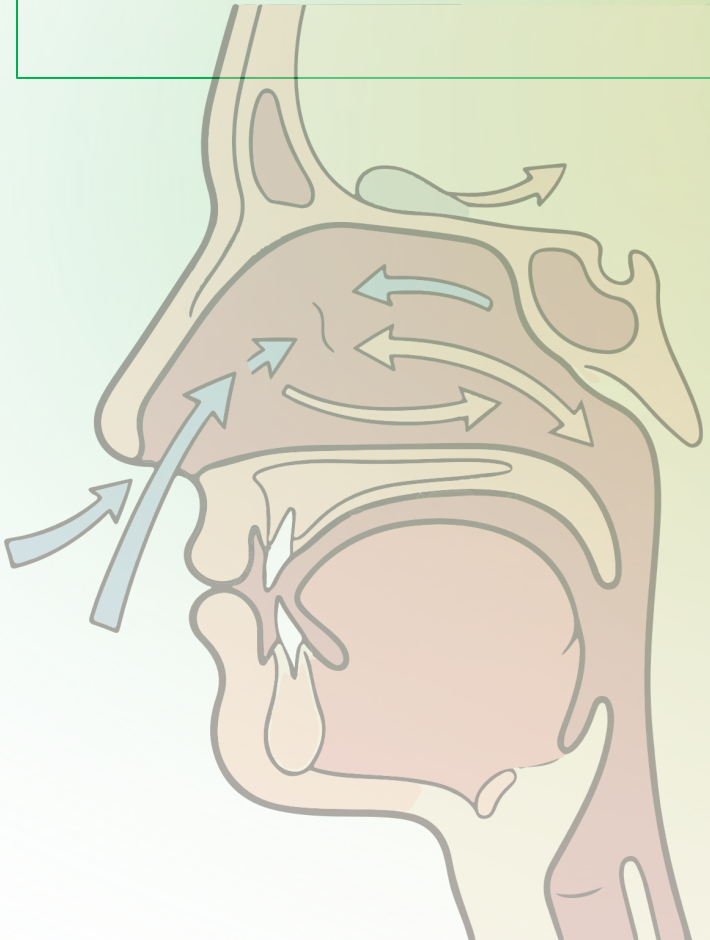


Orofacial Myofunctional Therapy (OMT) - The Compliment to Airway & Sleep Medicine

Chris Zombek BSDH, COM®





**Chris Zombek, BSDH,
COM®**

- **Dental for 36 years**
- **Certified Orofacial Myologist since 2015**
- **Buteyko Breathing Method Trained**
- **Certified:**
**Perimenopause/menopause women's health/
functional nutrition through IWHI.**
- **OMT Experience: children 4 and up, sleep/airway
synkinesis; post bell's palsy.**
- **Member of the IAOM: (International Association of
Orofacial Myology) Certified and served on the board of
the directors/education committee for nine years.**
- **Member of AOMT: (Academy of Orofacial Myofunctional
Therapy)**

Conflict of Interest Disclosures for Speakers

Chris Zombek, BSDH,COM has no relevant financial relationships with ineligible companies to disclose.

Who is familiar with OMT? How many of you are currently referring patients for OMT ?

Raise your hand:

- **Never**
- **Occasionally**
- **Frequently**



Learning Objectives

Upon Completion Of This Course, Attendees Should Be Able To:

- **Describe what is OMT (Orofacial Myofunctional Therapy).**
- **Explain how OMT supports airway and sleep health.**
- **Identify patients who may benefit from an OMT referral.**
- **Describe collaborative pathways for integrating OMT into airway care.**

Gifts: QR Codes

- **References**
- **Screening Tool/Referral Sources/Organizations**
- **Script for questions from patients and parents.**
- **Additional questions**

Flow of Presentation

- **Definitions and Descriptions (OMT)**
- **Current and Relevant literature review**
- **Orofacial Myofunctional Disorder (OMD)/Signs and Symptoms**
- **(OMD) Root Cause**
- **Case Studies**
- **Gifts (QR codes)**

Many Sleep Breathing Disorder (SBD) Patients Continue to Struggle Despite

- CPAP
- Oral appliances
- Surgery
- Expansion

Why? because underlying dysfunctional oral habits remain untreated. 

