INTERESTING FACTS TO KNOW ABOUT CHIROPRACTIC.

I would like to share with you some of the facts about this wonderful profession. It is important to have a wider understanding of chiropractic, what it has gone through, what scientific contributions it has made, what research its members have conducted, what observations have been made, and its standing in health care.

It is notable that some members of other professions have now begun to adopt chiropractic concepts and techniques in tacit recognition of its potential and the positive outcomes that have been noted. In addition, extracts cited here are a partial demonstration of some of the neurophysiology principles upon which chiropractic is based.

DOES THE WORLD HEALTH ORGANISATION RECOGNISE THE SUBLUXATION?

The World Health Organisation's International Classification of Disease (ICD 10), classifies the "Subluxation complex (vertebral)" as Item M 99.1.
M99.0 is listed as "Segmental and somatic dysfunction
M99.1 is listed as "Subluxation complex (vertebral)
M99.8 is listed as "Other biomechanical lesions, and
ICD-10. World Health Organisation.
http://www.who.int/classifations/apps/icd/icd10online/

WHAT OTHER EVIDENCE IS THERE WHICH SUPPORTS THE SUBLUXATION CONCEPT?

Gray's Anatomy stated in reference to the sacroiliac joint that "locking may occur…" and that "This so-called subluxation of the sacro-iliac joint causes pain" and that "reduction by forcible manipulation may be attempted."

Williams PL, Warwick R. Gray's Anatomy 36th Edn. New York: Churchill Livingstone; 1980;477.

Leach RA. The chiropractic theories, principles and clinical applications. 3rd edn. Baltimore: Williams & Wilkins. 1994.

Gatterman MI. Foundations of chiropractic subluxation.. 2nd ed. St. Louis, Miss. Elsevier Mosby; 2005.

Rome PL. A basis for the theory of a central chiropractic principle – the vertebral subluxation. Chiropr J Aust. 2013;43 (1):2-13.

Warbasse JP. Subluxation of vertebrae. In :Surgical treatment. a practical treatise on the therapy of surgical diseases for the use of practitioners and students of surgery. Vol 1. WB Saunders Co, Phil. 1918:623.

Maigne R. The concept of painful minor intervertebral dysfunction. www.sofmmoo.com/english_section/divers/dim.pdf

ARE THERE OTHER NAMES FOR THE SUBLUXATION?

Rome PL. Usage of chiropractic terminology in the literature: 296 ways to say subluxation: complex issues of the vertebral subluxation. Chiropr Tech 1996;8 (2):49-60.

DOES THE WORLD HEALTH ORGANISATION RECOGNISE CHIROPRACTIC?

The World Federation of Chiropractic was admitted into official relations with the World Health Organization (WHO) as a non-governmental organization or NGO in January 1997. It

maintains an active program of work with WHO, which includes support for WHO policies and programs, advice on matters relative to the chiropractic profession, and attendance at annual and other meetings.
World Federation of Chiropractic.
https://www.wfc.org/website/index.php?option=com_content&view=article&id=110&Itemid=107&lang=en
W.H.O. guidelines on basic training and safety in chiropractic.
http://www.who.int/medicines/areas/traditional/Chiro-Guidelines.pdf

WHAT FAMOUS PEOPLE HAVE ATTENDED CHIROPRACTORS (Documented)?
Princess Dianna
The Queen Mother
Duke of Winsor
King George V
Chiang Kai Shek
Harry S Truman
Mahatma Ghandi
Eleanor Roosevelt
John D Rockefeller
Thomas A Edison
Rome PL. Prominent patients in royalty, politics, medicine and Industry. Chiro Hist. 2016;36 (1)87-98.

DO MEDICAL DOCTORS IN EUROPE MANIPULATE INFANTS?
Biedermann H. [The manual therapy of newborn infants and young children]. Vopr Kurortol Fizioter Lech Fiz Kult. 1995;4:48-49
Sasher R. Birth trauma and its implications for neuromotor development. In: Biedermann H.8 p.85-98.

