



2026

**Proceedings of the
17th Sacro Occipital Technique
Research Conference**

Nashville, Tennessee

April 24, 2026

Sacro Occipital Technique Research Conference

Nashville, Tennessee

April 24, 2026

Hosted by:

Sacro Occipital Technique Organization – USA

CONFERENCE PROCEEDINGS



Conference Chair

Charles L. Blum, DC

Research Director: Sacro Occipital Technique Organization – USA

Acknowledgements:

It is with the utmost gratitude I wish to thank all the various authors of these submitted abstracts and papers. Only with their selfless efforts can we share what we are finding in clinical practice and help build our evidence base of literature. I also wish to thank those who have donated to the Sacro Occipital Technique Organization – USA Research Fund which has helped pay for the printing of this conference's proceedings. Thanks to the SOT® Research Committee who participated with editing of SOT Research and this SOT Research Conference's Proceedings. A special thanks goes to NCMIC for supporting this research conference as well as helping to advance chiropractic and allied healthcare evidence-based research.

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Proceedings of the Sacro Occipital Technique Research Conference

Nashville, Tennessee - April 24, 2026



Charles L. Blum and Phillip Ebrall

Narrative abstract: The annual research conference of the Sacro Occipital Technique Organization (USA) was held in Louisiana, New Orleans, 28 April 2023.

The following is introductory information valuable to those attending the annual Sacro Occipital Technique (SOT) Research Conference held yearly at the Sacro Occipital Technique Organization – USA's Clinical Symposium. These brief notes accompany the conference's proceeding and help address the importance of chiropractors and other healthcare providers documenting their clinical practice in the form of case reports.

The founder of SOT, Major Bertrand DeJarnette, presented his initial research findings in 1935. Since then, the specialty field of SOT has grown and now presents an annual conference in North America.

The core theme of these conferences focuses often on doctors in clinical practice sharing their findings of patient presentations, treatment rendered, outcomes, and implications – all documented within the format of a case report to inform further research and scholarly inquiry.

For Major Bertrand DeJarnette DO, DC, research was an essential part of being a chiropractor and essential to the future of the chiropractic profession. As early as July 1935 Major Bertrand DeJarnette was a featured speaker at the 40th Anniversary Convention 1895-1935 of the *National Chiropractic Association*, presenting clinical research. Always research was his passion and in an interview in 1982 DeJarnette reiterated *'as far back as chiropractic college, I saw the need for a more scientific basis for chiropractic theory. My own personal physical problems had not been solved by medicine, osteopathy, or chiropractic; so I began experimenting on myself. I'm still at it, and I can see no end of the need for continuous research in chiropractic.'* (1)

DeJarnette saw the importance of sharing clinical experience through case report and self- analysis. This started as he first began to find that things he instinctively did for a patient would disappear from his memory if he did not outline them carefully. So before our day and age of computers he recommended that to begin the first step in research, you would need to buy a notebook, an eraser and a long pencil.

He emphasised that *'those would be your first three pieces of research equipment. You use your notebook because it is not expensive. You use a pencil because it can be erased, and of course mistakes*

... we call on all chiropractors to document their clinical approach in the form of a Case Report at least once every 2 years ...'



will be made so you must own an eraser'. (2) With those three pieces of equipment he sat down one evening and wrote his first case report of an unusual patient presentation and his treatment rendered. He recollected that he did not sit down to write until perhaps three months after that patient's presentation. He could not believe how much he had forgotten about the details. The lesson he learned was 'write the unusual down now'. (2)

When DeJarnette began to study the treatment he had rendered he realised that if any meaningful information were to evolve from his experience, he would have to resolve it himself. He suggested that research has to be a free agency. Basically he saw a need and worked to fulfil that need. He realised that explaining how his discoveries evolved was more difficult than the process of developing new diagnostic and therapeutic interventions. (2)

Chiropractic techniques, innovative integrative collaborations, and methods such as sacro occipital technique, temporomandibular disorder co-management, chiropractic manipulative reflex technique, and cranial techniques need an arena to share clinical and other forms of research. Critical study of techniques and innovative methods are what will help propel healthcare forward in this era of evidence informed practice and best practice research.

The annual *SOT Research Conference* looks to offer a venue for research papers; specifically those which investigate sacro occipital technique, dental chiropractic co-treatment, cranial techniques, viscerosomatic/somatovisceral reflex techniques, and new ground-breaking creative ways of helping humanity without necessarily the use of drugs or surgical intervention. This year's proceedings, like all prior conferences, will be shared with the chiropractic profession, for review, dissemination, and in-depth study.

'Research is a study of what you have and what you need to make it better; how to make it better is the final research step. SOT never wants to be just good. It always wants to be better and best and greatest and most dependable'. (3)

'Research in Chiropractic must go on forever. Someone must do this type work, for it simply will not take care of itself. A profession cannot stand still. Momentum must constantly be generated. Chiropractic research needs many things it does not now have. (4) Sacro Occipital Technic, like all Chiropractic Technics, needs further study. We certainly do not have all the answers to all of man's problems, and neither does any other group of people'. (4)

As a parting comment for his chiropractic colleagues Dr. DeJarnette said *'We must respect each other's beliefs. We must support our colleges and associations. We must work together and unite as a profession. And we must at all times be proud of chiropractic and proud of our calling as chiropractors'. (1)*

Evidence-based practice

Evidence-based practice (EBP) refers to a decision-making process which integrates the best available research, clinician expertise, and client characteristics. EBP is an approach to treatment rather than a specific treatment.

EBP involves complex and conscientious decision-making which is based not only on the available evidence but also on patient characteristics, situations, and preferences. It recognises that care is individualised and ever changing and involves uncertainties and probabilities. (5)

EBP develops individualised guidelines of best practices to inform the improvement of whatever professional task is at hand. It is a philosophical approach that is in opposition to rules of thumb, folklore, and tradition. Examples of a reliance on *'the way it was always done'* can be found in almost every profession, even when those practices are contradicted by new and better information. (5)

'It's about integrating individual clinical expertise and the best external evidence' (6)

However in spite of the enthusiasm for EBP evinced over the last decade or two some authors have redefined EBP in ways that add other factors to the original emphasis on empirical research foundations. For example EBP may be defined as treatment choices based not only on outcome

research but also on practice wisdom (the experience of the clinician) and on family values (the preferences and assumptions of a client and his or her family or subculture). (5)

Evidence informed practice

The term evidence based medicine (EBM) has traditionally been used to describe a means of treating patients based on research published in biomedical journals. Even though EBM also incorporated expert opinions and a doctor's clinical experience, it was common that insurance companies and other agencies, presumably seeking to protect patients or save money, would focus solely on the randomised controlled trial as the backbone of EBM.

When EBM appeared to be too restrictive or just clearly misinterpreted new terms such as *Evidence Based Practice* and now *Evidence Informed Practice* (EIP) have appeared. The value of EIP is that it takes research into account when making a clinical decision but also utilises patient values and preferences, risk benefit ratio of related or chosen therapy, and the doctor's clinical experience. Because this represents a clearer depiction of an actual clinical experience and at the same time seeks to offer the patient the highest level of care, the belief is that EIP is the best of what EBM has to offer.

It is important that a practitioner is aware of the current research on the effectiveness of their care so that they do not inadvertently make false or exaggerated claims regarding the potential benefits of the treatment rendered. Therefore keeping up to date on the research and literature, while time consuming, is an ethical obligation of doctors in practice.

Ideally doctors practicing EIP would best be able to predict and provide outcome expectations against which progress could be measured. In essence we all, as patients or doctors, should receive or offer treatment based on research and clinical experience. New research can uncover therapeutic interventions or benefits of certain types of care that were never before discovered. Also this research may determine that prior care that was customarily rendered is now inappropriate.

The challenge with chiropractic and its various techniques is that we are functioning from a situation where we have limited funds and limited methods to adequately study our innovative therapeutic applications. The annual conference delivered by SOT attempts to offer a tempered and reasonable voice for practitioners on the forefront of care, such as has been the case with Sacro Occipital Technique for years. Incorporating current research performed in the patient's best interest with one's own clinical experience is the hallmark of a responsible and ethical physician. Allied healthcare practitioners, chiropractors, and particularly SOT doctors have a responsibility to lead the way with EIP and focus first and foremost on patient based care.

Major Bertrand DeJarnette DO, DC developed SOT with outcome based assessment protocols and with research accountability as its backbone. The onus is upon us, those who learn and utilise his methods, to be informed of the evidence and evolving research and utilise this in the clinical application of SOT and its related methods.

The Case Report

How the Doctor in practice communicates to the Research Community

While low on the usual evidence-based practice hierarchy of evidence the case report is an extremely valuable manner for doctors in clinical practice or 'in the trenches' to communicate what is taking place in their practices. Until the doctors in clinical practice publish their case reports, researchers in a college setting can only attempt to guess what is taking place out there in the field.

There are significant limitations to case reports, such as no control subjects, the doctor and subjects are not blinded to the study, and the doctor's bias may cloud the study. So while the case report is an important tool for communication, the doctor authoring these studies needs to exercise caution to not over-interpret his or her findings. Robert Ward of *Southern University of Health Sciences* and past editor of the *Journal of Chiropractic Education* answers the question '*Why it is important to write a case report?*'

He wrote 'Most persons believe that the case report is used to describe unique, or at least highly rare, clinical presentations or diagnostic entities (e.g., "prostatic hypertrophy mimicking as ingrown toenail"). This is the most common use of the case report. However, equally important is the use of the case report to describe novel management approaches to more ordinary conditions.

'Another aspect of why case reports are written involves the audience. Case reports are generally considered as a communication from clinicians to scientists. The pointy-headed ivory tower population doesn't get to see the interesting things that happen in clinical practice. They often rely on case reports from the field in deciding what sorts of pilot studies to run, and those often lead to real full-scale clinical trials (the sort of research that field clinicians generally don't have the time, resource or interest to undertake).

'Case reports are a vital aspect of our literature base, and more of our practitioners need to write them. Until you write up that wonderful method that works in your office, the rest of the world cannot share in its benefits. Without publication, when you die or retire, your discoveries die with you'. (7)

There are *now ample papers* in the Chiropractic literature promoting *the value of the case report* with suggestions on *how best to prepare them*. We call for every chiropractor to prepare a case report of something unique to their practice at least once over the next 2 years. When this occurs, the indexed case reports in Chiropractic will increase ten-fold, from about 5,000 to about 50,000.

This *Journal* welcomes and promotes Case Reports and in association with the *Australian Spinal Research Foundation* and their *Case Report Project* are making a significant contribution to the Chiropractic case report literature. Each of us are more than happy to guide and support to as you write for first case report, and the ASRF can assign you a writing team to produce your paper.

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Resources to assist you to prepare your Case Report

We provide two resources to assist you prepare your case report:

- ▶ Patient Consent for Publication and Presentation
- ▶ Case Report Check List

Consent is a requirement only when there is a reasonable probability that the patient can be identified. They may be prominent in the entertainment industry, (1) or politics, (2) or, as is increasingly common, sports. (3) There may be other cases where its characteristics could result in identification of the patient, especially in small communities. This is not to say that the public in such a community could read the report, but more to suggest that privacy must be maintained if the practitioner chose to reproduce the report and distribute in their waiting room to demonstrate the types of patients they are helping. Given that most chiropractic conferences require case report consent forms and some journals also, it is best to always get a consent form signed.

The requirements of some journals may mandate that patient consent is required for any use of patient data. There are two clear matters to consider in this case:

- ▶ all patient-intake forms should carry a generic clause to the effect the patient consents to their anonymised data being used in a way which does not identify them for the purposes of education and research;
- ▶ some journals, and this masthead is one, do not require specific, overt consent for the use of anonymised data in a case report.

One of us (PSE) has elsewhere (4) addressed more completely the ethics of publication.

Some research meetings may require evidence of patient consent and to assist you with this we provide a form appropriate for recording *Patient Consent for Publication and Presentation*. (5)

One of us (CLB) has also created a handy '*check list*' to guide you through the process of preparing your first draft. (6)

Over the past decade medicine has tried to impose a format called the CARE guidelines for case reports. (7) The application of this format to chiropractic has been considered for this journal (8) however it is reasonable to now propose that the CARE approach could be seen as paradoxically both overly prescriptive and incomplete for optimally informed the advanced of chiropractic approaches to patient care.

Whilst there are papers specifically outlining what a Case Report should contain (9, 10) we both feel the attached guidance from Blum is both practical and complete. We recommend its use.

-
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Patient Consent for Publication and Presentation

Title of case study/series:

Author(s) names:

As the patient in this case study/series, I hereby give my consent for clinical information relating to my case to be reported at a scientific conference, in a conference proceedings, and/or published in a scientific journal.

I understand that my name, initials, or any protected health information such as my identification number, billing information, address, etc. will not be published and that efforts will be made to conceal my identity, but that anonymity cannot be guaranteed.

I understand that the material may be published in a journal, a website of a journal and in products derived from the journal. As a result, I understand that the material may be seen by the general public.

Name of patient (print) _____

Date_____

Signature of patient (or signature of the person giving consent on behalf of the patient, if the patient is a minor or deceased)

If you are not the patient, what is your relationship to him or her? (The person giving consent should be a substitute decision maker or legal guardian or should hold power of attorney for the patient.)

Why is the patient not able to give consent? (e.g., is the patient a minor, incapacitated, or deceased?)

If images of the patient's face or distinctive body markings are to be published, the following section should be signed in addition to the first section:

As the patient stated above, I give permission for images of my face or distinctive body markings to be published where they are relevant to the case and recognize that I might therefore be identifiable even though my name and initials will not be published.

Sign and date: _____

Please keep a copy of this completed form for your records.

Case Report Check List

Charles L. Blum, DC

Based on the article by Green BN, Johnson CD. Writing A Better Case Report, J Sports Chiropr & Rehabil. 2000 Jun;14(2):46-47. (Was adapted from: Keating JC. Towards a Philosophy of the Science of Chiropractic: A Primer for Clinicians. Stockton, CA: Stockton Foundation for Chiropractic Research; 1992:419-20.) Permission was given to Dr. Blum by Drs. Green and Johnson to share their information in this format.

See case report patient consent form (after check list) and have patient sign consent form before submitting this case report for publication.

INTRODUCTION

1. What specific health problem is associated with this case report and its significance (e.g., prevalence, incidence, morbidity, financial and social costs)?
2. What literature has been reviewed on this problem in relation to any diagnosis and treatment? We recommend you cite only the Top Five most recent papers on the topic, and any seminal paper.
3. How is this case report important and contribute to further understanding in health care?
4. Please state your paper's purpose or thesis clearly.

CASE REPORT

The Assessment:

1. Describe the patient's characteristics.
2. Define and describe the patient's health history clearly.
3. Clearly describe the patient's examination in terms of positive results and significant negative results.
4. What outcome assessment measures were utilized for clinical measurements?
5. Fully describe any novel diagnostic or assessment strategies that were utilized.
6. What does the literature say about the validity or reliability of the procedure used?
7. What is the patient's diagnosis?



Treatment/Intervention:

1. In a clear manner describe the treatment or intervention.
2. Clearly describe the treatment so it could be replicated by anyone reading this paper.

RESULTS

1. Any outcome assessment measures mentioned in the case report should have its data reported here.
2. What may be any possible side effects or risks associated with the treatment rendered?
3. Attempt to distinguish between short versus long-term outcomes associated with the treatment rendered?

DISCUSSION

1. Clearly describe your interpretation of the results.
2. Can you propose a mechanism for the observed changes?
3. What flaws might there be with your study and how could it be improved in the future?
4. Is there any differential diagnosis associated with this case report?
5. Why might some question your conclusion that the treatment was responsible for the observed changes?
6. What are the limitations associated with applying this study to other patients?

CONCLUSION

1. Clearly address the purpose of this case report as presented in the introduction.
2. Suggest what future research could be performed based on the findings of this case report.

Here, try to be specific and instead of a motherhood statement such as 'more research is needed', give your view on what specific questions should be answered based on the case you have presented.

The contemporary role of the case report in evidence generation for the discipline of Chiropractic

Scott Cuthbert and Phillip Ebrall

Abstract: Regardless of argument to the contrary from academics ignorant of advances in evidence gathering, the *Journal* continues to place an emphasis on publishing case reports relevant to the discipline of Chiropractic.

Here we provide both our rationale and our updated guidelines which are drawn from the model of evidence-based healthcare developed by the *Joanna Briggs Institute* (JBI) of *The University of Adelaide*.

We explain the philosophical principles of 'aboutness' and 'consilience' which significantly increase the value of a case report to allow agglomeration to better inform the clinical practice of Chiropractic.

We celebrate that case reports are the fertiliser of research proposals and as such are critical to the informed development of Chiropractic as a science-based discipline.

Indexing Terms: Chiropractic; subluxation; case report; writing guide.

Introduction

Case reports are no longer considered as low-value anecdotal reports contributing little to evidence for healthcare practice. This *Journal*, along with other mature health professions, places an emphasis on this form of discourse within the Chiropractic discipline and is aligned with the *Case Report Project* of the *Australian Spinal Research Foundation* (ASRF).

In our first four years this masthead has published nearly 80 case reports, each of which has been duly indexed by the *Chiropractic Library Collaboration* (ICL). Now, through our relationship with EBSCO these reports are available in full-text format through all universities globally to inform the planning of research into clinical aspects of the Chiropractic discipline.

Both of us are experienced with the writing and publication of case reports (1,

... case reports are the fertiliser of research proposals and as such are critical to the informed development of Chiropractic as a science-based discipline ...'



1. Cuthbert S. The Long and Winding Road of Whiplash Associated Disorders: An Applied Kinesiology Chiropractic Case-Report. *Asia-Pac Chiropr J.* 2022;2.4. URL apcj.net/papers-issue-2-5/#CuthbertWADAK

2, 3, 4, 5, 6) and one of us has contributed to discussion on the value and importance of case reports in the healthcare literature. (7, 8, 9)

The collective understanding of how evidence is reported, synthesised, and applied, continues to evolve and JBI (initially the *Joanna Briggs Institute, The University of Adelaide*) has emerged as a leading global organisation promoting and supporting evidence-based decisions that improve health and health service delivery. (10) Previous guidelines in Chiropractic referenced the generic medical *CARE Guidelines* (11) however this *Journal* now formally recognises and adopts the JBI circular model of evidence-based healthcare and the checklist published by them for writing case reports for inclusion as evidence in the form of expert discourse. We encourage readers to also adopt the format which we will now discuss.

The circular model of evidence-based healthcare

JBI have replaced the concept of an pyramidal evidence hierarchy with a more inclusive wheel, (12) representing a cycle of continuous quality improvement in healthcare delivery through continuous integration of evidence as it is generated. Thus the *JBI Model of Evidence-Based Healthcare* is a cycle which fosters the synthesis of evidence and then its transfer to where it is needed, and its subsequent implementation. Each of these actions is developed as a science.

