Walt Fritz, PT April 2018


“Myofascial release and laryngeal massage are effective in improving vocal function and helping minimize throat pain.”


(Speaks to the utilization of myofascial release to the tongue in post-whiplash injuries) “The osteopathic (myofascial release) techniques led to a disappearance of pain and the complete recovery of the normal functions of the tongue, such as swallowing and mouth opening.”


“The primary objective of this small case series was to demonstrate the potential application of myofascial release in the treatment of dysphagia in HNC survivors following definitive therapy.”

“Conclusion: Dysphagia is a common post-treatment sequela in HNC patients. Our descriptive observational data preliminarily suggests that the novel approach of manual therapy may have role for the treatment of HNC patient dysphagia. Future study will further investigate the effects, the long-term benefits, and ideal regimen of myofascial release in this patient population.”


“Myofascial release and massage techniques applied on the masticatory muscles are more effective than control (low to moderate evidence) but as effective as toxin botulinum injections (moderate evidence).”


“Myofascial techniques consist of a combination of joint mobilizations, passive range of motion, contract-relax stretches, and myofascial release.” “This preliminary study suggests that physical therapy techniques may have a role in the treatment of a subset of MTD patients.”

(Note: interventions suggested in this article required significant session numbers to achieve effects. I do not feel it necessary to provide so many sessions before change is noted.)


“Myofascial Release (MFR) is a form of soft tissue therapy used to treat somatic dysfunction and accompanying pain and restriction of motion. Hence some intervention is required to improve chest expansion. So this study was conducted in an effort to improve the chest expansion using MFR techniques to the respiratory muscles.” “Conclusion: The result shows that the chest expansion increased significantly at all the three levels. The expansion improved maximally at the nipple level.”


   “Manual therapy techniques such as joint mobilization, muscle energy technique, and soft tissue mobilization were safely and effectively applied to this patient with head and neck cancer." “Soft tissue mobilization was chosen due to its reported ability to reduce pain and increase tissue extensibility.”
   “RFS (radiation fibrosis syndrome) may cause deformation and function disorders of the fascial system that exerts a crucial influence on the mobility of joints, abdominal and lumbar tissues, and consequently, of chest walls. The fascial techniques consisting in expanding the skin, subcutaneous connective tissue and deep fascia make it possible to restore normal shifting of particular layers of soft tissues. The myofascial relaxation was found to influence the general homeostasis thanks to the loosening of tense soft tissues enabling to reduce pain and improve circulation in the region with RFS.”
   “SLP Treatment Protocol Overview:
   1. Myofascial Release on muscles of mastication.
   2. Lateral tongue stretch pulling the hyoid down and push to contralateral side.
   3. Geniohyoid and posterior mylohyoid (from body of hyoid laterally to mandible) are especially targeted. In contrast to concerns that manual therapy would be painful/intolerable during radiation therapy, all patients felt that manual therapy lessened their throat pain.”
   “Collectively, this suggests that clinicians properly trained in manual therapy techniques, who also have significant experience with head and neck cancer patients, can deliver such treatment during radiation therapy.”
   “Overall, this clinical experience demonstrated that manual therapy during radiation therapy can be tolerated by patients, and that it attenuated generalized neck/throat pain during the course of each treatment session.”
   “Findings from this investigation suggest that myofascial release reduces muscle activity resulting in decreased tension noted on videoendoscopy, EMG measures, and perceptual ratings of the participant’s voice. Results from this case study indicate that MFR is a viable treatment modality for voice clinicians when treating MTD.”
   “Based on the results of this study, it can be concluded that MFR improved MTD symptoms in this case study.”
   “The application of myofascial manual techniques decreases esophageal pressure, thus allowing patients to learn esophageal speech at a faster pace.”
   “The voice therapy, scheduled and supervised by a laryngologist-phoniatrician and conducted by a speech-language pathologist, was supplemented with osteopathic myofascial rehabilitation of the larynx.”
   “Conclusion: The use of osteopathic (myofascial) therapy helps significantly improve the functions of the vocal tract in patients with occupational dysphonia.”
   “Conclusions: The use of myofascial release techniques in patients with disorders of the masticatory apparatus significantly increased the range of mandible opening.”
Dysphonia:
http://ptjournal.apta.org/content/ptjournal/72/12/893.full.pdf

42. Epub
International
38.
37.
35.
34.
33.
32.
31.
30.

Tomlinson,
Threlkeld,
Tacani,
Schneider,
Rushton

2016.
Au
2008.

"Thus, the removal of myofascial trigger points would reduce cervical tension and also allow for better breath support
in phonation."