DO MEDICAL DOCTORS IN EUROPE MANIPULATE PAEDIATRIC PATIENTS?
In relation to paediatric care, Biedermann states "Where I work (Germany, Belgium, Switzerland) I do not deem it necessary to let the parents sign a written [consent] form. All parents receive a folder explaining the procedure and the eventual reactions of the children. To our knowledge there are no serious side effects to manual therapy in children (MTC) if the guidelines laid down here are followed. Our archives comprise more than 25 000 children treated in our practice (as of July 2003) and another group at least as big as this one treated by colleagues who follow the same procedure."
Biedermann H, Manual therapy in children. Edinburgh, Churchill Livingstone. 2004:238.

An example of medical manipulation of infants is in Lewit's text which states:-
"The most striking phenomenon found especially frequently in children and adolescents is pelvic distortion which is dealt with in later chapters. I found it in 11 of 80 children (14-41 months old) examined in crèches, in 81 out of 181 children (aged 3-6 years) in nursery school and in 199 out of 459 school children between the ages of 9 and 15...From nursery school age onwards, pelvic distortion is found in about one-third to one-half of children.....pelvic distortion in children goes hand in hand with blockage, mainly at the atlanto-occipital joint, and also that after manipulation of this joint, pelvic distortion disappears. In 1982, I therefore examined a group of 75 nursery-school children (aged 3-6 years) and found pelvic distortion in 24, of whom

23 had movement restriction at the atlanto-occipital joint! In 12 of these manipulation was carried out (atlas-occiput); the pelvic distortion disappeared simultaneously.3 (p 23-24)

Lewit K. Manipulative therapy in rehabilitation of the locomotor system. 3rd ed. Oxford Butterworth Heinemann. 1999:21-22,281-288

There is a well-established precedent by medical doctors, particularly in Europe, of managing infant, paediatric and other patients for so-called organic conditions by spinal manipulation….This seems contradictory if not hypocritical when there is noted evidence in the medical literature itself of not only the rationale supporting these concepts, but evidence of medical doctors carrying out the same procedures for the same purpose on the same condition.

Rome PL. Medical management of paediatric and non-musculoskeletal conditions by spinal manipulation. Chiropr J Aust. 2013;43:131-138.

DO MEDICAL DOCTORS IN EUROPE MANIPULATE PAEDIATRIC PATIENTS WHO HAVE CONDITIONS SUCH AS:-

Attention Deficit disorder. – Theiler R. In:Biederman pp133-144

Asthma Biedermann Mohr H, Biedermann H. In: Biedermann pp190-195.

Colic In: Biedermann, pp295-297.

Lewit K. Manipulative therapy in rehabilitation of the locomotor system. 3Rd ed. Oxford Butterworth Heinemann. 1999:281-288.

Maigne R. Orthopaedic medicine. A new approach to vertebral manipulations. Springfield, Charles C Thomas. 1972:164.

Biedermann H, Manual therapy in children. Edinburgh, Churchill Livingstone. 2004.

Rome PL. Medical management of paediatric and non-musculoskeletal conditions by spinal manipulation. Chiropr J Aust. 2013;43:131-138.

IS THERE EVIDENCE THAT EURPOPEAN MEDICAL DOCTORS HAVE PUBLISHED SPINAL MANIPULATIVE MANAGEMENT OF CERTAIN NON-MUSCULOSKELETAL CONDITIONS – SO-CALLED ORGAN DISORDERS?

Fedin AI, Kakorin SV, Gaikin AV, et al. Impact of manual therapy methods on blood pressure in patients with essential hypertension and cervical osteochondrosis. Kardiologiya, 1991; 31(10): 56-59.

Davydov OV. Spinal syndrome of abdominal pain pathogenesis and treatment. Klin Med, 1991; 69: 90-91.

