



Chiropractic management of ankyloglossia and retrognathia and their impact on breastfeeding: A case study

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Introduction

The management and diagnosis of ankyloglossia are varied. Ankyloglossia, also known as tongue-tie, is a congenital oral anomaly that may decrease the mobility of the tongue in elevation, extension and lateralization, therefore may decrease tongue function. It is caused by an unusually tight, short and or thick lingual frenulum, a connective tissue membrane consisting of fascia and oral mucosa, connecting

the underside of the tongue to the floor of the mouth. It can be located along the entire underside of the tongue (root to tip) or a more posterior location leaving the tongue tip free.¹ The prevalence varies widely, possibly due to disagreements in how to assess and diagnose a tongue tie. Values in studies vary between 4.2 percent - 10.7 percent, however a recent meta-analysis concluded for infants under one year of age it's 8 percent.² Restricted tongue mobility as a result of ankyloglossia may lead to feeding difficulties, speech problems and can affect the height and width of the palate, position of the mandible and alignment of the teeth.³ Mills, et al., 2020 cadaver studies demonstrated the lingual frenulum to be a dynamic structure formed by the midline fold of the floor of mouth fascia together with the overlying floor of mouth mucosa.⁴

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New research published on the health impacts effects of sitting

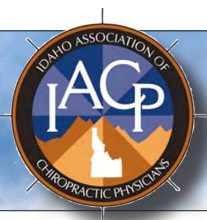
Tired of sitting at that desk all day long? Turns out it's not good for your health, either, according to a [new study](#) published in *JAMA Network Open*.

That work, called *Occupational Sitting Time, Leisure Physical Activity, and All-Cause and Cardiovascular Disease Mortality*, found: "In this cohort study involving 481 688 individuals over a mean follow-up period of 12.85 years, individuals who predominantly engaged in sitting at work exhibited a higher risk of mortality from all causes (16%) and cardiovascular disease (34%) compared with those who predominantly did not sit, even after adjusting for sex, age, education, smoking, drinking, and body mass index. Individuals who predominantly sit at work would need to engage in an additional 15 to 30 minutes of physical activity per day to mitigate this increased risk and reach the same level of risk as individuals who predominantly do not sit at work."

Modern lifestyles have become increasingly sedentary, with prolonged sitting now pervasive as an integral part of normal life, despite the fact that, with some exceptions, the scientific literature agrees on its deleterious effects. For the first time in 2020, the World Health Organization guidelines on physical activity recommended reducing sedentary behaviors because of their health consequences, which aligns with similar recent physical activities guidelines published in the US in 2018 and in the UK in 2019 that also discourage prolonged sitting. However, adhering to these recommendations, particularly in workplace settings, remains challenging and is not well supported.

This new prospective cohort study included participants in a health surveillance program in Taiwan who were followed-up between 1996 and 2017. Data on occupational sitting,

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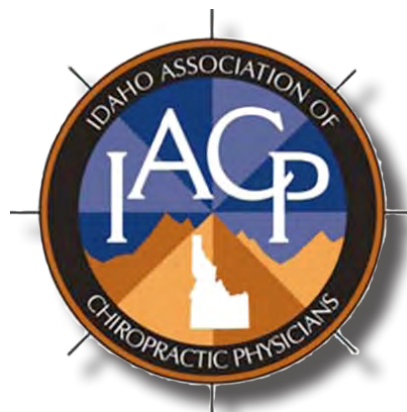
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Chiropractic management of ankyloglossia and retrognathia and their impact on breastfeeding: A case study

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The floor of the mouth is made up of four muscles: paired mylohyoid muscles, geniohyoid, digastric muscle and stylohyoid muscle. The oral diaphragm (muscular floor of the oral cavity) bridges between the two rami of the mandible and is formed from the mylohyoid muscles.⁵ The tongue directly influences facial development due to its role in the development of the oral skeletal structures. Outward pressure is exerted on the palate, gums and descending teeth and the mandible by the tongue. The buccal musculature constricts in response to the outward forces to maintain equilibrium. In this way, the tongue drives the developing position and shape of both the maxillae (palate and dental arch) and that of the mandible as well as the space for the erupting dentition.⁶ The alveolar bone is connected to lip, tongue, and buccal musculature via frenums (folds of tissue); the primary function of these is to maintain balance between growing bones, the tongue and lip musculature. This occurs during development of the fetus and limits movement of lips, tongue, and cheeks. Abnormal frenal attachment may affect lips, tongue and cheeks and may influence the position and shape of the jaw (as well as the maxillae) and dentition. Hence, the issue of ankyloglossia can have both long-term as well as short-term effects.⁶

Frenectomy is commonly proposed to obliterate or incise the tethering tissue(s) using laser, scalpel, or surgical scissors. However, there is much disagreement amongst health care professionals as to whether frenectomy is the sole reason for resolution of symptoms. The evidence for short term efficacy of the frenectomy show improvement in breastfeeding, immediate changes in the mothers' nipple pain, milk transfer and weight gain.^{7,8} Long term improvements are not demonstrated.

Clinical presentation varies. The focus in this case was on the complications related to breastfeeding issues. These included but were not limited to; latching difficulties, inability to sustain a latch, irritability while feeding and nipple pain during feeding for the mother. Although there are many different approaches to the problem, this case study specifically demonstrated the utility of musculoskeletal management of breastfeeding difficulties in infants with tethered oral tissue.

Methods

The literature search was conducted in six databases (ScienceDirect, NCBI, PubMed, Sci-Hub, Academy of

Breastfeeding Medicine, JAMA Network) from inception and completed using search terms relevant to breastfeeding difficulties, chiropractic management, retrognathia, frenectomy, ankyloglossia, lactation difficulties. The case records of the chiropractor and lactation consultant were consulted to review the case presentation and management.

Case presentation

The family presented to the chiropractic clinic. The infant was presented to the chiropractor at 32 days of age, weight was 3900g and the chief complaint was breastfeeding difficulties and inability to latch. They were currently finger feeding and using a supplemental nursing system. The lactation consultant was concerned about the infant's inability to transfer milk.

Historical findings were as follows: the mother was Gravida 1, Para 1. She had a natural vaginal delivery at 41 weeks. Delivery duration was 19 hours with active labor of about an hour. The normal vertex delivery was complicated by the use of ventouse suction, and the mother required an episiotomy. Apgar scores were 9 at 1 minute, 10 at 5 minutes and 10 at 10 minutes. Birthweight 3650g. Length 52cm, head 37cm. The discharge weight was 3400g.

Maternal medical history was insignificant; she was taking no medication.

At 12 days of age, the infant presented to a lactation consultant (LC) with an immediate aim to ensure infant received enough nutrition, as the infant's weight was 3500g, not yet achieving birth weight. The mother presented with sore nipples. The infant had no latch, suck, or milk transfer from the breast. Infant was being fed expressed milk via finger feeds or nasogastric tube as a home-made supplemental nursing system. Mother trialed a nipple shield but it did not improve the infant's efficiency in transferring milk and the infant continued losing weight. The lactation consultant encouraged her to pump and give exclusive breast milk (EBM) "top-ups", fed to the infant either using finger feeding or ng tube, or, preferably, supplemental nursing system. The LC corrected the infant's latch and referred them to another healthcare provider to consult on the diagnosis and perform a frenectomy of a posterior tongue tie. They were also referred by the LC for craniosacral therapy as she suspected bilateral tight temporomandibular joints (TMJ).

On day 13 the infant underwent a frenectomy with scissors

to release the posterior tongue tie. The procedure was performed by an ear nose and throat (ENT) doctor and weight was 3580g at the local hospital. At 2 weeks old, parents were concerned about bottle feeding interfering with their ultimate goal and were adamant about their choice to breastfeed. They were currently feeding via supplemental nursing system or finger feeding. The lactation consultant had suggested feeding in a laid-back position to assist in moving the jaw forward, as infant weighed 3455g that day, on day 15.

On day 16, three days post frenectomy, the mother messaged the lactation consultant and reported that the infant was not suckling. The mother was finger feeding as she was struggling with the laid-back position. The lactation consultant advised to try the dancer hold. A dancer hold is used to assist infants with low tone who struggle to latch. This is obtained by the mother gently cupping the underside of the breast with one hand; four fingers under the breast and the thumb on top. The hand slides forward creating a U-shape with thumb and index to hold the infant's cheeks with the chin resting in the middle of the U-shape. The lactation consultant sent suck training videos, post frenectomy exercises and a pump schedule to protect the milk supply.

At 2 weeks 5 days (Day 19) the mother again tried using a nipple shield. On video, the infant showed short sucking bursts. The mother was battling with the supplemental nursing system and was worried about finger feeding. Education on nipple shield use was given by the LC who encouraged continuation of pumping and referred for chiropractic care. No appointment was made at this time.