Fig 1: The JBI model of evidence-based healthcare. (10) From <https://jbi.global/jbi-model-of-EBHC>



Note: This image is protected by copyright. Its use here is in academic context, citing the source as <https://jbi.global/jbi-model-of-EBHC>

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5. Ellis WB, Ebrall PS. The resolution of chronic inversion and plantar flexion of the foot: A pediatric case study. *J Chiropr Technique*. 1991; 3:55-9.
6. Ebrall PS, Ellis WB. Transient syncope in chiropractic practice: A case series. *Chiropr J Aust* 2000; 30:82-91.
7. Ebrall PS. Was it only \$1.17? The Value of Case Reports and Best Practice. [Editorial]. *Chiropr J Aust* 2012;42:81.
8. Ebrall PS, Murakami Y. How to write a well constructed, credible Case Report for Integrative Medicine. *Jap J Int Med* 2018;11(3):285-91.
9. Ebrall P, Doyle M. The value of case reports as clinical evidence. *Chiropr J Aust*. 2020;47:29-43. <http://www.cjaonline.com.au/index.php/cja/article/download/247/107>.
10. About JBI. Who are we? <https://jbi.global/about-jbi>
11. Doyle M, Ebrall P. Points to consider when writing to the CARE Guidelines for case reports. *Asia-Pac Chiropr J*. 2021;1(3):1-4. URL [https://www.apcj.net/site_files/4725/upload_files/DoyleCAREchecklistforcasereports\(1\)\(1\).pdf?dl=1](https://www.apcj.net/site_files/4725/upload_files/DoyleCAREchecklistforcasereports(1)(1).pdf?dl=1)
12. The JBI model of evidence-based healthcare. <https://jbi.global/jbi-model-of-EBHC>

The *evidence generation wedge* of the JBI Model identifies discourse (or narrative), expertise, and research as legitimate means of knowledge generation. It recognises that the results of well-designed research studies grounded in any methodological position, anecdotes or personal opinion and expertise are all deemed valid methods of generating evidence to inform policy and practice. (12) It is at this point that well-structured case reports appear as pieces of evidence to be considered, and for this reason, JBI have provided a *Critical Appraisal Checklist for Case Reports*, on which this paper is based.

Understanding evidence

In philosophical terms 'science' is only 'science' because, after Popper, the knowledge found is falsifiable. Knowledge is falsifiable if it can be logically contradicted by an empirical test. In order to know if the knowledge in a case report could be true there must be a way to prove it to be false, the empirical contradiction.

For this reason all mature inquiry starts with a null hypothesis which in effect says that the finding sought to be replicated is not true and that nothing happened. In other words, for any critic of chiropractic to ignore a case report can only mean they have a way to show it is false. They then usually resort to demeaning diminutive language but as the *JBI Evidence Wedge* shows this has no value in restricting admission as discourse.

Herein lies the strength of the case report, it presents claims which are difficult to prove wrong. This point is where the small group of post-realists (13) within Chiropractic fail to understand that it is not the author of a case report who has to prove their report is true, it is they, the post-realists, who must prove it wrong. In other words, they are bound to falsify it or else accept it. Their trite arguments are that a case report is only '*n of 1*' and is '*not controlled*'. They miss the point that one case of one thing is interesting, a second needs noticing, and a third establishes a clinical effect which deserves to be more fully investigated. It is here where '*consilience*' has high evidential power. (14)

The book '*Consilience*', published in 1998 by Harvard scientist Edward O Wilson, argues that the grand quest to unite all human thought began during the post-Renaissance Enlightenment era. He argues it should continue today, being centred on the intellectual power of the scientific method. Wilson is one of the greatest naturalists of the 20th Century and says that the goal of consilience is to achieve progressive unification of all strands of knowledge in service to the indefinite betterment of the human condition. This corresponds to the JBI Model's '*Global Health outer wedge*' rationale.

As a disclaimer, a case report may most certainly be proven wrong if the exact conditions from patient to presentation, to suspected causation, to the mode of treatment, and so on, are able to be replicated which is most unlikely. Human variance in clinical practice makes replication very difficult. Within pharmaceutical studies the reality of individual patient variance is statistically lost within the large size of any cohort. These cohorts form the studies where results flow from the group to the individual, removing individual variance in their response. Chiropractic is the reverse, which is true patient-focussed care, where information from one individual case report can be applied across or upwards to another patient who is 'about' the same.

For these reasons we consider case reports are most unlikely to be proven wrong, and must therefore be accepted as a true report of a certain set of clinical circumstances. In turn this raises the responsibility of the author to present the case in a manner which allows not so much a direct replication, but more of an '*aboutness*'. One of us (PE) with a colleague (YM) has previously addressed this in detail; (15) in brief the concept of *aboutness* means a case report must have sufficient detail to allow another clinician to '*match*' it to a patient '*about*' the same. This means a report of the care of a 70 year old male is not applicable to a 5 year old female, but may have value when considering

13. Ebrall P. Changing chiropractic's subluxation rhetoric: Moving on from deniers and vitalists to realists, post-realists, and absurdists. URL Asia-Pac Chiropr 2022;3:3. URL apcj.net/Papers-Issue-3-3/#EbrallRhetoric

14. EO Wilson. Consilience: The Unity of Knowledge. New York. Random House as Vintage (reprint). 1999.

15. Ebrall PS, Murakami Y. Constructing a credible case report: Assembling your evidence. J Contemp Chiropr 2018;1:40-53 <https://journal.parker.edu/index.php/jcc/article/download/29/11>

options for the care of a 68 year old male with a presentation about the same as that of the 70 year old.

Multiple case reports allow consilience

Many journals serving the Chiropractic Discipline no longer accept case reports except where a case is considered unique. The Editorial Board of this *Journal* considers this position is flawed as non-publication of case reports similar to those currently indexed is wilful interference with the agglomeration of evidence. Both positive and negative outcomes should be reported as case reports because both are equally important. To ignore or discredit a case report is to say one is not interested in any negative outcomes which may serve as a caution in other patients.

The philosophical principle at play here in addition to 'aboutness' is 'consilience' which allows for information to be extracted from more than 1 case report of a similar presentation. An application of the philosophical tools of aboutness and consilience is shown to allow 'agglomeration' of multiple reports and for interpretation with hermeneutics. The ultimate expression of agglomeration is a case series.

Within the JBI model, this represents the collection of published strands of '*anecdotes, personal opinion and expertise*' which are accepted as valid methods of generating evidence to inform policy and practice.

With this in mind we now give our interpretation of the JBI Checklist for the critical appraisal of case reports with some contextual comments. JBI allows for any of these to be checked as '*Not Applicable*'; the *Journal's* position is that each should be addressed.

Checklist for a Case Report

1: Are the patient's demographics clearly described?

Demographics are naturally the patient's gender, age, and occupation. For JBI demographics also describe the patient's race, medical history, diagnosis, prognosis, previous treatments, past medical conditions, and current diagnostic test results, and medications. They suggest the setting and context may also be described.

For Chiropractors these points are equally relevant including 'gender' and apart from one paper suggesting we can work well with transgender patients, (16) we see some evidence of differences in response to Chiropractic care based on a patient's gender. We accept, of course, clinical conditions specific to a gender, such as endometriosis for females and testicular torsion for males. We also acknowledge hormone considerations and their effects on ligaments, and differences in bony shapes most notably the pelvis, which are important clinical considerations. What we are saying is that through aboutness and consilience, Chiropractors are wise to match case reports by gender, such as a report of a 65 year old female with a patient who is a 68 year old female, but perhaps not with a patient who is a 68 year old male.

We do ask for a deeper notation of past functional and pathological conditions and whether or not the patient is a *novice to Chiropractic Care* or has a history of care. If there is a history it may be useful to note the form of that care, most importantly for determining whether the patient preference was for mechanically-assisted or manual adjusting and whether or not the prior approach had achieved outcomes the patient found satisfactory or not.

Most commonly, the Chiropractic setting will be the '*clinic of the author*' which is usually '*private practice*' although we must make provision for patients who may be co-managed, for example in a hospital setting. A valuable source of cases yet to be responsibly reported are from outreach activities in a field or '*outreach*' clinic, notwithstanding that such activities quickly turn into social media posts to promote the ego of a practitioner. (17) The literature has little reporting of the impact on the

16. Maiers MJ, Foshee WK, Henson Dunlap H. Culturally Sensitive Chiropractic Care of the Transgender Community: A Narrative Review of the Literature. *J Chiropr Humanit*. 2017 Aug 4;24(1):24-30. DOI 10.1016/j.echu.2017.05.001.

17. Post: Doc Martin Camara is in Quezon City, Philippines. Facebook. 12 March 2024. <https://www.facebook.com/docmartincamara>



health of a community made by the provision of such services. Sometimes outreach projects are subject to critical appraisal (18, 19) but mostly the academics and students involved are lax in reporting cases arising from these learning activities and we would like both academics and students to do better as it is known that outreach clinics include a wide variety of clinical presentations. (20, 21, 22)

2: Was the patient's history clearly described and presented as a timeline?

Here JBI state 'A good case report will clearly describe the history of the patient, their medical, family and psychosocial history including relevant genetic information, as well as relevant past interventions and their outcome'. They make reference to the CARE guidelines which we now minimise in light of our revised position.

We agree with the suggestions of JBI which can only enhance the reader's ability to achieve consilience through aboutness by gathering more than one case report. This information also presents a justification for reporting historical Chiropractic intervention.

3: Was the current clinical condition of the patient on presentation clearly described?

Here JBI suggest 'The current clinical condition of the patient should be described in detail including the uniqueness of the condition/disease, symptoms, frequency and severity. The case report should also be able to present whether differential diagnoses were considered'.

The *Journal* prefers the clinical condition to be named in the report title and given as an indexing term. We also expect the report to open with a paragraph informed by the literature which means the writing needs to be targeted and concise. We do not want a 'literature review', we prefer the top 3 to 5 papers, current and/or seminal, on the topic. See more below.

Clinical signs are valuable information

With regard to noting symptoms, we go further to request the notation of 'clinical signs'. Our preference is for only a summative statement of prior medical attention with a more expansive, if possible, statement of prior Chiropractic management, especially noting the technique/s used and the patient's response.

For a case report to have meaning it must be anchored in current practice, and show either why and how current practice is a good idea, or not. Thus we also welcome case reports of failed care by a Chiropractor.

Replacing the literature review

Earlier case reports in the discipline of Chiropractic have included almost a thesis length review of relevant literature and we consider this now to be inappropriate. For a literature review to have value it must be undertaken with specific methodology, and this methodology is not something we reasonably expect of an active Chiropractic clinician.

Thus while not asking for a literature review, we do expect a case report to be submitted with reference to the top 3 or 5 papers that are current in the literature, and here we mean the broader medical literature and not just that of our discipline.

The top papers should include any previous occurrence in the Chiropractic literature. Here you may need to go back in time in the *Index to Chiropractic Literature* to find a paper or two which have

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18. Amorin-Woods LG. Student perceptions of a clinical placement within a therapeutic community. *Chiropr J Aust.* 2017 ;45(4):Online access only p 269-87.
 19. Amorin-Woods LG, Losco BE, Leach M. A mixed-method study of chiropractic student clinical immersion placements in nonmetropolitan Western Australia: Influence on student experience, professional attributes, and practice destination. *J Chiropr Educ.* 2019;33(1):30-9. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6417866/>
 20. Morschhauser E, Long CR, Hawk C, et al. Do chiropractic colleges' off-campus clinical sites offer diverse opportunities for learning? A preliminary study. *J Manipulative Physiol Ther.* 2003;26(2):70-6. DOI 10.1067/mmt.2003.21.
 21. Todd AJ, Carroll MT, Russell DG, et al. A prospective survey of chiropractic student experiences with pediatric care and variability of case mix while on clinical placement in Rarotonga. *J Chiropr Educ.* 2017;31(1):14-19. DOI: 10.7899/JCE-16-4.
 22. Tavares P. Overview of conditions seen on a Canadian Memorial Chiropractic College outreach to the Dominican Republic. *J Can Chiropr Assoc.* 2021;65(2):164-73.

previously addressed the condition. The 'advanced' search screen can be used to allow for variants in name and spelling of the condition.

We expect the author of a case report to have some idea of what they are reporting and we do require a contextualisation of the case being reported within the contemporary literature of the discipline, and then contextualised into the broader field of health care. This means making a notation of the social burden of disease and the extent to which the condition being reported may contribute to that should it be one of the known 'burden' conditions.

4: Were diagnostic tests or assessment methods and the results clearly described?

A short summary is useful to capture findings from previous assessment; simply acknowledge previous medical tests and briefly summarising their findings. Chiropractors place a higher reliance on diagnostic imaging and here we welcome detailed reports of what imaging was performed, along with not only the findings, but especially the meaning of those findings and how they may have impacted the care that was chosen for that patient.

Diagnostic Imaging includes EMG scans along with a range of findings from other devices which are informative of the patient condition and suitable for inclusion and reproduction of the images.

5: Was the intervention or treatment procedure clearly described?

The intent is for the reported intervention to be more or less replicable by another Chiropractor. Thus you must report something more than '*subluxations were corrected at L5, T12, and C7 ...*'. A subluxation occurs with a joint, so for a start it must be written as '*at L5/S1, T12/L1, and C7/T1*'.

Further, what type of subluxation was it in terms of chronicity and was it primary or compensatory? Specifically, how was it corrected? Here we want to see listings and technique, such as '*L5/S1 listed as L5 PRS corrected by Gonstead finger pull move with a side-lying position, right side down*'. This level of detail is required to allow replication by others, although we freely admit that every technique has a different 'style' which is unique to the individual practitioner and difficult to capture.

Please remember we are fighting a battle to show clinical effectiveness of segment-specific Chiropractic over the bone-setter minority on the fringe of the discipline who consider broad-based regional spine manipulation to be a valid clinical skill representing all that a 'chiropractor' should be doing. This has been made abundantly clear by McCoy Press. (23)

Dr Matthew McCoy, publisher of four journals dedicated to research on the vertebral subluxation, noted the post-realist bone-setter sect is urging '*That spinal adjusting should be embraced as non-specific and that we need to "dial down" the "preoccupation with technique details" and any notion that specificity matters because its "of little clinical consequence"*'. As ignorant as this statement may be, it is part of the agenda to remove subluxation from Chiropractic education AND practice. We must take heed of McCoy's warning and appreciate that the bone-setter group have no evidence for their claim that specificity has no clinical meaning.

It is also part of that groups's agenda to end Chiropractic being '*a vitalistic, salutogenic model focused on reducing and correcting subluxations*' by pretending it is not evidence based and is instead '*"dogma based" and that this dogma is rooted in the "art, science and philosophy" of chiropractic*'. (23)

23. This isn't some Chicken Little paranoia. Its reality. Matthew McCoy, Found and Editor, McCoy Press. April 2024. Subscriber email.

The sheer arrogance of this group is palpable in their claim that '*a case-report carries no real scientific weight*', a claim which demonstrates their ignorance of the current literature and of organisations such as JBI which have significantly advanced evidence-based health care and have done so in a manner completely compatible with *Chiropractic* science, which with this *Journal* along with McCoy's four journals align.

The least we as a Chiropractic Journal speaking '*Chiropractic*' to Chiropractors can do, is to use our language proudly to report how an experienced and successful practitioner approaches and corrects clinical problems in the hope it will serve as a mini-tutorial for others.

The more specific we can be in our clinical descriptions and our language, the better the evidence we leave for others to work with.

6: Was the post-intervention clinical condition clearly described?

For this requirement JBI state '*A good case report should clearly describe the clinical condition post-intervention in terms of the presence or lack thereof symptoms. The outcomes of management/treatment when presented as images or figures would help in conveying the information to the reader/clinician*'.

Quite clearly we require more than '*the patient felt better*', perhaps adding words like '*and was able to return to normal duties*' or whatever ADL is relevant to them. We also like to report the outcomes of quantitative tests, such as numerical or percentage changes on a pain scale, or a 'disability' index, or some other common measure used within the discipline.

However we appreciate that important outcomes within Chiropractic are so much more than just pain reduction and improved movement, and include cognitive dimensions and particularly subjective matters such as adaptability, stress response, and coping skills. The more clearly we can identify and report on these outcomes, the more useful the case report will be.

7: Were adverse events (harms) or unanticipated events identified and described?

JB I hold the view that '*It is important that adverse events are clearly documented and described, particularly when a new or unique condition is being treated or when a new drug or treatment is used. In addition, unanticipated events, if any that may yield new or useful information*'.

Chiropractors are fortunate in that our collective treatments are clinically well established and known to be extremely safe. However we ask authors to be aware of any response to care that did not show the expected response and to report it, even should it be only transitory and mild.

We would like these to be identified and clearly described along with not just the expectation held for that therapeutic intervention, but also a thoughtful comment on why a less than optimal outcome may have occurred. In particular, should there be any harm reported by the patient we would like this documented so it can be published in a 'no-blame' manner to serve as a lesson on things practitioners should be looking for and considering as early warning flags.

On course, should the outcome be an injury perceived to be related to the care, or indeed the withholding of care, we would like to report this as well and will work with the author to ensure the case is properly documented and carries sufficient information to help other Chiropractors improve their decision-making with similar patients while protecting author confidentiality.

This *Journal* will publish a case report under an alias and make note of doing so.

8: Does the case report provide takeaway lessons?

Here we agree with JBI that a meaningful case report is strengthened when there is a succinct take-away, regardless of what that take-away may be. Ideally it will be a new understanding of a common or even an infrequent presentation, with sufficient details to help others attempt to replicate the positive outcome and avoid the negative outcome should that be the case.

We do appreciate that most often there is no simple take-away other than this is what presented, this is what was done, and this is the outcome, which is perfectly acceptable documentation.

Writing the Abstract

Format

A lot of nonsense has been proposed how an Abstract should be written which essentially reduce to it being either a 'structured' format or a 'narrative' format. This Journal accepts either.

The 'Narrative' format is straightforward; you reduce your paper to 300 words or so, as a story telling who you saw, what they presented to you with, what you thought it was and how you treated it, and then your outcomes or results. You may write this in the first person, that is 'My patient ...', 'my clinic', and 'I used [techniques]'.

The structured format is journal dependant as there are different things that must be mentioned depending on the topic. For example, a structured abstract in a Chemistry journal will have very different headings to a structured abstract in a Journal of Emergency Medicine.

For this Journal we ask you to use 4 headings:

- ▶ **Objective:** State the compelling reason for you writing this report. It could read like this '*In this report I describe my care of a young adult presenting with groin pain which had been unresponsive to medical care. The patient is a 28 year old male hurdler ...*' This heading covers Item 1 of the checklist.
- ▶ **Clinical features:** Here you give a summary of your findings and of other information brought to the encounter to inform you. You summarise points 2, 3, and 4 of the Checklist.
- ▶ **Intervention and outcomes:** Here you summarise points 5, 6, and 7 of the Checklist. Be succinct with what you did, why you did it, and what happened. It helps if you can say why you know the outcomes are as reported, especially if you quantified them or followed-up.
- ▶ **Conclusion:** Give the reader the take-away lesson. This is often the most powerful part of your report, as you will summarise why this is an important matter and how your intervention was beneficial.

Indexing terms

For the reason this Journal speaks Chiropractic to Chiropractors, and its papers are written in the Chiropractic language by Chiropractors, the first indexing term will always be 'Chiropractic'.

If your paper is addressing the identification and correction of subluxation, then the second indexing term will be 'subluxation'. These two terms are important to build the profile in the global literature of a Chiropractor's care of subluxation.

All papers published in this Journal are also published on *Publitas*, a globally indexed platform that cuts across all disciplines. Given our papers are also listed as full text in EBSCO they are 'findable' through your keywords by any academic in any university globally.

We tend to run 5 indexing terms, so your remaining 3 should include the proper terms for the clinical condition you have cared for, and a generic indexing term such as the name of your core technique, as '*Gonstead*', or '*SOT*', or '*AK*', and so on. Where you case as shown positive outcomes for vague matters then used terms such as '*adaptability*', '*well-being*', '*women's health*' for example.

Summary

In summary, a case report is an entertaining and informative narrative from a Chiropractor's first-person perspective of a patient whose presentation is interesting and whose care may carry some ideas for the reader to consider.

The patient should be described in a way that allows demographic aboutness, and their history and presentation in a way that allows the deeper level of clinical aboutness and subsequent consilience.