Svatko LG, Ivanichev GA, Sobol IL. Manual treatment of impaired hearing associated with cervical spine pathology. Vestn Otolaringol, 1987; 2: 28-31.

Likhachev SA, Borisenko AV. [Manual therapy in the combined treatment of patients with vertebral vestibular dysfunction].Vrach Delo. 1991 Jun; (6):20-4.

Samorukov AE, Riazantsev AK. [The combined treatment using manual therapy and balneotherapy of patients with neurological manifestations of lumbar osteochondrosis].Vopr Kurortol Fizioter Lech Fiz Kult. 1990 Jan-Feb;(1):27-29.

Garber IM, Chetverikova NE, Kaluzhskaia LT, Tarasova SM, Barabash LA. [A combined method for treating the neurological manifestations of lumbar osteochondrosis with a low-frequency magnetic field and the vacuum phonophoresis of hydrocortisone and trilon B].Vopr Kurortol Fizioter Lech Fiz Kult. 1990 Mar-Apr; (2):61-62.

Likhachev SA, Borisenko AV. [The dynamics of vertebrogenic vestibular dysfunction under the influence of manual therapy].Lik Sprava. 1994 Jul-Aug; (7-8):84-88.

Drobinskiĭ AD, Serga VV. [Value of manual therapy in the complex treatment of patients with neurologic manifestations of cervical osteochondrosis]. Zh Nevropatol Psikhiatr Im S S Korsakova. 1987;87 (4):533-536.
Krag E. Other causes of dyspepsia - especially abdominal pain of spinal origin. Scand J Gastroenterol Suppl 1982;79:32-37.

DO ANY CHIROPRACTORS PUBLISH REFEREED RESEARCH PAPERS IN MEDICAL JOURNALS?

Haavik-Taylor H, Murphy B. Cervical spine manipulation alters sensorimotor integration: A somatosensory evoked potential study. Clin Neurophysiol 2007;118 (2):391-402.
Bolton P, Budgell B, Kimpton A. Influence of innocuous cervical vertebral movement on the efferent innervation of the adrenal gland in the rat. Auton Neurosci 2006;30;124(1-2):103-111.
Bolton PS, Budgell BS. Spinal manipulation and spinal mobilization influence different axial sensory beds. Med Hypotheses 2006:66(2):258-262.
Giles LFG. Review of tethered cord syndrome with a radiological and anatomical study: Case report. Surg Radiol Anat 1991;13 (4):339-343.

DO MEDICAL DOCTORS PUBLISH PAPERS IN CHIROPRACTIC JOURNALS?

Bogduk N. The anatomical basis for cervicogenic headache. J Manipulative Physiol Ther 1992;15 (1):67-70.

ARE THERE CHIROPRACTORS HOLDING HOSPITAL POSITIONS?

Till AG, Till H. Integration of chiropractic education into a hospital setting. J Manipulative Physiol Ther. 2000;23 (2):130-133.
Rome PL. Chiropractic hospital appointments in Australia – an international comparison. Chiro J Aust. 2016;44 (2):142-163.

IS THERE COLLABORATIVE RESEARCH BETWEEN MEDICAL DOCTORS AND CHIROPRACTORS?

Michaelsen MR. Manipulation under joint anaesthesia/analgesia: a proposed interdisciplinary treatment approach for recalcitrant spinal axis pain of synovial joint origin. J Manipulative Physiol ther. 2000;23 (2):127-129.
Budgell B, Sato A. Modulations of autonomic functions by somatic nociceptive inputs. Progress in Brain Research 1996;113:525-539.

DO CHIROPRACTIC RESEARCHERS STUDY THE EFFECT OF SPINAL ADJUSTMENTS ON THE NERVOUS SYSTEM?

