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A wide-angle photograph of the Chicago skyline, featuring the Willis Tower (formerly Sears Tower) as the central focus. The city is situated along the Lake Michigan shoreline, with a highway and a park area visible in the foreground. The sky is blue with some light clouds.

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Orofacial Myofunctional Therapy:

What is OMT? Why is it important to ortho care?

By Joy L. Moeller, RDH, BS, COM (Certified Orofacial Myologist)

After 30 years of practicing and teaching courses in OMT, I view the profession of OMT as a specialty of its own, working parallel with orthodontic treatment and one that is the critical missing element to complete care.

The Greek prefix “myo” means muscle. Orofacial Myofunctional Disorders (OMD) is often commonly referred to as “tongue thrust” because the tongue functions against or between the front or side teeth during swallowing rather than lifting up into the palate. This disorder is generally accompanied by inappropriate function of the muscles of the tongue, lips, jaw and face. Often a low forward resting posture of the tongue and upper lips results. The basic problems that result are related to abnormal orofacial functions and postures. These resulting problems are numerous and need to be addressed in order to avoid malformation of the dental arches.

Orthodontic practitioners need to be concerned with OMD because the abnormal functions and postures of OMD can adversely influence dental growth, slow orthodontic treatment time and undermine the stability of correction resulting in relapse.

When assessing your patient for orofacial muscle dysfunctional patterns, it's important to look for the following problems:

- Does your patient complain about chronic headaches?
- Does your patient have an open mouth rest posture?
- Have your patient's teeth moved after orthodontic treatment?
- Does your patient exhibit an open bite?
- Does your patient complain of temporal mandibular dysfunction (TMD) or neck pain that has muscle involvement?
- Is the patient's tongue always in the way when you are adjusting wires?
- Does your patient exhibit a scalloped tongue from pressing against the teeth?

- Have you noticed oral habits such as thumb or finger sucking, nail biting, lip licking or biting, hair twirling or chewing?
- Does your patient lisp when saying the “s” sounds?
- Do you see the tongue come forward against the teeth when swallowing?
- Is your patient a mouth breather contributing to anterior gingivitis or open mouth rest posture?
- Does your patient grind or clench his/her teeth?
- Does your patient have chronic stomachaches, burping, drooling, hiccups or acid reflex?
- Does your patient have a forward head posture?
- Does your patient have a short lingual frenum or a tight labial frenum?
- When you check for oral

cancer on the sides of the tongue, have you found lesions from tongue thrusting caused by chronic irritations?

These are all possible signs and symptoms of an orofacial muscle dysfunctional pattern that can be addressed by an Orofacial Myofunctional Therapist (OMT). (Figures 1A - F)

History of Orofacial Myofunctional Therapy

OMT is an area of specialization arising out of orthodontics². The field of OMT is unique because the therapist helps the patient make major life-enhancing changes, which affect the entire body.

Many dentists during the 1800s and early 1900s recognized that tongue rest posture, mouth breathing and oral habits influenced occlusion. Edward H. Angle justly termed by some as “the father of orthodontics” wrote: “Malocclusion of the Teeth”³ appearing in Dental Cosmos in 1907 in which he recognized the influence of the facial muscles on dental occlusion. In his

research he concluded mouth breathing was the chief etiological factor in malocclusion.”

The first program of OMT began in 1918 with an article written by an orthodontist Dr. Alfred P. Rogers⁴ entitled “Living Orthodontic Appliances”. He was one of the first doctors in the United States to suggest that corrective exercises would develop tonicity and proper muscle function and there by influence proper occlusion.

In the 1970s and 1980s, there were two different organizations representing therapists. Daniel Garliner and Dr. Roy Langer founded the Myofunctional Therapy Association, and Dr. Marvin Hanson, Richard Barrett, William Zickefoose and Galen Peachy founded the International Association of Orofacial Myology (IAOM).

Currently, the IAOM, located in the United States, is the only professional organization promoting and developing Orofacial Myofunctional Therapy in the entire world.



