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Chiropractors with certification in vestibular rehabilitation administer treatment beyond spinal alignment to help vestibular patients.

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# Chiropractics for the Treatment of Vestibular Disorders

By Dr. Daniel Lane, BSc, DC (UK), DACNB, FFAAFN

"I feel dizzy and you want to snap my neck?!"

There are a lot of people who may think a chiropractor will automatically "snap the neck" of every patient they see, including patients suffering from dizziness. Spinal manipulation, whether performed by a chiropractor, medical doctor, osteopath or physiotherapist may or may not be an appropriate intervention for a patient. There are particular cases where spinal manipulation should be avoided and these "absolute contraindications" and "red flag symptoms" are well known[1]. Chiropractors, like other health professionals, are trained to select the most appropriate treatment for a patient, and may use alternative types of manual therapy when spinal manipulation is not indicated.

Safe, effective and appropriate treatment can only be determined following a detailed case history and examination. Patients suffering from dizziness or other symptoms suggestive of a vestibular disorder should expect a detailed diagnostic work-up before any treatment program is recommended, irrespective of the healthcare professional they consult. It is especially important for vestibular patients to choose a healthcare professional that has received specialized training in vestibular disorders.

There is increasing interest from members of the public who want to learn more about how chiropractors help people with vestibular disorders. This is in part due to reports in the media[2] describing the successful treatment of "high profile" figures including Sidney Crosby and CNN anchor Colleen McEdwards by the Florida-based chiropractor, Dr. Ted Carrick, who is one of approximately 600 chiropractors around the world that are sometimes referred to as "Board Certified Chiropractic Neurologists" or "Neurological Chiropractors," titles that may on occasion be confusing to those who work outside the profession.

## TRAINING

Chiropractic shares common ground with other healthcare professions including occupational therapy, osteopathy and physiotherapy. All four professions contain special interest groups with a focus on neurology. Those working within these groups are sometimes referred as "neurological chiropractors" or "neurological physiotherapists" and

should not be confused with medical doctors that specialize in neurology (i.e. neurologists). In most cases, practitioners within these special interest groups have attained post-graduate qualifications in fields related to neurology or neurological rehabilitation and sometimes specifically in vestibular rehabilitation.

Chiropractors with a special interest in neurology and neurological rehabilitation have the opportunity to undertake additional post-graduate study from approved programs (which may specifically include vestibular rehabilitation). For example, candidates that successfully demonstrate competency in both written and practical examinations may be granted Board Certification by The American Chiropractic Neurology Board (ACNB)[3]. The ACNB is fully accredited by The National Commission for Certifying Agencies (NCCA)[4], an organization established in 1987 to "help ensure the health, welfare and safety of the public through the accreditation of certification programs and/or organizations that assess professional competence." The NCCA uses a rigorous peer review process to establish accreditation standards for a wide range of professions and occupations including dentistry, nursing, occupational therapy and pharmacy. Finally, chiropractors also share the same opportunity as their colleagues in medicine, occupational therapy, osteopathy and physiotherapy to take specific "stand-alone courses" in vestibular rehabilitation. The excellent program entitled "Vestibular Rehabilitation – A Competency Based Course"[5] run by The Emory University School of Medicine and headed by Dr. Susan Herdman, Dr. Neil Shepard, Dr. Richard Clendaniel and Dr. Courtney Hall is a world-recognized certification course and sets a high benchmark for all practitioners working with vestibular patients. (Note: In the U.S. this course is limited to physical therapists.)

## DIAGNOSIS & TREATMENT

The diagnosis and treatment of vestibular disorders is complex. Patients frequently describe feelings of dizziness, however it is important to note that dizziness is a general term that is often used to describe symptoms of light-headedness, feeling off-balance, geo-centric vertigo (when the world appears to spin around the patient) or ego-centric vertigo (when the patient feels they are spinning and the world is stationary), or a combination of the above. Therefore, it is incumbent upon the clinician to spend time with every patient, to listen and take a careful history, and to follow up with a detailed and appropriate examination.

Chiropractors with post-graduate certification in vestibular rehabilitation are well placed to help patients presenting with dizziness or other symptoms suggestive of a vestibular disorder.

It is important to point out that a critical distinction is made between dizziness that is caused by "peripheral" and "central" disorders[6]. Peripheral vestibular disorders (such as benign paroxysmal positional vertigo or cervicogenic dizziness) can usually be managed "in-office" and generally respond well to specific manual therapies such as "Canalith Repositioning Treatment" or manual therapy to the cervical spine[7] respectively. Central vestibular disorders (such as vestibular migraine, persistent postural-perceptual dizziness previously known as chronic subjective dizziness, traumatic brain injury or stroke) often require co-management with other health professionals (such as a medical doctor or psychologist) or in some instances very urgent onward referral.

