

Focal Dystonia: A Selected Annotated Bibliography By Category

by Joanna Cowan White

1) Articles, Dissertations, Books, Other 2) Personal Focal Dystonia Stories 3) A few books on Neuroplasticity and the Brain 4) Related Resources Recommended by People with Focal Dystonia 5) Coaching

Author's Note: I am grateful to the musicians I spoke to in phone interviews conducted for a Central Michigan University internal review board-approved project. These people were forthcoming with thoughts and resource suggestions. Researching this topic was stressful, but the willingness of these musicians to share anonymously what they found helpful and to describe their feelings kept me going.

These resources are among the most current, scholarly, and most relevant to flutists. Many items are listed here because they were particularly helpful to the musicians with focal dystonia who shared them with me.

Articles, Dissertations, Books, Other

Altenmüller, Eckart. "Empowering Musicians; Teaching, Transforming, Living: Promoting Health and Wellbeing When Making Music: A Holistic Approach In Music Education." *American Music Teacher*. June/July 2016: 50–2.

Musicians' health and prevention.

*Altenmüller, Eckart, and Jabusch, Hans-Christian. "Focal Dystonia in Musicians: Phenomenology, Pathophysiology, and Triggering Factors." *European Journal of Neurology*, 17 (2010) 31–36.

Prolific focal dystonia researchers. Hannover.

*Altenmüller, Eckart. "Focal Dystonia: Advances in Brain Imaging and Understanding of Fine Motor Control in Musicians." *Hand Clinics* 19, no. 3 (2003): 523–38.

Brain diagrams.

Berque, Patrice et al. "A Combination of Constraint-Induced Therapy and Motor Control Retraining in the treatment of Focal Hand Dystonia in Musicians." *Medical Problems of Performing Artists*. Vol. 25. (2010):149–61.

Scottish study combining constraint-induced therapy with slow down exercises in a one-year training program for eight musicians, including one flutist, positive change.

Brandfonbrener, Alice G., "Musicians with Focal Dystonia: A Report of 58 Cases Seen during a Ten-Year Period at a Performing Arts Medicine Clinic." *Medical Problems of Performing Artists* 10, no. 4 (1995): 121–27.

Alice Brandfonbrener, known for her pioneering work in performing arts medicine, was one of the first to study large numbers of musicians with focal dystonia.

*Butler, Katherine and Karin Rosenkranz. "Focal Hand Dystonia Affecting Musicians. Part II: An Overview of Current Rehabilitative Treatment Techniques." *The British Journal of Hand Therapy*. Vol. 2. No. 3. (Autumn 2006): 79–87.

Clear, wide-ranging summary.

*Butler, Katherine. "Focal Hand Dystonia Affecting Musicians," in *Neurology of Music*. London: Imperial College Press, 2010. 367–392.

Clear, wide-ranging summary.

Byl, Nancy N. "RSI and Focal Hand Dystonia." San Francisco State University.

Send \$20 check to UC Regents, Anthony Casino at UCSF Physical Therapy Health and Wellness, 1675 Owens St. SF, CA, 94158.

*Byl, Nancy N. and Alberto Priori. "The Development of Focal Dystonia in Musicians as a Consequence of Maladaptive Plasticity: Implications for Intervention," in *Music, Motor Control and the Brain*. NY: Oxford University Press, (2006).

Byl and Priori discuss focal dystonia as negative neuroplasticity, proposing interventions.

Byl, Nancy N. and Alison McKenzie. "Differences in Somatosensory Hand Organization in a Healthy Flutist and a Flutist with Focal Hand Dystonia: A Case Report." *Journal of Hand Therapy*. (2000): 302–9.

Hand representation on somatosensory cortex degraded in FD but unclear if "cause or consequence."

Byl, Nancy N., et al. "A Primate Model for Studying Focal Dystonia and Repetitive Strain Injury: Effects on the Primary Somatosensory Cortex." *Physical Therapy*, March 1997. Academic OneFile.

Byl and her colleagues' work with primates influenced scientists' understanding about brain map in the somatosensory cortex of the brain and how it becomes blurred in focal dystonia.

*Candia, Víctor, et al. "Changing the Brain through Therapy for Musicians' Hand Dystonia" in *The Neurosciences and Music. II: From Perception to Performance*. (2005): 335–42.