Most important, the description of your therapeutic intervention is most useful when it is segment specific and technique specific. Details like frequency and duration of care are also valuable pieces of

information. A recent case report by Adam McBride (24) is noteworthy for its description of care and for achieving resolution in 2 patient-visits, due in no small reason for the thoroughness of diagnosis and appropriateness of the care provided and which is carefully documented.

Readers are very welcome to submit their own papers directly to us as editors who will assist you. Do not think that the horror stories you have heard about cruel and harsh peer-review will be your experience with us. We each have sufficient publications between us that we have both time and experience to give to you to help you achieve publication in your own name. We know what that would mean to you and your practice.

This *Journal* is also honoured to be in partnership with the *ASRF Case Report Project*, for which you only need submit clinical data, which is kept safe and confidential, and the ASRF writing team will turn your data into a wonderful paper on which you will be lead author. At any time you can go to our home page and review the *ASRF Case Reports* published to date and get some ideas. This is an outstanding contribution to the development of clinical evidence in our profession and we are grateful first to the Chiropractors who annually hold activities in their clinic to raise the funds to support this project, and second to the ASRF for providing capable writers who understand how to 'speak chiropractic'.

All case reports are indexed for the profession and available in full text through EBSCO to the world's academic and research communities.

One final point to note is that you may elect to write in the first person, such as 'I found this I did that ...' or in the third person. The choice is yours. Naturally the ASRF writers can only write in the third person.

Conclusion

Case reports are the fertiliser of research proposals. Unless the academic community is made aware of the amazing outcomes experienced daily in Chiropractic offices they will continue devising irrelevant research proposals which nobody cares about and nobody reads. Worse, they will try to dumb down our clinical art so that our clinical results do not show their own weaknesses.

As JBI make clear, the well-written case report serves as an irrefutably valuable input to the evidence-forming discourse which advances the quality of patient care.

As an Appendix we provide a set of suggested headings to guide data collection and writing.

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24. McBride AS. Resolution of Adhesive Capsulitis (Frozen Shoulder) following Chiropractic Care and Applied Kinesiology (AK): A case report. [Proceedings]. *Asia-Pac Chiropr J.* 2024;4.4. apcj.net/ak-Proceedings-papers/#McBrideCapsulitis



Appendix

A flow of useful headings for case reports in this Journal

Introduction

Here give the clinical condition addressed and contextualise that condition with reference to 3 to 5 current papers.

Case details

The patient

Here give the full demographics and presentation details.

History

Give the patient's history and previous care. A timeline may be informative.

Clinical findings

Give your clinical findings including imaging and tests

Management

Management plan

Give your management plan with expected progress points, reviews, and timelines for improvement

Therapeutic intervention

A clear description of what you did.

Outcomes

What happened? What measures did you use? What were the patient's subjective reports?

Include and adverse events and how you managed them.

Discussion

Show why this case is a useful contribution to Chiropractic's knowledge base.

Conclusion

Comments to summarise and wrap up the learning in this case.

Abstract

Indexing terms



2026 Sacro Occipital Technique Research Conference

April 24, 2026



Platform Presentation Schedule

- 10:30am** **Introduction to the research conference a review of recent publications**
Charles Blum, DC
- 10:40am** **Blum CL. SOT extremity technique protocols and kinesiotape application to a 27-year-old male with unremitting left shoulder pain and weakness**
Charles Blum, DC
- 10:50am** **A 28-year-old female presenting with right-sided facial paralysis, facial numbness, and TMJ pain treated with sacro occipital and cranial techniques: A case report**
Thomas Bloink, DC, Charles Blum, DC
- 11:00am** **Resolution of Chronic Right-Sided Body Pain Through Sacro Occipital Technique Category II Procedures and Vestibular Integration: A Case Report**
Kyle Grunwald, DC
- 11:10am** **Five-year-old male patient presenting with leaking spinal tap site treated with Sacro Occipital Technique (SOT) cranial therapy to improve CSF circulation: A case report**
Rachel Hamel, DC
- 11:20am** *Panel Discussion – Questions and Answers*
- 11:30am** **BREAK**
- 11:40am** **Resolution of Cervicogenic Dizziness in an Adolescent Female Following Orthodontic Intervention: A Case Report on the Application of Sacro-Occipital Technique**
David Mattinen, DC
- 11:50am** **Chiropractic Management of Cervicogenic Dizziness: A Case Report Using Sacro-Occipital Technique**
David Mattinen, DC
- 12:00noon** **Sacro occipital technique care of a 27-year-old male presenting with multiple concussions: A case report**
Rachel Murata, DC



- 12:10pm** **Sacro occipital technique care of a 72-year-old male presenting with lumbar spinal stenosis and sacroiliac joint sprain syndrome: A case report.**
Erin Jewel Rosen, DC
- 12:20pm** *Panel Discussion – Questions and Answers*
- 12:30pm** **BREAK for LUNCH**
- 2:00pm** **Sacro Occipital Technique (SOT) extremity protocols and kinesiotaping application in a 68-year-old male with chronic intermittent right-sided grip strength weakness: A case report**
Charles L. Blum, DC
- 2:10pm** **Sacro Occipital Technique treatment of five patients presenting with lumbopelvic pain and atypical category two findings that resolved by incorporating a pubic bone adjustment: A case series**
Jason Scoppa, DC
- 2:20pm** **Sacro occipital technique care incorporating extremity and cranial/craniofacial techniques for the treatment of a 60-year-old female presenting with unresolved carpal tunnel syndrome: A case report**
Juliet Tablak, DC
- 2:30pm** **Cervical Compaction and Distraction Testing as a Diagnostic and Therapeutic Guide: A Case Report**
Jeffrey Tucker, DC
- 2:40pm** *Panel Discussion – Questions and Answers*
- 2:50pm** **BREAK**
- 3:00pm** **Whole-Body Kinematic Chain Contributions to Right Biceps Pain in a 12-Year-Old Baseball Pitcher: A Case Report**
Daniel Tuttle, DC, LCSW, QEEG-DL
- 3:25pm** **Successful Sacro Occipital Technique care for an 11-year-old female presenting with scoliosis: A case report – With Clinical Applications**
David Simmons, DC
- 3:50pm** *SOT Research Conference Concludes*



e-Poster Presentations

Craniocervical and Neurovascular Dysfunction Following Head Trauma: A Case Study on the Role of Cranio Fascial Dynamics

Katie Howat, DC

Can cranial chiropractic improve vocal tone in singers?

Joe Guy Porter, DC

Invited Articles

Blum CL. PACBACK study and its relationship to Chiropractic: Is Chiropractic spinal manipulative therapy? Asia-Pac Chiropr J. 2026;6.4

Blum CL. Carpal Tunnel Syndrome: Conservative Care. Asia-Pac Chiropr J. 2026;6.3

Getzoff H. Sacro Occipital Technique (SOT) Indicators: Accessing Problems and Developing Strategies. Asia-Pac Chiropr J. 2026;6.3.

Getzoff H. A critical approach for learning the Operating Principles of Sacro Occipital Technique (SOT) Chiropractic. Asia-Pac Chiropr J. 2023;3.4.

Grunwald, K. Vestibular Integration Protocol

Jason Scoppa. The TMD Alliance and SOTO-USA



SOT Research Conference Presenter Biographies

SOT Research Conference Proceeding Author Biographies (Listed in alphabetical order)



Thomas Bloink, DC specializes in cranial-dental integration in Silicon Valley at the California Cranial Institute, which was founded in 1992. Dr. Bloink was on the board of advisors to help create SOTO-USA and is actively presenting at research conferences throughout the world, and developing novel treatment approaches for functional neurological conditions. He works closely with many different specialists including dentists, orthodontists, and oral-maxilla surgeons. ENT's and others to ensure the best possible outcome for his patients.



Charles L. Blum, DC is in private practice Santa Monica, California and past president of SOTO – USA, now their research chair. Adjunct research faculty at Cleveland Chiropractic College, associate faculty at Southern California University of Health Sciences and previous at Palmer College of Chiropractic West teaching the SOT Elective. Dr. Blum is a Certified SOT Cranial Practitioner, on the peer review board of various journals, lecturing nationally and internationally, has written various SOT related texts, and has extensively published in multiple peer reviewed indexed journals and research conferences from 1984 to the present.



Phillip Ebrall is a Professor of Chiropractic in the non-Western world actively assisting a number of universities to introduce the Transnational Chiropractic Curriculum where his main role is as Curator of Chiropractic Education with the Chiropractic Diplomatic Corps. As an academic (1990-2016) he managed and/or renewed 8 chiropractic curricula in 5 countries across 4 universities including one with 3 campuses. All attained full compliance with CCEA accreditation standards. In addition to the now closed Tokyo College of Chiropractic, universities he has worked with include Central Queensland University, RMIT University, International Medical University, and Hanseo University. His prime activity in his supposed retirement is to edit the Asia-Pacific Chiropractic Journal, now in its 5th year, and to write on the Philosophy of Chiropractic, as distinct from Chiropractic Philosophy.



Harvey Getzoff, DC practiced (SOT Chiropractic) for 46 years (1973 thru 2019) in Marlton, NJ. Dr. Getzoff was board certified in SOT in 1981 and board certified in Craniopathy by the International Craniopathic Society in 1982. He received his Fellowship and Diplomate status in SOT in 1990 also by the International Craniopathic Society. Marlton, NJ. He co-authored 3 articles in the Journal of Manipulative and physiological Therapies (JMPT) on the "Dental Chiropractic Co-treatment of Structural Disorders." in the mid 1990's. He also authored the book "A Practical Guide to Cranial Adjusting." in 1996. Dr. Getzoff has recently published 12 papers in the Asia Pacific Chiropractic Journal (2020-2026) on the practice of SOT.



Kyle Grunwald, DC, is chiropractor based in Portland at Unity Chiropractic and Wellness Center. He specializes in pediatric and family chiropractic care with an emphasis on neurodevelopment, functional neurology, and low-force techniques including SOT and cranial work. Dr. Grunwald is particularly passionate about supporting neurodivergent individuals and children with complex developmental and sensory challenges. His clinical focus integrates biomechanical, vestibular, and dural considerations to address chronic pain and neuroregulatory dysfunction.



Rachel Hamel, DC, is a San Diego-based cranial chiropractor and functional medicine practitioner specializing in brain health and chronic neurological issues. After overcoming a debilitating nine-year battle with Lyme disease, she dedicated her career to wholistic healing, eventually graduating as valedictorian from Palmer West Chiropractic College. She is a certified Craniopath and the author of the best-selling book Freedom Brain, where she shares strategies for optimizing the nervous system. Through her clinic and the Unfiltered Healing podcast, she focuses on identifying the root causes of inflammation and physical dysfunction.



Katherine Howat, DC followed in her grandfather and father's footsteps to Palmer College of Chiropractic, graduating Magna Cum Laude in 2001. She then joined her father and mentor, Dr Jonathan Howat, at Oxford Chiropractic Clinic, UK, where she specialised in Sacro Occipital Technique (SOT). In 2018, she helped develop Cranio Fascial Dynamics (CFD) and is now qualified to teach and assess students in this technique worldwide. Following her father's passing in 2023, Katherine assumed leadership of the clinic and continues to lead the teaching and advancement of CFD.



David Mattinen DC graduated from CMCC in 1998. He practices in St. John's Newfoundland, Canada at Core Insight Chiropractic with a team of four related chiropractors: David and his wife Jennifer Drover, sister-in-law Janice Drover, and brother-in-law Eric Crane. David has had an eclectic range of chiropractic training over the years and is a late comer to the SOT method. With a background in Craniosacral Therapy, SOT came as a natural fit and when he started studying it 2 years ago, it felt like "coming home". He attained his Certified Spinal Practitioner designation last year and is working toward his cranial certification in 2026. He is presenting a case report at the 2026 SOT Symposium in Nashville and looks forward to sharing with his colleagues in the future.



Rachel Murata, DC graduated from Life West Chiropractic College in March 2026 as valedictorian of her class. She earned her Bachelor of Arts in Dance with a minor in Business Administration, magna cum laude, from Loyola Marymount University. During her doctoral training, she was actively involved in the Sport Performance Institute and SOT Club, attended NET and SOT seminars, and participated in both local and international chiropractic service trips, including service work in Mexico City. In her free time, she enjoys skiing and climbing.



Guy Joe Porter, DC graduated from McTimoney College of Chiropractic in 2021, winning its Achievement Award in Research. During the last 3 years of this course he was mentored by Dr Jon Howat DC. Protocols learnt included SOT, Cranio Fascial Dynamics & Craniosacral Therapy among others. Dr Porter has also studied Lymphatic & Cranial Osteopathy with Dr Perrin DO and Emotional Freedom Techniques (EFT) with Emma Roberts and Sue Beer. Dr Porter was previously a professional musician, graduating from Kings College London & Royal Academy of Music, working with vocalists.



Erin Jewel Rosen, DC, was born into a family of two dedicated chiropractors, where she was immersed from birth in the belief that the body is inherently designed to heal itself. This philosophy became the foundation of her life's work. She has degrees in both Chiropractic and Kinesiology and has also spent her life studying different aspects of health first hand. Dr. Rosen is an Assistant Instructor with the Peak Potential Institute and is a Certified SOT® Spinal Pediatric Practitioner (CSSPP) and Certified SOT® Cranial Pediatric Practitioner (CSCPP).



Jason Scoppa, DC has been practicing in the Seattle area since 2012. Having graduated from Palmer Chiropractic College in California, Dr. Scoppa went on to earn post graduate certifications in SOT and SOT craniopathy through SOTO-USA, Applied Kinesiology through the ICAK, and Sports Medicine through the ACBSP. He has completed hundreds of hours of postgraduate coursework in the areas of TMJ, myofunctional therapy, airway, appliance therapy, expansion techniques, cranial facial growth and development, craniofacial pain, and cranial-dental co-management.



David Simmons, DC took his first seminar from Dr. DeJarnette in 1978. He has been teaching sacro occipital technique (SOT) at the SOT clubs at Cleveland Chiropractic College – Los Angeles and Southern California University of Health Sciences, as well as SOT Regional Certification Series in Los Angeles, California for over 28 years. He is passionate about practicing chiropractic and loves to go to his office six days a week working to help patient improve their health through natural means.



Juliet Tablak, DC, is a chiropractor, functional medicine practitioner, and the owner of Los Gatos Chiropractic & Wellness Center in Los Gatos, California. Her clinical work focuses on Sacro Occipital Technique (SOT), craniopathy, pediatric and family care, as well as integrative functional medicine. Dr. Tablak is passionate about supporting patients through all stages of life—from infants and children to adults and growing families—and takes a holistic, relationship-centered approach to care. She enjoys teaching (SOT elective at Life West) and mentoring chiropractic students, bringing both practical experience and a heart-centered perspective to the next generation of practitioners.



Jeffrey Tucker, DC has been in private practice in Los Angeles for over 42 years and is known for adopting innovative therapies such as laser, shockwave, TECAR, frequency, lymphatic, heat-based treatments, and deep muscle stimulation. His work focuses on chronic pain care, posture training, conditioning, therapeutic exercise, soft-tissue therapy, and nutrition-based biohacking. He collaborates monthly with a multidisciplinary team at The Breath Center in Calabasas, providing integrated evaluations and treatments. Dr. Tucker has received numerous awards, taught for programs including the National Academy of Sports Medicine (NASM) and Functional Movement Screening (FMS), and authored more than 100 publications on rehabilitation and healthy aging.



Daniel Tuttle, DC, MSW is both a Chiropractic Physician and Licensed Clinical Social Worker. He is a licensed QEEG Diplomate and has practiced Neurofeedback for 16 years. He led the first randomized control study on the effects of SOT chiropractic adjustments on the brain using qEEG analysis. He practices in Clearwater, Florida using both licenses to develop innovative methods of treating both the mind and body. Dr. Tuttle has extensive experience in treating patients utilizing SOT, cranial, and innovative TMJ treatment and assessment procedures.



Gilbert Weiner, DC is a graduate of New York Chiropractic College, now called Northeast College of Health Sciences in 1978 going directly to Puerto Rico to begin his private practice. There he had an interest in scoliosis and noticed various comorbidities, mainly temporomandibular joint disorders (TMD). Since beginning his private practice he has actively been investigating scoliosis, its cause and treatment. Currently he is an Adjunct Assistant Professor at Northeast college of Health Sciences

A 28-year-old female presenting with right-sided facial paralysis, facial numbness, and TMJ pain treated with sacro occipital and cranial techniques: A case report

Thomas Bloink, DC, Charles Blum, DC

Background: Bell's palsy is an acute peripheral facial nerve paralysis that may present with facial weakness, sensory disturbances, and associated craniofacial pain. Standard medical management commonly includes corticosteroid therapy, while complementary manual therapies are sometimes used to address associated musculoskeletal dysfunctions. This case report describes the management of a patient with right-sided Bell's palsy, temporomandibular joint dysfunction, and chronic migraine headaches using sacro-occipital and cranial techniques.

Case Presentation: A 28-year-old female presented with an eight-day history of right-sided facial paralysis (*grade III - House-Brackmann Facial Nerve Grading*), facial numbness, and temporomandibular joint (TMJ) pain. She had been evaluated by her primary care physician and was unresponsive to the prescribed corticosteroids. The patient reported significant anxiety due to an upcoming wedding scheduled one week later. Her history included chronic migraine headaches following two motor vehicle accidents in the prior year, one of which involved loss of consciousness.

Assessment and Intervention: Physical examination revealed decreased translation of the right TMJ with palpatory pain, hypertonicity of the right muscles of mastication, and tenderness along right craniofacial sutures. Hypertonicity and tenderness were also present in the right cervical paraspinal and suboccipital musculature. The patient was treated with sacro-occipital technique (SOT) category I blocking to address sacroiliac fixation and pelvic torsion, along with a cranial correction involving the left temporal bone in extension/internal rotation. A temporary occlusal orthotic (Aqualizer dental splint) was provided to reduce clenching, and adjunctive light therapy was applied to reduce inflammation.

Outcomes: The patient received three treatments over the course of one week. Following treatment, facial motor function improved and the patient regained the ability to smile, indicating resolution of Bell's palsy symptoms. TMJ pain was reduced, and her chronic migraine headaches also resolved during the same period. She was able to attend her wedding without facial asymmetry.

Conclusion: Although spontaneous recovery is common in Bell's palsy and steroids are a common pharmaceutical intervention, the temporal relationship between the multimodal manual interventions and symptom improvement suggests a potential association. This case highlights the possible role of integrative manual therapy approaches in managing Bell's palsy with concurrent temporomandibular dysfunction and chronic headaches. Further controlled studies are needed to evaluate the effectiveness of these interventions.

SOT extremity technique protocols and kinesiotape application to a 27-year-old male with unremitting left shoulder pain and weakness

Charles L. Blum, DC

Introduction: A 27-year-old male presented with chronic pain and weakness in his left shoulder one month after injuring his shoulder while aggressively regurgitating in the bathroom. He was a bit embarrassed to describe the cause of his injury but was frustrated because nothing he had done from rest, medication, to massage had given him any relief.

Methods: The patient was assessed utilizing sacro occipital technique extremity technique protocols and it was noted that when sitting it was challenging for him to hold his left arm straight outward when sitting, while he had no problem doing so with his right arm. When assessed in the supine position with his left arm held towards the ceiling he couldn't hold it in place with even slight caudalward pressure. In SOT extremity protocols this would suggest an anterior position of the humeral head in the glenoid fossa.