"Briefly, this treatment involved kneading the extralaryngeal musculature in an anterior-posterior direction at specific
locations while exerting a downward pull on the larynx. Target voice stimuli were presented concurrently while changes
in voice quality were noted. The assessment and treatment protocol were completed in a single session that ranged in
duration from 50 minutes to 3 hours."

(iv) Manual circumlaryngeal therapy (the manual laryngeal musculoskeletal tension reduction technique) was
undertaken according to the description of Aronson (3); (a) the hyoid bone was encircled with the thumb and index
finger, which were worked posteriorly until the tips of the major horns were felt; (b) light pressure was exerted with the
fingers in a circular motion over the tips of the hyoid bone; (c) the procedure was repeated beginning from the thyroid
notch and working posteriorly; (d) the posterior borders of the thyroid cartilage just medial to the sternocleidomastoid
muscles were located and the procedure was repeated; (e) with the fingers over the superior borders of the thyroid
cartilage, the larynx was worked downward, and moved laterally at times;"

(Roy describes techniques and methodologies that are nearly identical to many aspects of myofascial release in the neck
region. The difference appears to be the titling given the work. This is the case in many forms of manual therapy,
massage, and myofascial release in the physical therapy/massage therapy communities.)


doi:10.1016/j.otc.2007.05.013
36. Směkal, D., Velebová, K., Hanáková, D., Lešpíková, M., The effectiveness of specific physiotherapy in the treatment of

“Utilizing a physiotherapy protocol that included myofascial release, it was found that after treatment (t)he range of
mouth opening increased significantly (from 37.3 mm to 41.3 mm, p < 0.001). The finding shows that this state was
maintained two months later: mouth opening (p < 0.003). Pain was ameliorated, the intensity of sounds reduced, and
the range of movement significantly improved after specific physiotherapy.”

doi:10.1016/j.jvoice.2009.08.001.
http://www.jaypeejournals.com/ejournaul/ShowText.aspx?ID=7008&type=FREE&Typ=TOR&IN=~/journals/images/JPLLOGO.gif
&ID=526&isPDF=YES
http://ptjournal.apta.org/content/ptjournal/72/12/893.full.pdf

“Conclusion: Results demonstrate a 10-session MFR+Ex (myofascial release plus exercise) program is feasible in
patients with MTD. Furthermore, preliminary findings suggest that the MFR+Ex intervention improves patient
outcomes related to pain, functional status, voice-specific QOL, and ROM.”

“Clinical Relevance: Preliminary evidence suggests that physical therapists can implement the MFR skills necessary to
effect improvements in outcomes for patients with MTD. Recommendation for expanding physical therapy practice
includes patient referral from an outpatient voice center. Physical therapists interested in improving outcomes in
patients with MTD should consider incorporating MFR techniques into standard practice.”

There was little information about the validity and reliability of the available methods. Palpatory methods were qualitative. Most of the palpatory methods evaluate the tension at both static and dynamic tasks. There were only a few scales summarized.


55. This paper reverses the usual relationship, postulating from their findings that improving tongue position and swallowing will allow better body/head position posture to be seen. In a bit of a reversal from traditional reasoning, this small study sets a tone for tongue corrections as a basis for overall change.

56. “This study showed that swallowing is able to modulate postural control and it can be a determining factor in postural syndromes; if not promptly interpreted, may evolve into full-blown and irreversible musculoskeletal disorders for which treatment often proves ineffective.”

57. “The rationale for the integration of neurodynamics into standard treatment is, that it may directly affect the peripheral nervous system, resulting in improved efficiency of the region treated. After a short neural mobilization, the clinician observes an obvious improvement in speech motor skills, e.g. a clearer speaking voice. With the improved speech skills, the subsequent speech therapy exercises can be carried out in a more intensive and more effective manner. Therefore, a speech therapy treatment with the integration of neurodynamic techniques may lead to better results than the same treatment without neurodynamics.”

