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2024 IAOM Convention

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Raleigh, NC

Future Vision: Orofacial Myofunctional Innovations

Friday, September 27

The Myofocus™ Take Off into Orofacial Myofunctional Therapy Algorithm

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Abstract. Orofacial Myology is an ever-evolving science that requires a sound understanding of the root causes of orofacial dysfunctions, the mechanism of physiological functions, the functional impacts of these dysfunctions, and how to individually assess and implement on a wide range of cases. Often, the therapist may find all of these factors challenging to navigate through, due to the variables involved. The Myofocus™ Take Off into Orofacial Myofunctional Therapy Algorithm is the first and only one known in the world to provide a comprehensive methodology in applying the principles of Orofacial Myology, where all of the above elements have been taken into account for, creating individualized prescriptions that are catered for the patients.

Summary

The field of Orofacial Myology continues to advance, with its importance being increasingly recognized in a diverse array of functional conditions. Comprehending these connections and the rationale behind the science is an essential initial step in becoming an Orofacial Myofunctional Therapist. The basics of this discipline need to be first explored, along with the reasons why it is a vital knowledge and skills to acquire within the health paradigm. However, having such understandings alone is not sufficient in being able to master the evaluations, diagnoses and implementation of the therapy. With the Myofocus™ Take Off into Orofacial Myofunctional Therapy Algorithm, therapists are able to utilize a logical and inclusive protocol, where orofacial dysfunctions are classified into four main categories. Each category is then divided into three levels, with each level being further broken down into three sub-levels, resulting in 180 orofacial myofunctional prescriptions, in which the therapist is instinctively obligated to develop the myofunctional eye to individually assess and treat each patient without leaving any functional stone unturned. The algorithm intentionally covers all orofacial dysfunctions at any particular stage of the patient's conditions, ensuring that possible hidden compensations are also being considered in the treatment. Consequently, the system minimizes the complexity, obstacles and indecisions that may arise while executing Orofacial Myofunctional Therapy.

Dropping the E, G, and O from Myofunctional Healthcare

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Abstract. In the world of orofacial myology, due to its holistic nature, practitioners need to be able to collaborate and integrate their treatment as part of a team. Within the team, there are many different personalities that the practitioner needs to be able to deal with and manage. Being able to differentiate your own egos and archetypes, leads to breaking barriers that would otherwise encourage working in isolation. Ultimately, having an understanding of this behavioral healthcare is crucial in delivering effective and consistent services that benefit not just the patients, but also the practitioner and their network.

Summary

Effective communication is crucial in a collaborative and integrative team approach to healthcare. Because orofacial myology relates to many functional systems of the human body, managing these as separate entities fails to recognize the interconnectedness. However, when working as a team, different personalities and archetypes often become barriers that may disadvantage the patient. An initial exploration of these personalities and archetypes allows the practitioner to effectively handle the members in each team. These archetypes are categorized to four kinds, each being represented by an animal that reflects the individual personalities. Additionally, ego plays a role. Bad ego may hinder progress and the opportunity to grow. Therefore, being able to differentiate between good ego and bad ego, understanding when to use them appropriately, and recognizing the various archetypes, provide a sound platform for practitioners to build upon professional and personal relationships. Consequently, the art of communication becomes much more tangible to master, ensuring the practitioner remains authentic and real.

The Nasal Breathing Revolution with Nitric Oxide

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Abstract. Nitric oxide (NO) is a major component of human health and a lack or deficiency of nitric oxide is the cause of most chronic disease processes (Bryan, 2018). Health care providers should be able to communicate with patients on how to optimize nitric oxide production in the human body.