Fig 1a



Fig 1b



Fig 1c



Fig 1d



Fig 1e



Fig 1f

Team Approach

Today, the field is expanding to include many professions. Through a team approach, the patient can experience the best of all worlds and achieve remarkable results. The interdisciplinary approach to patient wellness includes but is not limited to:

- Orthodontics
- Speech language pathology
- Dental hygiene
- Periodontics
- Oral surgery
- Ear, nose and throat specialty
- Cranial osteopathy
- Allergology
- Pediatric dentistry
- Pediatrics
- Physical therapy
- Chiropractics
- Gastroenterology
- Plastic surgery

Failure to Help?

Through 30 years of practicing Orofacial Myofunctional Therapy, some questions asked me by patients or their parents are:

“Why didn’t someone tell me about this earlier?”

“I knew I had a tongue thrust, but I didn’t know there was a special person to help me.”

“Why didn’t someone tell me my habit of tongue thrusting, thumb sucking or nail biting could be easily eliminated in therapy?”

“I have tried multiple splints, medications and occlusal adjustments for my TMD problem. I was even referred to a psychologist for counseling because they told me it was stress related. Why didn’t someone recognize my facial muscle incorrect balance and refer me for orofacial muscle therapy sooner?”

“This is the third time my orthognathic surgical result has relapsed. Why hasn’t anyone referred me to an orofacial myofunctional therapist?”

“My child was traumatized by wearing a “rake” in his mouth to stop his tongue thrust. His speech has gotten worse, and he has withdrawn. After the rake was removed, the tongue thrust just returned. Why wasn’t I given the option of seeing a therapist who specialized in treating this disorder with exercise?”

“My child wore a palatal expander for a high narrow palate. After the expander was removed, the palate collapsed because the tongue was resting down. Why wasn’t I referred to an orofacial myofunctional therapist immediately following the expander being removed?”

“I was told I was tongue-tied and needed a lingual frenectomy. After surgery, my tongue reattached and scar tissue formed and was worse than before we started! Why wasn’t I told to see a therapist immediately following surgery to prevent re-attachment?”

Patients can learn to develop healthy muscle patterns. These healthy muscle patterns, when permanently habituated, can be proactive in preventing or aiding:

- Orthodontic relapse
- Articulation disorders
- Breathing disorders due to allergies or mouth breathing habits
- TMD when it is a muscle or habit related issue
- Digestive disorders from not chewing properly or swallowing air
- Forward head postural problems
- Faster normalization of the facial muscles and neuromuscular facilitation post orthognathic surgery

How Can OMT Help The Orthodontist?

Orofacial myologists can assist the orthodontist in many aspects of his or her practice to:

- Provide muscle patterns that promote a stable orthodontic result
- Reduce the time spent in fixed appliances
- Normalize the inter-dental arch vertical rest posture dimension, the freeway space
- Identify and eliminate orofacial noxious habits which interfere with stable orthodontic results
- Teach nasal breathing and remodel the airway through nasal cleansing and behavior modification
- Reinforce compliance with wearing rubber bands, functional appliances, and retainers
- Develop a healthy muscle matrix and eliminate habits that contribute to TMD
- Correct forward head and neck posture problems

Since most of our patients are in need of orthodontic treatment, if the patient was referred by a source outside of dentistry, we are certainly a great potential referral source for orthodontists and general dentists and pediatric dentists who do orthodontics.

The best time for the orthodontist to refer the patient to an orofacial myofunctional therapist is before the braces go on or before the braces come off, depending on the patient’s facial structure and motivation. We can work together to help the motivated patient achieve amazing results. To elaborate on the importance of the working relationship between OMTs and orthodontists, I have reached out to some of my esteemed colleagues for commentary, which follow below.

According to Dr. John Kishibay, an orthodontist from Santa Monica,

“We know that form follows function and function can follow form. Therefore, it is vital to identify those patients that need myofunctional therapy. In these patients, myofunctional therapy by a specialist is essential. Treatment is effective and orthodontic stability is enhanced.”

California, who is a professor at USC School of Dentistry. “Orofacial Myofunctional Therapy must be part of the treatment plan from the beginning. This way the patient understands from day one that the muscle adaptation is important for long-term stability. Especially important would be the orthognathic patient. The patient must learn to use the new space in an ergonomic manner, in both a functional patterning and habit elimination awareness.”