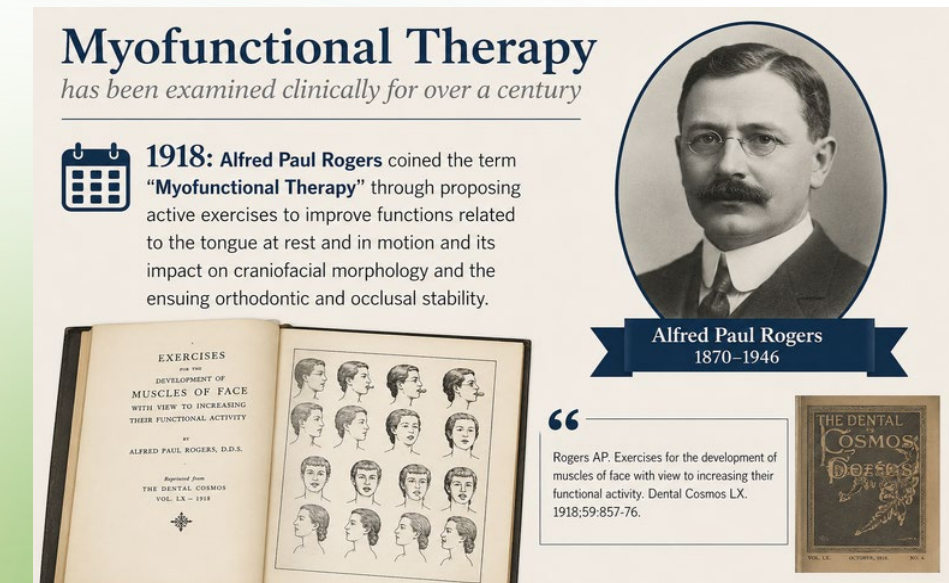
Definitions and Descriptions (OMT)

What is Orofacial Myofunctional Therapy?

Neuromuscular Re-Education Of: Tongue, Lips, Cheeks, Jaw, Soft Palate, Breathing Patterns

Myofunctional Therapy has been examined clinically for over a century.

1918: Alfred Paul Rogers:
Proposing active exercises to improve functions related to the tongue at rest, tongue movement and its impact on craniofacial morphology and the ensuing orthodontic and occlusal stability.



Rogers AP. Exercises for the development of muscles of face with
view to increasing their functional activity. Dental Cosmos LX.

1918;59:857-76.

How OMT Supports Airway and Sleep Health

- Improves tone, endurance of the tongue and pharyngeal dilator muscles.
- Promotes appropriate tongue resting posture against the palate.
- Reduces upper airway collapsibility during sleep.
- Encourages diaphragmatic and nasal breathing.

TONGUE MUSCLES

Intrinsic (within the tongue) & Extrinsic (attach to bone)

INTRINSIC MUSCLES

(within the tongue)