Sensorimotor retuning (SMR) changes cortical networks.

Candia, Víctor, “Rosenkranz, Butler, et al. “Pathophysiological Differences between Musician’s Dystonia and Writer’s Cramp.” *Medical Problems of Performing Artists* 20, no. 3 (September 2005): 149.

While musician’s dystonia and writer’s cramp are both focal dystonia, they have differences.

*Chang, Florence C F and Steven J. Frucht. “Motor and Sensory Dysfunction in Musician’s Dystonia.” *Current Neuropharmacology*. vol. 11, no.1. (2013): 41–7.

Research highlights up to 2013. pathophysiology, problematic cortical plasticity, abnormal sensory processing, problems across motor pathways.

Conable, Barbara. “How To Resolve Dystonias: A Movement Perspective.” *The International Musician*. (July 2002) 10–11.

Focal dystonia resulting from faulty technique, resolution through kinesthetic awareness and body mapping.

De Lisle, Rae. *Focal Dystonia in Pianists: A Way to Recovery Through Retraining*. University of Auckland: 2013.

Using “biomechanically ideal movement patterns” for retraining improves symptoms; hopeful outlook.

De Lisle, Rae et al. “Effects of Pianism Retraining on Three Pianists with Focal Dystonia.” *Medical Problems of Performing Artists*. 21.3 (Sept. 2006): p. 105.

About piano, but details of retraining described.

“Dystonias Fact Sheet,” n.d.

Government fact sheet on focal dystonia.

Ellenberger, Carl. M.D. “Musicians with Dystonia: Practice Makes Imperfect.” *The Double Reed*, vol. 39. no. 3. 63+

A doctor gives a current perspective and mentions the need for more stories from those who get through focal dystonia.

Fain, Susan. *An Application of the Principles of Anatomy, Physiology, and Neurology to the Balancing and Playing of the Flute*. Ann Arbor: ProQuest. (2009).

Scientific look at flute playing, interviews with musicians with performance challenges, including focal dystonia.

*Farias, Joachin. *Limitless: How Your Movements Can Heal Your Brain*. e-Book. (2016). A new paradigm of focal dystonia and the resulting implications for recovery.

Includes stories of patients and data from 20 years of work with over 900 patients.

Farias, Joachin. *Playing Without Practice*. Video. 2013.

Twenty-seven minutes of hand exercises; purchase on website.

*Farias, Joachin. *Intertwined: How to Induce Neuroplasticity*. e-book (2012). Spanish researcher Farias, now at University of Toronto, writes about his focal

dystonia patients all over the world. First half provides individual stories; second half is about brain retraining and reports on training study.

Farias, Joachin. *Rebellion of the Body*. e-book. (2010).

Stories and metaphors. a section on categories of dystonic movements.

Fletcher, Seth David. "The Effect of Focal Task-Specific Embouchure Dystonia upon Brass

Musicians: A Literature Review and Case Study." dissertation text. (2008) (Accessed February 23, 2016).

Dissertation, including basic brain information.

*Frucht, Steven J. "Focal Task-specific Dystonia—From Early Descriptions to a New, Modern Formulation. *Tremor and Other Hyperkinetic Movements*. <http://www.tremorjournal.org>. 2014.

Frucht Steven J et al. "The Natural History of Embouchure Dystonia." *Medical Problems of Performing Artists* 18, no. 1 (March 2003): 42+.

An older article often cited in later articles.

Furuya, Shinichi and Eckart Altenmüller. "Acquisition and Reacquisition of Motor Coordination in Musicians. *Annals of the New York Academy of Sciences*. The Neurosciences and Music V. (2015): 188–124.

Effects of transcranial stimulation.

Grossnickle, Karen. "Case Report." Central Michigan University. (2015–16).

Not yet published. The use of graded motor imagery with focal dystonia.

Haslinger, B. and Eckart Altenmüller et al. "Sensorimotor overactivity as a pathophysiologic trait of embouchure dystonia." *Neurology*. 74.22. n.d.:1790–1797.

Authors wonder if traits precede dystonia.

