greg Kawchuk** @GNK1 · Mar 17
> Chiropractors should refrain from any communication that suggests spinal adjustment/manipulation may protect patients from contracting COVID-19 or will enhance their recovery. Doing otherwise is potentially dangerous to public health." /2 bit.ly/COVID-19_170320
> Show this thread

2 18 71

WFC @WFCchiropractic · Mar 19

bit.ly/WFC_immunity.. The WFC has published a rapid review of the available literature on SMT and claims relating to immunity. There is no credible scientific evidence to support these claims.#BeEPIC #WFCmatters



1 12 19

Wisconsin Chiropractic Association

Contact: John Murray, WCA Executive Director
jmurray@wichiro.org
608 609 1130

April 2, 2020

The Wisconsin Chiropractic Association released the following statement regarding the topic of spinal adjustments and immunity to the Covid-19 virus.

"The Wisconsin Chiropractic Association fully endorses the statements of the World Federation of Chiropractic and the American Chiropractic Association on the topic of chiropractic adjustments and immunity to Covid-19.

Given the lack of quality scientific evidence related to spinal adjustments and immunity to Covid-19, the Wisconsin Chiropractic Association has been advising its members to avoid making any such claims or risk being in violation of state laws regarding misleading advertising, professional conduct and practicing outside of their scope of practice.

Chiropractic clinics that are choosing to remain open as essential healthcare providers under the Governor's emergency Stay at Home order should exercise an abundance of caution and closely follow all relevant safety, sanitizing, privacy, advertising and evidence-based guidelines."

Read the World Federation of Chiropractic statement here:

https://www.wfc.org/website/images/wfc/Latest_News_and_Features/Spinal_Manipulation_Immunity_Review_2020_03_19.pdf

Read the American Chiropractic Association statement here:

https://www.acatoday.org

Chiropractic Examining Board

Additional Resources

Apply to Serve

Annual Report

Meeting Schedule and Agendas

Suggest an Agenda Item

Statutes and Administrative Code

Related Links

A-Z Profession List

Check for Pending Rules

Orders and Disciplinary Actions

Professional Assistance Procedure

Monitoring

File a Complaint

Contact

Chiropractic Examining Board
DSPS
PO Box 8366
Madison, WI 53708-8366

(608) 266-2112

Email for questions:
dsps@wi.gov

The Chiropractic Examining Board is created in Wis. Stat. § 15.405(5) and has authority as outlined in Wis. Stat. ch. 446.

Contact: Valerie Payne, Executive Director

Valerie.Payne1@wisconsin.gov

Members

The members of the Chiropractic Examining Board are appointed by the Governor and confirmed by the Legislature to serve 4-year terms. The Board consists of four members who are licensed chiropractors in this state, and two public members.

Member	Officer	Member Type	Term Expiration
King, Jeffrey A.	Chairperson	Chiropractic Member	7/1/2023
Gerondale, Bryan R.	Vice Chairperson	Chiropractic Member	7/1/2021
Damrow, James M.	Secretary	Chiropractic Member	7/1/2023
Bautch, Scott D.		Chiropractic Member	7/1/2021
Fortier, James		Public Member	7/1/2020
Kugler, Carl		Public Member	7/1/2021

**Board members whose terms have expired may continue to serve until their successor is confirmed by the Senate.*

Announcements

World Federation of Chiropractic: COVID-19 Advice for chiropractors as of March 17, 2020, produced with advice and guidance from the WFC Research Committee and WFC Public Health Committee.

World Federation of Chiropractic Coronavirus Statement on 3-17-2020

The Board reminds licensees that advertising in a manner which is false, deceptive, or misleading is unprofessional conduct. Please see Wis. Admin. Code Chir 6.015 and 6.02(15).

Last updated: 3/20/2020

The Texas Board of Chiropractic Examiners agrees with and endorses the statements made by the World Federation of Chiropractic relating to chiropractic treatment and COVID-19.



The Texas Board of Chiropractic Examiners agrees with and endorses the statements made by the World Federation of Chiropractic relating to chiropractic treatment and COVID-19.

https://www.wfc.org/website/image/wfc/Latest_News_and_Features/Coronavirus_statement_2020_03_17.pdf

https://www.wfc.org/website/image/wfc/Latest_News_and_Features/Spinal_Manipulation_Immunity_Review_2020_03_19.pdf

The Board will investigate claims made that chiropractic spinal adjustment/manipulation confers or boosts immunity as a violation of the law.