The following day (day 20) the infant had stopped feeding on the nipple shield and managed to latch directly onto the breast. The mother wanted to discontinue pumping if the infant was latching. The family purchased an infant scale.

At day 22, the infant's weight was 3710g. Because the mother felt the infant was transferring enough milk breastfeeding, she stopped pumping. It is unknown whether the infant was using shields at this stage.

At three weeks 6 days (day 27), the infant's weight was 3540g, and the infant had still not regained her birth weight. The lactation consultant advised the mother again to express and bottle feed (and instructed her on paced feeding – hold infant in an upright or semi – upright position, allow the infant to open their mouth over the nipple and close over the base. If the upper lips are pulled in then use your fingers to open them over the nipple to flange them out. Hold the bottle horizontally so the flow is not too fast. Build in

pauses as needed), as she was concerned the infant was not transferring milk. There was great concern about possible dehydration and parents were quizzed about sufficient numbers of wet nappies per day. The family booked a follow up with the lactation consultant the same day to be shown the Medela supplemental nursing system as the infant was lethargic and did not want to suck. The LC provided the supplemental nursing system and demonstrated its' use. Power pumping education was also given as well as information on quantities needed per feed and 3 hourly feeds were recommended.

At 4 weeks (day 28) the LC followed up on the supplementary nursing system – the infant was able to feed but the duration of feed was considered too lengthy (2 hours to drink 100mls). The feeding method was changed to a feeding tube and syringe, along with finger feeding. The mother's milk supply seemed adequate as she was able to pump 120ml per session.

The following day (day 29) the infant managed to take in a total of 630ml and was more awake. The mother was again encouraged to see a chiropractor to rule out a musculoskeletal reason why the infant was unable to transfer milk successfully. The day thereafter (day 30) the infant managed to take in a total of 730ml and feeds seemed to be going faster.

However, on day 31, the intake dropped to a total of 640ml and the mother was concerned about duration of the feeds.

At 4 weeks 4 days (day 32) total intake volume dropped to 590ml and the infant was lethargic. At this point the infant was presented for chiropractic care.

The parents presented the infant to the chiropractic clinic at 4 weeks 4 days (day 32). The infant's weight was 3900g. Previous therapy included craniosacral therapy by physiotherapist with no improvement according to the parents. This therapy was received after the frenectomy, at 2 weeks of age. Figure 1 shows the growth chart.

Observation revealed retrognathia (recessed jaw), restricted tongue movement and function, decreased temporomandibular joint (TMJ) range of motion (the range was decreased more on the left than the right) and reduced oral reflexes (rooting and sucking).⁹ The infant had a posteriorly translated cranium on cervical vertebrae 1 (C1), hyoid retraction with flexion C0/C1 which causes the chin to chest presenting as "multiple chins," and a collapse in the anterior neck musculature presenting as red lines/ folds

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of skin under the chin (figures 2 and 3). The infant tilted her head to the left and when observed supine, her entire length of her body was concave on the left as if shaped like a banana. Visual assessment of the mouth was difficult due to the limited range of the jaw. Post frenectomy scarring was seen. The tongue range of motion was limited.

Feeding assessment involved the supplemental nursing system and a nipple shield (Figure 4). The parents were overwhelmed by the lack of weight gain. They were concerned that they were pursuing breastfeeding to the detriment of their infant's health. Feeds at this stage lasted longer than an hour. After these long feeds, the mother then had to pump and get ready for the next feed, and her mental health was a concern.

Management

Management included chiropractic adjustments modified to the age and size of the patient to the cranium, temporal mandibular joint, hyoid and performed a bilateral occipital release. Soft tissue therapy was applied to the anterior neck musculature, including a stretch to release muscle restriction. Home exercise program included massage therapy (anterior neck, face & chest), the guppy stretch (infant lying supine and allowing the head to tilt gently into slight extension opening up the anterior neck), side to play (infant is side lying and looking at parents) and different options of tummy time. These included the rugby ball carry (one hand between legs and the infant's stomach, other hand supports head if needed, holding the infant close to you for support), tummy to mummy (infant lying on your stomach or chest so the infant is face to face) and lap time (infant prone on your lap).

On the day after the treatment (day 33), a bottle with a

slow flow wide neck peristaltic teat was recommended by the chiropractor after consultation with the lactation consultant, as the mother was battling to feed the infant the required amounts via supplemental nursing system. This bottle was to be used with paced feeding technique and basic sucking exercises were given. These included gum tracing (working on lateralization of the tongue) and biting (finger to back of gum and infant bites down to increase strength of the jaw), suck training (using gentle pressure of the finger on the palate, light so as not to activate the gag reflex but increase pressure as she gets used to it, in order to initiate a seal around the finger). Feeds were to be no longer than 40 minutes in total. Feeding for longer durations meant the energy used to feed outweighed the calories consumed during that time.

The following day (day 33) the infant managed a total intake of 650ml; one feed was directly from the breast. At four weeks 6 days (day 34), she managed a total intake of 750ml from both breast and bottle. Exercises were religiously performed after every feed. Her weight increased to 3990g. Three days later (day 35), a second chiropractic treatment was given (figure 5). The infant was sucking at the breast

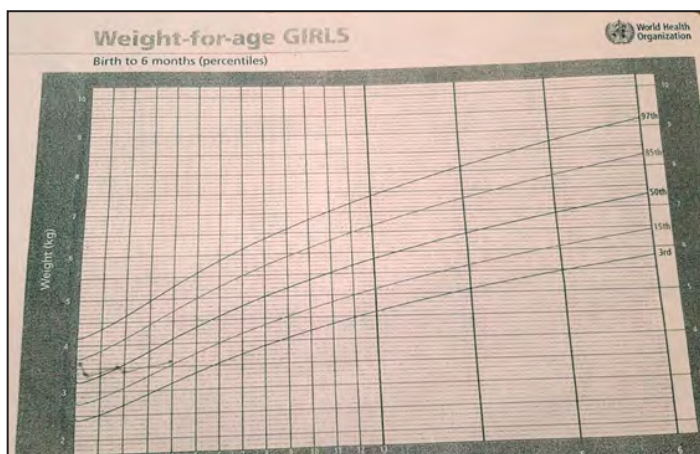


Figure 1. Weight chart.

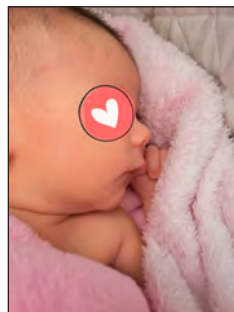


Figure 2. Treatment Day 1 - Recessed chin and multiple skin folds.



Figure 3. Day 1 Treatment — Recessed chin and multiple skin folds anterior neck.

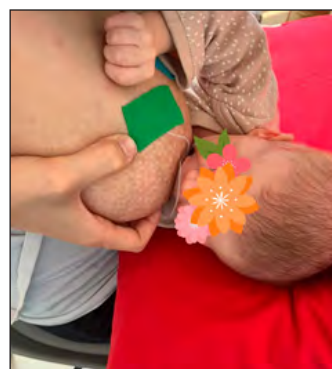


Figure 4. Feeding assessment Day 1 with SNS and nipple shield.

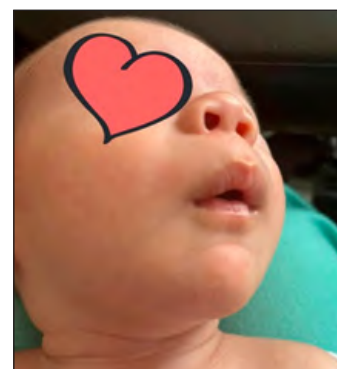


Figure 5. Second chiropractic session — visual decrease in jaw recession.

and able to feed for extended periods of time. A total of 750ml was taken.

The day after the second chiropractic session the infant managed three breastfeeds directly from the breast. The tongue seemed to be protruding further. While breastfeeding, it seemed that the infant became frustrated at flow rate but managed four minutes of direct feeding at a time. Bottle intake was 700mls on Day 36.

Six days after the original chiropractic session (day 38) the mother reported more direct breastfeeding; she also reported a strong suck causing nipple pain. The infant had managed two full feeds from the breast and the mother continued with the home exercise program. A video was sent to the chiropractor from the mother and a feed observed (figure 6). The video showed a deeper latch; however residual tightness remained in the facial muscles. Her milk supply seemed to have stabilized as she reported, she had "lots of milk."