Bolton PS. The somatosensory system of the neck and its effects on the central nervous system. J Manipulative Physiol Ther 1998;21 (8):553-63.
Haavik-Taylor, Murphy B. Transient modulation of intracortical inhibition following spinal manipulation. Chiropr J Aust 2007;37 (3):106-116.
Leung, S. The value of cineradiographic motion studies in the diagnosis of dysfunctions of the cervical spine. Bull Eur Chiro Union 1977; 25(2):28-43.

Niazi IK, Turker KS, Flavel S, Kinget M, Duehr J, Haavik H. Changes in H‐reflex and V‐waves following spinal manipulation. Exp Brain Res. 2015, Jan 13. DOI 10.1007/s00221-014-4193-5

Pickar JG, Bolton PS. Spinal manipulative therapy and somatosensory activation. J Electromyogr Kinesiol. 2012;22 (5):785-94. doi: 10.1016/j.jelekin.2012.01.015. Epub 2012 Feb 19.

Pickar JG, Wheeler JD. Response of muscle proprioceptors to spinal manipulative-like loads in the anesthetized cat. J Manipulative Physiol Ther. 2001 Jan;24(1):2-11.

Pickar JG. Neurophysiological effects of spinal manipulation. Spine J. 2002;2(5):357-71.

Sung PS, Kang YM, Pickar JG. Effect of spinal manipulation duration on low threshold mechanoreceptors in lumbar paraspinal muscles: a preliminary report. Spine (Phila Pa 1976). 2005 Jan 1;30 (1):115-22.

IS THERE EVIDENCE THAT CONDITIONS OTHER THAN LOWER BACK AND NECK PAIN MAY RESPOND TO CHIROPRACTIC CARE?

"Spinal manipulative therapy can affect the resting status of somatic structures via mechanical and neurological (somato-somato reflex) mechanisms, and this change can cause change to the afferent arm of the somato-visceral reflex. It is likely that supraspinal influences play a major role in this."

Pollard H. The somatovisceral reflex: How important for the type "O" condition? Chiropr J Aust 2004;34 (3):93-102.

There is a well-established precedent by medical doctors, particularly in Europe, of managing infant, paediatric and other patients for so-called organic conditions by spinal manipulation….This seems contradictory if not hypocritical when there is noted evidence in the medical literature itself of not only the rationale supporting these concepts, but evidence of medical doctors carrying out the same procedures for the same purpose on the same condition.

Rome PL. Medical management of paediatric and non-musculoskeletal conditions by spinal manipulation. Chiropr J Aust. 2013;43:131-138.

This present study examined the effects of cervical spinal manipulation…. the authentic manipulation produced significant alterations in both heart rate and measures of heart-rate variability calculated from power spectrum analysis. In particular, there was an increase in the ratio of low-frequency (LF)-to-high-frequency (HF) components of the power spectrum of heart-rate variability, which may reflect a shift in balance between sympathetic and parasympathetic output to the heart.

Budgell B, Hirano F. Innocuous mechanical stimulation of the neck and alterations in heart-rate variability in healthy young adults. Autonomic Neurosci: Basic & Clinical, 2001;91:96-99.

In summary, we found that diastolic pressure dropped significantly post-adjustment among those receiving cervical adjustments, which was accompanied by a moderate (0.50) clinical effect (ES), and that pulse pressure (systolic − diastolic) increased significantly among those receiving cervical adjustments, accompanied by a large ES (0.82). …The converse relationship was observed in the group receiving thoracic adjustments. This study could have the benefit of leading to a better understanding of the effects of chiropractic adjustments and autonomic responses regarding organ dysfunctions in general.

Welch A, Boone R. Sympathetic and parasympathetic responses to specific diversified adjustments to chiropractic vertebral subluxations of the cervical spine. J Chiropr Med. 2008'7(3):86-93.

"In contrast to the impressive body of knowledge concerning the effects of visceral afferent activity on autonomic functions, there is, generally speaking, much less information available on the reflex regulation of visceral organs by somatic afferent activity from skin, the skeletal muscle and their tendons, and from joints and other deep tissues.