We encourage concerned Texans to file complaints with the Board. The Board's complaint process, as well as a link to our complaint form, can be found here: http://www.tbce.texas.gov/complaint-information.html.

MINNESOTA
BOARD OF CHIROPRACTIC EXAMINERS

Dear Doctor of Chiropractic:

With the concerns about coronavirus, we want to reassure you that the Minnesota Board of Chiropractic Examiners (MBCE) is remaining focused on our mission of public health and protection during these unprecedented times. The MBCE encourages all chiropractors to stay up-to-date with recommendations and protocols established by the World Health Organization (WHO), the U.S. Centers of Disease Control and Prevention (CDC), and local health departments in regard to COVID-19.

All licensees are advised that anyone making claims that adjustments can provide immunity to the flu or coronavirus is likely in violation of statute and rule relating to both scope of practice and advertising claims.

Please watch your local news and check the Minnesota Board of Chiropractic Examiners (MBCE) home page for links to the latest governing agencies' web pages and information on this health emergency.

Sincerely,

Minnesota Board of Chiropractic Examiners
www.mnchiroboard.com

March 23, 2020: All licensees are advised that anyone making claims that adjustments can provide immunity to the flu or coronavirus is likely in violation of statute and rule relating to both scope of practice and advertising claims.

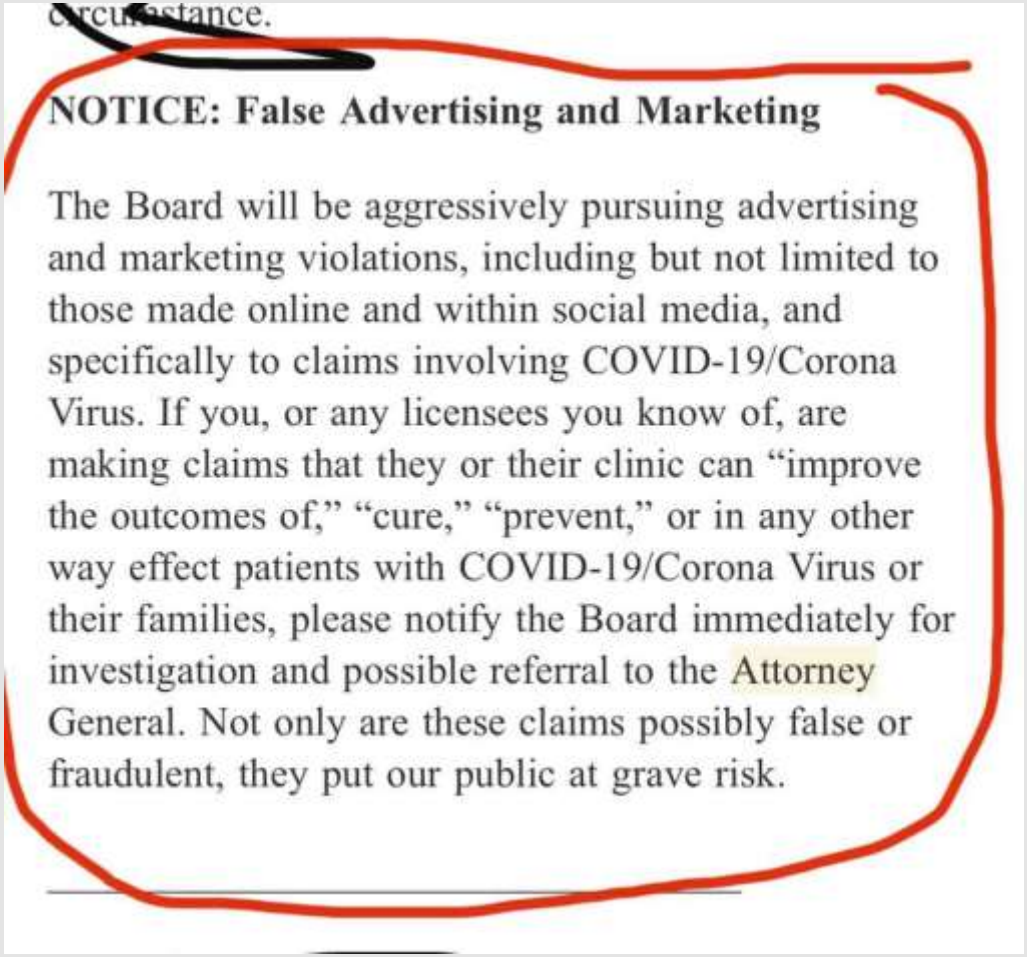
Given there are no specific guidelines from the national and international agencies at this time for chiropractic offices, we recommend that you use discretion and consider the cautions for everyone to stay home as much as possible. There has been a temporary lessening of restrictions and penalties regarding tele-medicine. With that in mind, we recommend that you use heightened screening protocols with patients regarding travel / exposure / illness and those with increased risk / vulnerability, before accepting them into your clinic. Close your waiting room and have patients wait in their car until you're ready to see them. Use discretion and best practices regarding safety for your staff and patients.