A further consult to reassess the latch and cause of nipple pain occurred on day 40, which was her third chiropractic treatment. The jaw seemed to have reduced the degree of recession (figure 5) and she managed to create a seal around the breast, her tongue was more mobile and range of movement was good. Range of movement in the jaw had improved allowing a wide mouth for latching. The nipple pain the mother had been experiencing seemed to be settling.

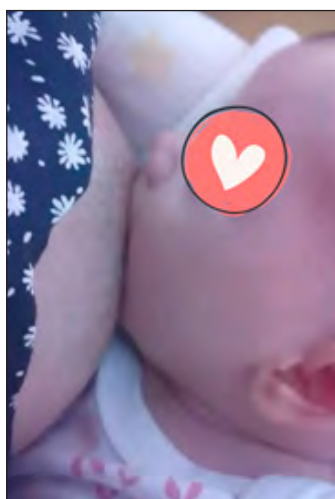


Figure 6. Feeding assessment received six days post original treatment.

At 6 weeks of age the infant weighed 4320g (see growth chart in Figure 1). The infant seemed to be bringing up milk which was attributed to the fact she wasn't used to the volumes she was able to drink. Education and burping techniques were given to the parents, along with holding the infant upright post feed for 20 minutes to minimize the positing as the possibility of aerophagia (taking air in at the breast often seen with oral motor dysfunction as a result of ankyloglossia, coming on and off the breast or during bouts of crying) might be contributing to the increase in refluxing.¹⁰

At 4 months of age she presented to the clinic with an acute torticollis. Treatment included modified cervical adjustments, sternal clavicular mobilizations, thoracic releases and bilateral sacrum adjustments. Home exercise program consisting of neck and core strengthening exercises were given. These included tummy time, encouraging looking up, with every nappy change side to sit up (from supine roll the infant onto their left hip, aim the right shoulder to the left hip and encourage the infant with your voice to sit up, then do opposite side). Neck stiffness cleared after one session. At this age, infants gain neck control and feeding becomes less reflexive.^{11,12} This may lead to feeding difficulties however this infant experienced no feeding difficulties at this stage. She weighed 6640g meaning she had picked up 232g per week in the last 10 weeks. This was within normal ranges for her current age.¹³

No adverse effects were reported by the parents post chiropractic care and adjustment.

Conclusion

This case study demonstrated that a multi-disciplinary team was required to manage a difficult case of sub-optimal breastfeeding. Chiropractic care has proved to be an important part of the multi-disciplinary team used to not only treat breastfeeding difficulties but also play a role in the management of tongue tie or tethered oral tissue.

References:

1. Wongwattana P. The effect of frenotomy on long-term breastfeeding in infants with ankyloglossia. *International Journal of Pediatric Otorhinolaryngology*. 2022;152:110983.
2. Hill RR, Lee CS, Pados BF. The prevalence of ankyloglossia in children aged <1 year: a systematic review and meta-analysis. *Pediatr Res*. 2021;90(2):259-266.
3. Srinivasan C, Bhadrinath AB. Skeletal and dental characteristics in subjects with ankyloglossia. *Prog Orthod*. 2013;14(44).
4. Mills N, Geddes DT, Amirapu S, Mirjalili SA. Understanding the Lingual Frenulum: Histological Structure, Tissue Composition, and Implications for Tongue Tie Surgery. *Int J Otolaryngol*. 2020;2020:1820978. <https://europepmc.org/articles/PMC7391099>.
5. Toth J, Lappin SL. Anatomy, Head and Neck, Mylohyoid Muscle. In: *StatPearls*. Treasure Island (FL): StatPearls Publishing. Copyright © 2023, StatPearls Publishing LLC.; 2023.
6. Defabianis P. Ankyloglossia and its influence on maxillary and mandibular development. (A seven year follow-up case report). *Funct Orthod*. 2000;17(4):25-33.

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7. Callea M, Wahjuningrum DA, Scalisi FC, Setiawan F, Fepiosand RA, Ramadhan DL, Morabito A. Tie Tongue and Frenotomy: An Article Review. *Journal of International Dental and Medical Research*. 2023;16:5.
8. Messner AH, Walsh J, Rosenfeld RM, Schwartz SR, Ishman SL, Baldassari C, Brietzke SE, Darrow DH, Goldstein N, Levi J, Meyer AK, Parikh S, Simons JP, Wohl DL, Lambie E, Satterfield L. Clinical Consensus Statement: Ankyloglossia in Children. *Otolaryngol Head Neck Surg*. 2020;162(5):597-611.
9. Colson SD, Meek JH, Hawdon JM. Optimal positions for the release of primitive neonatal reflexes stimulating breastfeeding. *Early Hum Dev*. 2008;84(7):441-449.
10. Kotlow L. Infant Reflux and Aerophagia Associated with the Maxillary Lip-tie and Ankyloglossia (Tongue-tie). *Clinical Lactation*. 2011;2:25-29.
11. Lee HM, Galloway JC. Early intensive postural and movement training advances head control in very young infants. *Phys Ther*. 2012;92(7):935-947.
12. Lagarde MLJ, van Alfen N, de Groot SAF, Geurts ACH, van den Engel-Hoek L. Adaptive capacity of 2- to 5-month-old infants to the flow, shape, and flexibility of different teats during bottle feeding: a cross-sectional study. *BMC Pediatr*. 2019;19(1):477.
13. Child growth standards. World Health Organization; 2023. <https://www.who.int/tools/child-growth-standards>.



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New research published on the health impacts effects of sitting

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leisure-time physical activity (LTPA) habits, lifestyle, and metabolic parameters were collected. Data analysis was performed in December 2020.

Results: The total cohort included 481 688 participants (mean [SD] age, 39.3 [12.8] years; 256 077 women [53.2%]). The study recorded 26 257 deaths during a mean (SD) follow-up period of 12.85 (5.67) years. After adjusting for sex, age, education, smoking, drinking, and body mass index, individuals who mostly sat at work had a 16% higher all-cause mortality risk (HR, 1.16; 95% CI, 1.11-1.20) and a 34% increased mortality risk from CVD (HR, 1.34; 95% CI, 1.22-1.46) compared with those who were mostly nonsitting at work. Individuals alternating sitting and nonsitting at work did not experience increased risk of all-cause mortality compared with individuals mostly nonsitting at work (HR, 1.01; 95% CI, 0.97-1.05). For individuals mostly sitting at work and engaging in low (15-29 minutes per day) or no (<15 minutes per day) LTPA, an increase in LTPA by 15 and 30 minutes per day, respectively, was associated with a reduction in mortality to a level similar to that of inactive individuals who mostly do not sit at work. In addition, individuals with a PAI score exceeding 100 experienced a notable reduction in the elevated mortality risk associated with prolonged occupational sitting.

Conclusions and Relevance: As part of modern lifestyles, prolonged occupational sitting is considered normal and has not received due attention, even though its deleterious effect on health outcomes has been demonstrated. In this study, alternating between sitting and nonsitting at work, as well as an extra 15 to 30 minutes per day of LTPA or achieving a PAI score greater than 100, attenuated the harms of prolonged occupational sitting. Emphasizing the associated harms and suggesting workplace system changes may help society to denormalize this common behavior, similar to the process of denormalizing smoking.

People who predominantly sit at work have a 16% higher risk of mortality from all causes, and a 34% higher risk of mortality from cardiovascular disease. To counteract the increased risk, individuals who sit a lot at work would have to engage in an additional 15 to 30 minutes of physical activity per day to reduce their risk to that of individuals who do not predominantly sit, researchers estimated.

This new JAMA Network Open study is significant because it involves so many participants — more than 480,000 — and researchers followed them over an average time of

nearly 13 years. They also adjusted for sex, age, education, smoking and drinking status, and BMI.

The US Centers for Disease Control and Prevention recommends that adults engage in at least 150 minutes of moderate to high-intensity exercise a week. That amounts to about 22 minutes a day, or if people are exercising, say, five times a week, it's about 30 minutes each time. Ideally, people can set aside time to walk briskly, jog, ride a bike, work out on the elliptical machine or otherwise commit time to exercise for at least that amount of time per week.

Many desk workers already engage in some version of these activities, but they can work to increase the duration and intensity of the activities. Instead of walking around the neighborhood once before dinner, what about walking around twice? Instead of going to the gym twice a week, what about three times? Could they park a few blocks farther and walk faster to get to work and back? These small changes add up.

It really doesn't have to be a huge change: A very small amount of light physical activity during work hours can improve health, according to the studies. These are sometimes called "exercise snacks." Some things people can do include getting up every 30 minutes or an hour to stretch or walk around their office — or for people who work at home, their home, apartment corridor or yard. They could hold a plank or do jumping jacks. Those with more mobility challenges can still do stretches like side bends and twists in their chair.



Are you using social media compliantly in your practice?