### DEFINITIONS

**Peripheral Vestibular Disorders**
Disorders which originate in the inner ear and the pathways to the brainstem.

**Central Vestibular Disorders**
Disorders which originate within the brain and brainstems.

How does a "neurological chiropractor" with certification in vestibular rehabilitation help patients with vestibular disorders? It is outside the scope or intent of this article to detail every possible diagnostic test and treatment program that may be appropriate when helping a patient with a vestibular disorder. Instead let's look at 3 brief case examples to provide insight into what a patient might expect when consulting a clinician with a similar background. Please remember that every case is different and that successful treatment is always "patient-centered" and tailored to the individual. In other words, no two treatment programs are the same because no two cases are exactly alike.

## CASE STUDIES

### Case 1

June, a 64 year old retiree, arrived at the clinic after a 4-day struggle with vertigo and dizziness. She explained that she awoke a few days previously and on turning to her left side in bed suddenly felt a violent "tumbling" feeling as though the "whole room was spinning around" for a minute or so. June said that this had occurred a couple of times since, although not as badly, and she had felt "a bit wobbly and dizzy." June was generally fit and rarely ill, although she did tell us that she had been unwell in bed with a cold for a few days before this had happened.

When June attended her initial consultation most of her examination was completely normal (as is often the case). June's history was consistent with a diagnosis of benign paroxysmal positional vertigo (BPPV) and this was confirmed with special testing[8]. We also noted a fair amount of stiffness in June's neck, which was probably not surprising given her age and the fact that she had been trying to keep her neck stiff for fear of the vertigo re-occurring. The good news is that this problem usually responds well to a treatment known as "canalith repositioning treatment" (also known as "Epley's maneuver")[8]. With June's consent we continued with treatment and she was driven home by a friend. We gave June advice about sleeping position and she returned to the clinic 2 days later "feeling 100%." We repeated the special tests, which were normal, so we discharged June home with advice to return if her symptoms reoccurred.

### Case 2

Mary, a 46 year old pharmacy assistant, presented to the clinic with a 5-month history of dizziness and feelings of "light-headedness." She reported that her symptoms were worse when she was tired and when walking around or when she quickly moved her head. She also felt worse when using a computer and this together with the "busy" visual background of the pharmacy was making work increasingly difficult. Mary said that she felt that her symptoms had started a few weeks after an attack of vertigo in bed one night. She had seen her family doctor at the time, who had diagnosed her with an ear infection. Mary admitted that although the vertigo had completely settled down within a day or so, she had found the experience extremely frightening and was worried that it might happen again. She had seen her family doctor several times over the past few months, who had arranged an MRI (which was normal) and prescribed her anti-depressants. Mary said that the anti-depressants had helped at the start but she stopped taking them after a couple of months because she felt that her sleep was getting worse.

When Mary attended her initial consultation much of her examination was completely normal. We did however note that she was breathing a little fast and shallow most of the time and that she carried her neck quite stiffly. Special tests[9] looking at the relationship between her neck, eyes and sense of balance, suggested that at least some of her problems were related to stiffness of the muscles and joints at the top of her neck.

We explained to Mary that her symptoms most closely resembled persistent postural-perceptual dizziness (previously known as chronic subjective dizziness) and cervicogenic dizziness. We agreed upon a treatment program that comprised both home-based exercises (including vestibular rehabilitation therapy[10,11], controlled breathing exercises and relaxation techniques) and office-based appointments (including gentle manual therapy to reduce her neck stiffness and monitoring of her home-based exercises). We took care to ensure the safety of Mary's treatment and to ensure that she was comfortable with all procedures used. Mary attended the clinic for 9 weeks and she reported a gradual reduction in all her symptoms until at discharge she was symptom-free.

**Case 3**

Susan, a 34 year old stay-at-home mother, presented to the clinic with a 2-year history of intermittent vertigo. She described the attacks of vertigo, which lasted anywhere between a few seconds to a few hours, as severe and it often felt as though her head was "spinning around inside." Susan said that she usually felt nauseous and sometimes vomited when the vertigo was particularly bad. She said that it was uncommon for her to go more than a couple of weeks without an attack of vertigo and had noticed that she was more likely to get an attack if she was tired or stressed. Susan admitted to often "having a bit of a stiff neck" and being a "headachy" person. Susan had a younger sister who apparently suffered with migraine headaches. Susan's family doctor arranged an MRI when her symptoms first started, which was normal.

