

# Treating Myofunctional Disorders to Enhance Occlusal Stability

**LVI DENTISTS** strive to create an environment of muscle harmony and perform beautiful restorative work in their finished cases. In today's world, with baby-boomers wanting to keep teeth longer, this is a necessary service in order to have long-term functional and esthetic results.

Other important, sometimes missed aspects are the myofunctional disorders that may interfere with long-term stability.

**If a patient:**



**The results of circumventing myofunctional therapy may be disastrous for both the patient and the practitioner.**

The field of Sleep Medicine or Dentistry has exploded and now includes myofunctional therapy as an adjunctive treatment.<sup>1</sup> Many studies showing that airway surgery such as tonsillectomy and adenoidectomy alone are not enough to reverse the effects of obstructive sleep apnea.<sup>2</sup>

A new meta-analysis of 331 studies, which recently was accepted for publication in Sleep,<sup>3</sup> concluded that myofunctional therapy decreases AHI by approximately 50% in adults and 62% in children. Lower oxygen saturations, snoring and sleepiness outcomes improve in adults. This information is changing the way the medical profession treats OSA. I feel myofunctional therapy is going to bridge the gap between medicine and dentistry.

This new information is very exciting because at last patients will have access to care not to only treat the symptoms of sleep disorders, but perhaps the actual cause. The treatment options may be expanded to include a therapy program that may change the patient's ability to breathe, chew, and swallow: thus addressing some of the reasons why the airways may have collapsed in the first place.

A frenum inspection bill was passed into law in Brazil starting in 2015. Restricted frenums may be one cause of myofunctional disorders and may lead to posture problems,<sup>4</sup>

breastfeeding problems,<sup>5</sup> or orthodontic problems, especially in Class III<sup>6</sup> malocclusion. My professional experience suggests that restricted frenums may lead to sleep disorders by preventing the back of the tongue from lifting to the palate properly, which is required to maintain an open airway. We now have a new groundbreaking study confirming the relationship of restricted frenums and sleep apnea.<sup>7</sup>

Orofacial pain treatment is now a standard of care treatment in Brazil using myofunctional therapy as an adjunctive treatment. A new study showing the impact of impaired orofacial motor functions on chronic temporomandibular disorders included rehabilitation using increased activity of the muscles by balancing both sides during chewing which improved the orofacial motor control.<sup>8</sup>

Open bites and orthodontic relapse has been noted in patients with myofunctional disorders including hypotonia. Moreover, there are more studies showing that the habits must be addressed in order to insure occlusal stability long term.<sup>9</sup>

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Because myofunctional therapy relies on active patient participation, myofunctional therapists use several techniques that are based on the 10 principles of neuroplasticity. Neuroplasticity means the ability of the brain to change, following physiologic or pathologic input generating an adaptive response. This is why a sequential treatment plan over time is essential to formulate this effective and successful work in contrast to just a few occasional exercises.

The American Dental Hygienists' Association (ADHA) policy has been in place regarding the practice of Orofacial Myology by Dental Hygienists since 1992. The ADHA policy statement is listed under the section PRACTICE, Patient Care Services, policy #9-92: "The American Dental Hygienists' Association acknowledges that the scope of dental hygiene practice includes the assessment and evaluation of orofacial myofunctional disorders; and further advocates that dental hygienists complete advanced clinical and didactic continuing education prior to providing treatment."

If you have a dental hygienist who is willing to expand their knowledge and work in your practice, or have a physical therapist or speech pathologist nearby who has taken a post-graduate course, this is a service you may want to provide for your patients. Your patients will be happy to discover that someone in your practice can identify and help them with problems they have had their entire life that earlier have not had any practical solutions. There may also possibly be a huge cosmetic enhancement when the facial muscles are all working in the correct manner.

I look forward to speaking this year at the IAPA and will discuss protocols as to how to determine a myofunctional disorder and frenum restriction and learn how myofunctional therapy can work with sleep, breathing and TMD problems.

- 1 Guilleminault, C, Sullivan, S. 2014. Guilleminault, C, et al, 2013, Diaferia, G, et al, 2012, Huang, Y., Guilleminault, 2013
- 2 Villa, Maria Pia, et al, 2014, Guilleminault, C. et al, 2013
- 3 Camacho M, et al, 2014
- 4 Olivi, G, et al. 2012
- 5 O'Callahan, C, Macary, S, Clemente, S., 2012
- 6 Jang, So-Jeong, et al. 2011, Melink S., et al 2010
- 7 Huang, Y, Quo, S, Berkowshi, J, Guilleminault, C., 2015
- 8 Ferreira, C. et al. 2014
- 9 Saccomanno, S. et al. 2012



### **IAPA FUN FACT #1**

Did you know...

*That we partied on the USS Midway to close out our 2011 San Diego conference.*