Social media has become integral to our daily lives, transforming how we communicate, share information, and connect with others. Chiropractic practices have recognized the importance of engaging with patients and the public through social media platforms. While the benefits of using social media in healthcare are numerous, healthcare professionals and organizations must employ responsible and ethical practices when navigating this digital landscape.

Patient Confidentiality

One of the foremost responsibilities of healthcare practitioners on social media is to protect patient confidentiality. Sharing patient information, even unintentionally, can lead to severe legal and ethical consequences. To maintain patient privacy: (The HIPAA Journal, 2024)

- Avoid discussing specific patient cases: Never post identifiable information about patients, including their names, photographs, or other identifying details. Even general descriptions should be avoided to prevent potential breaches.
- Seek informed consent: If you wish to share a patient's story or experience, obtain explicit consent from the patient beforehand. Ensure they understand the implications and consequences of sharing their information on social media.
- HIPAA and social media cases are on the rise. In October 2019, a dental practice was fined \$10,000 for impermissibly disclosing PHI on a social media review site; while in January 2016, a nursing assistant was fired from her job and sentenced to 30 days in jail for posting a video of a patient online.

Provide Accurate Information

Healthcare professionals are responsible for providing accurate and reliable information to the public. Misleading or false information can harm patients, erode trust, and tarnish the reputation of healthcare organizations. To provide accurate information:

- Cite reputable sources: Always verify the credibility of sources before sharing medical information or advice. Use peer-reviewed journals, official medical guidelines, or information from recognized healthcare institutions.
- Fact-check before posting: Take the time to fact-check any medical claims or statistics before sharing them on social media. Misinformation can have real-world consequences.
- Correct mistakes promptly: If you discover you've shared incorrect information, correct it promptly and transparently. This demonstrates your commitment to accuracy and integrity.

Maintain Professionalism

Social media platforms are public spaces where chiropractors represent themselves, their organizations, and the chiropractic profession. To maintain professionalism:

- Set clear boundaries: Distinguish between personal and professional accounts. Use separate profiles for professional content to maintain formality and focus on healthcare-related topics.
- Use a respectful tone: Engage with others respectfully, even in the face of criticism or differing opinions. Maintain a courteous and professional demeanor at all times.
- Avoid conflicts of interest: Disclose any financial relationships or conflicts of interest that could affect the credibility of your content.

Foster a Positive Online Presence

A positive online presence can enhance a healthcare practice's reputation, attract patients, and foster trust within the community. To cultivate a positive presence:

- Engage with the community: Actively participate in conversations related to healthcare topics, answer questions, and provide valuable insights.
- Share educational content: Regularly share educational and informative content, such as articles, videos, or infographics, that benefit your audience and showcase your expertise.

The responsible use of social media in chiropractic practices is a balancing act that requires careful consideration of patient privacy, accuracy, professionalism, and community engagement. By adhering to ethical guidelines and best practices, chiropractors can harness the power of social media to educate, inspire, and connect with patients while upholding their commitment to patient care and privacy. When used responsibly, social media can be a valuable tool for enhancing healthcare communication and patient outcomes.

Dr. Ray Foxworth is a certified Medical Compliance Specialist and President of ChiroHealthUSA. A practicing chiropractor, he remains "in the trenches" facing challenges with billing, coding, documentation and compliance. He has served as president of the Mississippi Chiropractic Association and is a former Staff Chiropractor at the G.V. Sonny Montgomery VA Medical Center. You can contact Dr. Foxworth at 1-888-719-9990, info@chirohealthusa.com or visit the ChiroHealthUSA website at www.chirohealthusa.com.

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The Whole Child

By Sharon A. Vallone, DC, FICCP

Editor, *Journal of Clinical Chiropractic Pediatrics*

Mnemonics and acronyms. I firmly believe that I made it all the way through chiropractic school and then into active practice thanks to mnemonics and acronyms. I remember anatomy lab with instructors, Turkel and Kennedy, at my alma mater, New York Chiropractic College in Old Brookville, NY: “One, two – buckle my shoe, three, four – kick the door, five, six – pick up sticks, seven, eight – shut the gate.” Perfect for a soon to be pediatric chiropractor, yes? This helped me remember the nerve root supply of deep tendon reflexes: S1, S2 – ankle jerk, L3, L4 – knee jerk, C5, C6 – biceps and brachioradialis, C7, C8 – triceps. Then there was “C3, 4, 5 keeps the diaphragm alive” to help remember the nerve root supply of phrenic nerve which innervates the diaphragm. I can still recall much “livelier” or entertaining ones I won’t recount here!

Then there were the acronyms we went into practice with, like RICE which was the acronym for four elements of treatment for soft tissue injuries: rest, ice, compression, and elevation. Soon, there were those that became a part of everyday life working with Dr. Lorraine Golden and Dr. Tracy Barnes at the clinic of Kentuckiana Children’s Center in Louisville, KY, where they faithfully provided chiropractic care to children with special needs: FLL, FTT, AOM, EDS, ADHD, ASD, DS, ALL, EBV, PANS, PANDAS (I’ll leave you to puzzle these out! There’s an entire alphabet of them.)¹

But most importantly, I carry with me to this day the acronym I first heard while visiting Pennsylvania Institute of Straight Chiropractic as a third trimester student in search of chiropractic philosophy. ADIO, “Above-Down, Inside-Out”, was a statement of chiropractic philosophy coined by BJ Palmer who taught that the innate intelligence of the body controlled healing from the inside out and that chiropractic supported the body to achieve self-healing.²

This philosophy has kept the fire burning for 37 years of clinical practice. I would like to offer you another acronym, an acronym for pediatric chiropractors who work with the WHOLE CHILD:

W – Who are you working with? Why have they come to you? What can you offer them? Is the family Willing to do their part? When can we start (is there anything you need to do before you initiate care?)

H – Hands on (we offer our patients a valuable and effective intervention – a specific chiropractic adjustment as well as the healing power of touch on modulating the autonomic nervous system^{3,4} and we support them in Health and Healing.)

O – Observe⁵ (we are trained to use our ALL of our senses to discern our patient’s status, differentially diagnose then plan our treatment and any referrals that might be necessary to support the child where they are.)

L – Listen⁵ (to the parent and the child and any other important people in the child’s life that contribute insight into what the child is experiencing or needs (especially in the case of infants and toddlers, or older but non-verbal children.)

E – Educate⁵ (Educate yourself, first and foremost Put your Ego to bed! Do I need to study different techniques, do I need

The WHOLE CHILD

W — Who? Why? What? Willing? When?

H — Hands. Healing

O — Observation

L — Listening

E — Educate

C — Collaborate

H — Health. Honesty

I — Inspire

L — Love

D — Discern

to address the cranials?^{6,7} do I appreciate the role of fascia and treat fascial restrictions?⁸ What do other practitioners provide and I should collaborate with them?

Educate your patients and their parents. “Words matter! The chiropractic profession has been a pioneer in health care employing aspects of the whole person biopsychosocial approach with an emphasis on self-healing. This approach has involved methods that encompass psychosocial, emotional/spiritual, physical, and healthy lifestyle components which may promote functional gain/preservation, reduction of pain interference and maximization of quality of life.”⁹)

C – Collaborate with other health care providers who offer expertise different from what you are providing (from their pediatrician to their teachers and coaches and everyone in between – IBCLC, ND, OT, PT, SLP, MT, LAc, RD, mental health workers etc.) or even collaborating with another chiropractor who may have a different technique or a niche expertise or experience that you do not (yet) offer or (yet) have.

H – Help – “Primum non nocere” – our prime directive (“First, do no harm”) and Honesty, in the integrity of your communication and practice.

I – Inspire (again, educate, motivate, encourage compliance and inspire your families! “Typical chiropractic encounters include distinct elements that involve “a plan that requires patient commitment and cooperation” and a goal to “develop a positive image of personal control over one’s health.”^{9,10})

L – Love (need I say more?)

D – Discern (remain present to your patient in the time that you have with them and always monitor the ever-changing environment of the family and your patients health, mood, level of understanding and compliance and when you have done your job, and they need something in addition to your ministrations.)

Palmer explicitly stated that “over-adjusting is kept to a bare minimum if at all”.^{9,11}

Clarence Gonstead, a notable chiropractor whose teaching remains influential to the present day, regularly discussed the notion that upon finding the need to manipulate the spine one should fix it and leave it alone. “The right number and kind of adjustments can set the stage for nature to heal; too many adjustments in the wrong place can undo any good

that was done and slow down the healing mechanism.”^{9,12}

“Instead of waiting for symptoms to appear or become advanced, chiropractors have also maintained a focus on early intervention and prevention measures that include addressing both biological and psychosocial elements.”⁹ Proactive maintenance care is a critical component in educating our patients (and their parents) in self-care during a critical window of opportunity with children who once empowered, can carry this “superpower” into a healthy adulthood.