To rule out any cervical involvement strength of the left straight arm was tested with caudal pressure with his head turned to the right and left. There was a 50% increase in ability to resist caudal force on right rotation and no change on left rotation. This indicated left sided posterior subluxation of his cervical vertebra, and unilateral cervical stairstep analysis revealed a posterior rotation of C5/6 on the left side. The left C5/6 articular facet was adjusted from posterior to anterior and had an audible release along with a normalization of the unilateral cervical stairstep findings. Then his left humeral head was adjusted anterior/posterior with a double thumb thrust.

Results: Following the cervical adjustment his straight left arm outstretched arm strength was maintained at an improved 50% in neutral and either head rotation position. Following the double thumb humeral head adjustment, he had 100% strength as compared to the right side (patient was right hand dominant) in both the supine and in a seated position. He then had his left humeral head stabilized in a posterior position with kinesiotape following SOT extremity protocols. He reported the following day that he had no pain and full strength that was maintained since the treatment. A four day follow up indicated he was stable without any return of prior symptoms.

Conclusion: SOT extremity protocols appeared to be an effective tool to both assess and treat a patient with both cervicobrachial syndrome and an anterior humeral head subluxation. The instantaneous response to care and that it maintained without any relapse particularly when his condition had persisted for one month without any change, suggests that this method of care may be worthy of greater study.

Sacro Occipital Technique (SOT) Extremity Protocols and Kinesiotaping Application in a 68-Year-Old Male with Chronic Intermittent Right-Sided Grip Strength Weakness: A Case Report

Charles L. Blum, DC

Abstract

Introduction: A 68-year-old male presented with chronic intermittent right-sided grip strength weakness that interfered with tennis and pickleball participation. The condition had been stable to worsening over two months and was unresponsive to rest, physical therapy, medication, and massage therapy.

Intervention and Outcome: Sacro Occipital Technique (SOT) extremity protocols were applied, addressing cervical spine dysfunction, elbow mechanics, and wrist biomechanics. Kinesiotaping and rehabilitative exercises were incorporated. Grip strength normalized following intervention and remained stable during provocative positional testing.

Conclusion: This case suggests that a subset of patients with chronic, positionally influenced grip weakness may respond to SOT extremity protocols. Further research is warranted.

Introduction

A 68-year-old physically active male presented with chronic intermittent right-sided grip strength weakness of two months' duration. The weakness compromised his ability to play tennis and pickleball and negatively affected his self-esteem. Previous interventions—including rest, physical therapy, medication, and massage—had not altered his symptoms. The patient described himself as generally strong and reported that the isolated grip weakness felt disproportionate to his overall conditioning.

Examination Findings

Grip strength was assessed bilaterally using manual muscle testing of the opponens pollicis and opponens digiti minimi muscles under varying biomechanical conditions.

Neutral Position Testing

- Both right and left thumb-to-fifth digit opposition strength were strong when the wrist, elbow, and cervical spine were in neutral alignment.
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Cervical Spine Influence

- When the head was rotated to the left, both right and left thumb-to-fifth digit strength weakened.
- No change occurred with right cervical rotation or neutral positioning.



Forearm Position Influence

- The right thumb-to-fifth digit strength weakened in full forearm supination.
- Strength remained intact in neutral and pronation.
- No positional changes were observed on the left.

Wrist Position Influence

- The right thumb-to-fifth digit strength weakened in full wrist flexion.
- Strength was normal in neutral and extension.
- No positional changes were observed on the left.

Intervention

1. Cervical Spine (C3/4 Dysfunction)

Assessment revealed:

- Left C3/4 articular facets anterior
- Right C3/4 articular facets posterior

Capsular tissues were released, and the segment was adjusted to functional balance. Following correction:

- Bilateral grip strength was no longer affected by cervical rotation.

2. Left Upper Extremity

No supination, pronation, flexion, or extension deficits were identified.
No intervention was performed.

3. Right Elbow

The flexor carpi ulnaris and extensor carpi ulnaris muscles were stretched toward the medial epicondyle until tissue relaxation occurred.

The olecranon was then repositioned within the trochlear fossa via gentle extension mobilization.

Post-intervention:

- Grip strength in full supination normalized.

4. Right Wrist

Each carpal bone was gently distracted and guided into extension to correct a relative hyperflexion positioning and restore functional mechanics.

Post-intervention:

- Grip strength was normal during wrist flexion and extension testing.

Kinesiotaping and Rehabilitation

Kinesiotape was applied to support wrist extension and maintain functional carpal positioning. The patient was instructed in rubber band exercises to:

- Stimulate wrist extensors
- Reciprocally inhibit wrist flexors

This approach parallels conservative wrist protocols described in:

Blum CL. *Carpal Tunnel Syndrome: Conservative Care*. Asia-Pac Chiropr J. 2026;6(3).

Outcome

Following cervical, elbow, and wrist interventions:

- Grip strength normalized in all previously provocative positions.
- Positional cervical rotation no longer produced weakness.
- Supination and wrist flexion no longer reduced strength.
- The patient reported immediate subjective improvement.

Discussion

This case demonstrates:

- The importance of positional loading during strength testing.
- The potential contribution of cervical segmental dysfunction to distal neuromuscular inhibition.
- The influence of elbow and wrist biomechanics on grip strength expression.
- The possible value of SOT extremity protocols in cases unresponsive to traditional conservative care.

The interaction between cervical mechanics and distal motor function suggests a functional neurological component rather than isolated local muscular pathology.

Conclusion

Further research is needed to determine: What subset of patients with chronic, unresolving grip weakness may respond to SOT extremity protocols. Whether positional muscle inhibition patterns can serve as clinical predictors. The durability of outcomes following combined spinal and extremity interventions. This case highlights the potential clinical utility of integrating cervical and extremity biomechanics in patients presenting with chronic grip weakness.



Resolution of Chronic Right-Sided Body Pain Through Sacro Occipital Technique Category II Procedures and Vestibular Integration: A Case Report

Kyle Grunwald, DC

Introduction: Chronic unilateral body pain may reflect complex neuromechanical dysfunction involving vestibular, dural, and temporomandibular systems. This case describes an integrative approach using Sacro Occipital Technique (SOT) procedures and vestibular-based interventions to prepare a patient for oral surgical intervention.

Methods: A 35-year-old female was referred by an oral surgeon for assessment of 15-year history of chronic right-sided pain and vestibular imbalance prior to a planned frenectomy. She reported aching and burning sensations in the right neck, temporomandibular region, and upper arm, numbness in the right palm and anterior forearm, soreness in the right psoas region, and deep aching in the posterior right leg. Postural assessment on a balance pad revealed a left posterior pull suggestive of vestibular asymmetry. Care included SOT Category II pelvic blocking, temporomandibular and Category II cranial procedures, and vestibular chair exercises with visual fixation [full protocol found later in this conference proceedings].

Results: The patient received 3 office visits before right-sided pain dissipated, and 8 visits before compensation patterns and tensional shifts were dulled and the patient was pain free. Three months since starting care, her postural balance stabilized, and all chronic right-sided symptoms resolved. At that point the patient was subsequently cleared for tongue-tie revision (frenotomy) surgery. She continues wellness care at a frequency of 1 visit every 3-4 weeks and is maintaining reduced tension and no longer experiencing pain in her daily life.

Conclusion: SOT procedures combined with vestibular integration strategies may provide effective management for chronic unilateral pain and support pre-surgical musculoskeletal optimization.

Five-year-old male patient presenting with leaking spinal tap site treated with Sacro Occipital Technique (SOT) cranial therapy to improve CSF circulation: A case report

Rachel Hamel, DC

Introduction: A five-year-old male child presented with a diagnosis of B-cell Acute Lymphoblastic Leukemia (B-ALL). B-cell ALL is an aggressive malignancy of the blood and bone marrow in which immature B-cells (lymphoblasts) proliferate rapidly, interfering with normal hematopoiesis. It is the most common pediatric leukemia, accounting for approximately 30% of childhood cancers, although it can also occur in adults. Despite its aggressive nature, B-ALL is highly treatable, with reported cure rates of 85–90% in pediatric populations using multimodal therapies including chemotherapy, immunotherapy, and hematopoietic stem cell transplantation. [Huang FL, Liao EC, Li CL, Yen CY, Yu SJ. Pathogenesis of pediatric B-cell acute lymphoblastic leukemia: Molecular pathways and disease treatments. *Oncol Lett*. 2020 Jul;20(1):448-454.]

At the time of the initial visit, the patient was undergoing ongoing chemotherapy and receiving monthly lumbar punctures as part of his treatment protocol. His parents brought him to the clinic after it was noted that the spinal tap site appeared to be leaking and was not sealing properly. Due to significant discomfort, the patient was unable to walk or sit without severe pain, which he rated as 9–10/10. At the initial examination, he arrived in his mother's arms due to his inability to ambulate independently. In addition to the radicular pain into his legs limited his ability to walk or sit, the patient reported persistent headaches and had been scheduled for a follow-up surgical procedure.

Methods / Intervention: The goal of therapy was to explore whether cerebrospinal fluid (CSF) circulation might be influenced using Sacro Occipital Technique (SOT) cranial therapy. No manual spinal adjustments were performed. Treatment consisted of reducing left psoas tension that was causing a left side antalgic positioning and using pelvic blocks to treat pelvic torsion/fixation adversely affecting sacral nutation (SOT's Category One). Cranial care focused on decompressing the zygomas bilaterally and lifting the right maxilla, as well as a (category one cranial) left internal temporal adjustment. Lastly the patient's sagittal suture (spreading) was gently released on the external aspect along the sagittal suture to aid CSF drainage into the greater sagittal sinus. Ultimately the treatment focused on gentle cranial SOT techniques intended to reduce possible restrictions affecting craniosacral dynamics and CSF circulation.

Results: Following the first treatment session, the patient was able to get off the treatment table without reporting head pain. Mild lower extremity discomfort remained (reported as 2/10), but he was able to walk out of the clinic unassisted. At the second appointment, both the patient and his mother reported that the lower extremity pain and headaches had nearly resolved. The previously scheduled follow-up surgical procedure was subsequently cancelled. Additionally, the patient experienced substantial improvement in sleep quality and resolution of the leg pain that had persisted for several months.

Conclusion: It was hypothesized that the intervention may have contributed to improved CSF circulation and reduced CSF stagnation. One possible explanation is that altered CSF dynamics may have created a pressure gradient that interfered with sealing of the spinal puncture site; improvement in these dynamics may have allowed the leak to resolve spontaneously. The patient received two sessions of SOT cranial therapy, which coincided with clinical improvement and the cancellation of the planned surgical intervention. However, as this represents a single case, causal relationships cannot be established. Further research is needed to evaluate whether similar conservative approaches may benefit other pediatric or adult patients experiencing CSF leakage or complications following lumbar puncture before proceeding directly to surgical management.

Craniocervical and Neurovascular Dysfunction Following Head Trauma: A Case Study on the Role of Cranio Fascial Dynamics

Katherine Howat, DC

Background: Craniocervical trauma, including head injury and whiplash, may be associated with persistent neurological and vascular symptoms such as headache, dizziness, limb weakness, and autonomic dysfunction. In some cases, vascular complications such as vertebral artery injury may contribute to symptom complexity. Cranial fascial and dural-based therapeutic approaches, including Cranial Facial Dynamics (CFD), have been proposed as adjunctive treatments, although their mechanisms and efficacy remain incompletely understood.

Case Presentation: A 56-year-old female with a history of multiple head traumas and cervical injuries presented with chronic neurovascular symptoms, including headache, limb weakness, sensory disturbance, balance impairment, and episodic seizure activity. Following an upper cervical chiropractic intervention, she developed acute neurological symptoms suggestive of a transient ischemic event. Subsequent imaging demonstrated reduced calibre and later occlusion of the left vertebral artery, consistent with dissection, followed by later recanalization.

The patient underwent a series of CFD-based interventions over 12 visits. During early treatment sessions, she experienced recurrent transient seizure episodes temporally associated with interventions. Over time, her symptoms fluctuated, with gradual improvement reported in overall well-being. Medical management during this period included adjustment and discontinuation of antihypertensive medications (including amlodipine and lisinopril) and later initiation of the anticonvulsant lamotrigine, after which seizure activity improved.

Intervention: Treatment consisted of a standardized CFD protocol aimed at addressing cranial-dural and fascial strain patterns, alongside ongoing medical supervision. No invasive procedures were performed.

Outcomes: Over the course of care, the patient reported progressive improvement in energy levels, reduction in headache frequency, and improved functional status. Follow-up imaging demonstrated recanalization of the previously occluded vertebral artery. At two-month follow-up, the patient reported feeling “back to normal.” However, the clinical course was marked by significant confounding factors, including natural vascular healing, medication changes, and intermittent adverse neurological events.

Discussion: This case highlights the complexity of managing post-traumatic neurovascular dysfunction, particularly in the context of vertebral artery dissection. While symptomatic improvement occurred during the period of CFD care, causality cannot be established due to multiple confounding variables, including spontaneous vascular recovery and pharmacological intervention. The occurrence of seizure activity temporally associated with treatment also raises important safety considerations.

Conclusion: In patients with complex craniocervical and neurovascular presentations, recovery may occur over time with multimodal management. The use of CFD in this case proved effective in relieving torsional dural strain, enhancing neurovascular circulation, and improving clinical

outcomes. Timely correction of dural and fascial tension may help restore cranial homeostasis, reduce reliance on pharmacological interventions, and promote recovery from chronic symptoms.

Resolution of Cervicogenic Dizziness in an Adolescent Female Following Orthodontic Intervention: A Case Report on the Application of Sacro-Occipital Technique

David Mattinen, DC

Objective: To describe the resolution of cervicogenic dizziness in an adolescent female following Sacro-Occipital Technique (SOT) chiropractic care, and to explore the potential relationship between cranial distortion, orthodontic stress, and upper cervical dysfunction.

Clinical Features: A 13-year-old female presented with constant dizziness lasting 10 months, beginning after the application of (dental) braces. Symptoms were resistant to acupuncture and massage therapy. ENT assessment ruled out vestibular causes. Clinical history included infantile torticollis and forceps-assisted birth. Examination revealed skeletal malocclusion, narrow palate, tongue tie, cranial distortion, TMD, SOT category 2 pelvic pattern and upper cervical (C0-1) subluxation.

Intervention and Outcome: A course of SOT-based chiropractic care, including cranial and spinal adjustments, was delivered. Symptom relief began by visit 7 and resolved by visit 12. A brief lapse in care led to symptom recurrence. Care was resumed and the dizziness resolved again by visit 16. The patient was seen a total of 22 times. Her subluxation pattern is greatly improved; her symptoms have abated, and she continues to receive wellness care.

Conclusion: This case suggests that SOT chiropractic care may be beneficial in managing cervicogenic dizziness linked to orthodontic and biomechanical cranio-cervical stresses. Co-management with allied disciplines is warranted in cases involving complex cranial and upper cervical findings. Further research is needed to explore interdisciplinary care models.

Chiropractic Management of Cervicogenic Dizziness: A Case Report Using Sacro-Occipital Technique

David Mattinen, DC

Objective: To describe the chiropractic management of cervicogenic dizziness in an adult male using Sacro-Occipital Technique (SOT) and examine the relationship between the upper cervical spine, the sphenobasilar joint, and the experience of disequilibrium.

Clinical Features: A 56-year-old male presented with a 10-year history of intermittent dizziness associated with mechanical neck pain. His history included head and neck trauma from an industrial accident 25 years earlier, and a discectomy surgery at L5-S1. Examination identified upper and lower cervical subluxation and dysfunction of the sphenobasilar joint.



Intervention and Outcome: The patient received a course of SOT-based chiropractic care, including cranial and spinal adjustments. Dizziness diminished within several visits, but remained intermittent and associated with certain movements, positions, and episodes of neck pain. With continued care, symptom frequency decreased substantially and resolved following treatment directed at the sphenobasilar joint and upper cervical spine.

Conclusion: This case suggests that SOT-based chiropractic care may assist in the management of cervicogenic dizziness through the correction of cervical dysfunction and cranial base mechanics. Systematic clinical studies are required to clarify the anatomical and neurophysiological mechanisms through which chiropractic interventions may influence cervicogenic dizziness.

Sacro occipital technique care of a 27-year-old male presenting with multiple concussions: A case report

Rachel Murata, DC

Introduction: A 27-year-old male presented for care following multiple concussions sustained within a four-month period. The initial concussion occurred six months prior to presentation. The second and third head traumas occurred within four months of the initial injury. The first concussion resulted from a volleyball spike striking the right temporal region of his skull. At the time of injury, he collapsed and experienced tinnitus, vertigo, photophobia, headaches, hand tremors, behavioral changes, and impaired coordination. He described his headaches as a pressure sensation behind the eyes accompanied by soreness along the vertex of the head.

Methods / Intervention: At the initial assessment, the patient was diagnosed with pelvic torsion secondary to sacroiliac joint (SIJ) hypermobility syndrome, classified as Sacro Occipital Technique (SOT) Category II. Clinical findings included: right medial knee pain, contracted left psoas muscle, and tenderness over the left upper SIJ. Palpation revealed tenderness along the right squamosal, sagittal, and coronal sutures. Motion palpation identified vertebral subluxations in the cervical, thoracic, and lumbar spine, accompanied by segmental tenderness and adjacent taut paraspinal musculature. Cranial assessment demonstrated a left temporal bone in extension/internal rotation.

Treatment interventions included: diversified spinal adjustments to the cervical, thoracic, and lumbar regions, SOT Category II pelvic blocking, adjustment of the left temporal bone, and cranial suture work involving the sagittal, coronal, and temporal sutures. At the conclusion of the first visit, the patient was fitted with a sacro-trochanteric belt. He was instructed to: apply ice to the left SIJ for 10–15 minutes at a time, avoid strenuous physical activity, and perform cerebellar balance exercises using a Bosu ball

Results: The patient completed eight visits over five weeks. He reported significant improvement, including: complete resolution of low back pain and marked reduction in headache frequency and intensity. However, he continued to experience intermittent retro-orbital pressure. Further examination revealed signs consistent with convergence insufficiency, including difficulty with tracking during cardinal gaze testing and persistent photophobia. So he was referred to a functional optometrist for comprehensive visual assessment and management of light sensitivity. The patient declined this referral.

Conclusion: Prior to initiating care at this clinic, the patient's symptoms had remained stable or worsened despite rest and the use of analgesics. No spontaneous improvement had occurred. There was a temporal association between the application of SOT Category II pelvic care and cranial interventions and the resolution of his low back pain, along with significant reduction in headache symptoms. The patient reported that he did not believe his low back pain or concussion-related symptoms would have improved without this course of treatment.

Can cranial chiropractic improve vocal tone in singers?

Joe Guy Porter, DC

Objective: To assess whether tone production in singers improves following a cranial chiropractic adjustment with a jugular foramen distraction.

Method: Following ethical approval, an interventional pilot study was undertaken. 15 professional and semi-professional singers sang a note, received the adjustment, and then sang the same note again. The chiropractic adjustment consisted primarily of Dr. Howat's modified Buddingh jugular foramen release as well as the Howat Cranio Fascial Dynamics (CFD) procedure with sacro occipital technique's psoas and diaphragm adjustments. Each participant returned for a second measurement and adjustments within 2 weeks. Changes in harmonic content of notes were measured using a spectrum analyzer and compared. Participants also completed a questionnaire about broader vocal parameters before and after adjustment.

Results: 73% (n=11) measured an immediate improvement in tone from one or both adjustments and for 45% (n=5) the change was a significant improvement of 10dB or more ($p<0.001$).