Hirata, Yoshihiro, and Eckart Altenmüller et al. "Sensory Mapping of Lip Representation in Brass Musicians with Embouchure Dystonia." *NeuroReport* 15, no. 5 (2004): 815–18.

Is embouchure dystonia related to a cortical disorder or abnormality?
"Patient's upper lips showed decreased sensitivity compared with lower lips, an asymmetry absent in controls." (William Dawson in *Medical Problems of Performing Artists*, Sept. 2005.)

Ittis, Peter W. et al, and Eckart Altenmüller. "Divergent Oral Cavity Motor Strategies between Healthy Elite and Dystonic Horn Players." *Journal of Clinical Movement Disorders* 2 (October 21, 2015): 15.

Recent fMRI studies comparing oral cavity of horn players with dystonia to those without.

Ittis, Peter, et al, and Altenmüller. "Real-time MRI Comparisons of Brass Players: A methodological Pilot Study. *Human Movement Science*. (August 2015): 132–45.

Examination of motor function in the oropharyngeal cavity of four brass players. tonguing similar from one brass instrument to another, authors recommend applying these methods to the study of musician's dystonia.

Ittis, Peter. W. "Medical and Scientific Issues, Music Performance Anxiety." *The Horn Call*. (February 2012.)

Discussion of psychological components.

*Ittis, Peter W. "Medical and Scientific Issues, Embouchure Dystonia: Hope for the Future?" *The Horn Call*, (2011): 66.

Ideas from 2011.

Ittis, Peter W., and Michael W. Givens. "EMG Characterization of Embouchure Muscle Activity: Reliability and Application to Embouchure Dystonia.(electromyography)." *Medical Problems of Performing Artists* 20, no. 1. (2005): 25.

Horn players studied to see how to measure EMG data.

*Ittis, Peter. *Embouchure Dystonia: Mind Over Grey Matter*." (accessed February 26, 2016).

Uploaded 2011; explains musician's dystonia in brain terms and shows early struggle with condition.

Ioannou, Christos I., and Eckart Altenmüller. "Psychological Characteristics in Musician's Dystonia: A New Diagnostic Classification." *Neuropsychologia* 61 (2014): 80–88.

Psychological characteristics.

*Jabusch, Hans-Christian, and Altenmüller et al. "Setting the Stage for Prevention and Treatment: New Therapeutic Approaches in Musician's Dystonia." (December 2008).

Benefit of behavioral approach with pianists. prevention paragraph at end.

*Jabusch, Hans-Christian, and Eckart Altenmüller. "Focal Dystonia in Musicians: From Phenomenology to Therapy." *Advances in Cognitive Psychology* 2, no. 2–3 (2006): 207.

Overview of focal dystonia research to 2005.

Jabusch, Hans-Christian, et al, and Eckart Altenmüller. "Focal Dystonia in Musicians: Treatment Strategies and Long-term Outcome in 144 Patients." *Movement Disorders* 20, no. 12 (2005): 1623–26.

Large study done in Hannover. improvement in half.

Jabusch, Hans-Christian, and Eckart Altenmüller. "Anxiety as an Aggravating Factor during Onset of Focal Dystonia in musicians. (Clinical Report)." *Medical Problems of Performing Artists* 19, no. 2. 2004. 75.

Perfectionism and anxiety in those with focal dystonia.

Jabusch, Hans-Christian, Sandra V. Müller, and Eckart Altenmüller. "Anxiety in Musicians with Focal Dystonia and Those with Chronic Pain." *Movement Disorders* 19, no. 10 (2004): 1169–75.

Anxiety in those with focal dystonia and in those with chronic pain.

Kieslinger, Klaus et al. "Successful Treatment of Musician's Dystonia Using Repetitive Transcranial Magnetic Stimulation." *Clinical Neurology and Neurosurgery*. (April 2013).

Case study of a violist.

*Klein, Alex. "Focal Dystonia and Me." *The Double Reed*, vol. 39. no. 3. 48–62.

Unusual in its depth, this article contains both information and personal testimony.

Klickstein, Gerald. "Can Focal Dystonia Be Prevented? 7 Sensible Precautions" *The Musician's Way Blog*. (Accessed August 4, 2015)

Prevention.