Superior Longitudinal

Inferior Longitudinal

Transverse

Vertical

EXTRINSIC MUSCLES

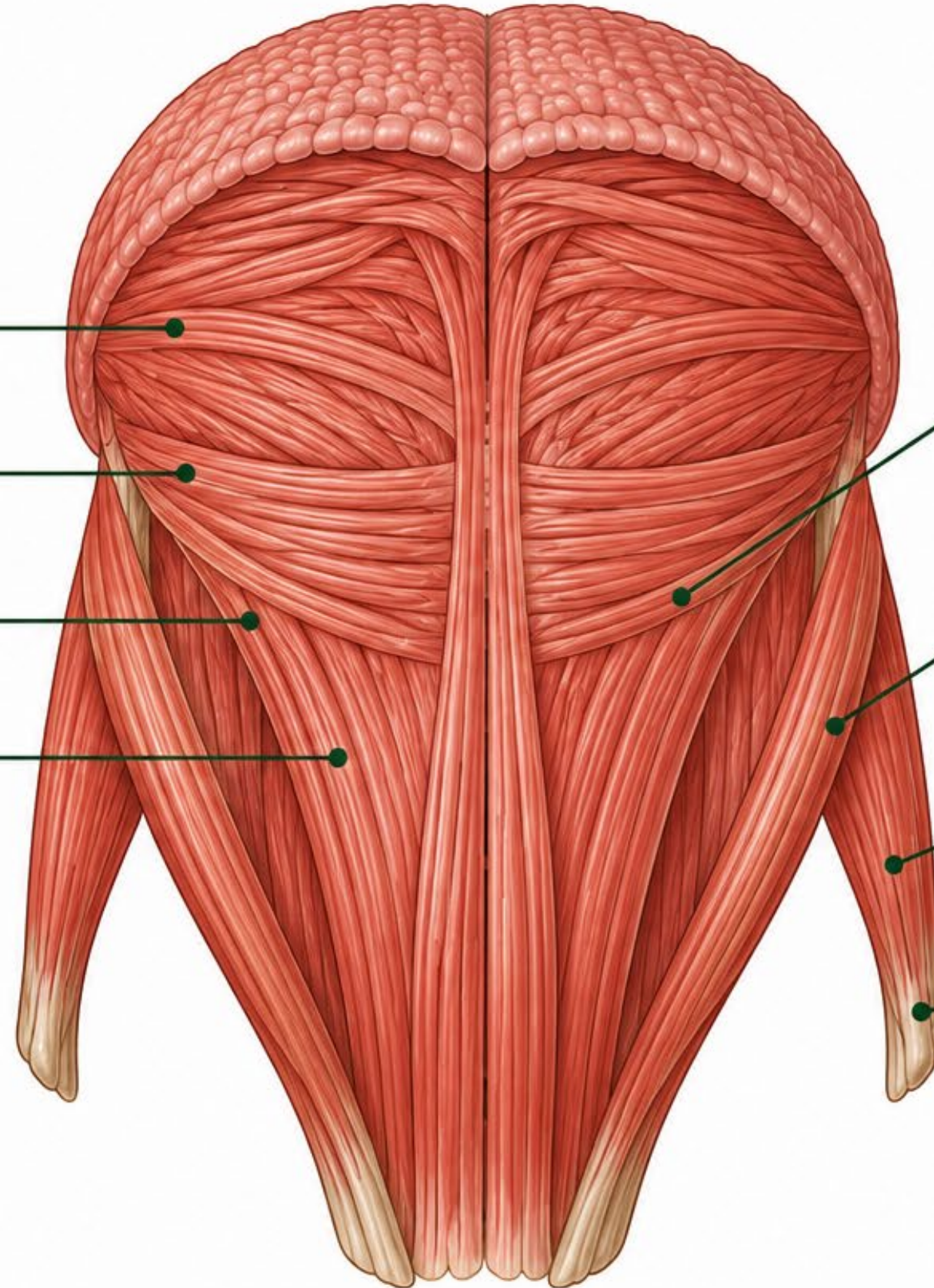
(attach to bone)