Conclusion: This pilot study informs singers of an option available that could immediately improve vocal tone and performance parameters and may prove helpful to avoid overuse voice damage. Chiropractic can help athletes to increase performance and avoid injury—could the same now be applied to singers? Further research using robust randomized control trials (RCT) design is indicated, potentially tracking autonomic nervous system changes indicated with an immediate increase in parasympathetic activity compared with a decrease in sympathetic following the adjustments.

Sacro occipital technique care of a 72-year-old male presenting with lumbar spinal stenosis and sacroiliac joint sprain syndrome: A case report.

Erin Jewel Rosen, DC

Introduction: A 72-year-old male presented with a diagnosis of lumbar spinal stenosis accompanied by left-sided sciatica, progressive left foot drop, and worsening radicular symptoms over the preceding year. His condition resulted in functional decline and frequent wheelchair use. His medical history was extensive and included placement of a cervical spine spacer, right total hip arthroplasty, coronary stent placement, hypertension, coronary artery disease, and thyroid dysfunction managed with multiple medications. He had previously undergone physical therapy with limited lasting improvement. The patient reported that sitting aggravated his symptoms, whereas walking temporarily reduced discomfort. He had received long-term chiropractic care throughout his life with reported benefit and transferred to this office for care in approximately 2019–2020.

Methods / Intervention: Clinical evaluation suggested a chronic sacroiliac joint sprain consistent with Sacro Occipital Technique (SOT) Category II, involving the iliolumbar ligaments and bilateral L4/L5 region. Associated findings included motor weakness, specifically foot drop and gait disturbance. The patient also demonstrated Category II cranial suture dysfunction affecting craniofacial structures, airway mechanics, and chronic suboccipital compression. Initial management incorporated Category III protocols to address acute symptomatology. Interventions included: SOTO (Step-Out Turn-Out) procedure targeting the piriformis muscle, orthopedic lumbar blocking, cervical staircase technique, and sagittal suture release. Within several weeks, sciatic-like pain significantly reduced. As symptoms localized primarily to the left sacroiliac joint and deep left gluteal region, care transitioned toward comprehensive Category II management to address whole-body structural relationships.

Results: Within two weeks of initiating care, the patient demonstrated reduced severity of left-sided radicular pain and improvement in motor weakness. By one month, treatment focused primarily on sacroiliac joint stabilization and its biomechanical relationship to the cranium, spine, and lower extremity. As stabilization progressed, a home rehabilitation program was introduced, emphasizing: foot sensory re-education and strengthening, lower extremity strengthening, postural stability, and vestibular integration.

Currently, the patient exhibits: decreased severity of left foot drop, return of plantar sensation, improved dorsiflexion strength of the toes and ankle, increased standing tolerance, improved gait symmetry, and reduced reliance on wheelchair use for short distances. His consulting neurologist expressed satisfaction with the clinical improvements observed since the initiation of care at this office.

Conclusion: This case illustrates the management of a complex presentation involving severe lumbar spinal stenosis and chronic sacroiliac joint sprain in a medically complicated geriatric patient. The patient's extensive medical history required careful interdisciplinary consideration throughout care. The observed improvements suggest that Sacro Occipital Technique may provide benefit in select patients with multifactorial structural and neurologic presentations. Further research is warranted to evaluate outcomes in larger cohorts with similar complexity.

Sacro Occipital Technique treatment of five patients presenting with lumbopelvic pain and atypical category two findings that resolved by incorporating a pubic bone adjustment: A case series

Jason Scoppa, DC

Introduction: Low back pain associated with sacroiliac joint dysfunction is commonly managed using Sacro Occipital Technique (SOT). Category Two presentations are typically characterized by sacroiliac joint sprain and pelvic torsion patterns and often respond to established SOT protocols. However, some patients demonstrate atypical findings and fail to improve with standard care. A series of patients with SOT Category Two findings that were unresponsive to standard SOT protocols were evaluated using specific clinical outcomes following incorporation of a pubic bone adjustment.

Methods: Five patients (ages 15–57; mixed gender) presenting with low back pain were diagnosed as SOT Category Two. All had previously undergone conservative therapies (including chiropractic, physical therapy, and acupuncture) without satisfactory resolution of symptoms. In addition to Category Two findings, each patient demonstrated bilateral gracilis muscle inhibition and weakness during supine active straight leg raise against resistance. Patients received standard SOT Category Two protocols and Basic Cranial Two procedures. A pubic bone adjustment was incorporated, consisting of resisted leg adduction to activate the adductor musculature and facilitate pubic bone balancing. Clinical response and stability of Category Two findings were assessed at follow-up visits.

Results: Following incorporation of the pubic bone adjustment, all five patients reported marked reduction or resolution of their chief complaint. Immediate improvement in gracilis muscle strength and supine straight leg raise testing was observed. Four patients required a single pubic bone adjustment, while one required two applications per visit. All patients subsequently tested as stable Category Two presentations and this was sustained generally months following the initial treatment.

Conclusion: This case series suggests that patients presenting with concurrent SOT Category Two findings, bilateral gracilis inhibition, and weakness during resisted supine straight leg raise may benefit from inclusion of a pubic bone adjustment. Assessment of gracilis function and resisted straight leg raise may be clinically useful when Category Two cases fail to respond to standard SOT protocols. Further controlled studies with larger sample sizes and objective outcome measures are needed to evaluate the reproducibility and generalizability of these findings.

Successful Sacro Occipital Technique care for an 11-year-old female presenting with scoliosis: A case report

David Simmons, DC

Introduction: An eleven-year-old female diagnosed with scoliosis by her allopathic pediatrician at her yearly check-up presented at this office for care. Because her family was treated at this office for years her mother brought her in for a second opinion. Her initial assessment indicated that she did have a scoliosis with a convexity to the left in the lumbar region and to the right in the thoracic region.

Intervention: The patient was initially treated as a category two and was blocked in the supine position until her indicators subsided and was treated with a DeJarnette scoliosis protocol presented in his 1969 Chiropractic Assistant's Manual. The patient had a scoliosis with the lumbar convexity towards the left and the thoracic convexity towards right. So she was treated initially supine with a pelvic block placed at a 45° caudal angle through the right acetabulum and another pelvic block placed under her shoulder at a 45° caudal angle towards her spine.

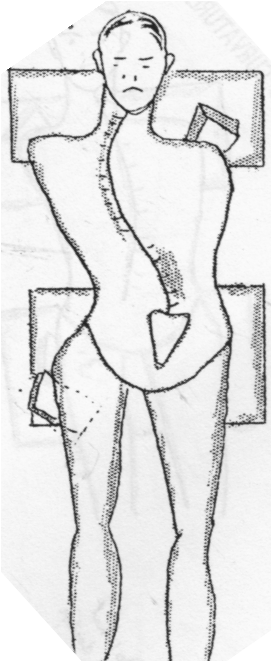
As her body relaxed, she was then turned to the prone position and blocks were placed at a 45° caudal angle bilaterally through her ASIS (SB+ block position). Once blocks were placed and the patient relaxed, simultaneous pressure was gently applied to reduce the increased asymmetrical muscle tension at the concavity of the curves (case lumbar concavity on the right and thoracic concavity on the left). After the muscle tension was reduced then thumb pressure was applied to the convexities in the lumbar and thoracic region simultaneously until the vertebral spine felt like it relaxed into a more symmetrical positioning.

Outcome: Following the first office visit she was seen again eleven days later and her scoliosis was improved but still present. She was treated again three weeks later and at that time there was no sign of the scoliosis. At a five-week follow up office visit her scoliosis was back but not as severe as initially. She was then seen once a month over two months with no trace of the scoliosis. At seven months from instituting chiropractic care her scoliosis returned though was very mild, but following that treatment it never recurred. When she had her twelve-year-old check up from her patrician there was no sign of any scoliosis.

Conclusion: This case presents treatment of an adolescent with scoliosis diagnosed initially by her pediatrician and treated successfully with sacro occipital technique protocols. It may be of value for future studies investigating more interdisciplinary relationships between allopathic and chiropractic physicians treating children with scoliosis.

SEE: The following DeJarnette Scoliosis Protocol (next page)

DeJarnette Scoliosis Protocol 1969 Chiropractic Assistant's Manual



With a patient that has a scoliosis with the lumbar convexity towards the left and the thoracic convexity towards right the following protocol would apply. With a lumbar convexity towards the right and the thoracic convexity towards the left, the application would be reversed.

With a left lumbar convexity, the patient is treated initially supine with a pelvic block placed at a 45° caudal angle through the left acetabulum and another pelvic block placed under her right shoulder at a 45° caudal angle towards her spine.

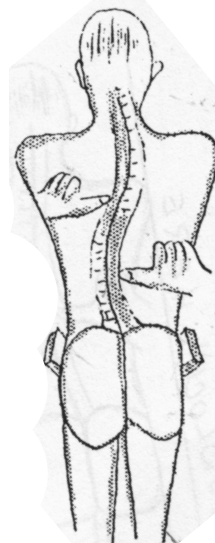
DeJarnette MB. The Chiropractic Assistant. Self-Published: Nebraska City, NB. 1969:37.

When the patient's body relaxes in the supine position and maximum correction is achieved, then blocks are removed and patient is instructed to turn over to the prone position. Once prone then blocks are placed at a 45° caudal angle bilaterally through the ASIS (SB+ block position).

Once blocks were placed and the patient relaxed, simultaneous pressure is gently applied to the paravertebral musculature to reduce any increased asymmetrical muscle tension at the concavity of the curves (lumbar concavity on the right and thoracic concavity on the left).

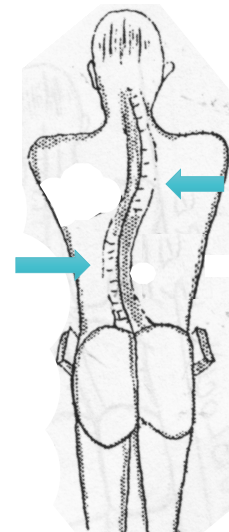
After the paravertebral muscle tension is reduced then thumb pressure is applied directly to the spinal vertebra at the apex of the convexities in the lumbar and thoracic region. Pressure is applied simultaneously until the spine feels like it can relax into a more symmetrical positioning.

Step One



Pressure to
concavities to
reduce muscle
tension

Step Two



Pressure to
convexities to
reduce scoliosis

Sacro occipital technique care incorporating extremity and cranial/craniofacial techniques for the treatment of a 60-year-old female presenting with unresolved carpal tunnel syndrome: A case report

Juliet Tablak, DC

Introduction: Carpal tunnel syndrome (CTS) is a common entrapment neuropathy characterized by numbness, tingling, and/or pain in the distribution of the median nerve. This case report describes a 60-year-old female presenting with a two-month history of bilateral wrist numbness and tingling that had not responded to initial conservative medical management. The patient had previously consulted her primary care allopathic provider via telehealth and was prescribed a cock-up wrist brace. Despite adherence, her symptoms did not improve.

Methods/Intervention: Following her initial in-office evaluation, the patient was diagnosed with: segmental and somatic dysfunction of the cervical spine, segmental and somatic dysfunction of the thoracic spine, and bilateral carpal tunnel syndrome.

An important contributing factor emerged during the history: the patient had recently begun treatment with Invisalign prescribed by her dentist. She reported that the onset of bilateral numbness and tingling closely coincided with the initiation of this orthodontic care. To evaluate a potential descending kinematic chain contribution from the craniomandibular region, she was advised to temporarily discontinue use of the aligners.

She was assessed within the Sacro Occipital Technique (SOT) framework and categorized as a Category I (pelvic torsion with sacroiliac joint fixation) and treated with pelvic blocking procedures consistent with Category I findings, thoracic drop-table adjustments, and cervical adjustments at C5/6 and C6/7.

Instrument Assisted Soft Tissue Mobilization (IASTM) applied bilaterally to the forearms and flexor retinaculum (first visit only). Following the soft tissue therapy her bilateral radius and carpal bone dysfunction was assessed and treated.

Given the temporal relationship between the initiation of Invisalign and the onset of CTS symptoms, cranial and craniofacial structures were assessed and treated. Technique included sphenobasilar technique, bilateral craniofacial stretch (hyperflexion), cranial vault sutural release, bilateral temporal bone adjustments, occipital pump technique, fronto-parietal release, and “fruit jar” technique. Intraoral treatments focused to the bilateral lateral pterygoid muscles as well as the maxillary and vomer bone balancing

Results: One week following the initial treatment, the patient reported approximately 85% resolution of bilateral carpal tunnel symptoms. Two weeks post-initial visit, her symptoms had completely resolved. At a subsequent visit one week later, her condition remained stable, and she no longer required the cock-up brace. She remained compliant with discontinuing Invisalign and began exploring Alternative Lightwire Functionals (ALF) as an alternative orthodontic appliance. The patient continued with monthly maintenance care for one year with no recurrence of numbness or tingling.

Conclusion: This case presents a possible descending kinematic chain contribution to bilateral carpal tunnel symptomatology originating from the temporomandibular joint (TMJ) region. While spinal and extremity chiropractic interventions likely contributed to symptom resolution, the temporal association between symptom onset and the initiation of Invisalign is notable.

This report highlights the importance of considering whole-body kinematic chain relationships — including craniomandibular influences — when evaluating peripheral neuropathic presentations. Further investigation is warranted to better understand potential biomechanical and neuromuscular connections between orthodontic appliances, TMJ function, and distal neuropathic symptoms.

Cervical Compaction and Distraction Testing as a Diagnostic and Therapeutic Guide: A Case Report

Jeffrey Tucker, DC

Introduction: A 50-year-old female presented with chronic cervical pain and significant restriction in active range of motion (AROM). Initial findings included cervical extension limited to 20° (normal ~60°), bilateral rotation limited to 30–35° (normal ~80°), and lateral flexion limited to 30–35° (normal ~45°). Extension was painful and markedly restricted. Although the patient has chronic neck pain she reported progressive loss of rotation over the past two weeks. Cervical compaction testing, as described by Major Bertrand DeJarnette, was used as part of the evaluation.

Methods: The cervical compaction test was performed supine with the examiner stabilizing the skull while the patient performed a bilateral straight-leg raise (Milgram-type maneuver). Outcomes assessed changes in bilateral leg-lift ability with cervical neutral positioning, cervical compression, and cervical distraction. Improved leg lifting with distraction was interpreted as suggestive of cervical disc involvement. Treatment consisted of manual cervical traction, segmental mobilization, fascial release, and patient-specific auto-traction home exercises.

Results: After two weeks of care, cervical rotation was fully restored. Extension improved from 20° to 60° and was pain-free. Lateral flexion improved but remained mildly restricted. The patient demonstrated functional stability while continuing prescribed home decompression and postural exercises.

Conclusion: Cervical compaction testing, supplemented with distraction assessment, served as both a diagnostic and therapeutic guide in this case. Cervical distraction-directed care was associated with significant improvements in mobility and pain. Further investigation is warranted to evaluate reproducibility and clinical utility in similar patient populations.

Whole-Body Kinematic Chain Contributions to Right Biceps Pain in a 12-Year-Old Baseball Pitcher: A Case Report

Daniel Tuttle, DC, LCSW, QEEG-DL

Introduction: A 12-year-old male presented with right biceps pain that developed while playing baseball two weeks prior to his office visit. He rated the pain as 6–7/10 during throwing, with symptoms exacerbated by continued throwing activity. Functional muscle testing revealed inhibition of the left psoas, left tensor fascia lata, right brachioradialis, and right anterior deltoid muscles.

Methods / Intervention: The patient presented with a Category 2 pattern (pelvic torsion with sacroiliac joint hypermobility), along with an underdeveloped maxillary arch, sacral subluxation, mild scoliosis, and right occipital subluxation. These findings were addressed through chiropractic adjustments, including right upper extremity adjustments. No improvement in symptoms was observed.

The patient subsequently sought care from another chiropractor who provided Graston soft tissue therapy for suspected biceps tendonitis; however, symptoms remained unchanged. At a follow-up visit in this clinic, further functional analysis in the standing position identified subluxations of the left ankle and left hip that had not been previously addressed.

Results: Correction of the left-sided lower extremity subluxations, in combination with Category 2 blocking and right upper extremity adjustments, resulted in complete resolution of the patient's symptoms. No additional follow-up care was required.

Conclusion: This case highlights the importance of assessing patients within functional movement patterns and considering whole-body kinematic chain contributions when evaluating and treating musculoskeletal complaints. Distal or contralateral biomechanical dysfunction may contribute significantly to localized upper extremity pain, particularly in throwing athletes.

Is the C2 tilt a reliable indicator of decompensated spinopelvic alignment: A Sacro Occipital Technique perspective

Gilbert Weiner, DC Charles Blum, DC

Purpose: To investigate the relationship between C2 slope and pelvic tilt and provide clinicians with an additional radiographic parameter for evaluating global spinal balance using routine lateral cervical imaging.

Introduction: A growing body of research has illustrated an intimate connection between the C2 slope and pelvic tilt (PT). These studies are suggesting that the C2 slope (C2S) is a critical, easily measured radiographic marker that can be used in cervical sagittal alignment analysis and serves as a simplified, accurate calculation for pelvic tilt (PT). Apparently the C2/PT may act as a vital link between the upper and lower spine and pelvic position, assisting clinicians in the diagnosis of spinal deformity

Methods: Incorporating cervical analysis into full-spine evaluations may improve diagnostic accuracy when addressing persistent pelvic imbalance or recurrent postural compensations. For practitioners utilizing Sacro Occipital Technique, these findings offer a measurable framework that may support traditional clinical observations regarding the cranial–pelvic relationship.

Conclusion: Assessment of C2 alignment may help identify compensatory postural adaptations that influence pelvic orientation and overall sagittal integrity. Further clinical investigation may clarify whether evaluating C2 alignment prior to pelvic category correction could enhance stability and longevity of chiropractic adjustments.

PACBACK study and its relationship to Chiropractic: Is Chiropractic spinal manipulative therapy?

Charles L Blum

Indexing terms: Chiropractic; PACBACK study; professional identity; SMT; adjustment.

When I read the review of Bronfort et al.'s '*Spinal Manipulation and Clinician-Supported Biopsychosocial Self-Management for Acute Back Pain: The PACBACK Randomized Clinical Trial*,' published in the February 2026 issue of *The Journal of the American Medical Association*, (1) I found myself asking a fundamental question:

... we risk confusing what is measurable with what is meaningful ... '

'What exactly was studied - and was it Chiropractic?'

The trial aimed to compare spinal manipulation and clinician-supported biopsychosocial self-management with guideline-based medical care for adults with acute or subacute low back pain (LBP) at increased risk of chronicity. The principal finding ...



that clinician-supported self-management produced a small reduction in disability, while spinal manipulation showed no difference in pain or disability compared with medical care, has clear implications.

But those implications depend entirely on whether the intervention labeled ‘spinal manipulation’ meaningfully represents the Chiropractic clinical encounter.

That question deserves careful scrutiny

Randomised controlled trials (RCTs) are designed to isolate variables, reduce bias, and eliminate confounders such as placebo effects and regression to the mean. Their strength lies in reduction. Yet Chiropractic, as historically practiced and taught, is not a reductionist intervention. It is a clinical process, comprehensive, iterative, and individualised. (2)

When an RCT studies ‘spinal manipulative therapy’ (SMT), it necessarily operationalises the intervention into a standardised, reproducible procedure. This is methodologically appropriate. However, in doing so, the intervention becomes a distilled technical act rather than a systems-based clinical encounter. The more tightly controlled the procedure, the further it may drift from the complexity of actual chiropractic practice.

This is not a rejection of RCT methodology. It is a question of construct validity.