*Konczak, Jurgen; Abbruzzese, Giovanni, and Giovanniabbruzzese. "Focal Dystonia in Musicians: Linking Motor Symptoms to Somatosensory Dysfunction." *Frontiers in Human Neuroscience* 7. (2013).

Decreased precision of tactile and proprioceptive perception. somatosensory origin of symptoms. sensory tricks effective.

Labelle, Rosalie. "Dystonia and Brain Plasticity." *Newsletter of the Ottawa Area Dystonia Support Group*. web. (1/13/14.)

Clear terminology.

Lederman, Richard J. "Neurological Problems of Performing Artists." Sataloff, Robert and Alice Brandfondbrenner and Richard J. Lederman. *Performing Arts Medicine, 3Ed. Narberth: Science and Medicine*, (2010): 51–76.

Book chapter from earlier FD researchers.

Lederman, Richard J. and Stephan Schuele. "Focal Dystonia in Woodwind Instrumentalists: Long-Term Outcome." *Medical Problems of Performing Artists* 18, no. 1 (March 2003): 15+.

Instrumentalists with focal dystonia in the 1990s; interesting historically.

Lee, André et. al. (including Iltis and Altenmüller). "Quantification of Instability of Tone production in Embouchure Dystonia." *Parkinsonism and Related Disorders*. (2014).

Small sample size; quantification method; higher variable of fundamental frequency in dystonia.

Leisner, David. "Curing Focal Dystonia, or How to Play the Guitar with Large Muscles." web. (2006). (accessed May 29, 2016).

Detailed explanation of how to use large muscle groups. some flutists have found this concept useful.

Leung, Wency. "Using the Brain to Retrain the Body to Overcome Dystonia." *The Globe and Mail*. (date) (accessed August 4, 2015).

Toronto article about the work of Joachin Farias.

Likar, Amy. "Performance Anxiety: A Resource Guide." National Flute Association online publication. *FQ Plus*, March 5, 2012.

Broad range of resources for combatting performance anxiety.

Lim, Vanessa K., and Eckart Altenmuller. "Musicians' Cramp: Instrumental and Gender Differences." *Medical Problems of Performing Artists* 18, no. 1 March 2003 21+.

The role of gender and instrument group on who gets focal dystonia.

Marston, Karen Lynn. *Finding the Balance: Jan Kagarice, a Case Study of a Master Trombone Teacher*. Columbia University. Ann Arbor: ProQuest LLC (2011).

Dissertation on the teaching concepts of Jan Kagarice, but not focusing on her focal dystonia coaching.

Munte, Thomas F. et al and Eckart Altenmüller. "The Musician's Brain as a Model of Neuroplasticity." *Nature Reviews/ Neuroscience*, no. 6 (2002): 473. 2014.

Background on musicians' brains, including pictures.

Musicians With Dystonia. dystonia-foundation.org.
Started in 2000 by Glen Estrin and Dr. Stephen Frucht.

Neuropathic Institute. Graded Motor Imagery ?

Peterson, A., J. Berque, J. Jabusch, J. Altenmüller, and J. Frucht. "Rating Scales for Musician's Dystonia: The State of the Art." *Neurology* 81, no. 6 (2013): 589–98.

Authors recommend development of new uniform rating scale.

*Rosenkranz, Karin et al. "Regaining Motor Control in Musician's Dystonia by Restoring Sensorimotor Organization." *The Journal of Neuroscience*, (Nov. 18, 2009).

Proprioceptive training of pianists improved motor control.

Rosenkranz, Karin and Katherine Butler et al. "Sensorimotor Reorganization by Proprioceptive Training in Musician's Dystonia and Writer's Cramp." *Neurology: Official Journal of the American Academy of Neurology* 70, no. 4 (2008): 304–15.

Sensory training.

Rosenkranz, Karin, et al. "Slow-down Exercise for the Treatment of Focal Hand Dystonia in Pianists." *Medical Problems of Performing Artists* 21, no. 1. 2006. 25–28.

Slow down approach.

Rosenkranz, Karin, "The Neurophysiology of Focal Hand Dystonia in Musicians" in *Music, Motor Control and the Brain*. NY: Oxford University Press, (2006): 283–292.

Good brain explanations.

Rothwell (Author). "Sensorimotor Reorganization by Proprioceptive Training in Musician's Dystonia and Writer's Cramp." *Neurology: Official Journal of the American Academy of Neurology* 70, no. 4 (2008): 304–15.