COVID-19: How to Contact the Board

Due to the current COVID-19 health emergency, the Minnesota Board of Chiropractic Examiners (MBCE) is practicing social distancing. We ask that you conduct all business with the MBCE via email, online or by phone. You may find our contact information on this page.

If you must come in personally, admittance will be limited to one person at a time. Please do not bring others, such as children, with you as they will be required to wait in the hall. The specific staff member you wish to speak to may be working at a remote location and only available by phone or email.

Oregon



circumstance.

NOTICE: False Advertising and Marketing

The Board will be aggressively pursuing advertising and marketing violations, including but not limited to those made online and within social media, and specifically to claims involving COVID-19/Corona Virus. If you, or any licensees you know of, are making claims that they or their clinic can "improve the outcomes of," "cure," "prevent," or in any other way effect patients with COVID-19/Corona Virus or their families, please notify the Board immediately for investigation and possible referral to the Attorney General. Not only are these claims possibly false or fraudulent, they put our public at grave risk.

FTC Sends 45 More Letters Warning Marketers to Stop Making Unsupported Claims That Their Products and Therapies Can Effectively Prevent or Treat COVID-19

New "treatments" targeted include herbal, homeopathic, and music therapies

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FOR RELEASE

May 7, 2020

TAGS: Coronavirus (COVID-19) | deceptive/misleading conduct | Bureau of Consumer Protection | Northwest Region | Southwest Region | Consumer Protection | Advertising and Marketing | Health Claims

The Federal Trade Commission announced it has sent 45 more letters warning marketers nationwide to stop making unsubstantiated claims that their products and therapies can treat or prevent COVID-19, the disease caused by coronavirus. This is the fourth set of warning letters the FTC has announced to sellers of such products as part of its ongoing efforts to protect consumers from COVID-19 related scams. In all, the Commission has sent similar letters to almost 100 companies and individuals.

The FTC previously sent warning letters to sellers of vitamins, herbs, colloidal silver, teas, essential oils, and other products pitched as scientifically proven coronavirus treatments or preventatives.intravenous (IV) "therapies" with high doses of Vitamin C, ozone therapy, and purported stem cell treatments.

Several of the letters announced today target other "treatments," including Chinese herbal medications, music therapy, homeopathic treatments, and even shields claimed to boost the immune system by protecting the wearer from electromagnetic fields. However, there is currently no scientific evidence that these, or any, products or services can treat or cure coronavirus.

The FTC sent the letters announced today to the companies and individuals listed below. The recipients are grouped based on the type of therapy, product, or service they pitched to supposedly prevent or treat COVID-19

EVENTS CALENDAR

Related Resources

Coronavirus Warning Letters

For Consumers

Blog: FTC warns 45 more sellers of scam Coronavirus treatments

For Businesses

Blog: 45 more companies get coronavirus warning letters

The Office of
Minnesota Attorney General Keith Ellison
helping people afford their lives and live with dignity and respect • www.ag.state.mn.us

March 31, 2020

[redacted]

[redacted]orth [redacted]00

[redacted]

Re: Agreement to Refrain from Deceptive COVID-19 Representations.