If Chiropractic is defined within a study as a generic spinal manipulation that can be delivered interchangeably by multiple professions, then the profession itself has effectively been removed from the equation. What remains is a mechanical input, stripped of the analytical frameworks, technique systems, pre- and post-assessment strategies, and philosophical underpinnings that guide clinical decision-making in Chiropractic practice.

In that case, negative or neutral findings may tell us something meaningful about generic SMT, but not necessarily about Chiropractic.

Over recent decades there has been a discernible shift within segments of Chiropractic academia toward redefining the profession in increasingly biomedical terms. This shift includes de-emphasising traditional terminology such as *subluxation*, minimising technique systems in educational curricula, reframing clinical expertise as anecdotal rather than practice-based evidence, and replacing profession-specific language with the broader term ‘spinal manipulative therapy’. (3 - 7)

These moves are often justified as necessary for scientific legitimacy and integration within mainstream healthcare systems. Yet integration achieved through erasure of professional distinctiveness carries consequences. If Chiropractic becomes indistinguishable from physical therapy or other providers of manipulation, then large-scale trials comparing ‘SMT’ across disciplines will inevitably flatten professional identity into procedural equivalence.

The PACBACK trial may reflect precisely this flattening

When I entered Chiropractic education in the 1970s, I encountered a discipline that viewed the adjustment not as a mechanical manoeuvre alone, but as part of a broader clinical philosophy emphasising structure-function relationships, nervous system integrity, patient agency, and wellness-oriented care. Over decades of practice, I came to understand Chiropractic as a dynamic interaction between assessment, intervention, reassessment, and patient engagement.

Technique systems were not arbitrary traditions; they were structured methods of clinical reasoning. Each provided a coherent internal logic; guiding where to adjust, how to adjust, and how to evaluate

response. Removing these systems from education and research in favour of standardised technique ‘packages’ risks dismantling the analytical architecture that differentiates Chiropractic from generic manipulation.

A profession cannot study itself accurately if it first reduces itself to something else

RCTs are inherently reductionistic. (2, 8) They excel at studying tightly bounded interventions. But Chiropractic, as practiced by many clinicians, may not be reducible to a single procedural input without altering its essential character. When SMT in a clinical trial approximates a generalised diversified adjustment or mobilisation, the intervention studied may represent only the outer shell of Chiropractic practice.

The implications are significant. If trials define Chiropractic narrowly as SMT and find minimal differences compared with medical care, then policymakers, educators, and patients may reasonably conclude that Chiropractic offers little distinct value. Yet such conclusions may reflect the limits of operationalisation rather than the limits of the profession.

This raises a broader epistemological question: What forms of evidence are most appropriate for evaluating complex, systems-based healthcare encounters?

Practice-based research networks, pragmatic trials preserving clinical individuality, mixed-methods studies capturing patient-reported meaning and functional transformation, and longitudinal observational data may better approximate the lived reality of chiropractic care. Elevating only highly reductionist RCTs as definitive evidence risks privileging methodological purity over ecological validity.

A mature profession should not fear scrutiny. Nor should it fear refining traditional concepts in light of emerging evidence. The term *subluxation*, for example, can and should be examined critically, clarified operationally, and updated scientifically. Vitalistic language can be interrogated thoughtfully. Clinical expertise should be studied rather than dismissed.

But refinement is not the same as elimination

The future of Chiropractic may depend on whether it chooses assimilation through simplification or collaboration through distinctiveness. A profession that abandons its analytical frameworks, technique systems, and philosophical foundations in order to fit neatly into biomedical research templates may gain temporary legitimacy at the cost of long-term identity.

The PACBACK trial invites not only interpretation of its data, but reflection on how Chiropractic is being defined within contemporary research. If we study Chiropractic as generic SMT, we should not be surprised when the results describe generic SMT.

The deeper challenge is this: Can Chiropractic research design methodologies be robust enough to withstand scientific scrutiny while still honouring the complexity of the chiropractic clinical encounter?

Until that question is addressed directly, we risk confusing what is measurable with what is meaningful, and mistaking the reduction of Chiropractic for its representation.

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Carpal Tunnel Syndrome: Conservative Care

Charles L Blum

Narrative: A contributory factor in Carpal Tunnel Syndrome (CTS) is overuse of the wrist with repetitive grasping, possibly shortening the flexor muscles and related connective tissue. This shortening may reduce the size of the tunnel or modify the passageway and compromise the median nerve's pathway creating entrapment and irritation.

Since the main use of our hands involve grasping, touching, and holding it is common to overuse our wrist flexor compartment possibly creating a chronic flexed wrist joint.

I describe a method of assessing and conservatively treating this type of CTS (flexion overuse), which incorporates chiropractic extremity adjusting, using KT ProX tape, and rehabilitative exercises.

Indexing terms: Chiropractic; SOT; carpal tunnel syndrome; wrist rehabilitation.

Introduction

Carpal tunnel syndrome (CTS) is one of the most common peripheral entrapment neuropathies, (1) relatively commonly needing surgical intervention, (2) but surgery is not fraught without secondary side effects. (3)

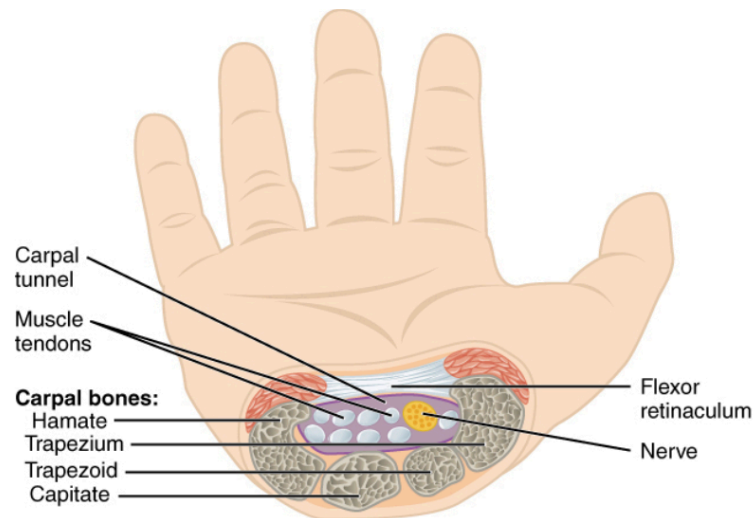
Developing an effective conservative method of caring for this condition is something doctors in healthcare are regularly investigating.

... A positive finding for CTS will note strength with opposing thumb and 5th digit extension and ulnar/radial deviation with asymmetrical weakness on wrist flexion...

What is carpal tunnel syndrome (CTS)?

Carpal means the wrist joint and on the palm side (flexor) surface of the wrist there is a tunnel of connective tissue that allows for a nerve to the hand (median nerve) to pass. While there can be various causes of CTS such as from local inflammation, connective tissue disorders, and repetitive trauma, one aspect that can contribute to CTS is how the joint is positioned and used.

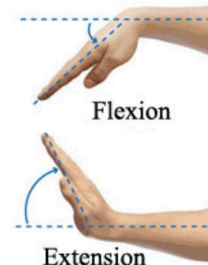




One contributory factor in CTS is overuse of the wrist with repetitive grasping, possibly shortening the flexor muscles and related connective tissue. This shortening may reduce the size of the tunnel or modify the passageway and compromise the median nerve's pathway creating entrapment and irritation. Since the main use of our hands involve grasping, touching, and holding it is common to overuse our wrist flexor compartment possibly creating a chronic flexed wrist joint.

The following is a method of assessing and conservatively treating this type of CTS (flexion overuse), which incorporates chiropractic extremity adjusting, using KT ProX tape, and rehabilitative exercises.

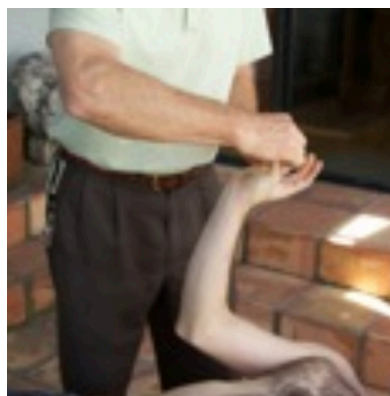
One paradigm of Chiropractic, sacro occipital technique (SOT), has a methodology for assessing wrist flexion malpositions, which can relate to CTS. Generally it can be found by a muscle test, which will provocatively exacerbate any wrist flexion malposition and cause a muscle (thumb and 5th digit approximation) to weaken on testing.



Chiropractic Assessment and Treatment

The patient is asked to approximate his/her thumb and 5th digit and resist their separation while having the hand and wrist in a neutral position. Once baseline strength is noted the patient is then tested with the wrist in flexion, extension, ulnar deviation and radial deviation. A positive finding for this CTS condition will note strength in extension and ulnar/radial deviation with asymmetrical weakness on wrist flexion.





Testing strength in wrist extension



Testing strength in wrist flexion

Chiropractic adjusting involves creating some gentle distraction of the wrist joint in slight flexion with pressure on the extensor surface of the wrist bone(s) (malpositioned in flexion) and maintaining this pressure as the wrist joint is brought gently into an extension position. The concept is that the wrist joint is in too much flexion and the joint and its related bones need to be allowed to move into their normal extension position. Once gently adjusted into position the joint will move in a balanced way both in flexion and extension with equal strength on finger approximation.

KT ProX Taping for CTS

The KT ProX tape is the perfect tape for this type of CTS patient presentation since it minimises the amount of tape needed as well as creates the exact amount of pressure to support the wrist into an extension position. Once the wrist joint is functionally positioned through the chiropractic adjustment and when re-testing the thumb and 5th digit approximation is strong during wrist flexion then taping can be used to maintain the correction.

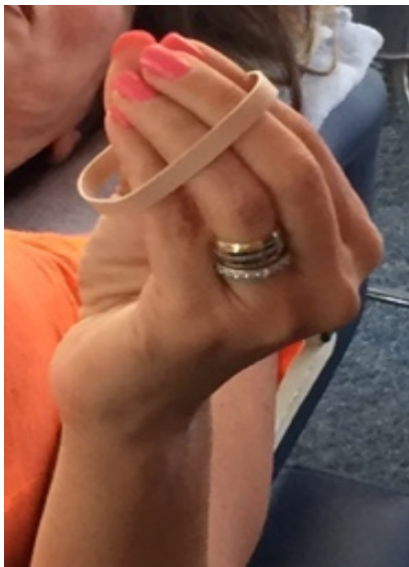


With the wrist in slight extension the central part of the tape is first placed with 50-75% stretch from the back of the hand to the top of the forearm, maintaining slight extension at the wrist joint. Once in place then the sides of the KT ProX tape are stretched at 50-75% to add tension right at the back of the wrist joint. This will inhibit wrist flexion, which while important during the day and is especially an issue for nighttime when sleeping.

Rehabilitative exercises

Since the wrist is most commonly used for flexion activities, such as grasping and holding, this often creates an imbalance in muscle use. So it is important to encourage the patient to pursue muscle activities that involve wrist extension. Since hand extension activities are rare at best it is important to find activities that patient can perform on their own.

The simplest and most cost effective exercise involves using a rubber band place around the patient's fingers with the wrist in slight extension and having the patient open their fingers into extension. The rubber band's resistance will help stimulate the hand and wrist extensors which neurologically and physically will calm down the 'over-flexion' of the wrist joint. Generally it is recommended that 5-times a day the patient perform 3-sets-of-10 rubber band extension stretches with a 30-60 rest in between each set of 10-stretches.



Case

A 42-year-old female patient was seen at this office for a left sided 'over-flexed' CTS related wrist joint. She reported chronic wrist pain which was worse when awakening in the morning and on repetitive grasping, holding, and using a computer keyboard. She was assessed and treated for a wrist flexion malposition, was taped with KT ProX tape, and given rubber band exercises to perform.

The patient was seen once a week for 4-weeks at which point with the KT ProX tape removed there was no weakening of her thumb and 5th digit approximation on wrist flexion, which coincided with her having almost no wrist pain and full wrist function.

She was instructed to continue with the exercises and be seen in 2-weeks to be re-assessed. Her condition was stable at that 2-week mark and she was instructed to continue with the exercises, particularly after she performs repetitive activities (e.g., grasping and computer keyboard use), and be seen in 1-month. When she was seen at 1-month her condition was relatively stable and she was told to continue with the rubber band exercise for prevention, particularly after performing repetitive wrist activities and contact this office if there were any flare-ups.

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Sacro Occipital Technique (SOT)

Indicators: Accessing Problems and Developing Strategies

Harvey Getzoff

Narrative: Here I discuss the complexity of the SOT primary indicators; Heel Tension, Arm/Fossae, and SOTO, but also for how they clearly illustrate the functional connection between the body's structural and neurological systems.

It is important to keep in mind when practicing SOT that the indicators discussed in this paper can at times overlap and vary. Nevertheless, verification (retesting the indicator post adjustment) can confirm the choices you have made.

All three plumb line scenarios on Chart #3 can greatly benefit from the Sitting Disc Technique (SDT) especially if indicated, 'Clinically the Straight Leg Raise (SLR) could be used as a pre and post assessment tool to judge the effectiveness of the SDT adjustment

Indexing Terms: Sacro Occipital Technique (SOT); Problem-Solving; MB DeJarnette; Primary Cranial Sacral Respiratory Mechanism.

Introduction

'To bring order out of chaos SOT offers the category system of analysis, finding that specific problems, communicate in uncomplicated manners'

MB. DeJarnette DC

This paper examines how a chiropractor can utilise a system of analysis and adjustment, in this case the SOT indicator system, to access the functional capacity of three systems (known as categories) that are essential components of the body's structural and neurological systems and their functional relationship.(8, 9) The three categories are referred to as category one, two and three. *'SOT indicators are functional test and observations that indicate the state of function of each SOT category'.* (5)

The category most in need of adjustment is specified by category determining indicators (Chart#1) while category adjustments are specified by category procedural indicators (Chart #2). Some indicators (like Step Out Toe Out, SOTO) serve as both a category 'determining' indicator and a category 'procedural' indicator. (11)

... The category most in need of adjustment is specified by category determining indicators ...'



Chart #1: Category defining indicators			
Indicator	Category #1	Category #2	Category #3
Symptoms:	Not applicable	Not applicable	Sciatic nerve pain
Plumb line analysis eyes closed 10 secs. (1,3):	A/P sway with bilateral T1/first rib motion (head flex)	Lat. sway with unilateral T1/1st rib mot. (hd. Flex)	No sway with fixed bilateral T1/first rib motion (head flex)
Arm/Fossae test (16,8,19):	Not present	Positive, <i>*takes precedence over all other category defining indicators</i>	Not present
Heel Tension (16,8,19):	Present, same side as leg deficiency	Not applicable	Not applicable
Leg deficiency (1,3):	Present prone	Present supine	Present prone
Step Out Toe Out manoeuvre (11,13):	Not applicable	Not applicable	Present and applicable
Spinal lean (11, 16,5):	Not applicable	Not applicable	Present and applicable

Chart #2: Procedural defining indicators	
Procedural indicators	Action to be taken
Cervical range of motion (ROM) primarily limited rotation. (12)	When cervical rotation is limited, it specifies the need for cervical stair step and figure 8 adjustment in chosen category
Ilio femoral motion, the side with diminished motion (11)	Indicator for ilio femoral adjustment in category two and three
Psoas muscle test, side with diminished overhead arm pull (5)	Indicator for psoas adjustment in category two and three
Crest (temporal) and dollar (occipital) signs (5,19)	Utilize in category one to differentiate between the need for a temporal or occipital adjustment
Straight leg raise (SLR) limited motion and/or pain (5,19,13)	Indicator for sitting disc technique (SDT), primary to category three but can be used in category two
Cranial ranges of motion limited (9)	Along with head tilt and the lack of cranial growth and development unilaterally, it is an indicator of the need for a cranial adjustment
Occipital fiber (18,17)	Spinal adjustment coordinated with specified soft tissue reflexes if line #2, category one and two, primarily category one.
Sitting cervical flexion limited (4)	Anterior thoracic adjustment, palpating thoracic interspinous spaces for compression, primarily in category two.

'Nothing in SOT is done without a reason and no action is complete until it is re-evaluated, all guided by indicators'. (11,15)

'All three categories can be clinically defined with some potential overlaps and with some distinct functional interrelationships'. (11)

Categories Defined

Their Primary Indicators and Blocking Guidelines

SOT Categories = Model of Function + State of Dysfunction + Method of Adjustment (5)

Category One

Category One pertains to the Primary Cranial Sacral Respiratory Mechanism (PCSRM). The term 'respiratory' refers to the intrinsic motion of the cranial and sacral components of the PCSRM which facilitates tension on the dura and the subsequent circulation of Cerebral Spinal Fluid (CSF). This process is essential for the protection and the nourishment of the Central Nervous System (CNS).

Heel Tension serves as a marker for category One blocking, which enhances the sacrum's respiration while monitoring crest and dollar signs (5) to determine the resulting respiratory response of the cranium. Additionally, this process anticipates the involvement of the Atlas vertebra as it adapts to the needs of the PCSRM. Five to six minutes are needed on the blocks until the cranial needs are fully realised.

Test for heel tension by standing at the foot of the table and grasping each heel with your thumbs across the calcaneus/talus with your fingers encircling the patient's ankle. Test the tension in both heels simultaneously as you traction. Then test them separately by pulling each heel with both hands. Compare the relative tension left to right. This indicator is an indication of sacral respiratory function and the adaption of the atlas vertebra to help maintain tension on the dura. (1,3,16)

Category Two

Category Two refers to ligamentous sacroiliac weight-bearing instability, resulting from the accumulation of instability throughout the entire structural system Inclusive of the sutures of the cranium. (2,6,9)

The basis for a category One cranial adjustment is to facilitate dural tension. The basis for a Category Two cranial adjustment is to facilitate sutural function. (2,6,9)

The arm/fossae test monitors the nervous system's sensory/motor response to the instability of the weight-bearing portion of the sacroiliac joint. (5, 8) The blocks are placed immediately after the arm/fossae test indicates the need for blocks (arm weakness) and most often can be removed, as indicated, after the cranial basic two adjustments. (8)

For further discussion of category Two and the arm fossae test please refer to my paper titled 'Sacro Occipital Technique (SOT): Systems Integration', published in this Journal; Asia Pacific Chiropractic Journal. 2024 5,1. [Click here](#).

The two portions of the Sacroiliac Joint

Category	Description
One (1,3,8):	Synovial membrane (AKA Boot) respiratory movement part of the PCSRM.
Two (1,3,8):	Hyaline cartilage, limited movement, weight-bearing, and ligament supported.

Category Three

Category Three pertains to lumbar subluxations, lumbar disc lesions and condition of the sciatic nerve, along with functionally necessary adaptations of the piriformis muscle and possibly the psoas muscle and the upper cervical region. (1,3,11)

The primary indicator for category three is the Step Out Toe Out (SOTO) test, which assesses the piriformis muscle in relation to a lumbar disc lesion or potential entrapment of the sciatic nerve by exhibiting pain and or restriction unilaterally when applied. (1,3,11)

Chart #3: Category Three Algorithm: SOTO therapeutic response indicates the condition, the severity, and the likely outcomes of SOTO. (11)

Plumb line	Possible symptoms	SOTO no blocks	Initial diagnosis	SOTO on blocks	Repeat SOTO on blocks	Prognosis
1-Lean away from the side of pain	Possible pain low back, buttocks upper leg	Probable unilateral restriction	Bulging disc, (lateral disc)	Improvement of symptoms and movement	Further improvement	Favorable, should improve with care
2-Lean to the side of pain	Pain buttocks and leg	Probable unilateral restriction, increase in pain.	Herniated disc (medial disc)	Possibly no change	Still no change	Guarded, possibly some improvement
3-Lean most often away from the side of pain	Pain probable buttocks and upper leg	Probable unilateral restriction	Piriformis Syndrome	Improvement of symptoms and restriction	Further improvement	Favorable should improve with care

For further discussion of Category Three and the Step Out Toe Out (SOTO), please refer to my paper titled 'Category Three Predictability of Outcomes' published in this journal Asia Pacific Chiropractic Journal, 2024, 4,3. [Click here](#). On occasion scenario #1 and #3 can be found in combination.