Sensory training.

*Sadnicka, Anna et al. Task-specific Dystonia: Pathophysiology and Management. *Journal of Neurology, Neurosurgery, Psychiatry*, Online. (2015).

Overview from several countries; environmental risk factors highlighted; focal dystonia is “a modifiable disorder of motor control”; a call for more research.

Sakai, Naotaka. “Slow-down Exercise for the Treatment of Focal Hand Dystonia in Pianists.” *Medical Problems of Performing Artists*. 21.1 (March 2006).

Twenty pianists; positive results.

*Schmidt, Alexander and Hans-Christian Jabusch and Eckart Altenmüller et al. “Etiology of Musician’s Dystonia: Familial or Environmental?” *Neurology: Official Journal of the American Academy of Neurology* 72, no. 14 (2009): 1248–54.

Technical article questioning etiology; authors conclude there may be a genetic contribution.

Schoonderwaldt E, and M. Demoucron. “Extraction of Bowing Parameters From Violin Performance Combining Motion Capture and Sensors.” *Journal of the Acoustical Society Am.* 126.5 (Nov. 2009): 2695–708.

Measuring bowing of a violinist with 3D motion capture.

Schuele, Stephan; Jabusch, Lederman, and Altenmüller. Botulinum Toxin Injections in the Treatment of Musician’s Dystonia. *Neurology*, Volume 64, No. 2. January 2005. p 341–3.

Neurology meeting, 2004; authors followed 84 musicians; 67–93% received benefit from injections; many discontinued treatment as it did not meet their needs.

Tamura, Yohei, et al. “Disordered Plasticity in the Primary Somatosensory Cortex in Focal Hand Dystonia.” *Brain: A Journal of Neurology* 132, no. 3 (January 1, 2009): 749–55.

Brain origin of focal dystonia.

Tubiana, Raoul, and Philippe Chamagne. “Prolonged Rehabilitation Treatment of Musician’s Focal Dystonia,” in *Medical Problems of the Instrumentalist Musician*. London: Martin Dunitz. (2000).

Doctor and physical therapist used rehabilitation program (1990s) with physical and psychological components. Known for inventing one of the rating scales for focal dystonia, they work with posture, limb movement, mirror work at the instrument, in a training program taking up to two years. Not mentioned in many studies, they noted that this “neuromuscular reprogramming” correlated better musician function at the outset with better results.

Watson, Alan. "What Studying Musicians Tell Us About Motor Control of the Hand." *Journal of Anatomy* (2006) 208: 527–542.

Includes a discussion of focal dystonia.

White, Darrow Edward, (Author). "Focal Dystonia among Selected Instrumentalists and Other Playing-Related Impairments: Implications for Music Education." University Microfilms International (UMI), 2008.

Dissertation, effect of teaching methods on injury.

White, Joanna. "Musician's Focal Dystonia: Strategies, Resources, and Hope." *Flutist Quarterly* (Winter 2017).

The article which this bibliography accompanies.

White, Joanna. "Focal Dystonia Confidential Interview Project." (2016). Internal Review Board-approved phone interview study at Central Michigan

University; flutists and other instrumentalists with focal dystonia.

*Willis, Sarah. "15: Music and Science." *Sarah's Music: Episode Extras*. (accessed February 26, 2016).

Gordon College Kinesiology professor Peter Iltis, working with researchers in Hanover, using fMRI imaging to compare what happens inside the body of musicians with and without focal dystonia. Sarah Willis, Berlin Philharmonic horn player, in this blog entry, discusses her participation and shows a video of her tongue and trachea, taken while she played a non-metal horn inside an MRI machine for an hour. Useful for woodwind pedagogy.

3rd International Congress on Treatment of Dystonia. <http://www.treatment-of-dystonia.org>

3D Motion Capture. immm.hmtm-hannover.de.

Simultaneous capture of sound, motion, and analog data.

***Particularly recent and comprehensive items.**

Personal Focal Dystonia Stories

Musicians Focal Dystonia Facebook Group (closed group):

<https://www.facebook.com/groups/9022753084/>

With over 600 people, this supportive closed internet group has many people who are up on the science, are positive, and love sharing information. They post playing experiment videos, which are met with encouragement.