Summary

In 1998, three U.S. scientists won the Nobel Prize in Physiology or Medicine for discovering that NO is a powerful signaling molecule in the cardiovascular system (Koshland, 1992). NO dilates blood vessels and brings oxygen rich blood to the body thereby lowering blood pressure. Conversely, a deficiency of NO leads to a decrease in blood flow to the brain, organs, and extremities. NO is involved in the immune system along with stem cells, macrophages, T-cells and other pathogen fighting entities and acts as a neurotransmitter in the nervous system (Bryan, 2018; Monkada & Higgs, 1993). NO is made endogenously in the human body through endothelial cells via amino acids L-arginine and L-citrulline with intracellular calcium which produces a vasodilation effect thereby relaxing smooth muscles (Khalaf et al., 2019). Another way NO is made is through a diet of nitrates by which our symbiotic bacteria found intraorally transforms the nitrate to nitrite which we swallow and then the stomach acid converts the nitrite to NO. In this pathway, NO kills harmful bacteria keeping the gut biome healthy (Benjamin et al., 1994). The stomach needs to be acidic for this to occur, therefore, proton pump inhibitors (PPIs), known as antacids, interrupt this pathway. PPIs were not meant to be taken on a long-term basis and a study of patients on PPIs for 3-5 years had an increase for heart attack and stroke by 30% (Bryan, 2018; Nolde et al., 2021; Smith et al., 2022). Also, antiseptic mouthwash can kill the symbiotic bacteria intraorally which can disrupt this cycle of NO production (Blot, 2021). A third way NO is made is through nasal breathing. Nasal breathing produces a considerable amount of NO in the paranasal sinuses. The paranasal sinuses contain beating cilia where NO is produced via the endothelial cells (Chen et al., 2000). There are 3 types of NO produced in the paranasal sinuses. Some of the NO produced in the sinuses act as a first line of defense by killing bacteria, viruses, and fungi which enter the nasal passages while the other forms of NO produce a vasodilation effect and a third acts as a neurotransmitter (Kim et al., 2001). Interestingly, the act of humming increases NO 15-fold as compared with quiet exhalation (Weitzberg & Lundberg, 2002). In 2017, the American Dental Association encouraged dentists to screen for sleep-related breathing disorders (ADA House of Delegates, 2017). Since then, dentists are turning their attention to the prevention and consequences of obstructive sleep apnea (OSA) characterized by episodic reductions of airflow by 10 or more seconds caused by a partial or total collapse of the airway (Pinto et al., 2016). Patients with OSA suffer from oxidative stress because of the repeated hypoxic episodes of apnea they endure all night. This oxidative stress reduces endothelial NO synthesis thereby inhibiting NO production (Badran et al., 2015). The use of a continuous positive airway pressure (CPAP) machine restores NO production by increasing L-arginine (Lavie et al., 2003). Since nasal breathing is a predictable source of NO, then taping during sleep is one way to improve perfusion of NO. One study showed an improvement in snoring and sleep apnea scores with mouth taping during sleep (Lee et al., 2022). More studies should be devoted to this important topic of NO production.

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Biological Laws of Human Biomechanics in Orofacial Myofunctional Therapy

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Abstract. The biological laws of human biomechanics are important in Orofacial Myofunctional Therapy (OMT) because they help individuals make sense of mechanisms used in orofacial neuromuscular rehabilitation. They help with the understanding of the structure, function, motion and the role that fascia plays in the structural integrity of the human body.

Summary

A general understanding of the biological laws of human biomechanics is important for the delivery of any form of physical therapy and neuromuscular rehabilitation. The application of biomechanics in human health can be classified according to improvement of performance and reduction and/or treatment of injury (Knudson, 2007).

This is significant in orofacial myofunctional therapy (OMT) as it seeks to improve orofacial function and reduce and treat orofacial myofunctional disorders (OMDs). The therapist's comprehension of human biomechanics and the biological laws is key to supporting their work. It enables the therapists to convey easily and concisely complex physiological processes and mechanisms (e.g., using simple language, terminology, and illustrations), plan and provide effective treatment for their patients, as well as to make appropriate referrals (Tamayo-Myerson, 2023).

The purpose of human biomechanics as well as OMT is to achieve stability, balance, coordination, ease of motion, and restored function. The effects of directed movement

in physical therapy have been well documented, and a number of studies show it is integral to modulating cellular behavior and tissue adaptation (Ng et al., 2017). "As nearly every rehabilitation intervention introduces force to the affected tissues, therapists must have an appreciation of how those mechanical responses influence biological signals to result in tissue healing" (Thompson et al., 2016).