All three plumb line scenarios on Chart #3 can greatly benefit from the Sitting Disc Technique (SDT) especially if indicated, '*Clinically the Straight Leg Raise (SLR) could be used as a pre and post assessment tool to judge the effectiveness of the SDT adjustment.*' (pre- SLR, > SDT, > post-SLR). (11, 13)

Chart #4: A Timeline for Category Blocking:				
Category	Indicator	Purpose of the Blocks	Blocking Times	Desired Outcome
One	Heel Tension (HT) + Place blocks, according to leg lengths. (19)	Respirate the sacrum, then monitor the cranial responses (crest, and dollar signs).	20 to 30 seconds for HT correction, an additional 5 to 6 minutes to monitor response in the cranium. OK to check and adjust occipital fibers while on blocks. End adj. with cervical and cranial adjustments as indicated (2,6)	Improved function of the PCSRM
Two (19)	Arm/Fossae (AF)+ place blocks, according to leg lengths. (19)	Position the weight-bearing portion of the sacroiliac	Proceed to the basic 2 cranial adj. (8) after placing the blocks. Retest A/F after Basic 2 for correction, remove blocks. The Iliofemoral and Psoas adj. If indicated are done prior to blocks. Cervical/cranial adj. after blocks. (8)	Improved weight-bearing stability throughout the entire structural system
Three (19)	Step Out Toe Out (SOTO)+ Place blocks, according to leg lengths. (19)	Level the pelvis, create balance of the piriformis muscles, and differentiate the severity of the disc lesion.	Repeat SOTO every 2 minutes, 3 times maximum (on blocks) to further correct the piriformis balance and evaluate the sciatic nerve. (11)	Improved function of the involved piriformis muscle. Achieve a more accurate assessment of the condition of the sciatic nerve and the need for SDT.

Plumb Line Category Defining Indicators

A: Thoracic one/first rib plumb line palpation

The palpation examination for categorisation consists of neck flexion and extension, while palpating the first ribs where they join thoracic-one (T1) transverse processes usually one and a half inches (3 - 4 cm) lateral to the thoracic one spinous process.

- ▶ Category One: A bilateral non-painful mobile T1/first rib with no unilateral differences. *'The head nodding shows us a bilateral T1/first rib motion which is characteristic of Category One'.* It is possible that *'the anterior to posterior rocking motion of Category One'* is part of the T1/first rib motion needed to enhance the respiratory function of the PCSRM. (1, 3)
- ▶ Category Two: A painful, swollen, mobile T1/first rib on one side more than the other when forward flexing and extending the cervical spine. *'There will be no rocker motion such as seen in the Category One'.* *'An attempt of the body to maintain an upright posture when challenged by the asymmetrical joint-loading of one sacroiliac joint'.* (1, 3)
- ▶ Category Three: A bilateral T1/first rib limited motion as the body attempts to restrict mobility throughout the system in the presents of a disc lesion. The limited motion is consistent with the body's limited motion on the plumb line as it attempts to protect the damaged disc. (1, 3, 11)

B: Plumb line motion

The patient stands on a foot plate unsupported with their back to the plumb line. Arms are at their sides with the head facing forward. Their feet are in the centre two slots unless their knees are touching. If so, move their feet to the outside slots. Try to level their shoulders while maintaining the external occipital protuberance aligned with the centre of the sacrum. Wait 10 seconds with their eyes closed to make the analysis. (1, 3)

- ▶ Category One: If observing anterior to posterior sway (A-P) from behind then stand lateral to the patient to visualise the A-P rocking motion more directly. (1, 3)
- ▶ Category Two: A category two demonstrates a lateral sway usually away from the side of the unstable sacroiliac weight-bearing joint, 'one side supporting, the other side is avoiding weight'. (1, 3)
- ▶ Category Three: In acute cases the patient is antalgic (with a spinal incline) or there could be a curvature of the lumbar vertebra. There is limited motion in an effort by the body to splint the involved disc. (1, 3, 11)

Note the similarities between T1/first rib plumb line findings (A) and the plumb line motion findings (B).

Conclusion

SOT: Methods driven, systems based, functionally oriented, all guided by indicators

Throughout more than fifty years of practicing and studying SOT, I have developed a deep appreciation not only for the complexity of the SOT primary indicators; Heel Tension, Arm/Fossae, and SOTO, but also for how they clearly illustrate the functional connection between the body's structural and neurological systems.

- ▶ Heel Tension responds to a disturbance of the PCSRM and its protector, the atlas vertebra, all vital to the function of the central nervous system. (16)
- ▶ The Arm/Fossae test reacts to a sacroiliac weight-bearing disturbance as the Nervous System seeks to respond to the loss of stability. (8)

- ▶ SOTO is a process of discovery for nerve and disc function, as well as a part of the category three adjustments, as it is applied and re-tested (Chart #3). (11)

It is important to keep in mind when practicing SOT that the indicators discussed in this paper can at times overlap and vary. Nevertheless, verification (retesting the indicator post adjustment) can confirm the choices you have made.

I honour Dr Dejarnette (founder and developer of SOT) for his 70 plus years of extensive research and study all presented and explained in detail in his yearly seminar notes and teaching conferences.

I trust that the readers of this paper will review this commentary as my personal interpretation of the SOT teachings and readings, informed by my years of experience practicing SOT.

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A critical approach for learning the Operating Principles of Sacro Occipital Technique (SOT) Chiropractic

Harvey Getzoff

Abstract: This paper presents a structured approach to understanding the principles of the Sacro Occipital Technique (SOT) and its contemporary application. The guidance is presented as narrative with key points to facilitate learning the technique.

The paper is presented as a Master Class in chiropractic technique.

Indexing Terms: Chiropractic; Sacro Occipital Technique; SOT; technique; DeJarnette.

Key Point 1: SOT Principles. The fundamental operating principles of the functional systems that govern the SOT methods (technique). The operating principles of these three functional systems (categories) are considered the core SOT principles. Also considered as a key SOT principle is that nothing in SOT is done without a reason and no action is complete until it is re-evaluated, all guided by indicators.

Key Point 2: SOT Categories. SOT categories consist of the operating principles of three primary functional systems of the body and methods of analysis and adjustment of those three systems. The three SOT categories are differentiated by SOT category defining indicators. DeJarnette wrote in his 1980 seminar notes 'To bring order out of chaos SOT offers the category system.' (8)

Key Point 3: SOT Indicators. SOT indicators are functional tests and observations that indicate the state of function of each SOT category (category defining) and the adjustments needed to properly adjust the defined category. SOT indicators also monitor patient improvement.

Key Point 4: Guarding. The dictionary definition of guarding is 'To keep safe from harm or danger, protect and watch over.' (35) This concept transfers to all that is known of the extensive neurological network of human systems that regulates posture, motion and function. In Category One we have the tendon guard reflex that reacts to a disturbance of the PCSRM. In Category Two the difference in function of the muscles surrounding the T1/first rib articulation acts as a unilateral guard reflex in the presence of unilateral weight-bearing instability. In Category three the lumbar spinal muscles along with the piriformis and psoas muscles react to the lumbar problem.

Introduction

This paper presents a pathway for learning Sacro Occipital Technique (SOT). SOT is a systems method of Chiropractic developed over seventy-five years by Major Bertrand DeJarnette DC.

The pathway presented in this paper for learning SOT is based on the understanding of answers to six relevant and challenging questions concerning the SOT systems method of chiropractic. (1) The goal is to create a critically thought-out process for learning the operating principles of the SOT Category system. This process concurs with the Socratic method of learning, which is based on asking and answering questions to stimulate critical thinking. (2, 3)

This paper does not teach methods of patient analysis and adjustment, but those methods should be easier to comprehend and perform when the answers to these questions are carefully thought through.

The overriding importance of this paper, in my opinion, is that appropriate questions when asked, processed and answered allow for a deeper and a more contextual understanding of the operating principles of the SOT Category system. As stated by Harrington Emerson *'The man who tries methods ignoring principles is sure to be lost.'* (4) Regarding the use of questions for learning Warren Berger writes in his book *A More Beautiful Question 'A question phrased a certain way produces an almost palpable feeling of discovery.'* (5) The six questions are presented as two questions for each of the three SOT categories. (6, 7, 8)

Each of the three SOT categories represents the operating principles of a primary functional system of the body, a method of analysing the state of function of each system and a method of adjusting each functional system. (Key Points 2, 5) (6) It is my belief, as previously stated, that understanding the operating principles of the SOT categories in context *'knowledge is information in context'* (9) will not only lead to greater understanding of the SOT patient analysis and adjusting methods but also to a greater ability to perform these methods.

Key Points are integrated within this paper to both serve both as an additional learning pathway and as a source of reference for the concepts expressed throughout this paper. The given words and terms express actions, the state of something or a relationship between two or more relative aspects of SOT. An example of this is the key term guarding. (# 4). Each SOT Category develops a specific guarding response to a disruption in its functional system. *'All the muscles of the body are continually being remodelled to match the function that is required of them.'* (10)

- ▶ Category One has the *tendon guard reflex*
- ▶ Category Two has a *functional difference (left to right) of the muscles directly surrounding the Thoracic one /first rib articulation*
- ▶ Category Three has *spinal, piriformis and psoas muscle guarding responses*. The understanding of these guarding responses will lead to an understanding of the operating principles of the three SOT categories.

Question #1 Category One

What are crest and dollar signs and what are their meaning?

Crest and dollar signs are SOT procedural indicators. (Key Point 3) (7, 8, 11) Procedural indicators are tests and observations that are used when adjusting a specific category. (12) (Key Point 1) Crest and dollar are specific to Category One. Category One addresses the function of the *Primary Cranial Sacral Respiratory Mechanism* (PCSRM). (Key Point 5) (6, 7, 13)

... DeJarnette organised an approach to the assessment and care of a patient to 'bring order out of chaos'. The Sacro-Occipital remains a core technique for the conventional practice of chiropractic'



Key Point 5: Respiratory. Respiratory refers to the inherent motion of the cranial sacral portions of the PCSRM that allows for tension on the dura and the movement of cerebral spinal fluid throughout, protecting and nourishing the central nervous system.

The interacting components of the PCSRM are:

- ▶ the inherent respiratory motion of the sacrum
- ▶ the inherent respiratory motion of the cranial bones
- ▶ the tension of the dura's membranes and its attachments
- ▶ the pulsation of cerebral spinal fluid (CSF) on a cellular level
- ▶ the movement of CSF throughout the Central Nervous System (CNS)

Crest signs are found laterally in the lumbar musculature while dollar signs are found in the buttock musculature. (7, 8) The integrity of these muscles comparatively, left to right and one to another is the procedural indicator for the necessary category one cranial adjustment. Crest signs indicate the need for a temporal bone adjustment. Dollar signs indicate the need for an occipital bone adjustment. (7, 8, 14) Frontal bone adjustments are made in the absence of crest and dollar signs and in the presence of a head tilt. (14)

Question #2 Category One

What is heel tension and why is it both a procedural and a category defining indicator and also can be considered an adjustment? (Appendix 6) (12, 15)

Key Point 6: Heel Tension, Arm/Fosse, Step Out Toe Out. All three of these indicators are both category defining and procedural indicators that are primary to each category. They define the category most in need of adjustment and procedurally indicate when the blocks are needed and when they are no longer needed. 'As a system strives for equilibrium the precise placement of the blocks with careful controls results in a quick and meaningful response.' [6]

Key Point 7: SOT Blocks. The SOT blocks [36] are specifically designed to initiate necessary structural and functional changes in the pelvis and throughout the body that were found by SOT indicators. They are essential to each category adjustment. Retesting the indicator dictates the removal of the blocks.

Heel tension is a unilateral resistance of the *Achilles* tendon and its attached musculature, on the short leg side. Heel tension, also known as the *tendon guard reflex*, monitors the respiratory function of the sacrum (Key Point 5), the needed tension on the dura and most of all the role of the atlas in maintaining these processes. (14, 16)

If heel tension is present, it strongly defines the need for a Category One adjustment and when the Category One blocks (Key Point 7) are placed (an adjustment) and the PCSRM responds. The heel tension, procedurally monitored, will resolve, no longer needing the tendon guard reflex. DeJarnette writes in his 1980 manual that '*Releasing the tendon guard reflex is the most important step in the Category one procedure.*' (8)

Category One adjustments are designed to enhance PCSRM function.

Question #3 Category Two

Why does the Arm/Fossae test have to be done so precisely (exact)? (17) (Key Points 6, 8)

The arm/ fossae test must be done so precisely because it analyses the body's immediate ability to respond through the muscle system to multiple sensory stimuli, eyes watching, ears listening, the involved fossae (Key Point 8) for touch sensitivity, and to an arm pull for a muscle reaction. It is not a muscle test (7, 8) even though an isolated simple muscle response is part of the arm/fossae test.

Key Point 8: Fossae. The fossa is part of the arm/fossa test that refers to *Poupart's* (inguinal) ligament of the anterior pelvis. The fossae represent one of four areas of ligament tissue that becomes stimulated in the presence of a congruent ligamentous weight-bearing sacroiliac imbalance. (6) Stimulation of this area is part of the arm/fossa test.

Key Point 9: Sacroiliac Joint. Both a respiratory joint (Key Point 5), the synovial boot portion, (7, 8) Category One and the ligamentous weight-bearing portion, Category Two, are key factors in both categories.

Key Point 10: Function. SOT is functionally oriented. All indicators, both defined and procedural are judged on how they perform when they are functionally tested. SOTO is the one SOT indicator that also asks for patient symptomatic feedback along with its functional evaluation.

These sensory organs and structures that are challenged test the integrity of the central nervous system, calling on it to interpret the multiple sensory challenges, integrate and process the challenges and express those stimuli through the muscles. A sacroiliac ligamentous weight-bearing imbalance (Key Point 9) often present when the structural system is compromised will disrupt this process and can be disclosed by the arm/fossae test. Discerning the performance of the weight-bearing system is difficult but possible.

DeJarnette wrote in his *Philosophy, Science and Art of SOT* that '*The arm/fossae test is the most exacting neurological and myological test a doctor of chiropractic can make, and it requires a developing skill constantly renewed.*' (18) When sensory/motor integration is altered and defined by the arm/fossae test Category Two becomes the category of choice.

- ▶ Category Two is based on a primary neurological principle, the ability of the body to receive sensory input, the integration of this input and the capacity of the body to respond to that input through the muscles while in the presence of a ligamentous sacroiliac weight-bearing imbalance (Key Point 9). (6)
- ▶ The Category Two blocks restore the functional balance of the ligamentous weight-bearing structures of the sacroiliac joint allowing for improvement of weight-bearing balance, sensory/ motor integration and the resultant arm/fossae test.
- ▶ Improvement can be maintained when spinal, cranial and other adjustments are made in conjunction with blocking (Appendix 10). The arm/fossae test, like heel tension, can be considered a category defining indicator and an adjustment.

Question #4 Category Two

Why does a unilateral functional difference of the muscles surrounding thoracic one/first rib articulations define a Category Two?

Category Two is a unilateral problem of the body to maintain weight-bearing function (Key Point 6) with the ligamentous weight-bearing portion of the sacroiliac joint primary. The unilateral T1/first

rib difference, a guarding affect (Key Point 4) indicates the body's struggle to promote weight-bearing stability (19) in the presence of a sacroiliac joint weight-bearing imbalance.

Question #5 Category Three

What is the role of muscle guarding in the understanding of Category three? (Key Point 4)

Muscle guarding occurs in Category Three as protection of the lumbar problem, which is primary to Category three. The muscle guarding effect, while limiting motion in the lumbar area and often creating an antalgic posture, (7, 8) can and usually does affect other structures. In Category Three the *piriformis* muscle and its attachments are most often affected. This is discovered through the Category Three defining *Step Out Toe Out* (SOTO) test. (Key Point 6) (7, 8, 20, 21, 22) At times the sciatic nerve can be entrapped in the sciatic notch (7, 8, 21) or a lumbar disc lesion could be further complicating and intensifying the muscle guarding response.

The SOTO test is both a defining and a procedural indicator for Category Three (11) and both useful and necessary in determining the degree of severity of the lumbar problem. It can also be adjusted by Category Three blocks. The *psaos* muscle often will have a guarding effect as well as the *piriformis* muscle and must be analysed and adjusted. (7, 8, 23)

- ▶ Category Three addresses lumbar subluxations, lumbar disc lesions and the condition of the sciatic nerve
- ▶ Category Three blocks (Key Point 7) and the SOTO procedural manoeuvre (unilateral pain or movement differences) reduces and/or removes the muscle guard reflex while at the same time further defining the sciatic nerve and its related disc tissue. (21)
- ▶ When the SOTO is completed, and the *psaos* muscle is adjusted the lumbar problem is prepped for adjustment. The preferred method of lumbar adjustment is the SOT *Sitting Disc Technique*. (20, 24)

Question #6 Category Three

What is the significance of the Straight Leg Raise (SLR) test in Category Three?

The straight leg raise test assesses the ability of the lumbar spine to move away from extension into a flexed position. This can be difficult to accomplish in the presence of a lumbar problem, primary to Category three. The SOT *Sitting Disc Technique* (SDT) enhances lumbar flexion while reducing lumbar extension and its compressive forces on lumbar disc tissue. (20, 24, 25)

When done effectively it also reduces the limitations of the SLR. I report this in my retrospective case series '*Clinically the SLR can be used as a pre and post assessment tool to assess the effectiveness of the SDT adjustment.*' (26)

Cervical and Thoracic findings are not category defining indicators, but they are procedural and need to be adjusted as indicated in each category protocol. The primary SOT cervical analytic and adjusting methods are the stair step and 'figure 8' procedures. (7, 8, 27, 28) The primary thoracic analytic and adjusting methods are the trapezius (29) and occipital fibres and palpatory methods focusing on inter spinous space compression. (30, 31, 32, 33)

Conclusion

I write this paper with an appreciation of the complexity of the SOT method and the valuable purpose it serves. SOT presents a vast amount of information regarding primary functional systems of the body (Categories), ways of analysing the state of these systems and a method of addressing their needs. (6, 7, 8, 11)

The books, articles and pages referenced in this paper (especially References 8, 12, 18, and 34) should be helpful in the learning of SOT analytical and adjusting methods.

Key Point 11: Systems. SOT Categories consist of three primary systems centred on the function of the Central Nervous System, its attachments and structural stability throughout the entire body. These systems like all 'systems are ever changing processes of self-organisation, growth and adaption.' (37)

Key Point 12: Dr. DeJarnette DC. DeJarnette understood that these systems were either in a process of growth or decay. He developed an indicator system to identify its state of operation and developed methods to stimulate in a way that the body would learn. (6)

As stated in the introduction, I believe that the format of this paper (questions/answers) along with the supplemental material provided in the appendix offers the reader a critically based process, with a reliance on context, for learning the essence (operating principles) of the SOT categories.