Berglof, Katie. "Living with Embouchure Dystonia." Video Blog, web. Accessed May 29, 2016.

Horn/embouchure.

Bitti, Federico. "After Seven Years of Debilitating Muscle Spasms, I have hope." Globe and Mail. (March 6, 2015).

Cervical.

Brachfield, Andrea. "My Success Story with Focal Dystonia: Andrea Brachfeld." March 1, 2014. *The Flute Journal*, August 26, 2016.

Flute/hand.

Ciucevich, David. David Ciucevich focal dystonia story, web. January 3, 2016. Clarinet and other/hand.

Cooper, Colin. "Journey of Discovery." Classical Guitar. 1997. Web. Accessed May 29, 2016. (David Leisner)

Guitar/hand.

Corrigan, Annie. "Breaking the Silence On Focal Dystonia: Arts and Music, Indiana Public Media." Accessed August 4, 2015.

Flute/embouchure and multiple.

Dannenbring, Mark. "Overcoming Focal Dystonia." Flute View. July 2, 2014.

Flute/hand.

Détari, Anna. "Anna Détari – Focal Dystonia Story." Musician's Focal Dystonia. web. January 3, 2016.

Flute/embouchure

Dunham, Deborah. "Facing Focal Dystonia." Bass World. Vol. 31, No. 1. 2007. 33+

String bass/hand and multiple.

"Embouchure Dystonia—A Flutist's Journey towards Healing." Accessed August 4, 20.

Flute/embouchure.

Farley, Todd. "Playing His Hand." *Neurology Now*. Vol. 6, No. 4. July/August 2010. p. 16– 18.

Guitar/hand.

"Focal Dystonia: A Musician's Resource." focaldystonia.co.uk.

Guitar/hand.

Gaboury-Sly, Janine. "Medical Problems and Horn Playing: A History of My Performance Injury (Focal Embouchure Dystonia)." *Horn Call: Journal of the International Horn Society*, February 2004.

Horn/embouchure.

Gambaro, Jill. "Carpal Tunnel Syndrome and Focal Dystonia in Musicians." *International Musician*. September 2, 2014.

Multiple.

Globe, The, and Mail. 2016. "Video: Choosing Madonna over Meds, One Man's Quest to Walk." *The Globe and Mail*. Accessed May 14.

Cervical dystonia.

Goldensohn, Ellen. "When the Music Stops." *Musician's Health*. Fall 2012. 78+. Flute/embouchure and multiple.

Gorrie, Jon. Focal Dystonia (Personal Website) web. Accessed May 29, 2016.

Trumpet/embouchure.

Greenhalgh, David,. "Living with Focal Hand Dystonia." *Pan: The Journal of the British Flute Society* 32, no. 2. 2013. 28–31.

Flute/hand.

Gulbranson, Ashley. "A Lost Embouchure Found: A Journey Back from Focal Dystonia." *The Horn Call*, 2014, 31.

Horn/embouchure.

Harscher, Jerald. The Poised Guitarist. web. Accessed May 29, 2016. Guitar/Hand, Focal Dystonia Lessons.

Harvey, Ian. "Musicians who work through their injuries do so at their peril." *Star*. March 4. 2014.

Guitar/hand, multiple.

Houston, Michael. Focal Dystonia—An Outline of My History. web. Accessed May 28, 2016.

Piano, hand.

Hundley, Tom. “Despite Disorder, Musician Finds Way to Play—The New York Times.” Accessed August 4, 2015.

Oboe/hand.

Ittis, Peter. “A Lost Embouchure Found: A Journey Back from Focal Dystonia.” *Call: Journal of the International Horn Society* 44, no. 3 (May 2014): 31–32.

Horn/embouchure.

“Internationally Renowned Pianist Leon Fleisher Launches Worldwide Comeback Tour; Dystonia Sufferer Shares Story of Forty-Year Career Interruption.” *PR Newswire*, 2004.

Piano, hand.

Klein, Alex. “Focal Dystonia and Me.” *The Double Reed*, vol. 39. no. 3. 48–62.

Unusual in its depth, this article contains both information and personal testimony.