But unfortunately, too often in our passionate desire to “help” our young patients, we may be over-treating. When we forget the ADIO principal, above down and inside out, when we think we are the ones healing our patients, we lose the thread. When we perpetuate an ongoing treatment plan of three times a week ad infinitum without seeing a measurable change in our patient’s status or level of function, we are encouraging passive care and not empowering self-healing and self-regulation.

Yes, in some cases, more frequent, intensive care could apply to an infant failing to thrive or a child with acute otitis media or in the throes of fever. Seemingly frequent ongoing care could apply to a very competitive athletic child who happens to also be accident prone, a child who is sensory seeking and constantly falling or crashing into things, or another child who is wheelchair-bound and due to neurologic issues, constantly fighting their restraints. But if you are continuing to treat a child and fail to discern that they require “something more” (i.e. the “athletic but accident prone” child possibly needing some rehabilitative exercise¹³ or the sensory seeking child who might benefit from something you do not provide like working on healing their gut after frequent rounds of antibiotics¹⁴ with a naturopath or some sensory integration therapy¹⁵ occupational therapy), have we fulfilled our obligation to serve them?

So, in conclusion, each child is an individual deserving of our full attention with constant self-surveillance to be sure we are attending to the child’s progress and overall well-being (even tuning in to parent and caretakers whose own self-care modeling influences our young patients), life transitions and ever-changing social pressures. We are the portal to the inclusion of chiropractic care as a component of a lifelong regimen of wellness!

Are we doing our best work if we are not treating the WHOLE CHILD?

References on next page

The Whole Child

Continued from last page

References:

1. Shah SS, Kemper AR, Ratner AJ. eds. *Pediatric Infectious Diseases: Essentials for Practice*, 2e. McGraw Hill; 2019. <https://accesspediatrics.mhmedical.com/content.aspx?bookid=2484§ionid=199373062>.
2. Palmer BJ. Palmer's law of life. Davenport: Palmer School Press; 1958. Pgs. 7-15, 131-133.
3. Field T, Diego M. Vagal Activity, Early Growth and Emotional Development Infant Behav Dev. 2008 September ; 31(3): 361—373.
4. Fludder CJ, Keil BJ. Presentation of neonates and infants with spinal vs extremity joint dysfunction. *Chiropractic Journal of Australia*. March, 2018. 46(1).
5. Keating G, Hawk C, Amarin-Woods L, Amarin-Woods D, Vallone S, Farabaugh R, Todd A, Ferrance R, Young J, O'Neill Bhogal S, Sexton H, Alevaki H, Miller J, Parkin-Smith G, Schielke A, Robinson A, and Thompson R. Clinical Practice Guideline for Best Practice Management of Pediatric Patients by Chiropractors: Results of a Delphi Consensus Process. *Journal of Integrative and Complementary Medicine*. <http://doi.org/10.1089/jicm.2023.0010> Online Ahead of Print: October 30, 2023.
6. SORSI <https://sorsi.com/sot-methods/>.
7. SOTO USA <https://soto-usa.com/what-is-sot/>.
8. Pirri C, Petrelli L, Pérez-Bellmunt A, Ortiz-Miguel S, Fede C, De Caro R, Miguel-Pérez M, Stecco C. Fetal Fascial Reinforcement Development: From “a White Tablet” to a Sculpted Precise Organization by Movement. *Biology (Basel)*. 2022 May 11;11(5):735. <https://pubmed.ncbi.nlm.nih.gov/35625463/>.
9. Gliedt JA, Schneider MJ, Evans MW, King J, Eubanks JE. The biopsychosocial model and chiropractic: a commentary with recommendations for the chiropractic profession. *Chiropr Man Therap* 25, 16 (2017). <https://doi.org/10.1186/s12998-017-0147-x>.
10. Coulter ID. The patient, the practitioner, and wellness: paradigm lost, paradigm gained. *Journal of manipulative and physiological therapeutics*, (1990 Feb) Vol. 13, No. 2, pp. 107-11.
11. Palmer BJ. Answers. Davenport: Chiropractic Fountain Head; 1952. p. 763.
12. Gonstead clinical studies society. Gonstead quotes. Published Jun 15, 2013. <http://gonstead.com/gonstead-quotes/>.
13. Butler S. “The right number and kind of adjustments can set the stage for nature to heal; too many adjustments in the wrong place can undo any good that was done and slow down the healing mechanism.” <https://www.thejoint.com/2021/09/03/how-young-athletes-can-benefit-from-chiropractic-care>.
14. Ng KM, Aranda-Díaz A, Tropini C, Frankel MR, Van Treuren W, O'Loughlin CT, Merrill BD, Yu FB, Pruss KM, Oliveira RA, Higginbottom SK, Neff NF, Fischbach MA, Xavier KB, Sonnenburg JL, Huang KC. Recovery of the Gut Microbiota after Antibiotics Depends on Host Diet, Community Context, and Environmental Reservoirs. *Cell Host Microbe*. 2019 Nov 13;26(5):650-665.e4. [doi:10.1016/j.chom.2019.10.011](https://doi.org/10.1016/j.chom.2019.10.011). Erratum in: *Cell Host Microbe*. 2020 Oct 7;28(4):628.
15. Guardado KE, Sargent SR. Sensory Integration. [Updated 2023 Jul 31]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan. <https://www.ncbi.nlm.nih.gov/books/NBK559155/>.

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Research notes relationship between chiropractic care and immune response

A [study](#) published last year in the *Journal of Chiropractic Medicine* by eight doctors of chiropractic sheds light on the interplay between chiropractic care and the immune system. That work, called, *Secretory Immunoglobulin A and Upper Cervical Chiropractic: A Preliminary Prospective, Multicenter, Observational Study*, investigates the effects of upper cervical adjusting techniques (UCATs) on the levels of secretory immunoglobulin A (SIgA) in the body.

Led by Philip R. Schalow, DC, DCCJP, this research delves into previously uncharted territory, exploring how chiropractic care influences the immune response through SIgA variations.

SIgA is a significant immunoglobulin found in mucosal secretions, contributing to the immune system's first line of defense against pathogens. This research not only provides insights into the immune response but also highlights the potential implications for the broader understanding of chiropractic care's effects on health and wellness.

The study's key findings include:

1. **Positive Impact of UCAT Treatment:** The research demonstrates a substantial increase in SIgA levels within 30 minutes after a UCAT treatment at the craniocervical junction (CCJ). This immediate elevation indicates a potential activation of the immune system following the chiropractic procedure.
2. **Temporal Nature of the Response:** While the increase in SIgA levels is temporary, it signifies the potential of chiropractic care to trigger a systemic immune response for a brief period after treatment.
3. **Longitudinal Investigation:** Unlike previous cross-sectional studies, this research takes a unique approach by investigating SIgA levels longitudinally in human subjects, offering new insights into the dynamics of the immune response over time.

Dr. Schalow said, "Our study opens a new chapter in understanding the intricate relationship between chiropractic care and the immune system. The immediate elevation of SIgA levels following UCAT procedures underscores the potential impact of these specific chiropractic procedures on immune responses. Our study opens a new chapter

in understanding the intricate relationship between chiropractic care, the immune system and mental health."

The Discussion section of the study said: "To our knowledge, this study is the first investigation to measure SIgA after UCAT treatment. Although human studies exploring SIgA levels have been completed in cross-sectional samples,^{9,22, 23, 24} this study is among the first to investigate SIgA samples longitudinally in human subjects.

"We measured an increase in mean SIgA 30 minutes after the first treatment, compared to both the initial sample and the sample taken after 2 weeks. However, there was no significant change between the initial and final samples, though the mean value after 2 weeks was lower than the initial value. Our findings are similar to those observed in individuals who received osteopathic manipulative therapy, who also showed a significant increase in SIgA after treatment.⁹ While our mean level of SIgA at baseline was nearly 3 times higher than in the osteopathic study—possibly due to that study's highly stressed participant population, who might have lower SIgA levels as a result of stress—our mean increase of 117.85 µg/mL (n = 40) was similar to their observed 139-mg/L (n = 12) increase.⁹ The osteopathic study also had a control group, which rested for 20 minutes instead of receiving osteopathic manipulative therapy, that showed a modest 35-mg/L (n = 13) increase in SIgA. We recommend using a similar control group in future research on the relationship between SIgA and chiropractic treatments. Our findings also showed no significant difference in the mean level of SIgA between men and women at any of the time points, similar to other studies.²⁵

"As SIgA is thought to be a marker for the status of not only the mucosal immune system²⁶ but also systemic immunity,² an increase in SIgA may indicate activation of the systemic immune system. Our findings suggest that after a UCAT treatment at the CCJ, a systemic immune response is activated for a short period.