The questions asked in this paper, like all questions, are in an interrogative form in order to seek information in return. My hope is that this form of learning will enlighten the reader how '*the art of asking questions is at the heart of discovery.*' (5)

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1 A CRITICAL APPROACH FOR LEARNING THE OPERATING PRINCIPLES OF SACRO OCCIPITAL TECHNIQUE (SOT)

THIS PAPER PRESENTS A PATHWAY FOR LEARNING SOT.
HARVEY GETZOFF DC. (46+)



Appendix: Key Points gathered

1. *SOT Principles*: The fundamental operating principles of the functional systems that govern the SOT methods (technique). The operating principles of these three functional systems (categories) are considered the core SOT principles. Also considered as a key SOT principle is that nothing in SOT is done without a reason and no action is complete until it is re-evaluated, all guided by indicators.
2. *SOT Categories*: SOT categories consist of the operating principles of three primary functional systems of the body and methods of analysis and adjustment of those three systems. The three SOT categories are differentiated by SOT category defining indicators. Dr. DeJarnette wrote in his 1980 seminar notes '*To bring order out of chaos SOT offers the category system.*' (8)
3. *SOT Indicators*: SOT indicators are functional tests and observations that indicate the state of function of each SOT category (category defining) and the adjustments needed to properly adjust the defined category. SOT indicators also monitor improvement.
4. *Guarding*: The dictionary definition of guarding is '*To keep safe from harm or danger, protect and watch over.*' (35) This concept transfers to all that is known of the extensive neurological network of human systems that regulates posture, motion and function. In Category One we have the tendon guard reflex that reacts to a disturbance of the PCSRM. In Category Two the difference in function of the muscles surrounding thoracic 1/first rib articulation acts as a unilateral guard reflex in the presence of unilateral weight-bearing instability. In Category Three the lumbar spinal muscles along with the piriformis and psoas muscles react to the lumbar problem.
5. *Respiratory*: Respiratory refers to the inherent motion of the cranial sacral portions of the PCSRM that allows for tension on the dura and the movement of cerebral spinal fluid throughout, protecting and nourishing the central nervous system.
6. *Heel Tension, Arm/Fossae, Step Out Toe Out*: All three of these indicators are both category defining and procedural indicators that are primary to each category. They define the category most in need of adjustment and procedurally indicate when the blocks are needed and when they are no longer needed. '*As a system strives for equilibrium the precise placement of the blocks with careful controls result in a quick and meaningful response.*' (6)
7. *SOT Blocks*: The SOT blocks (36) are specifically designed to initiate necessary structural and functional changes in the pelvis and throughout the body that were found by SOT indicators. They are essential to each category adjustment. Retesting the indicator dictates the removal of the blocks.
8. *Fossae*: The fossa is part of the arm/fossa test that refers to *Poupart's* (inguinal) ligament of the anterior pelvis. The fossae represent one of four areas of ligament tissue that becomes stimulated in the presence of a congruent ligamentous weight-bearing sacroiliac imbalance. (6) Stimulation of this area is part of the arm/fossa test.
9. *Sacroiliac Joint*: Both a respiratory joint (Key Point 9), the synovial boot portion, (7, 8) Category One and the ligamentous weight-bearing portion Category Two, key factors in both categories.
10. *Function*: SOT is functionally oriented. All indicators, both defined and procedural, are judged on how they perform when they are functionally tested. SOTO is the one SOT indicator that also asks for patient symptomatic feedback along with its functional evaluation.
11. *System*: SOT Categories consist of three primary systems centred on the function of the Central Nervous System, its attachments and structural stability throughout the entire body. These systems like all '*systems are ever changing processes of self-organisation, growth and adaptation.*' (37)
12. *Dr. DeJarnette DC*: DeJarnette understood that these systems were either in a process of growth or decay. He developed an indicator system to identify its state of operation and developed methods to stimulate in a way that the body would learn.

Vestibular Integration Protocol

Kyle Grunwald, DC

"This vestibular integration protocol is largely informed by concepts originally taught by Dr. Cedrick Noel through the Gravity Reset Method, as shared with me in a clinical mentorship setting, with additional modifications and treatment applications integrated from other educational sources and clinical experience."

1. Assessing the Need for the Procedure

The need for vestibular integration is determined through postural and balance assessment. The patient stands barefoot on a balance pad with feet in the same plane and as close together as comfortably possible. The practitioner observes for sway patterns—commonly right/left posterior or right/left horizontal. Anterior canal dysfunctions are rare; therefore, any anterior sway patterns are interpreted as compensatory to posterior canal dysfunctions (e.g., right anterior sway is addressed as a left posterior canal issue).

2. Determining the Direction and Specific Procedure [Directionality is based on observed sway and identified canal involvement]

- Posterior canal involvement: Modified Epley maneuver starting in the position corresponding to the dysfunctional canal.
- Horizontal canal involvement: Modified BBQ roll starting from the side of the dysfunctional canal, rolling through 360° to return to start before sitting up.
- Minimal sway/mild symptoms: Chair pull exercises to engage vestibular and oculomotor control without aggressive repositioning.

All procedures are performed with the patient maintaining visual fixation on a laser point to reinforce oculovestibular coherence.

3. Procedure Description

Step 1 – Balance and Sway Assessment:

Stand barefoot on a balance pad, feet in the same plane. Observe sway direction and amplitude.

Step 2 – Canal-Specific Intervention:

Large sway (posterior/horizontal):

- Posterior canal: Epley maneuver starting from dysfunctional position with eyes fixed on laser pointer; ~30 seconds per quarter turn.
- Horizontal canal: BBQ roll with laser fixation, four 90° turns.
- Final Fixation and Oculomotor Reinforcement:
- Once the patient returns to a seated position following either maneuver:



Posterior canal dysfunction:

- For a left posterior canal issue, the practitioner uses their left thumb, positioning it upward and outward into the patient's upper right visual field—that is, diagonally up and lateral relative to the patient's line of sight.
- For a right posterior canal issue, the practitioner uses their right thumb, positioning it upward and outward into the patient's upper left visual field.
- In both cases, the patient maintains a neutral head position, fixates on the practitioner's thumb in the upper-lateral field, and performs 3–5 small, slow “yes/yes” nodding motions while keeping eyes fixed on the target.

Horizontal canal dysfunction:

- For a right horizontal canal issue, the practitioner uses their right thumb, bringing it laterally into the patient's left visual field.
- For a left horizontal canal issue, the practitioner uses their left thumb, bringing it laterally into the patient's right visual field.
- The patient maintains a neutral head position, fixates on the thumb, and performs 3–5 controlled “no/no” head motions while maintaining visual fixation.

Mild sway: Chair with forehead-mounted laser; patient holds baton vertically, 12–18 inches from face; practitioner performs three gentle short pulls, pausing fully between each.

Chair Pull Procedure:

- Place patient in a rolling chair with laser pointer fixed to forehead.
- Patient holds a baton with both hands vertically at midline, ~12–18 inches from face.
- Patient stabilizes laser pointer dot on the end of the baton.
- Practitioner performs three short pulls in the direction of the visualized vestibular dysfunction on the balance pad, with a full stop between each pull.
- Reassess patient response; repeat as indicated.

Step 3 – Reassessment and Secondary Integration:

Return to balance pad for reassessment.

- If lateral sway persists: 1-3 lateral steps in direction of visualized vestibular dysfunction while holding baton vertically at midline with laser pointer fixed at upper end of baton
- If large anterior-posterior sway persists: Gaze Stability Chart protocol.
- Gaze Stability Chart Protocol

Chart: 7 vertical points with 2 additional lateral points adjacent to the center.

Patient wears laser pointer glasses, with the pointer aimed at the central point.

Procedure:

- Starting at the center (4th point), the doctor moves the patient's head and laser downward:
- To the 5th point → patient's eyes track upward to the 3rd point.
- To the 6th point → patient's eyes track upward to the 2nd point.
- To the 7th point → patient's eyes track upward to the 1st point.
- Patient closes eyes, then reopens at the bottom point (7th point) where the laser is positioned.
- Doctor moves the head and laser back to the center (4th point) while patient tracks the laser with their eyes.
- Repeat this sequence 3 times.
- Final Rep: After returning to center, doctor moves the head and laser laterally between the two points adjacent to the center while patient tracks the movement with their eyes.

Step 4 – Functional Reinforcement:

Swimming motion (ipsilateral arm and leg extension backward) or backward walking with baton at 45°, head neutral, gaze upward.

Step 5 – Reassessment and Retention:

Assessment Tools for Progress and Completion

- Recheck balance on the pad to confirm immediate change.
- Reassessment of balance pad sway patterns at next few patient appointments.
- Observation of changes in musculoskeletal pain patterns correlated with previously identified vestibular dysfunction.
- Improvement in overall postural stability and coordination.
- Integration considered complete when patient demonstrates stable posture, minimal to no sway, and reduced/absent pain patterns.

Home Exercises and Ergonomic Recommendations

- Backward swimming motion (ipsilateral arm/leg extension).
- Backward walking with baton at 45°, head neutral, eyes upward.
- Optional X0/X1 gaze stability exercises to reinforce oculovestibular coordination.

Criteria for Stability and Discontinuation of Care

- A patient is considered stable and ready to discontinue in-office vestibular interventions when:
- They maintain consistent postural balance on the pad without compensatory sway.
- No recurrence of vestibular symptoms between sessions.
- Patient pain is not returning, and they demonstrate improved brain-body awareness, including better recognition of posture, sway, and controlled movement during daily activities.
- At this point, continued home reinforcement may be suggested for maintenance, but no further in-office vestibular interventions are required unless indicated.

The TMD Alliance

Jason Scoppa, DC

We are happy to announce that the TMD Alliance has been restored after a hiatus of a few years, due to COVID and logistical reasons.

The Alliance of TMD Organizations (TMD Alliance), founded in 1995, is a group dedicated to protecting the rights and well-being of patients with temporomandibular disorders (TMD) and supporting clinicians in their treatment. It advocates for diverse and interdisciplinary treatment approaches in regards to jaw pain and dysfunction, including the role of dental occlusion in TMD, and serves as a voice for patient care.

SOTO-USA is a founding member of this group and the only non-dental organization involved. Drs. Blum and Scoppa serve as the representatives from SOTO-USA, and look forward to contributing to the interdisciplinary care models and sharing of information with regards to TMJ diagnosis and management.



SOTO-USA Research Update

Help Secure the Future of Sacro Occipital Technique (SOT)

SOTO-USA is on a mission: to advance Sacro Occipital Technique through research that strengthens its role in modern chiropractic care. Every study we publish, every article we release, helps SOT evolve—improving techniques, refining diagnostics, and ensuring the method remains respected in the scientific community.

But we can't do it alone. Your tax-deductible donation directly fuels research that protects and grows SOT worldwide. By contributing today, you help:

- Fund cutting-edge studies that keep SOT current and evidence-based
- Publish findings that guide practitioners and inspire innovation
- Preserve the legacy of Major Bertrand DeJarnette, DO, DC, and his pioneering work

SOT has changed the way chiropractors care for patients—your support ensures it continues to do so for generations to come.

Take action today. Make a lasting impact on chiropractic healthcare.

Donate now at www.SOTO-USA.org

Association of Chiropractic Colleges – Research Agenda for Chiropractic (ACC RAC) Conferences - Papers Presented at the 2025 and 2026 Conferences

Abstracts Presented at for the 2026 ACC-RAC Conferences

Ludwig M, Pfefer M, Cooper S, Blum C, McIntosh S, Aldrich M, Eads S, Frank G. Consensus development of clinical decision-making guide for assessment, diagnosis, and management of lumbar spinal stenosis in a doctor of chiropractic program outpatient health center. J Chiropr Educ 2026;40(1): 10.

Bloink T, Blum C. Interdisciplinary care of a 15-year-old male patient suffering from unresolved post-concussion syndrome symptoms secondary to high school American football trauma: A case report. J Chiropr Educ 2026;40(1): 6.

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Charles Blum. Sacro occipital technique (SOT) and cranial techniques for treatment of post-brain surgery secondary effects, two years post-surgery: A case report. J Chiropr Educ 2025;39(1):10.

Charles Blum. Inter- and intra-disciplinary chiropractic collaborative care of a patient presenting with temporomandibular joint disorder (TMD), head and neck pain, and right-sided cormiosis: A case report. J Chiropr Educ 2025;39(1):10.

Chad Hagen. Unexpected resolution of chronic sinus headaches following chiropractic care for cervicogenic headaches: a case report. J Chiropr Educ 2025;39(1):12.

Lisa Stowell, Charles Blum, Chiropractic treatment of a 33-year-old female presenting with bilateral toe walking and mild scoliosis throughout entire spine: A case report. J Chiropr Educ 2025;39(1):20.

6th Biennial Conference on Pediatric Brain Injury, April 29 – May 2, 2026, Calgary, Canada

Thomas Bloink, Charles Blum. Chiropractic Sacro Occipital Technique and Cranial Care and Conjoint Therapy for Care of Refractory Brain Trauma in a 14-Year-Old Male. Poster Presentation.

15th World Congress on Brain Injury, March 19-22, 2025, Montreal, Canada

Thomas Bloink, Charles Blum. Interdisciplinary care of a 15-year-old male patient suffering from unresolving post-concussion syndrome symptoms secondary to high school American football trauma: a case report. Poster Presentation.

18th World Federation of Chiropractic Biennial Congress

May 7-10, 2025, Copenhagen, Denmark.

Thomas Bloink, Charles Blum. A rare case of a patient presenting with Acoustic Neuroma and a Temporomandibular Joint Disorder treated with chiropractic and dental care: A case Report

Forty-Fourth Annual Conference of The Association for the History of Chiropractic

June 21, 2025, at The Gonstead Clinic, Mount Horeb, Wisconsin

Hagen C. Major B. De Jarnette, D.O., D.C. Founder and Developer of Sacro Occipital Technique



**SOT or Cranial Related Papers Published in the Asia Pacific Chiropractic Journal
January 2025 – Volume 5, Number 3**

Davis KY, Blum C. Parkinson's' Disease and Soft Tissue Orthopedics (STO): A Case Report. Asia-Pac Chiropr J. 2025;5.3

Blum CL. Chiropractic Manipulative Reflex Technique: The Relationship Between the Somatic and Autonomic Nervous Systems. Chapter 3: Introduction to Chiropractic Manipulative Reflex Technique (CMRT). Asia-Pac Chiropr J. 2024;5.3.

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**SOT or Cranial Related Papers Published in the Asia Pacific Chiropractic Journal
January 2026 – Volume 6 Number 3**

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Nashville, Tennessee – April 25, 2025

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The SOT Research Conference Proceedings (Now indexed and searchable!)

Many of the SOT Research Conferences have now been or will be published in the Annals of Vertebral Subluxation Research as well as in the Asia Pacific Chiropractic Journal and are available for searching through chiroindex.org (a major chiropractic search engine).

1st Annual Sacro Occipital Technique Research Conference Proceedings. Las Vegas, Nevada October 22, 2009. Annals of Vertebral Subluxation Research ~ Sept 29, 2011 ~ Pages 104-132.

2nd Annual Sacro Occipital Technique Research Conference Proceedings. New Orleans, Louisiana 2010. Annals of Vertebral Subluxation Research ~ October 17, 2011 ~ Pages 133-164.

3rd Annual Sacro Occipital Technique Research Conference Proceedings. Nashville, Tennessee May 19, 2011. Annals of Vertebral Subluxation Research ~ Nov 10, 2011 ~ Pages 165-182.

4th Annual Sacro Occipital Technique Research Conference Proceedings. Atlanta, GA May 3, 2012. Annals of Vertebral Subluxation Research ~ May 24, 2012 ~ Pages 41-59.

5th Annual Sacro Occipital Technique Research Conference Proceedings. Atlanta, GA May 2, 2013. Annals of Vertebral Subluxation Research ~ March 27, 2014 ~ Pages 22-48.

6th Annual Sacro Occipital Technique Research Conference Proceedings. Redondo Beach, CA May 15, 2014. Annals of Vertebral Subluxation Research ~ July 14, 2014 ~ Pages 129-144.

7th Annual Sacro Occipital Technique Research Conference, New Orleans, LA May 7, 2015. Annals of Vertebral Subluxation Research ~ June 8, 2015 ~ Pages 135-145

8th Annual Sacro Occipital Technique Research Conference, New Orleans, LA May 13-14, 2016.

9th Annual Sacro Occipital Technique Research Conference, Marina Del Rey, California. May 12-13, 2017.

10th Annual Sacro Occipital Technique Research Conference Proceedings: Kauai, Hawaii. February 28 – March 2, 2018. Ann Vert Sublux Res: Mar 2019(2019:): 29-33

11th Annual Sacro Occipital Technique Research Conference, Nassau, Bahamas, February 27 – March 1, 2019 Ann Vert Sublux Res: Jan 2020(2020:): 1-10

Many thanks go to the editors of the Annals of Vertebral Subluxation Research, Drs. Pamela Stone and Matthew McCoy for their continued support of chiropractic clinical research and SOT is greatly appreciated.

13th Annual Sacro Occipital Technique Research Conference, New Orleans, LA April 27, 2022. Asia Pacific Chiropractic Journal. Third Quarter July 2022; Issue 3.1. [<https://www.apcj.net/sot-abstracts-2022/>]



14th Annual Sacro Occipital Technique Research Conference, New Orleans, LA April 28, 2023. Asia Pacific Chiropractic Journal. [<https://view.publitas.com/asia-pacific-chiropractic-journal/2023-sot-conference-proceedings/>]

15th Annual Sacro Occipital Technique Research Conference, Nashville, Tennessee. April 26, 2024. Asia Pacific Chiropractic Journal. [<https://view.publitas.com/asia-pacific-chiropractic-journal/2024-sot-conference-proceedings-book/>]

16th Annual Sacro Occipital Technique Research Conference, Nashville, Tennessee. April 25, 2025. Asia Pacific Chiropractic Journal. [<https://view.publitas.com/asia-pacific-chiropractic-journal/sacro-occipital-technique-research-conference-nashville-tennessee-april-25-2025/>]

17th Annual Sacro Occipital Technique Research Conference, Nashville, Tennessee. April 24, 2026. Asia Pacific Chiropractic Journal. [In Print]

At the inaugural 2009 Sacro Occipital Research Conference, Las Vegas, Nevada we had 28 abstracts accepted. At subsequent Sacro Occipital Research Conferences many of the submissions have led to paper submissions to various other research conferences and peer review journals. All SOT practitioners and allied healthcare partners are encouraged to be a part of our future research conferences. Check the SOTO-USA website [www.SOTO-USA.org] or be aware for the call for papers.

Our ongoing commitment continues into the future with papers submitted to chiropractic and allied healthcare conferences and journals. One of the easiest ways types of research can be facilitated by a doctor in clinical practice is through the publishing of individual research papers and case histories. These lay the groundwork for future research directions and projects. If the need arises, we will be happy to assist the doctor in writing the paper or case history in order to get it submitted for publishing.

Please take a moment to review our landmark SOT and cranial research conference proceedings and texts, which will eternally preserve SOT and related published research. These can all be purchased online at www.soto-usa.org. by calling (336) 929-9917, or email – drcblum@aol.com.

- 1st Sacro Occipital Technique Research Conference Proceedings: 2009.
- 2nd Sacro Occipital Technique Research Conference Proceedings: 2010.
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- 6th Sacro Occipital Technique Research Conference Proceedings: 2014.
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- 15th Sacro Occipital Technique Research Conference Proceedings: 2024.
- 16th Sacro Occipital Technique Research Conference Proceedings: 2025.
- 17th Sacro Occipital Technique Research Conference Proceedings: 2025.

In Print:

The Compendium of Sacro Occipital Technique: ***Peer-Reviewed Literature 2000-2005.***

The Compendium of Sacro Occipital Technique: ***Peer-Reviewed Literature 1984-2000.***

The SOT Collection: *To the Year 2000.*

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