RF.Sato A, Sato Y, Schmidt RF. The impact of somatosensory input on autonomic functions. In: Reviews of Physiology Biochemistry and Pharmacology. Blaustein MP, Grunicke H, Pette D, Schults G, et al. eds. Berlin Springer-Verlag 1997;130.

"The elucidation of the neural mechanisms of somatically induced autonomic functions, usually called somato-autonomic reflexes, is essential to develop a truly scientific understanding of the mechanisms underlying most forms of physical therapy, including spinal manipulation and traditional as well as more modern forms of acupuncture and moxibustion." Kimura A, Sato A. Somatic regulation of autonomic functions in anesthetized animals – neural mechanisms of physical therapy including acupuncture. Jpn J Vet Res 1997;45(3):137-145.

"Spinal manipulative therapy can affect the resting status of somatic structures via mechanical and neurological (somato-somatic reflex) mechanisms, and this can cause a change to the afferent arm of the somato-visceral reflex. It is likely that supraspinal influences play a major role in this effect (and further) such changes can occur by the direct action of a somatovisceral effect at the segmental level." Pollard H. The somatovisceral reflex: How important for the type "O" condition? Chiropr J Aust 2004;34 (3):93-102.

Rome PL, McKibbin MR. Towards defining unclassified symptoms: eclectic conditions presenting in two chiropractic clinics. Chiropr J Aust. 2011;41 (3):83-94.

Rome PL. Anterior T6 subluxation syndrome: neurospinal dysfunction within a vertebral subluxation complex. Chiropr J Aust. 2000;30 (4):127-137. (Dyspepsia).

WHAT PAPERS DISCUSS THE ASSOCIATION OF CHIROPRACTIC CARE WITH THE NERVOUS SYSTEM?

Rome PL. Neurovertebral influence upon the autonomic nervous system: some of the somato-autonomic evidence to date. Chiropr J Aust. 2009;39(1):2-17.

Rome PL. Neurovertebral influence on visceral and ANS function: Some of the Somatovisceral Evidence To Date - Part II Somatovisceral. Chiropr J Aust. 2010;40 (1):9-33.

CAN ANIMALS RESPOND TO CHIROPRACTIC CARE?

Rome PL McKibbin MR. A review of chiropractic veterinary science – an emerging profession with somatic and somatovisceral anecdotal histories.

Rome PL. Animal chiropractic neutralises the claim of placebo effect of spinal manipulation: historical perspective. Chiropr J Aust. 2012;43 (1):15-20.

Rosner A. Neural responses to external forces in animal models. Dynamic Chiropr. 2015;33 (17). http://www.dynamicchiropractic.com/mpacms/dc/article.php?id=57469&no_paginate=true&p_friendly=true&no_b=true

HAS THERE BEEN LABORATORY RESEARCH ON ANIMAL SUBJECTS FOR CHIROPRACTIC.

"Animal research on visceral dysfunction, neural disturbance and the vertebral subluxation." Table 5.
The osteopath Louisa Burns also produced extensive rabbit research in 'Pathogenesis in visceral disease following vertebral lesions'. It is a fantastic study but quite old - 1948.

Likewise, Cleveland CS. Researching the subluxation of the domestic rabbit. Science Review of Chiropractic. Aug 1965;L (4):5-28

Rome PL. Neurovertebral influence upon the autonomic nervous system: some of the somato-autonomic evidence to date. Chiropr J Aust. 2009;39 (1):2-17.(Table 5)

CAN HEADACHES SOMETIMES ARISE FROM THE NECK?

Professor Stuart Butler reported that "more than 90 percent of recurring headaches can be traced to a mechanical derangement of the cervical or neck portion of the spine produced by injury."

Prof S Butler. "Headaches a real pain-in-the-neck." Sydney Telegraph. 27.8.1970. pp27. (Reporting findings by Braaf MM, Rosner.S. Headache following neck injuries. Headache. 1962; Oct 2:153-159.