"Mechanisms to explain our findings are not entirely clear. Chiropractic care may alleviate physiological stress in the body as well as self-perceived emotional stress,²⁷ which may contribute to these SIgA findings. Several studies have shown that SIgA is sensitive to physiological and emotional stress. For example, perceived stress, loneliness, and depressive symptoms have all been shown to decrease

various subclasses of SIgA in undergraduate students.²³ Emergency department nurses have reported higher stress levels and lower SIgA secretion than general ward nurses.²² Additionally, abbreviated progressive muscle relaxation has been shown to increase SIgA levels in undergraduate students.²⁴ The relationship between stress and SIgA secretion has been replicated in animal studies, where SIgA has been shown to decrease in both physiologically and psychologically stressed rodents.⁶ Future research could explore how loneliness, depressive symptoms, and emotional stress may contribute to SIgA responses in chiropractic patients by using outcome measures such as the Revised UCLA Loneliness Scale, the Beck Depression Inventory, and the Perceived Stress Scale, as well as investigating how these outcome measures may change throughout a course of chiropractic care.

“SIgA may be sensitive to neurological changes. Animal studies have shown that there is a link between the autonomic nervous system and SIgA levels. For example, SIgA has been shown to decrease when parasympathetic input is removed from the submandibular gland in rats.²⁸ It has also been shown in animal models to increase when stimulated by norepinephrine.³ While the relationship between the immune system and the sympathetic nervous system has been studied in depth,²⁹ further research is necessary to better understand the role the autonomic nervous system plays in SIgA secretion specifically, as well as the neuroimmunoendocrine effect of UCAT treatments at the CCJ. Heart-rate variability is a useful indicator of the autonomic nervous system and has been shown to change as the result of chiropractic spinal manipulation.^{10,12,30} Future research could investigate how heart-rate variability and SIgA levels change before and after chiropractic care.

“Lee proposed a thalamic neuron theory³¹ that may be a plausible explanation for our findings, which is that the immune system is modulated by the central nervous system. Lee proposed that the nervous system, immune system, and endocrine system have an inseparable relationship, and noted that boundaries between them are “both anatomically and molecularly blurred.”³¹ He proposed that the immune system could be considered a component of the central nervous system. Further research is necessary to explore the mechanisms behind our observations regarding SIgA secretion, as well as the relationship between UCAT treatments and immune function.

“We found improvement in both the PCS and MCS of the SF-12v2 from baseline to 2 weeks. While the SF-12v2 is more commonly used cross-sectionally in the chiropractic literature, our study examined how it changed longitudinally

in participants under chiropractic care. We recommend that future research continue to administer surveys past 2 weeks to investigate how physical and mental health scores may change over time, as measured by the SF-12v2.

“Our findings did not show a significant change in α -amylase during our 2-week study; however, we did observe that it was decreased at 2 weeks compared to the level observed after treatment. We recommend that future studies continue collecting samples past 2 weeks to see if this trend develops. We also did not observe a significant change in CRP throughout the study, because CRP levels remained fairly consistent at the 3 time points.”

The implications of this study resonate with both the chiropractic and medical communities, raising questions about the broader effects of chiropractic care on health and wellbeing. As SIgA levels reflect not only the mucosal immune system but also systemic immunity, the findings suggest that chiropractic care might have broader implications for immune modulation.

Chiropractic care’s influence on the nervous system is also explored in the study. The intricate connections between the nervous, immune, and endocrine systems have long been subjects of scientific inquiry and this research contributes by indicating a possible link between chiropractic adjustments and immune responses mediated by the central nervous system.

Project supervisor Dr. Julie Mayer-Hunt said, “We are just scratching the surface of understanding how chiropractic care may impact the immune system through neurological pathways. This study sparks further exploration into the complex mechanisms underlying these effects.”

The study acknowledges its limitations, such as the small sample size and the two-week follow-up period. However, it provides a foundation for future research in this exciting field. To read the entirety of the study, [click here](#).

This novel study underscores the dynamic nature of healthcare research, revealing new perspectives on the potential whole-body effects of chiropractic care. As the healthcare landscape continues to evolve, research efforts like this contribute to a deeper understanding of the body’s interconnected systems and the role chiropractic care might play in enhancing overall wellbeing.

Full study available at the *Journal of Chiropractic Medicine*, <https://doi.org/10.1016/j.jcm.2021.10.003>.



Chiropractic News

Foundation for Chiropractic Progress welcomes Online Chiro as Silver Corporate Sponsor

The Foundation for Chiropractic Progress (F4CP), a not-for-profit organization dedicated to educating the public about the value of chiropractic care, is excited to welcome Online Chiro, a website design and online marketing solutions company, as a new silver corporate sponsor.

"We are delighted to support the Foundation to work together to bring positive change to the chiropractic profession," says Tom Daniel, general manager, Online Chiro. "We look forward to a partnership that will offer successful and impactful collaboration."

Online Chiro is a leading website design & online marketing solutions company based in the suburbs of Chicago. Offering website design, search engine optimization, social media management and more, Online Chiro is a trusted and easy resource for doctors of chiropractic. They pride themselves in building strong online presences that attract more patients, save time and money and simplify your processes.

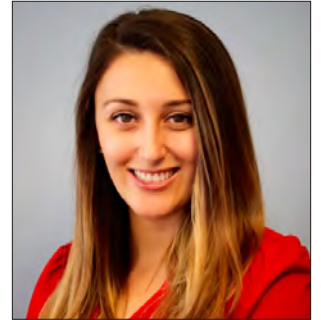
"We are honored to welcome Online Chiro as a valued sponsor of the Foundation," states Kent S. Greenawalt, chairman, F4CP. "As we head into the new year, we are grateful for the support of all contributors that will help us achieve our goals in 2024 for the greater good of the profession."

Online Chiro is a unique, affordable online marketing service for chiropractors, offering powerful websites, advertising, social media, reputation management, search engine solutions, telemedicine, and patient education. Unlike most digital marketing services, we have deep insight into the chiropractic industry, which allows us to seamlessly market practices and maximize our clients' success. To learn more, visit onlinechiro.com.

Women Chiropractors adds two new Board Members

Women Chiropractors is excited to welcome Alexis Lignos and Dr. Neema Moore to the Board. They are passionate and committed to the organization's mission to support, empower, and connect women who are chiropractors.

An architect of award-winning media campaigns, **Alexis Lignos** is a certified digital marketing professional with a passion for transforming ideas into impactful results. Alexis graduated from Montclair State University in 2012 with honors, having earned a Bachelor of Arts degree in Communication Studies with a concentration in Public Relations. After graduation, she pursued a career as a publicist specializing in healthcare, where she was responsible for securing earned media coverage in top-tier publications and navigating crisis communications. Alexis is currently the Marketing Director of the Foundation for Chiropractic Progress (F4CP), a nonprofit organization dedicated to building positive awareness regarding the benefits of chiropractic care. In her free time, Alexis enjoys spending time outdoors and with family.



Upon acceptance of her Board position, she shared "It is an honor to serve the Women Chiropractors' mission to advance the chiropractic profession and support the role of women in that advancement. The level of support, networking and knowledge-sharing WDC provides its members is a key benefit to all women seeking balance in their personal and professional lives. I look forward to elevating awareness of this growing community."

Dr. Neema Tillery Moore is originally from Bloomfield Hills, Michigan. She is passionate about supporting and empowering woman professionals and entrepreneurs to gain confidence, optimize their health, and walk in their greatness. She has degrees in Biology Secondary Education and a Doctor of Chiropractic from Palmer College of Chiropractic.



Having participated in a chiropractic mission trip to India, where she provided care to over 3,000 patients, reflects her passion for making a positive impact on a global scale. With over a decade of experience, she has owned and currently

manages two successful chiropractic practices in VA. Beyond her professional endeavors, Dr. Neema enjoys bringing women together for empowerment by hosting luxury retreats and workshops in wellness and personal development. She also balances being a wife to an entrepreneur and business owner and a mother to teenage twins.

Dr. Neema's achievements and dedication to uplifting women through various platforms make her an influential figure in her community and a source of inspiration for women looking to build confidence, wellness, and success in their lives, and an incredible asset to the Women Chiropractors' mission and Board.

ACA elects new leadership

The American Chiropractic Association (ACA) installed new leadership during its annual meeting in January in Washington, **Leo Bronston, DC, MAppSc**, of Onalaska, Wis., was elected president of the association, and **Marcus Nynas, DC**, of Billings, Mont., was re-elected vice president for the 2024-2025 term.