Four biological laws influence the work of orofacial myologists (OMs):

1. *Newton laws of motion* (inertia, force and action/reaction) help us understand how motion and forces applied to the human body act on the musculoskeletal system and how the body reacts to them (Swanson, 2011).
2. *Wolff's law* explains how bone grows and remodels in response to demands placed on it.
3. *Davis's law* postulates that biological soft tissues are capable of functional adaptations to a changing mechanical environment (Cyron et al., 2016).
4. *Hooke's law* (also known as the law of elasticity) states that the force (pressure) exerted by an elastic material during restoration (recoil) is proportional to the stress (deformation or length) imposed on it. This can apply to muscle and skin (Giuliodori et al., 2009).

Additionally, "universal gravitation affects all life forms on earth. Our body is constantly subject to forces from within and surrounding the body" (Lu & Chang, 2012).

Orofacial myologists (OMs) are key in providing neuromuscular re-education for the stomatognathic system. As therapists providing physical treatment for the orofacial complex, OMs need a clear understanding of how OMT can modulate cellular behavior and tissue adaptation, subsequently affecting the structure and posture.

Understanding the biological laws of human biomechanics and their relevance in OMT has led this author to invent a clinical tool for the treatment of OMDs and a clinical protocol to support its use. *The YTM tool®* (Tamayo-Myerson, 2021) alongside the clinical protocol *Glosso-Postural Integration®* (Tamayo-Myerson, 2023) form a simple and effective approach to facilitate and integrate correct tongue and orofacial functions with general body postures in active and passive states. This takes into account the fascial system, kinematics, reflexes, sensory systems, and neuromuscular responses to improve therapeutic delivery and outcomes (Ross et al., 2024).

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Finding My Balance: "My Myo Ikigai"

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Abstract. The *Ikigai* concept refers to the sense of accomplishment and fulfillment that follows when people pursue their passions. It is a reason for getting up in the morning and where individuals focus their energy to find ultimate fulfillment. The *Ikigai* concept influences people's lives, empowers patients, and helps them succeed.

Summary

Finding purpose in life is becoming increasingly difficult in today's modern world. Ever-increasing costs of living, society's demands, social media with unrealistic standards and ill effects, as well as COVID and associated lockdowns have put immense pressure on the general population and healthcare providers (HCP). *Ikigai* is about reaching a sweet spot that protects us from feeling overwhelmed, overworked, exhausted, and often ill. It is a Japanese term gaining attention around the world and refers to a passion that makes our lives joyful and happy (JapanGov, 2022).

The pressures to make ends meet and succeed above personal and professional limits and expectations in an ever increasingly competitive world where judgment and alienation has become the norm, and can often lead to burnout. This was especially true for HCP's during the COVID pandemic with increasing reports of recurring burnout where HCPs reportedly felt unfulfilled, lonely, and a loss of purpose (Guastello et al., 2024).

HCPs took on additional work and further education and training, but in some cases, they contemplated leaving work entirely in search for what was missing in life. They often lost track of time and focus, as well as other important aspects of life (e.g., time for family, friends, selfcare, time to contemplate, be grateful, re-charge and switch off) to reach *Ikigai*. That sweet spot brings a sense of happiness, fulfillment, joy and purpose to life, to keep the mind and body healthy and help humans strike a balance. The book *Ikigai: The Japanese Secret to a Long and Happy Life* is among the most popular books about longevity and fulfillment. It explores the world's longest living communities, their habits likely leading to fulfillment, happiness, as well as physical and mental well-being (Garcia, 2017).

Research has shown a well-balanced lifestyle where work, spending quality time with family and friends as well as making time to have fun, rest, and disconnect has a major impact in human biology and health. *"Having Ikigai (vs. not having Ikigai) was associated with a 31% lower risk of developing functional disability and a 36% lower risk of developing dementia"* (Okuzono et al., 2022).