Martin, Andrée. “Focal Dystonia: My Journey Inward: *Flutist Quarterly* 37, no. 1. Fall 2011. 28–30.

Flute/embouchure.

Martin, Andrée. “The Way We Do Anything is the Way We Do Everything.” *Observing Focal Dystonia*. Wordpress blog. web. June 9, 2016.

Flute.

Martin, Roger. “Tonal Imagination – Overcoming Focal Dystonia.” *Flutist Quarterly*. revised January 2013.

Flute/hand.

Miller, Kay. “When Focal Dystonia Strikes Musicians, Careers End.” *Star Tribune*. Minneapolis. December 17, 2006.

Flute, hand.

“Observing Focal Dystonia.” Blog. Andrée Martin. Flute, hand.

Oestreich, James R. "A Disorder That Stops the Music." *The New York Times*. web. March 13, 2012.

Multiple.

Owen, David. "The Yips." *The New Yorker*. May 24, 2014. Golf/yips.

"Phil Todd: Musician." Accessed August 4, 2015. Saxophone/hand.

Paraskevas, Apostolos. *A Classical Guitarist's Story of Recovery from Focal Dystonia, or Musician's Focal Dystonia of the Hand*.

Guitar/hand.

Smith, Philip. *International Trumpet Guild Masterclass*. YouTube. Columbus State University, March 22, Columbus, Georgia. 2016.

Upton. "Musician's Dystonia: A Silent Plague." *Clarinet and Saxophone*. Vol. 38. Issue 4. 2013. p 12+.

Saxophone/embouchure.

Vining, David. *Notes of Hope: Stories by Musicians Coping With Injuries*. Flagstaff,

Mountain Peak Music. 2014. Multiple.

Vining, David. "Narrative." davidvining.net. web. Accessed May 26, 2016.

Trombone/embouchure.

Walker, Gregory. "After the Injury." *Chamber Music* 25, no. 4 (August 7, 2008): 34–37. Multiple.

Whitman, Ernestine. "Struggling with Focal Dystonia." *The Flutist Quarterly*. Vol. 20, no. 3 1995. 46–48.

Flute, hand.

Wion, John. *Wood, Silver & Gold—A Flutist's Life*. New York: John Wion, 2007. Flute, hand.

Neuroplasticity and the Brain

Destin. *The Backwards Brain Bicycle – Smarter Every Day 133*.

<https://www.youtube.com/watch?v=MFzDaBzBIL0>

Doidge, Norman. *The Brain's Way of Healing: Remarkable Discoveries and Recoveries from the Frontiers of Neuroplasticity*. New York: Viking. 2015.

Doidge, Norman. *The Brain That Changes Itself: Stories of Personal Triumph from the Frontiers of Brain Science*. New York: Penguin. 2007.

Farias, Joachin (see *Intertwined* above)

Fehmi, Les and Jim Robbins. *The Open-Focus Brain: Harnessing the Power of Attention to*

Heal Mind and Body. Boston: Trumpeter. 2008.

Restak, Richard. *The New Brain: How the Modern Age Is Rewiring Your Mind*. Emmaus:

Rodale Books. 2003.

Sacks, Oliver. *Musicophilia: Tales of Music and the Brain, Revised and Expanded Edition*. New York: Vintage. 2008.

Schwartz, Jeffrey. and Sharon Begley. *The Mind and the Brain: Neuroplasticity and the Power of Mental Force*. New York: Harper Perennial, 2003.

Related Resources Recommended by People with Focal Dystonia

Altenmüller, Eckart. (See “Empowering Musicians” above. 2016.)

Brown, Brené. *The Gifts of Imperfection: Let Go of Who You Think You’re Supposed to Be and Embrace Who You Are. Your Guide to a Wholehearted Life*. Center City: Hazelden. 2010.

Brown, Brené. *Daring Greatly: How the Courage to be Vulnerable Transforms the Way We Live, Love, Parent, and Lead*. New York: Avery. 2012.

Conable, Barbara. *The Structures and Movement of Breathing*. GIA Pub. 2000. Conable, Barbara. *How to Learn the Alexander Technique: A Manual for Students*. GIA

Pub. 1995.

Conable, Barbara. Likar, Amy (editor/narrator). *Move Well Avoid Injury: What Everyone*

Needs to Know About the Body. DVD839. Andover Productions, 2009.