Dear [redacted], D.C.:

As you are aware, the Minnesota Attorney General's Office ("AGO") has received reports that your company has engaged in deceptive advertisements and marketing of its chiropractic services related to the ongoing COVID-19 public health emergency. Specifically, [redacted] has represented, among other things: (1) that its chiropractic services are "WAY more effective than social distancing;" (2) "See a CHIROPRACTOR to Increase Your Chances of Survival From Coronavirus;" and (3) signage that it was providing Coronavirus treatment.

As you know, you previously discussed [redacted]'s COVID-19 related advertising and marketing practices with Assistant Attorney General Katherine Kelly. During this call, you agreed that your business would immediately remove all COVID-19 related advertising and marketing materials (including social media and YouTube videos). You further agreed to not engage in any further COVID-19 related representations when advertising and marketing your company's chiropractic services in the future.

The Attorney General is the chief legal officer for the State of Minnesota and is authorized to utilize enforcement measures whenever the AGO has reason to believe that any person is using misrepresentation, misleading statements, or deceptive practices in connection with the sale of goods or services. *See* Minn. Stat. §§ 8.31; 325F.69. The AGO may file a lawsuit seeking civil penalties of **$10,000 per violation**, along with injunctive relief and recovery of the AGO's attorney fees and costs. *Id.* § 8.31, subds. 3, 3a.

Please confirm your above-described agreement to refrain from making deceptive COVID-19 representations by responding to this correspondence by letter or email **on or before April 3, 2020**. In your written response, please also verify that all COVID-19 related advertising and marketing materials (including any and all social media and YouTube posts) have been deleted and/or removed.

445 Minnesota Street, Suite 1400, St. Paul, MN 55101-2131
Office: (651) 296-3353 • Toll Free: (800) 657-3787 • Minnesota Relay: (800) 627-3529
An Equal Opportunity Employer Who Values Diversity • Printed on 30% Post-Consumer Material Paper

Marketing Concerns, Malpractice and COVID-19

Sunday, March 15, 2020 - 00:00

CHIROFUTURES MALPRACTICE PROGRAM

Some in the Profession Don't Want You to Tell the Chiropractic Story

We have heard stories from chiropractors who remain very busy triaging and caring for their existing practice members and welcoming new ones looking for strategies to deal with the current crisis. We are heartened that there are so many chiropractors that have this sense of obligation to serve.

We are heartened by this because there are also chiropractors, chiropractic organizations, chiropractic regulatory authorities and "leaders" in chiropractic that are attacking those who choose to keep serving in the face of this unprecedented event.

Chiropractors are being told and even threatened not to "Tell the Story". Sadly, they are being told not to tell the public about the fact that the nervous system controls the immune system - the two of them are actually a combined supersystem. They are being told not to share these facts with anyone and not to tell anyone that in addition to the important public health measures such as hand washing, responsible social distancing etc. that they should also consider getting their spines checked and adjusted if necessary along with other salutogenic activities that will support nervous and immune function.

These actions are as important and crucial as all of the other measures because beyond the hand washing and distancing there is no other solution except the robustness of one's immune response.

Unfortunately there are those such as The World Federation of Chiropractic (WFC) that has put out a deeply flawed "document" asserting there is no credible evidence in regards to the role of chiropractic and the nervous and immune systems. Sadly, Parker University's President and their Director of Research are promoting this nonsense, the American Chiropractic Association has endorsed it and the Texas Board of Chiropractic and a few others have sent out notices otherwise endorsing the WFC "document" and threatening chiropractors with it.

We will not tolerate those within or outside of the profession who seek to silence these truths or the science supporting them because that will lead to a worsening of the public health crisis and people will suffer unnecessarily due to their ignorance.

If we do our jobs correctly as chiropractors then we may be part of the solution in this crisis because we can help the engines of commerce to continue to function and help triage people who do not belong in the ER. Then those who are not sick and not at higher risk can work, provide for their families and take care of those among them that cannot take care of themselves.

At ChiroFutures we feel strongly about the role of chiropractic as a staple in supporting the health and well being of the public along with other salutogenic measures to enhance health and well-being and assist the body in adapting to physical, chemical and emotional challenges.