Dr. William Hang, an orthodontist practicing in Westlake Village, California, believes that OMT problems are one cause of poor facial development. He claims, “Stability will continue to be an elusive, unachievable goal with poor facial balance frequently being the norm of the post orthodontic result. Myofunctional therapy must become the first line of defense in the quest for proper facial development rather than the rescue squad when the orthodontic result is going up in flames. When orthodontists embrace myofunctional therapy, they stop treating symptoms and begin to focus on treating the cause of poor facial development (altered rest oral posture).”

Dr. Jerry Zimring, a practicing orthodontist for 44 years in Los Angeles, believes that attaining proper occlusion involves attaining a state of harmony between the teeth, the muscles and the bones. He states, “Both my daughter and my grandson were treated with myofunctional ther-

apy with excellent results that would not have been possible without this valuable treatment. I feel strongly that myofunctional therapy should be part of every orthodontic practice.”

Dr. Richard L. Jacobson is a Diplomate of the American Board of Orthodontics and has been in the exclusive practice of orthodontics in Pacific Palisades, California for the past 28 years stated: “We know that form follows function and function can follow form. Therefore it is vital to identify those patients that need myofunctional therapy. In these patients, myofunctional therapy by a specialist is essential. Treatment is effective and orthodontic stability is enhanced.”

Research has revealed a high incidence of speech problems in individuals who exhibit OMD. I have been practicing Orofacial Myofunctional Therapy for 30 years and have treated thousands of patients.

My son had this problem when he was 7 years old and I witnessed the positive change in his teeth, headache pain, and Attention Deficit Disorder (ADD) and Temporal Mandibular Dysfunction (TMD) issues. These dramatic results motivated me to study everything available in OMT. In 1978, I began a private practice in OMT in addition to practicing hygiene. I love the challenge of helping improve the quality of my

patient’s lives. There are five different programs I offer to my patients:

- Habit Elimination Therapy
- Mini-Myo program for the young child
- Orofacial Myofunctional Therapy
- Special Needs Therapy
- Cosmetic Muscle Toning for facial fitness

Habit Elimination Therapy

My program for habit elimination treatment is three to five visits. I work with thumb and finger sucking, nail biting, hair chewing, tongue and lip sucking and/or chewing, and many other oral habits with a 95 percent success rate.

Rosemarie A. Van Norman⁶, an expert in the field of thumb sucking, has determined:

- 60% of malocclusion is causal by prolonged digit sucking
- 10% of 6 to 11 year-olds suck their digits
- 85% of digit suckers exhibit an open bite
- Many times, open bites lead to TMD due to lateral movements of the jaw in order to chew food
- 49.9% of orthognathic surgery patients with open bite relapse
- 59% of digit suckers experience atypical root resorption
- 40% of digit suckers have learning and behavior problems in school

Infants are born with only a suckling skill, which enables them to survive. Usually at 9 months to 3.5 years, the child starts drinking from a cup and eating more solid foods and transitions from suckling to sucking, which is supposed to be used in only a few situations, such as using a straw. However, many times a pacifier is used or the child finds his or her thumb or another object, and the sucking habit is extended and continued.



Fig 2a

“The program that I follow uses behavior modification and positive reinforcement. The patient feels so proud to have ceased the habit once and for all.”



Fig 2b

At this point, the tongue is unable to rest and swallow correctly, leading to an open bite, cross bite or some other type of malocclusion. (Figure 2 A, B)

The program that I follow uses behavior modification and positive reinforcement. The patient feels so proud to have ceased the habit once and for all. The success of this program empowers patients to control many choices in their lives that feel good, but that they know are wrong for them. As a dental hygienist, I have learned that the value of pro-active therapy is to minimize or eliminate problems by treating early.

Mini-Myo Program For Youngsters

Many times, young children can benefit from doing exercises to develop positive growth factors and eliminate negative growth pressure. The young child program has to be fun and fast in order to achieve success. Because the bones are soft, the changes can be remarkably fast.