Being an orofacial myologist (OM) is a rewarding and demanding job. OM's look at the stomatognathic system, all of its functions and dysfunctions, how they may affect the orofacial complex and the rest of the body, as well as the patient's general well-being. This requires the OM to be alert and thorough during analysis of the patient's data. It also requires constant, updated education and training as the field edges forward with increased recognition in healthcare.

So, how can OMs prevent burnout and exhaustion with its compounding effects before these affect their physical and emotional health? Finding one's *Ikigai* can positively help restore this balance. Support groups, outings and retreats encourage OMs to take time to recharge and unwind away from practice and can have a positive impact on their general health and well-being (Bailey et al., 2023).

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Saturday, September 28

A Functional Approach to Sleep & Breathing: Tongue-Tie/Tone & Tongue Space

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Abstract. The presentation explored the impact of ankyloglossia on speech, sleep, breathing, and growth, introducing advanced diagnostic and treatment protocols, including the FAIREST-6 screening tool and refined lingual frenuloplasty techniques. The session aimed to optimize clinical outcomes through a multidisciplinary approach that integrates emerging research into practice.

Summary

Ankyloglossia, commonly known as tongue-tie, is a condition characterized by restricted tongue mobility due to a tethered lingual frenulum. This restriction can lead to a cascade of orofacial dysfunctions, including mouth breathing, clenching, grinding, sleep issues, speech impediments, and postural anomalies. Recent advances in understanding ankyloglossia emphasize the need for a comprehensive approach to diagnosis and treatment, integrating both surgical and non-surgical strategies to improve patient outcomes.

1. *Impact of restricted tongue mobility.* The presentation highlighted the far-reaching effects of restricted tongue mobility (tongue-tie), oral dysfunction (tongue-tone), and maxillofacial underdevelopment (tongue-space) on health. These restrictions were shown to contribute to sleep-disordered breathing, fatigue, depression, neck tension, pain, and more, underscoring the importance of addressing these conditions holistically (Lichnowska et al., 2024; Summersgill et al, 2023).

2. *Advanced diagnostic tools*: *The FAIREST-6 Screening Tool.* A key feature of the session was the introduction of the FAIREST-6, a validated screening tool designed to assess pediatric sleep-disordered breathing risks based on physical examination. The FAIREST-6 helped clinicians systematically evaluate the impact of restricted tongue mobility and its contribution to broader health issues (Oh et al., 2021).

3. *Evolution of clinical definitions and diagnostic clarity*. The presenter discussed the evolution of ankyloglossia definitions, clarifying common misconceptions around posterior tongue-tie, which is often misdiagnosed. The session emphasized the importance of using the floor-of-mouth (FOM) hold maneuver to identify "mid-tongue restrictions," a more precise term for what is traditionally referred to as posterior tongue-tie. This technique distinguished physical restrictions from muscle weaknesses and guided targeted therapeutic interventions (Mills et al., 2019).

4. *Refined lingual frenuloplasty techniques with myofunctional therapy.* Drawing on data from a cohort study involving 445 patients, Zaghi presented a refined protocol for lingual frenuloplasty combined with myofunctional therapy. The updated surgical approach included less invasive techniques, standardized therapy protocols, and defined mobility endpoints, significantly improving patient satisfaction rates while reducing complication frequencies. Key findings revealed that CO_2 laser use, refined suturing techniques, and standardized myofunctional protocols minimized postoperative pain and enhanced tongue mobility (Zaghi et al., 2024).

5. *Comprehensive treatment strategies and post-operative care.* The session explored treatment strategies for nasal obstruction, sleep bruxism, and mouth breathing, integrating various therapeutic modalities, including bodywork and myofunctional therapy. The importance of a multidisciplinary approach was emphasized, with tailored postoperative care plans that supported wound healing and long-term functional outcomes (Camacho et al., 2015; Guilleminault & Sullivan, 2014).

Conclusion

The presentation underscored the necessity of evolving clinical definitions, precise diagnostic techniques, and comprehensive treatment protocols for ankyloglossia and related disorders. By adopting a multidisciplinary approach that integrates advanced surgical techniques and therapeutic interventions, clinicians can achieve superior patient outcomes, optimizing health and wellness in every patient.