Much like Mary's case, Susan's examination was normal. We did note a moderate amount of stiffness affecting many of the muscles and joints of her neck, including quite a few "trigger points" (areas of localized muscle stiffness). She also had a little difficulty with some balance tests. Susan's history of headaches, her family history of migraine, the "ego-centric" nature of her vertigo and relatively unremarkable examination, all raised the possibility of an underlying "central" cause. However, given that Susan's previous MRI was normal, it was unlikely that there was a "structural" problem in her brain causing her vertigo.

We explained to Susan that her case appeared consistent with a diagnosis of vestibular migraine. While the precise mechanism that underlies vestibular migraine is not yet fully established, research suggests that it may be a "central" disorder caused by abnormal function of some parts of the brain[12,13,14]. This is consistent with our current understanding of migraine, which is now also considered to be a brain-based disorder.

We explained to Susan that in our experience with similar cases, a combination approach to care would be most likely to be successful. For this reason we recommended a treatment program that included home-based exercises (including vestibular rehabilitation therapy and relaxation techniques), migraine dietary advice, and office-based appointments (including gentle manual therapy[15] to reduce her neck stiffness and monitoring of her home-based exercises). As with all patients we took care to ensure the safety of Susan's treatment and to ensure that she was comfortable with all the procedures used.

In addition to the above we also offered Susan an innovative treatment known as "QEEG-Guided Neuro-feedback." QEEG-Guided Neuro-feedback could be considered to be a little like targeted "brain-training" and has been shown to be effective in reducing headache frequency in patients with recurrent migraine[16] and in clinic we have also found it helpful when treating patients with vestibular migraine. Susan attended the clinic for 16 weeks and she reported a gradual reduction in all her symptoms until at discharge she was happy to report an almost complete resolution of her symptoms.

While it is not important that you know all about vestibular disorders, it is very important that the healthcare professional you are consulting with does! You would be wise to ascertain the experience and level of training of any healthcare professional that you are considering by asking them directly. In this way, you can be assured that you will be in good hands.

**Disclaimer:**
Many of the treatment examples outlined in this article can also be performed by a specially-trained physical or occupational therapist. It is critical that vestibular patients ascertain a medical provider's qualifications and experience in evaluating and treating patients with inner ear disorders prior to agreeing to a treatment plan. We recommend coordinating all medical care with your primary care practitioner.

## ABOUT THE AUTHOR

Dr. Daniel Lane is a Registered Chiropractor practicing in Perth, Western Australia. He is Board Certified by The American Chiropractic Neurology Board (ACNB) and has completed certification in vestibular rehabilitation with Dr. Susan Herdman and her colleagues. In addition to consulting with patients in private practice Dr. Lane also works as a Sessional Academic in Neuroscience and Neurodevelopment at The School of Occupational Therapy and Social Work, based at Curtin University, Perth, Western Australia.

**Dr. Daniel Lane may be contacted at:**

info@perthbraincentre.com.au
www.perthbraincentre.com.au

**REFERENCES:**


1. http://www.who.int/medicines/areas/traditional/Chiro-Guidelines.pdf
2. http://edition.cnn.com/2014/09/15/health/colleen-mcedwards-balance-awareness-week/index.html?iref=storysearch
3. http://www.acnb.org/
4. http://www.credentialingexcellence.org/p/cm/ld/fid=1
5. http://www.rehabmed.emory.edu/pt/ce/info/Vestibular2015_PlanningOnly_4-30-2014.pdf
6. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3096243/
7. http://www.ncbi.nlm.nih.gov/pubmed/25220110
8. Herdman, S.J. and Tusa, R.J. 2007. Physical Therapy Management of Benign Positional Vertigo. In: Herdman, S.J. ed. Vestibular Rehabilitation, 3rd Edition. Philidelpia F.A.Davis Company, 233-259.
9. http://www.ncbi.nlm.nih.gov/pubmed/25058834
10. Herdman, S.J. and Whitney, S.L. 2007. Interventions for the Patient with Vestibular Hypofunction. In: Herdman, S.J. ed. Vestibular Rehabilitation, 3rd Edition. Philidelpia F.A.Davis Company, 309-337.
11. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3259492/
12. http://www.ncbi.nlm.nih.gov/pubmed/24814847
13. http://www.ncbi.nlm.nih.gov/pubmed/23918837
14. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3105632/
15. http://link.springer.com/article/10.1007/s10194-011-0296-6/fulltext.html
16. http://www.ncbi.nlm.nih.gov/pubmed/21309444.

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