I make sure to use a variety of rewards and behavior modification

techniques. Parental support at home is essential. The young child program lasts from three to six months and can make a major life enhancing change. (Figures 3a,3b) The goals of the Mini-Myo Program include:

- Encourage nasal breathing
- Develop a lip seal
- Implement a palatal tongue rest posture
- Encourage bilateral chewing
- Work on proper sleep posture as well as eating posture
- Introduce the “bite, sip, and swallow back” motion
- Keep hands and objects away from the face

Orofacial Therapy

My standard program for those ages 7 to 97 consists of year-long program of therapy

exercises for creating proper patterning of the tongue and facial muscles and includes:

- 1 Noxious habit elimination
- 2 Many different therapy exercises to stretch, tone and develop proper neuromuscular proprioception of the facial muscles
- 3 Introducing the proper chewing and swallowing patterns
- 4 Development of proper head and neck posture
- 5 Habituation of the new patterns



Fig 3a



Fig 3b

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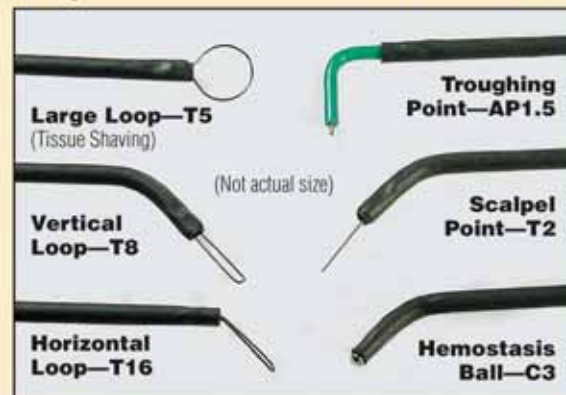
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Fig 4a



Fig 4b



Fig 4c



Fig 4d

The first eight weeks of treatment is the intensive period, followed by habituation of the new pattern. (Figure 4 A - D)

Special Needs Patients

These patients need an individual program based on their physical limitations, pain factors and ability

to cooperate. The treatment plan always needs to be individualized for the best result possible. The goals would be the same as the other programs, but the methods are customized to meet the needs of patients. The patients really appreciate this help that no other specialty has been able to provide. Some patients with special needs who are afflicted with incorrect muscle patterns are:

- TMD
- Autism
- Cerebral palsy
- Down Syndrome
- Attention deficit disorder
- Bell's palsy
- Orthognathic surgery
- Trauma induced muscle abnormalities
- Sturge Weber syndrome
- Lingual Dystonia

Cosmetic Muscle Toning

With age, orofacial posture changes. There are about 40 facial muscles that work in group function. This allows for facial expression. If the patient presents with chronic non-nutritive facial muscle habit patterns, inadequate orofacial postural patterns, orofacial muscle function patterns or orofacial muscle integration patterns, then the overall cosmetic appearance will be compromised in spite of cosmetic surgery or orthodontics.

Plastic surgery patients are tired of having their face cut, burned, injected, creamed and acid etched only to have gravity pull the muscles down again. The more effective way to achieve desired results would be to develop tone and fitness in the facial muscles by changing muscle patterns, habits and postures by a trained orofacial myofunctional therapist and work with the surgeon and orthodontist both before and after surgery.

A personal trainer will tell you that you have to stretch, lift weights and do cardio three to four times a week in order to be fit. Why not exercise your face as well? I feel that this type of treatment will be the way of the future for orofacial myofunctional therapists.

In Brazil, plastic surgeons would not think of doing surgery without having a trained orofacial myofunctional therapist to work with them. The field of cosmetic orthodontics is growing. It is only natural that cosmetic orofacial myofunctional therapy will follow.

Education Instruction

For speech and language pathologists, Dental hygienists, physical therapists, registered nurses, and other allied health care professionals there are currently four or five post-graduate courses available to help you become an orofacial myofunctional therapist. Certification is available through the International Association of Orofacial Myology.

After taking an approved IAOM course and becoming a member of the IAOM, one can apply to take a written exam and an on-site practical evaluation. The courses are usually five intensive days with a recommendation to follow up with an internship and other courses of study in the field.

Practicing OMT guides the patients toward making major life enhancing changes that affects their entire body.

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