Dr. Bronston, who runs a private practice, has been a member of the ACA board since 2019. He is chair of the ACA Health Policy and Advocacy Committee and has been ACA's representative to the American Medical Association's CPT® Health Care Professionals Advisory Committee (HCPAC) for more than a decade. Dr. Bronston was also recently appointed to serve on AMA's CPT Editorial Panel.

Dr. Nynas, who is a staff chiropractor with the Montana Veterans Administration (VA), has been a member of the board since 2023. He previously served nine years as ACA's Montana delegate and has chaired several committees in areas such as payment policy and Medicare.

In other elections, members of the ACA House of Delegates selected **Kris Anderson, DC, MS**, of Grand Forks, N.D., and **Adrian Stratton, MBA, PRP, CP**, of New York, N.Y. to join the BoG.

Dr. Anderson, who works at a federally qualified community health center (FQHC) in addition to running a private practice, serves as vice chair of the ACA Health Policy and Advocacy Committee. He is also an advisor to the American Medical Association's RVS Update Committee (RUC) HCPAC.

Mr. Stratton is a general management executive and partner at GAACC, a global-focused management consultancy. He is a registered and certified parliamentarian and has published and lectured extensively on parliamentary topics.

Continuing terms on the BoG over the next year are **Eric Benson, DC, FIAMA, FICC**, of Grand Island, Neb., and **Maithy B. Ta, DC**, of Kansas City, Mo. Additionally, the board appointed Dr. Benson as chair of the ACA Finance and Investment Committee. Ending terms on the board are Michael Martin, DC, and Steven C. Roberts, JD, LLM.

Opioid alternative being tested

An experimental pain medicine met the primary goal of a late-stage clinical trial, the drug's maker said Tuesday, setting the stage for it to seek approval from the US Food and Drug Administration this year and potentially providing an alternative to opioids that doesn't carry the same safety risks. The medicine from Vertex Pharmaceuticals, dubbed VX-548, was superior to a placebo in relieving pain after two kinds of surgery: abdominoplasty – also known as a tummy tuck – and bunionectomy, with a similar safety profile, Vertex said in a news release. A smaller Phase 3 study of acute pain relief for a broader range of conditions also demonstrated the drug's safety and efficacy.

In a comparison with an opioid treatment – hydrocodone bitartrate/acetaminophen, the combination that makes up Vicodin – the drug failed to meet a goal of superior efficacy. But it showed similar relief to the opioid on a measure known as the Numeric Pain Rating Scale.

The results, combined with those from previous trials, suggest that VX-548 has “an unprecedented and compelling profile as an option for people who have acute pain,” said Vertex's research chief, Dr. David Altshuler. The company said it will submit an application for approval to the FDA by mid-2024.

If it's successful, it will represent the first new class of acute pain medicine in more than two decades, said Dr. Jessica Oswald, an associate physician in emergency medicine and pain medicine at the University of California San Diego and a member of Vertex's acute pain steering committee.

Highly contagious virus returns to America

Measles was eliminated in the United States in 2000, after zero virus spread for more than a year, largely due to a “highly effective vaccination campaign,” according to the US Centers for Disease Control and Prevention. However, clusters in the US are still possible because the virus is not eliminated worldwide. There are several countries with active outbreaks.

Continued on next page

Chiropractic News

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Nearly two dozen cases of measles have been reported since December 1, according to an alert from the US Centers for Disease Control and Prevention. International travel, coupled with declining global vaccination rates, is probably behind this spate of cases, experts say. The Philadelphia Department of Public Health has confirmed at least nine cases of measles over the past month after a person contracted the highly contagious virus outside the United States and exposed a parent and child at a children's hospital, according to health department spokesperson James Garrow. That exposure then led to a Philadelphia day care outbreak that includes at least five children.

Lower MMR vaccination rates can put unvaccinated and undervaccinated individuals at risk, especially children and those with immune system problems. Measles can lead to serious complications, especially in children under 2, such as blindness, encephalitis or inflammation of the brain, and severe pneumonia.

A rare complication called subacute sclerosing panencephalitis can also happen seven to 10 years after infection and may result in seizures as well as behavioral and mental deterioration. Additionally, someone who doesn't get the MMR vaccine is at risk of contracting mumps and rubella, which are rare but still in circulation in the US due to international travel.

ACA Presents 2024 Annual Awards

The American Chiropractic Association (ACA) presented its 2024 Annual Awards on Jan. 26 during its annual meeting in Washington, D.C. The awards recognize chiropractors and other individuals for their exceptional service, achievement and/or leadership within the chiropractic profession.

Quinn James, DC, of St. Peters, Mo., received ACA's highest honor, the Chiropractor of the Year Award, honoring his advocacy on behalf of the chiropractic profession and the patients it serves. As ACA's Missouri delegate and a member of the ACA Legislative Committee and ACA-PAC Board, Dr. James stands out for his ability to rally support for pro-chiropractic legislation on the federal and state level. In addition, he shares the effective strategies he has learned with other volunteer advocates and chiropractic students,

and he encourages his colleagues everywhere to speak up for their profession.

Mark Bronson, DC, DIANM, of Fort Worth, Texas, received the Humanitarian of the Year Award, honoring his work to advance the chiropractic profession through excellence and collaboration. He is currently both chief examiner of the National Board of Chiropractic Examiners and president of the Texas Board of Chiropractic Examiners. He also works with the Texas Department of Insurance, evaluating on-the-job injuries and working to settle disputes within the system. Dr. Bronson is a past recipient of the Texas Chiropractic Association's Doctor of the Year Award.

Eric Roseen, DC, MSc, PhD(c), of Boston, Mass., received the George B. McClelland Researcher of the Year Award, recognizing an individual for developing, refining and/or expanding the body of knowledge in chiropractic. In addition to his practice, Dr. Roseen is an assistant professor of family medicine at the Boston University School of Medicine/Boston Medical Center, where he also directs the Program for Integrative Medicine and Health Disparities. His research includes a focus on the implementation of non-pharmacologic treatments for musculoskeletal pain in underserved communities.

William Lauretti, DC, of Seneca Falls, N.Y., received the Academician of the Year Award. Dr. Lauretti is a respected professor in the Department of Clinical Sciences at Northeast College of Health Sciences in Seneca Falls, where he leads a course on chiropractic technique. He has also developed courses on coding, documentation, patient education, and practice management and the law.

Quinn James, DC, of St. Peters, Mo., and **Alli Totzke-Hitzeroth, DC**, of Montpelier, Va., received the Delegate and Alternate Delegate of the Year Awards, respectively. Both awards recognize members of the ACA House of Delegates who have demonstrated exceptional service, achievement and/or leadership.

Caitlin Walter, DC, of Great Falls, Mont., received the Flynn-Lynch Award, which recognizes an outstanding member with no more than five years of experience serving in the House of Delegates.

First doctor of chiropractic joins AMA Panel

Leo Bronston, DC, MAppSc, of Onalaska, Wis., has been appointed by the American Medical Association (AMA) Board of Trustees to serve on the Current Procedural Terminology (CPT®) Editorial Panel. Dr. Bronston will be the first doctor of chiropractic to join the Panel.



The CPT Editorial Panel maintains the CPT code set, which is widely used across the healthcare industry to report procedures and services and to process claims. The panel is composed of 21 members, including representatives of 12 medical specialties and individuals representing groups such as the Blue Cross Blue Shield Association, America's Health Insurance Plans, the American Hospital Association, and

private health insurance plans. Dr. Bronston was appointed to serve as one of two representatives from the CPT Health Care Professionals Advisory Committee (HCPAC).

"Dr. Bronston's appointment is a great honor and a testament to his many years of work and dedication to coding-related issues. It is also a proud and historic moment for the chiropractic profession to achieve representation on the CPT Editorial Panel," noted ACA President Michael Martin, DC.

Dr. Bronston is a long-standing, highly respected member of ACA, serving the association and the chiropractic profession for more than 40 years in a variety of leadership roles. He has been a member of ACA's Board of Governors since 2019 and has distinguished himself for his work in the areas of coding and reimbursement and healthcare quality. In addition to serving as ACA's representative to HCPAC for more than a decade, he is chair of the ACA Health Policy and Advocacy Committee.

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Chiropractic College News

D'Youville University adopts Okanagan Charter

As the first university in Western New York to be recognized as a Health Promoting University, D'Youville University has joined an elite group of just 22 institutions nationwide who have adopted the [Okanagan Charter](#). The University will host a formal signing of the charter on February 27, 2024 at an annual wellness fair which takes place in the Health Professions HUB, showcasing both institutional and community partners who work daily to enhance the holistic wellness of students, faculty, and staff.