Becker WJ. Cervicogenic headache: evidence that the neck is a pain generator. Headache. 2010;50 (4):699-705.

Vincent MB. Headache and neck. Current Pain Headache Rep. 2011;15 (4):324-331.

Castien RF1, van der Windt DA, Grooten A, Dekker J. Effectiveness of manual therapy for chronic tension-type headache: a pragmatic, randomised, clinical trial. Cephalalgia. 2011 Jan;31(2):133-43. doi: 10.1177/0333102410377362. Epub 2010 Jul 20.

WHAT EVIDENCE IS THERE AS TO THE EFFICACY OF CHIROPRACTIC IN LOWER BACK PAIN?

A broad-based panel of experienced chiropractors was able to reach a high level (80%) of consensus regarding specific aspects of the chiropractic approach to care for patients with low back pain, based on both the scientific evidence and their clinical experience.

Globe GA1, Morris CE, Whalen WM, Farabaugh RJ, Hawk C; Council on Chiropractic Guidelines and Practice Parameter. J Manipulative Physiol Ther. 2008 Nov-Dec;31(9):651-8. doi: 10.1016/j.jmpt.2008.10.006.

Six to eight sessions of upper cervical and upper thoracic manipulation were shown to be more effective than mobilization and exercise in patients with CH, and the effects were maintained at 3 months.

Dunning JR, Butts, R, Mourad F, et al. Upper cervical and upper thoracic manipulation versus mobilization and exercise in patients with cervicogenic headache: a multi-center randomized clinical trial. BMC Musculoskelet Disord. 2016 Feb 6;17:64. doi: 10.1186/s12891-016-0912-3. http://bmcmusculoskeletdisord.biomedcentral.com/articles/10.1186/s12891-016-0912-3

Manipulation with "cracking" works better.
Neurophysiologic effects of spinal manipulation in patients with chronic low back pain.
Conclusion
These findings suggest that a single SM treatment does not systematically alter corticospinal or stretch reflex excitability of the erector spinae muscles (when assessed ~ 10-minutes following SM); however, they do indicate that the stretch reflex is attenuated when SM causes an audible

response. This finding provides insight into the mechanisms of SM, and suggests that SM that produces an audible response may mechanistically act to decrease the sensitivity of the muscle spindles and/or the various segmental sites of the Ia reflex pathway.

Clark BC, Goss DA, Walkowski S, et al.Neurophysiologic effects of spinal manipulation in patients with chronic low back pain. BMC Musculoskelatal Disorders. 2011;12:170. DOI: 10.1186/1471-2474-12-170. http://www.biomedcentral.com/1471-2474/12/170/abstract Free Download

IS CHIROPRACTIC CARE COST EFFECTIVE?

Effectiveness and costs of chiropractic or physiotherapy as primary treatment were similar for the total population, but some differences were seen according to subgroups. Back problems often recurred, and additional health care was common. Implications of the result are that treatment policy and clinical decision models must consider subgroups and that the problem often is recurrent. Models must be implemented and tested.

Skargren EI1, Carlsson PG, Oberg BE. One-year follow-up comparison of the cost and effectiveness of chiropractic and physiotherapy as primary management for back pain. Subgroup analysis, recurrence, and additional health care utilization. Spine (Phila Pa 1976). 1998 Sep 1;23 (17):1875-83;

This study of an MCO's low back pain allowed costs may be better redirected to primary care or chiropractic, given equivalent levels of case complexity. This study suggests chiropractic management as less expensive compared with medical management of back pain when care extends beyond primary care. Primary care management alone is virtually indistinguishable from chiropractic management in terms of costs.

Grieves B1, Menke JM, Pursel KJ. Cost minimization analysis of low back pain claims data for chiropractic vs medicine in a managed care organization. J Manipulative Physiol Ther. 2009 Nov-Dec;32 (9):734-9. doi: 10.1016/j.jmpt.2009.10.001.