Genioglossus

Hyoglossus

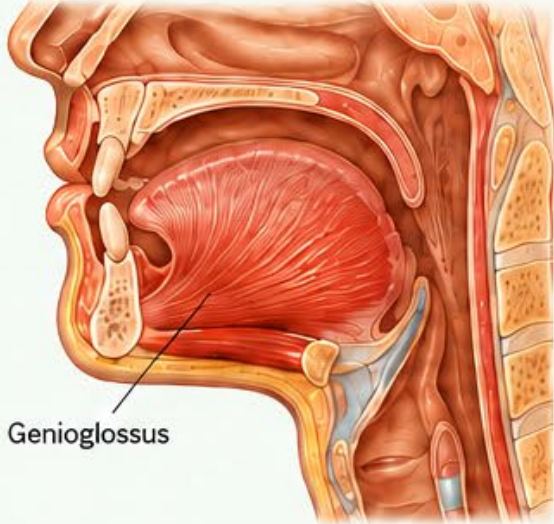
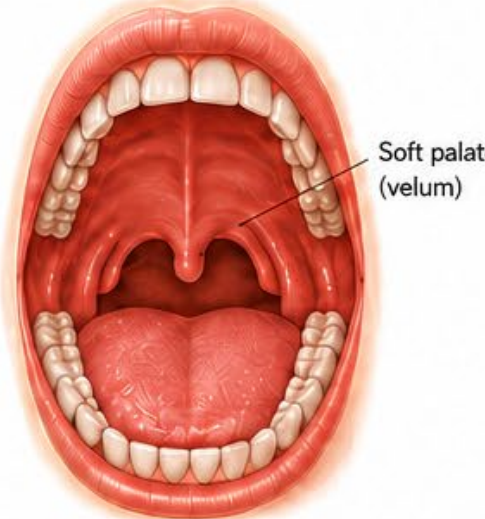
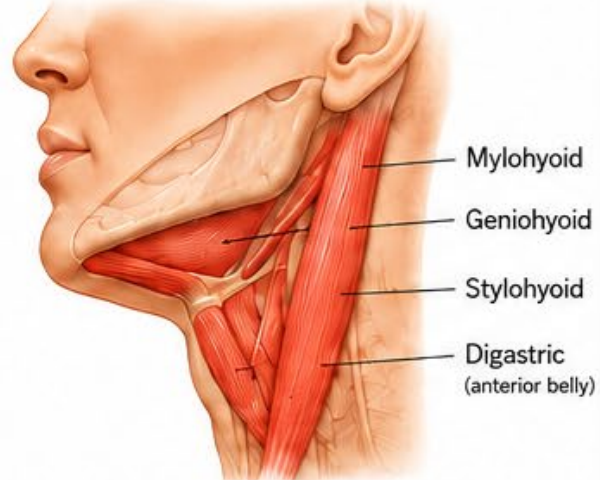
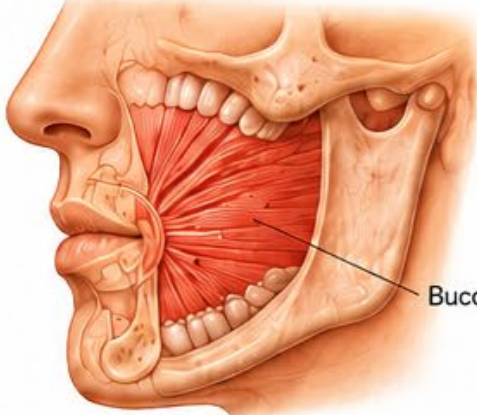
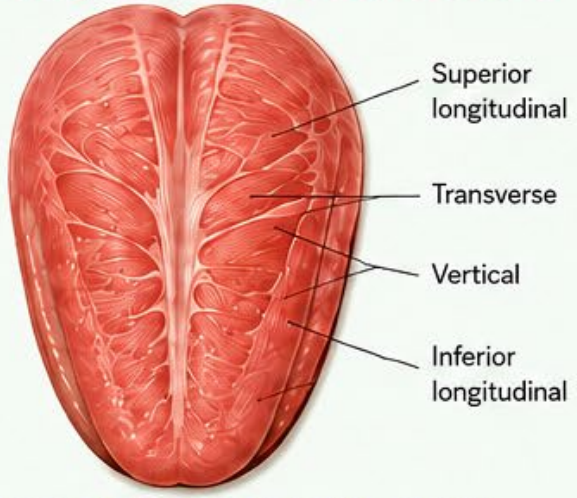
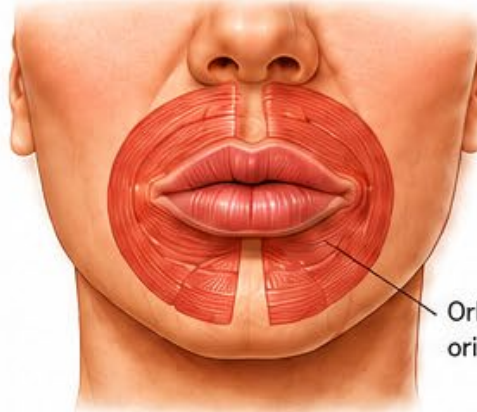
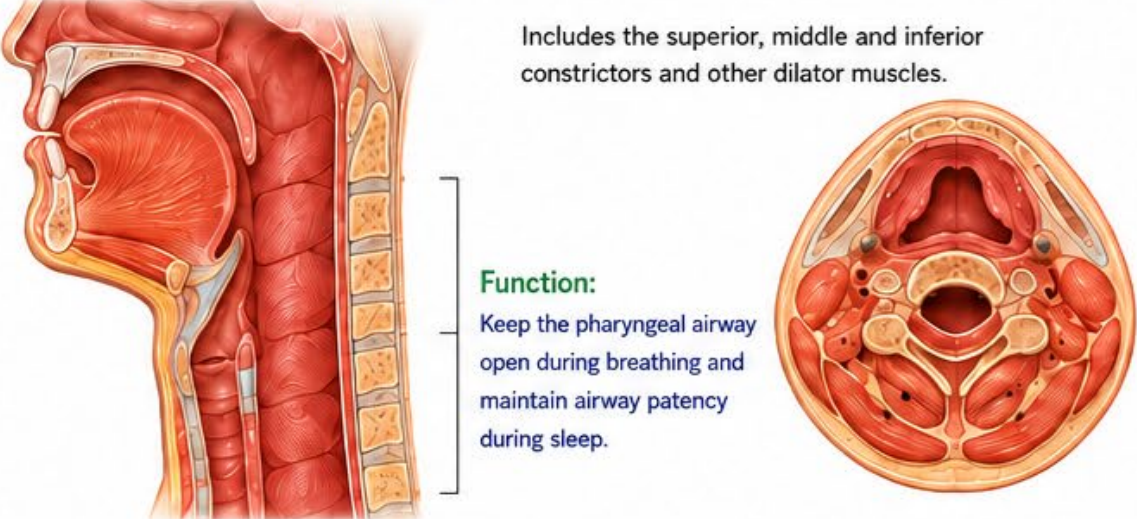
Styloglossus