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Enhancing Pediatric Airway Health: The Role of Dental Interventions

Nora Ghodousi-Zaghi, DDS
The Breathe Institute, Los Angeles, CA, U.S.

Abstract. This lecture delves into the role of pediatric dentistry in airway health, specifically addressing how dental interventions like expansion, early identification, and collaborative treatment of oral restrictions in infancy can significantly improve breathing and overall health in children. The presentation explores the latest techniques and approaches in dental interventions.

Cultural Competence, Humility, and Responsiveness in Myofunctional Therapy

Rehab Zaytoun, MD
Faculty of Medicine, Fayoum University, Cairo, Egypt

Vanessa Anderson-Smith, MA, CCC-SLP, COM®
Anderson Smith Therapy, Sioux Falls, SD, U.S.

Monica Marie Purdy, MA, CCC-SLP, COM®
Kids Abilities Pediatric Therapy Clinic, Indianapolis, IN, U.S.

Abstract. This seminar addresses diversity, equity, and inclusion (DEI) in myofunctional assessment and treatment. Professionals develop cultural knowledge (i.e., competency and humility) and responsiveness through interactions with colleagues, patients, and interdisciplinary providers. These lifelong learning skills are crucial for daily practice in our multicultural world.

Sunday, September 29

Is Prevention of Obstructive Sleep Apnea Possible?

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Abstract. Sleep disordered breathing (SDB) encompasses a spectrum of issues that affect breathing patterns in sleep. The issues broadly range from simple mouth breathing to severe apnea. Medical literature discusses numerous noninvasive or invasive methods to salvage the situation; however, there are few prevention protocols to date. The major challenge lies in identifying early symptoms of SDB due to lack of knowledge on the role of the tongue as a respiratory organ and its impact on the craniofacial respiratory complex.

Summary

This information is the culmination of case reports about sleep issues in infants to adolescents and how the Myoline protocol is used as an interceptive and preventive tool. Myoline is a strategically curated treatment protocol which is airway focused and myo-centric to optimize the functions of the craniofacial respiratory complex. This protocol employs myofunctional therapy, myofascial treatment, orthopedic appliances, and functional frenuloplasties as per treatment goals. The case series encompassed the following:

- Infants with sleep disturbances as simple as short sleep episodes to apnoeic episodes
- Toddlers with attention deficit hyperactivity disorder (ADHD) like symptoms and concomitant sleep issues
- Young children with maxillo-mandibular retrognathia and sleep disordered breathing (SDB) symptoms
- Adolescents with narrow jaws, full-fledged alignment issues, and unrestorative sleep

Diagnoses were based on comprehensive oral, dental, and functional history with inspection and palpation along with functional and radiographic investigations wherever needed.

Treatment strategies for the infants were oriented toward establishing breastfeeding (i.e., nature's best way to augment maxillary growth and the posterior nasal aperture), which gradually results in correcting sleep issues (Page, 2001; Palmer, 1998). In toddlers and young children, use of maxillary expanders, myofunctional trainers along with therapies and functional frenuloplasties were provided as a part of the Myoline protocol (Cistulli et al., 1998; Nota et al., 2022; Zaghi et al., 2019). In adolescents, mini implants assisted rapid maxillary expansion along with the use of myofunctional therapy, release of tethered oral tissues, and orthodontic corrections (Yoon et al., 2023).

Thorough functional evaluation and identification of OSA risk predictors early in childhood can help prevent the domino effect of something starting as simple as mouth breathing in the SDB spectrum. This case series reiterated "an ounce of prevention is worth a pound of cure." Sleep issues are a slow pandemic the globe is facing. Research-backed, multi-disciplinary approaches to help the children attain good restorative sleep is the *need of the hour*.

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The Heart of the Pivot: Moving Children & Families Beyond the Airway

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Abstract. Given the far-reaching impact of a child's dysregulation on individual and family function, this presentation introduced integration of a *Space & Pace* approach to improve a child' self-regulation within a whole-child/whole-family framework for optimal outcomes across all interventions.