58. The additional neurodynamic treatment in the IG included mobilization and palpation of peripheral nerves. Palpation and mobilization of the peripheral nerves are painless manual techniques, which may be used as physical examination but also as treatment techniques. Superficial peripheral nerves may be palpated by gentle lateral pulling of the nerve with the finger tip (like plucking a guitar string) (Butler, 2006). The purpose of mobilization of the nervous system supports normal functional movement of peripheral neural tissues, like gliding and stretching without discomfort, and treatment of non-neural structures surrounding the nervous system, like joints, muscles or even scar tissue (Coppieters and Butler, 2008). Detailed palpation and mobilization techniques have been described by Butler (1995, 2006), Maitland (2004), and specifically for cranial nerves by Pickartz von (2007). The following cranial nerves supply the muscles involved in speech: trigeminal nerve (V), facial nerve (VII), glossopharyngeal nerve (IX), vagus nerve (X), accessory nerve (XI), and hypoglossal nerve (XII) (Wendler et al., 2005; Ziegler, 2006; Ziegler and Vogel, 2010). In addition, motor innervation of the respiratory muscles is effected through the phrenic nerve, the intercostal nerves IeXI, and branches from the cervical and the brachial plexus (Larsen and Ziegenfuß, 2012; Schulte et al., 2007; Ziegler, 2006; Ziegler and Vogel, 2010). As part of the clinical reasoning process, the particular choice of which nerves were treated was derived from the outcome of the first evaluation sheet of the BoDyS. The neurodynamic techniques described below were integrated into the standard dysphagia treatment. To improve respiration, thoracic mobilization was performed (Butler, 2006; Jeangros, 2011; Pickartz von, 2011) to mobilize the intercostal nerves. Likewise, palpation and mobilization of the cervical plexus, brachial plexus, and accessory nerve (Butler, 1995, 2006; Shacklock, 2008) were implemented for the treatment of speech-related breathing. Palpation and mobilization of the vagus nerve (Maitland, 2004; Pickartz, 2015) were the neurodynamic treatment techniques used to improve vocal function. Similarly, in patients with articulation disorders, palpation techniques alone were used for the facial nerve (Fig. 2), whereas mobilization and palpation techniques were used for the trigeminal (Fig. 3), hypoglossal, and glossopharyngeal nerves (Butler, 2006; Pickartz von, 2007). The neurodynamic maneuvers within the context of dysphagia treatment are summarized in Table 2.”


63. Lunau, S., Schinoccia, L., Chosalla, G. (2011). Influence of posture on swallowing. Europ J of Paediatric Dentistry. 12(3), 171-174, 2011. This paper reverses the usual relationship, postulating from their findings that improving tongue position and swallowing will allow better body/head position posture to be seen. In a bit of a reversal from traditional reasoning, this small study sets a tone for tongue corrections as a basis for overall change.

64. “This study showed that swallowing is able to modulate postural control and it can be a determining factor in postural syndromes that, if not promptly interpreted, may evolve into full-blown and irreversible musculoskeletal disorders for which treatment often proves ineffective.”

65. Ateras, B., von Piekartz, H. (2017). Integration of a neurodynamic approach into the treatment of dysarthria for patients with idiopathic Parkinson's disease: A pilot study. Journal of Bodywork & Movement Therapies xxx (2017) 1e9. https://doi.org/10.1016/j.jbmt.2017.12.004. This study is the first to introduce concepts of neurodynamic testing/treatment into the speech language pathology world. Its methods and manner of presentation is to be applauded, as unlike many papers that mention a style/type/brand of manual therapy, much is left to the imagination as to just what was done to constitute the study. This particular paper shows in great detail much of the hands-on work, as well as speak to specific nerves in terms of distribution/innervation as well as how best to access/treat it, from a neurodynamic technique perspective. This paper fits my bias, hence the enthusiasm, in that addressing dysfunction from models that are explained from narratives more acceptable to the wider scientific community may be less fitting the older rabbit hole narratives of tissue-specific change and effects.

66. Khoddami, Seyyedeh Maryam et al. (2015). Review on Laryngeal Palpation Methods in Muscle Tension Dysphonia: Validity and Reliability Issues Journal of Voice . Volume 29 , Issue 4 , 459 – 468. DOI: https://doi.org/10.1016/j.jvoice.2014.09.023. “There were five main as well as miscellaneous palpation methods that were different according to target anatomical structures, judgment or grading system, and using tasks. There were only a few scales available, and the majority of the palpatory methods were qualitative. Most of the palpatory methods evaluate the tension at both static and dynamic tasks. There was little information about the validity and reliability of the available methods.”

“Conclusion: The quality of the research on interreliability and intrainreliability of spinal palpation diagnostic procedures needs to be improved. Pain provocation tests are most reliable. Soft tissue paraspinal palpation diagnostic tests are not reliable.”