Faigin, Gary. *The Artist's Complete Guide to Facial Expression*. New York: Watson-Guptill

2008.

Feldenkrais, Moshe. *Awareness Through Movement*. New York: Harper Collins. 1977.

Gorrie, Jon. *Performing in the Zone: Unleash Your True Performing Potential*. www.thezonebook.com. 2009.

Greene, Don. *Fight Your Fear and Win: Seven Skills for Performing Your Best Under Pressure—At Work, In Sports, On Stage*. New York: Broadway Books. 2001.

Hanna, Thomas. *Somatics*. Cambridge, MA: Da Capo Press, 1988.
Health Promotion in Schools of Music, University of North Texas and Performing Arts

Medicine Association. Includes Recommendations for Schools of Music.

Horvath, Janet. *Playing Less Hurt, An Injury Prevention Guide for Musicians*. New York: Hal Leonard Books, 2010.

Horvath, Janet, B. Mus, and M. Mus. "An Orchestra Musician's Perspective on 20 Years of Performing Arts Medicine." *Medical Problems of Performing Artists* 16, no. 3 (September 2001): 102+.

Rinpoche, Mingyar. "How to Train Your Monkey Mind." Huffington Post. July 15, 2016.
Jennings, Christina. "The Embodied Flutist." *The Flutist's Handbook: A Pedagogy*

Anthology, Volume 2. Santa Clarita: The National Flute Association. 2012. Kageyama, Noa. The Bulletproof Musician. bulletproofmusician.com.

Kageyama, Noa. "Practicing Self Compassion." *Flutist Quarterly*, Fall 2014. p. 28–31.

th

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Individual Coaching

Note: The following are not endorsed or recommended by the NFA, The Flutist's Quarterly, or the author.

For those who seek individual coaching either one-on-one or via Skype, the people listed here have made themselves available.

Katherine Butler, a physical therapist in London, has written comprehensive articles about focal dystonia.

In conjunction with Jon Gorrie (see below), flutist **Anna Détari** has recently begun to help others with musician's dystonia.

Musician **Joachin Fabra** takes a psychological/behavioral view of focal dystonia. His website states, "Musicians develop the disorder through behavioral patterns, which are a consequence of an exacerbated response to what they consider a threatening context."

Joachin Farias, a researcher now at the University of Toronto who has a doctorate in biomechanics and masters degrees in neuropsychological rehabilitation, psychosociology, and ergonomics—and is also a flutist—emphasizes neuroplasticity. His website describes an emphasis on returning to "original memories of proper

motion” and using them to “regenerate functional neural pathways.” He believes some changes can happen quickly. His book, *Intertwined*, includes stories of people with focal dystonia he studied around the world, explanations of brain science, and reports of a therapy program he conducted. His new book, *Limitless: How Your Movements Can Heal Your Brain*, details how focal dystonia manifests in different parts of the body.

Trumpet player **Jon Gorrie**, author of *Performing in the Zone*, emphasizes three areas in helping musicians with recovery: playing mechanics, mental direction, and emotions.

At the **Institut d’Art** in Spain, directed by Jaume Rosset, a team of specialists in physical therapy and neuroscience (which also considers psychological aspects) works with the sensorimotor retuning approach for all musicians with hand and embouchure dystonia.

Jan Kagarice, of *Musician’s Wellness*, has a pedagogical approach to working on focal dystonia and says her company, is “dedicated to assisting instrumentalists in attaining absolute functional efficiency for the highest level of musical artistry.”

Guitarist **David Leisner**, professor at the Manhattan School of Music, emphasizes “the full engagement of the largest muscle groups that are appropriate for each required movement, as well as an understanding of dead-weight, Alexander Technique and other ergonomic concepts.”

Trombonist and music professor **David Vining**, who has formulated materials for musicians with focal dystonia and runs Mountain Peak Music, coaches via Skype. He says the important thing is that each person “take responsibility for their own rehabilitation. Different things will work for different people and the only person who can establish the unique cocktail of therapies that will be effective is the person who is going through it.”

People I spoke with mentioned other coaches and teachers who were individually helpful to them.

Academy and the *Miami Dade College* in South Florida.