Summary: Children with daytime airway issues and sleep related breathing disorders often present with neurobehavioral sequelae and signs and symptoms of autonomic dysregulation that can mimic other conditions such as ADHD, sensory processing differences, and histamine intolerance. In some instances, one or more of these conditions may occur alongside airway issues, and can make obtaining a differential diagnosis challenging. A key feature amongst all these conditions is a child's struggle to self-regulate. The presence of dysregulation in a child has the potential to undermine their functions across all activities (day and night), decrease quality of life, and impede their ability to participate in myofunctional therapy and other airway-related interventions. By understanding the overlap in presentation of the aforementioned conditions, providers are better equipped to identify other key professionals who are instrumental in an interdisciplinary plan of care, as well as the treatment timing and planning for myofunctional therapy.

How Tethered Oral Tissues Can Impact Sleeping, Breathing, and Feeding

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Abstract. Evidenced-based information assists clinicians in assessment and treatment of infant sleeping, breathing, feeding, and functional movement as it pertains to tethered oral ties. Inadequate oral sensory-motor skills and tethered oral ties (i.e., tongue, lip, or buccal) can inhibit optimal sensory processing and sensory integration, primitive reflex integration (i.e., both postural and oral reflexes), gross motor and fine motor development, and breastfeeding and bottle feeding. Identifying early signs of dysfunction are critical in knowing when and to whom to refer while building an effective treatment plan.

Summary

Tethered oral ties (tongue, lip, and/or buccal) are embryological remnants of tissue that restrict normal and optimal oral sensory-motor functioning. However, this does not mean surgical intervention is the immediate solution for any or all patients. There needs to be a functional limitation in addition to the anatomy in order to meet tongue-tie release criteria (Baxter et al., 2018). This type of limitation impacts typical oral and body function such as adequate sleeping, breathing, feeding, and movement.

Sensory processing and integration, as well as reflex integration are critical components of functional sensory-motor development. Learning occurs when one receives accurate sensory information, processes it, and uses it to organize motor behaviors. Inaccurate or unreliable input disrupts the ability to process information (Dunn, 1991).

Knowledge of the eight sensory systems (i.e., visual, auditory, tactile, vestibular, olfactory, gustatory, proprioceptive, and interoception) is crucial for appropriate assessment and treatment (Ayres, 2005). Additionally, understanding subtypes of sensory processing disorders (i.e., sensory modulation disorder, sensory-based motor dyspraxia, and sensory discrimination disorder) is critical when evaluating babies and children (Miller et al., 2011).

Reflex activity produces the simplest motor behaviors, and it is stereotyped and dependable (Marieb, 2016). Some reflexes develop in the womb and aid in the birthing process (Otty, 2021). Primitive reflexes control the movements of the fetus and the newborn. These are transformed into postural reflexes, so the child is able to rise, walk, and keep balance (Blomberg, 2014). Integration of reflexes leads to improved cognition, motor control, learning, and behavioral responses.

Breastfeeding and bottle feeding rely on efficient sensory, motor, and reflex development. Otherwise, the quality of feeding is impacted. Breastfeeding promotes bonding with the mother, and lowers the risk of maternal postpartum depression, breast/ovarian cancer, and Type 2 diabetes. Additionally, it ensures a strong infant immune system (Jedrzejek, 2019).

While infants may show fewer sucks and longer duration of pauses on a bottle versus breastfed babies (Moral et al., 2010) there are still benefits to bottle-feeding. These include bonding time with non-breastfeeding caregivers, flexibility for mothers, and an alternative for babies who cannot digest components of human milk (www.bbbgeorgia.org). When infants transition to solid foods, it is not just about adequate oral sensory-motor skill development, but also about optimal sensory-motor and reflex integration.