“many clinical signs important in the differential diagnosis of subtypes of TMD were not measured with high reliability. In particular, assessment of pain in response to muscle palpation and identification of specific temporomandibular joint sounds seemed to be possible only with modest, sometimes marginal, reliability. These modest reliabilities could arise from examiner error because the clinical signs are themselves unreliable, changing spontaneously over time and making it difficult to find the same sign on successive examinations. The finding that, without calibration, experienced clinicians showed low reliability with other clinicians suggests the importance of establishing reliable clinical standards for the examination and diagnostic classification of TMD.”


“Conclusions: Among nonexpert physicians, physiatric or chiropractic, trigger point palpation is not reliable for detecting taut band and local twitch response, and only marginally reliable for referred pain after training.”

General references/more information:


B. For a list of published studies on myofascial release, please refer to the Myofascial Resource website: http://www.waltfritzseminars.com/myofascialresource/resources/research

C. If we can’t stretch fascia, what are we doing, by Alice Sanvito. http://www.massagestlouis.com/if-we-cannot-stretch-fascia-what-are-we-doing


F. Freeing Emotions and Energy Through Myofascial Release, by Noah Karrasch.

G. Understanding the Process of Fascial Unwinding, by Budiman Minasy

H. Three-Dimensional Mathematical Model for Deformation of Human Fasciae in Manual Therapy. Hans Chaudhry, PhD; Robert Schleip, MA; Zhiming Ji, PhD; Bruce Bukiet, PhD; Miriam Maney, MS; Thomas Findley, MD, PhD


J. For information on neurodynamic technique, please refer to texts by David Butler, PT, such as “Mobilisation of the Nervous System”, and Michael Shacklock’s “Clinical Neurodynamics: A New System of Neuromusculoskeletal Treatment”.

K. General explanations for myofascial release may be found at: http://en.wikipedia.org/wiki/Myofascial_release


M. For hundreds of research citations on myofascial release and related topics: http://www.waltfritzseminars.com/myofascialresource/resources/research


O. Diane Jacobs, PT; originator of DNM, http://www.dermoneuromodulation.com/

http://humanantigravitysuit.blogspot.com/

P. A few excellent texts on neurodynamics and tunnel syndromes:


Tunnel Syndromes by Marko M. Pecina, Andrew D. Markiewitz and Jelena Krmoptim-Nemanic (Oct 2, 1991)


S. Functional Atlas of the Human Fascial System, by Carla Stecco, which presents extensive cadaveric dissection studies of fascia throughout the body, but with little mention of the nerves.

T. Fascial mechanoreceptors and their potential role in deep tissue manipulation, By Robert Schleip.


V. Fascia defined: http://en.wikipedia.org/wiki/Fascia


CC. The effects of manual therapy on connective tissue: http://pjournal.apa.org/content/72/12/893.long

DD. A critical review of the trigger point phenomenon: http://rheumatology.oxfordjournals.org/content/early/2014/12/03/rheumatology.keu471.full.pdf?keytype=ref&ijkey=hShg4fj4QoqzoN

EE. Referral pain of peripheral nerve origin: an alternative to the “myofascial pain” construct: http://www.pain-education.com/referred-pain.html

FF. The fall of the postural-structural-biomechanical model? http://www.cpdo.net/Lederman The fall of the postural-structural-biomechanical model pdf

GG. Pain and the neuromatrix of the brain: http://www.jdentaled.org/content/65/12/1378.long


II. A meta-analysis of massage therapy research: https://www.researchgate.net/publication/8922944_A_Meta-Analysis_of_Massage_Therapy_Research

JJ. The top ten most-cited massage therapy articles. https://massagetherapyresearchandeduction.wordpress.com/2015/09/02/updated-the-top-ten-most-cited-massage-therapy-research-articles/


MM. How to Simplify Chronic Pain Puzzles: https://www.painscience.com/articles/occams-razor-for-chronic-pain.php


WW. How Placebos Change the Patient’s Brain


AB. From the Barrel Institute website: Mechanical Signaling Through Connective Tissue: A Mechanism for the Therapeutic Effect of Acupuncture. http://tinyurl.com/g6mp95t


AD. Translating fascia research into techniques you can use (Part II). http://www.advanced-trainings.com/articles/FascScience%20II_BP%20ART%2020151017.pdf


AF. Affective massage therapy. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3091449/

AG. What effect can manual therapy have on pain experience. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4976880/