"Our membership in the United States Health Promoting Campuses Network (USHPCN) further demonstrates our institution's commitment to a holistic view of health and well-being" said President Lorrie Clemo, PhD. "The transformational health sciences experience we offer expands beyond the classroom and into the personal lives of all our community members, promoting a better future for everyone."

The Okanagan Charter is a call to action for post-secondary institutions to embed health and well-being into all aspects of campus culture, including policies, programs, and services. It recognizes that health is a fundamental driver of academic success, and that healthy and sustainable campuses are critical for the well-being of individuals, communities, and the planet. As part of D'Youville University's commitment to the Okanagan Charter, community members will be working to enhance the culture that already exists supporting and promoting the physical, mental, social, and environmental well-being of our community members. This will include a range of activities and programs that focus on healthy eating, physical activity, mental health, and sustainability.

"D'Youville University is proud to join the global movement toward health and well-being" said Paige Schultze, D'Youville University Mental Health Counselor. "The charge of the Wellness Lodge is to recognize all the dimensions of wellness, incorporate these dimensions into the lives of our students, and to instill the mindset that wellness should be a daily routine."

The Wellness Lodge at D'Youville University offers students access to mental health counselors, crisis service advocates, massages, yoga, meditation, and educational programming

surrounding the various dimensions of wellness. Additionally, through a partnership with TimelyCare, students have 24/7 access to licensed mental health counselors and health coaches ensuring that personal care does not end after traditional business hours.

"Before someone is a student, they're a person with needs. Which is why health and well-being is a driving factor behind how we serve our students," continued Clemo. "We do not consider the Okanagan Charter to be a capstone to these efforts but rather a step in our continued push to a healthier tomorrow."

Parker Seminars returns to Las Vegas February 22 - 24, 2024

Parker Seminars, the largest chiropractic event in the world, is making a grand return to Las Vegas, but with a fresh twist! Parker is excited to announce that the upcoming Las Vegas event will be hosted at the brand-new Caesars Forum Event Center. Caesars Forum Event Center is connected directly to Harrah's Las Vegas through the FORUM sky bridge and the LINQ Monorail Station.

Join chiropractors and healthcare professionals from all corners of the globe as they converge in Las Vegas to gain insights from the front-runners in chiropractic and healthcare. We're thrilled to present a lineup of over 30 outstanding speakers, featuring renowned keynote addresses by David Goggins, Mayim Bialik, Ryan Holiday, Simon Sinek, Patrick Bet-David, and our very own William E. Morgan.

[Click here](#) for more information.



Northeast College receives Project/Initiative of the Year Award

Northeast College of Health Sciences received the Project/Initiative of the Year Award for its establishment of new undergraduate programs at the Seneca County Chamber of Commerce 2024 Annual Dinner and Community Awards presentation on Jan. 18, 2024.

Since relocating to Seneca Falls in 1991 from its Long Island location, Northeast College has been dedicated to building connections within the community and working together to support and strengthen the area's history of providing strong leadership and paving the way for progress and opportunity.

Most recently, Northeast College added in-demand academic programs to prepare even more healthcare leaders with its new undergraduate degrees, launching in Fall 2024: an AAS in radiologic technology, an AAS in diagnostic medical Sonography, and a B.S. in health care administration, along with the continued development of our Physician's Assistant program. These new programs are in addition to the College's certificate in Massage Therapy, also beginning Fall 2024, and its existing and well-respected flagship Doctor of Chiropractic program and online master's degree programs in applied clinical nutrition and human anatomy and physiology instruction.

Logan University Symposium 2024

Logan University is looking forward to welcoming chiropractors and health science professionals to the [2024 Symposium](#) at St. Louis Union Station. The event is taking place on Friday, April 12 and Saturday, April 13 and will provide continuing education opportunities, chiropractic seminars, networking events and more.



This year, some changes were made to the event to increase engagement and learning opportunities. One new addition to this year's Symposium is ***Bring your Chiropractic Office Staff Day*** on Friday. Chiropractors, chiropractic assistants, office managers, receptionists, billing specialists and administrative staff are encouraged to join. Led by Kathy Weidner (Mills-Chang), MCS-P, CPCO, CCPC, CCCA, this comprehensive training will teach you and your team how to master best practices to propel your practice to greater prosperity and stability. This session will empower your staff to drive increased financial success, exceptional patient care, increased engagement and motivation. Registration for the 8-hour program is \$99, and all who attend are welcome to join the Loomis Mix & Mingle (6:30 – 8:00 pm) directly after for food and refreshments.

"From the doctor to the front desk to the billing department, every team member plays a vital role in ensuring financial success, while following important regulatory guidance," said Amber Henry, EdD, Logan's Director of Continuing Education.

[Learn more](#) about ***Bring your Chiropractic Office Staff Day***.

In addition, the Symposium will feature 36 breakout session options. These breakout sessions are highly beneficial for attendees as they enhance the overall learning experience and cater to diverse interests and expertise levels. Breakout sessions provide a platform for in-depth exploration of specific topics, allowing participants to delve deeper into subjects that align with their individual preferences and professional needs. This personalized approach allows a more engaging and interactive environment, encouraging active participation and meaningful discussions among attendees. In addition, technique refresher and overviews will be offered throughout the event, taught by specialists of each technique.

[View the 2024 Symposium schedule](#) (PDF) to see all breakout session options.

This year's Symposium offers 19 total hours of continuing education (CE) courses. There are 15 in-person CE hour opportunities offered at the Symposium and four additional CE hour opportunities offered online to be taken after the event. Additionally, the online courses encourage ongoing learning beyond the event itself, allowing attendees to revisit materials, discuss with individuals they met at the event and reinforce their understanding at their own pace.

[Registration for the 2024 Symposium](#) is available online.

IACP Marketplace

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Walking now said to be “the closest thing we have to a wonder drug”

Getting exercise through walking is as easy as lacing up your sneakers and hitting the pavement or trail. Doing so is a safe way to get a workout without needing a gym, and it can boost your mental and physical health in several important ways. “Walking is the most studied form of exercise, and multiple studies have proven that it’s the best thing we can do to improve our overall health, and increase our longevity and functional years,” says Robert Sallis, MD, a family physician and sports medicine doctor with Kaiser Permanente. It’s never too late to reap the benefits of walking: A small 2013 study in the journal *Maturitas* found that seniors with an average age of 80 who walked just four times a week were much less likely to die over the study’s 10-year follow-up period than those who walked less. The many benefits of regularly walking include:

- 1. Lower body mass index (BMI):** A study from the University of Warwick in Coventry, England, published in 2017 in the *International Journal of Obesity* confirms that those who walk more and sit less have lower BMIs, which is one indicator of obesity. In the study, those who took 15,000 or more steps per day tended to have BMIs in the normal, healthy range.
- 2. Lower blood pressure and cholesterol:** The National Walkers’ Health study found that regular walking was linked to a 7 percent reduced risk of high blood pressure and high cholesterol.
- 3. Lower fasting blood sugar (glucose):** Higher blood glucose levels are a risk factor for diabetes, and the National Walkers’ Health Study also found that walkers had a 12 percent lower risk of type 2 diabetes.
- 4. Better memory and cognitive function:** A 2021 study published in the *Journal of Alzheimer’s Disease* found that when adults 55 or older with mild cognitive impairment were assigned to either stretching and toning exercises or to aerobic training—mostly walking—both groups showed some improvement on cognitive tests. But when compared with the stretching and toning group, the group that walked for fitness improved aerobic fitness more, had decreased stiffness in neck arteries, and showed increased blood flow to the brain in ways that researchers think could provide more cognitive benefits in the long term. A clinical trial of older adults in Japan published in the *Journal of the American Geriatrics Society* in 2015 found that after 12 weeks, men and women in a prescribed daily walking exercise group had significantly greater improvements in memory and executive function (the ability to pay focused attention, to switch among various tasks, and to hold multiple items in working memory) compared with those in a control group who were told just to carry on with their usual daily routine. And a study of 299 adults, published in the journal *Neurology* in 2010, found that walking was associated with a greater volume of gray matter in the brain, a measure of brain health.
- 5. Lower stress and improved mood:** Like other types of aerobic exercise, walking—especially out in nature—stimulates the production of neurotransmitters in the brain (such as endorphins) that help improve your mental state.
- 6. Longer life:** In a review of studies published in 2014 in the *International Journal of Behavioral Nutrition and Physical Activity*, researchers found that walking for roughly 3 hours a week was associated with an 11 percent reduced risk of premature death compared with those who did little or no activity.



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The Idaho Association of Chiropractic Physicians

The IACP News

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One Third (H)	8" wide by 3 1/8" tall	\$190	\$174	\$159	\$140
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