Nasal breathing is another important consideration with many health benefits (e.g., filtering and humidifying air, improved oxygen intake/absorption, improved sleep, stress reduction). However, mouth breathing has many negative implications (e.g., high narrow palate impinging on nasal and sinus areas, frequent upper respiratory illness, low forward tongue resting position, tongue thrust swallow, and dental malocclusion). Poor sleep and breathing are associated with mouth breathing along with a host of problems, including academic, behavioral, developmental, and social difficulties, weight abnormalities, and other health issues (Bahr, 2010; www.thebreatheinstitute.com). Therefore, functional evaluations using a multi-disciplinary approach are key for optimal success in the assessment and treatment of tethered oral ties impacting infant sleeping, breathing, feeding, and movement. Disciplines often include a variety of healthcare professionals.

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Myofunctional Approaches to the Treatment of Obstructive Sleep Apnea

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Abstract. Professionals who manage orofacial, oropharyngeal and upper airway disorders often encounter patients with obstructive sleep apnea (OSA). This session defined and explained OSA, its clinical presentation, etiologies, assessment procedures, and traditional treatments. Myofunctional therapy (MFT) has been applied to children and adults with OSA with varying degrees of success. We described protocols, reviewed evidence, and considered device- and app-driven treatment approaches.

Summary

Sleep-disordered breathing (SDB) is increasing in prevalence and poses a substantial health risk for an estimated one billion people worldwide. Obstructive sleep apnea (OSA), the most common form of SDB, is characterized by repeated episodes of upper airway narrowing (hypopnea) and/or obstruction (apnea) during sleep. The primary mechanisms of OSA include abnormal upper airway anatomy and/or decreased effectiveness of the upper airway dilator muscles.

The prevalence of OSA is estimated at 15-30% in men, 10-15% in women, and 1-6% in children. Clinical assessments for OSA include screening questionnaires (e.g., STOP-Bang, Chung et al., 2008), upper airway examination, history of relevant symptoms, consideration of risk factors, and standard diagnostic tests. Overnight laboratory polysomnography (PSG) is the gold standard assessment for the diagnosis of OSA. Severity is determined from the apnea-hypopnea index (AHI), a measure of the number of airflow reductions/cessations per hour during PSG.

Multiple treatment approaches are available for adults with OSA. The standard treatment is positive airway pressure (PAP), which uses air pressure to maintain upper airway patency during sleep. PAP therapy is very effective in reducing AHI and improving symptoms, though adherence is often suboptimal. Other treatments include oral appliance therapy, hypoglossal nerve stimulation, surgical approaches including uvulopalatopharyngoplasty, and behavioral/lifestyle strategies such as positional therapy, weight loss, and exercise. In pediatric patients, adenotonsillectomy (AT), if not contraindicated, is recommended as first-line treatment in the setting of adenotonsillar hypertrophy. Other approaches include PAP therapy if AT is not performed or OSA persists; intranasal steroids in those with mild OSA, in those who do not receive AT, or with residual postoperative OSA; and weight loss in overweight or obese children.

Myofunctional therapy (MFT) for OSA generally includes strategies targeting the positions and functions of the orofacial and oropharyngeal muscles (Guimarães et al, 2009), as well as respiratory resistance exercises (Puhan et al., 2007). In particular, exercises are intended to promote nasal breathing and to strengthen and “tone” the muscles of the tongue, velum, pharynx, and lips. Isolated exercises or restricted groups of exercises appear to be less effective for improving OSA than a more comprehensive MFT program (Erturk et al., 2020; Poncin et al., 2024; Silva de Sousa et al., 2023).

Evidence of MFT for OSA is growing and is generally promising, especially for patients with mild to moderate OSA (Meghpara et al., 2022; Rueda et al., 2020; Saba et al., 2024). Furthermore, simple devices and apps, which appear to increase adherence, are increasingly available (Marzouqah et al., 2024; O’Connor-Reina et al., 2021; Olmanson et al., 2021; Roberge et al., 2024). Nonetheless, the quality of evidence is relatively low and more high-quality randomized controlled trials are needed (Rueda et al., 2020), especially in children (Bandyopadhyay et al., 2020). Most systematic reviews and meta-analyses conclude that MFT is a low-risk approach for improving OSA and that it may be offered as an adjunctive therapy or as an option to patients who are resistant to more established approaches (Rueda et al., 2020; Saba et al., 2024).

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