Palatoglossus



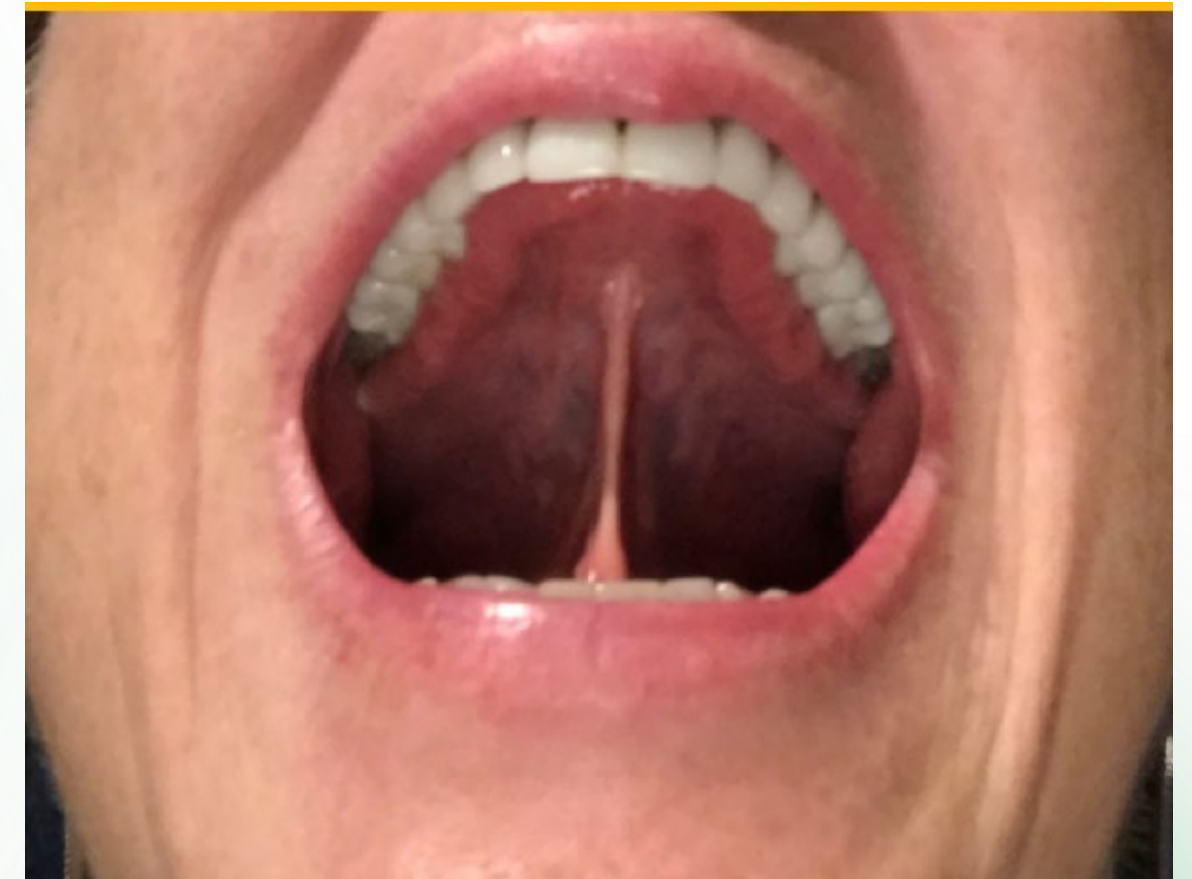
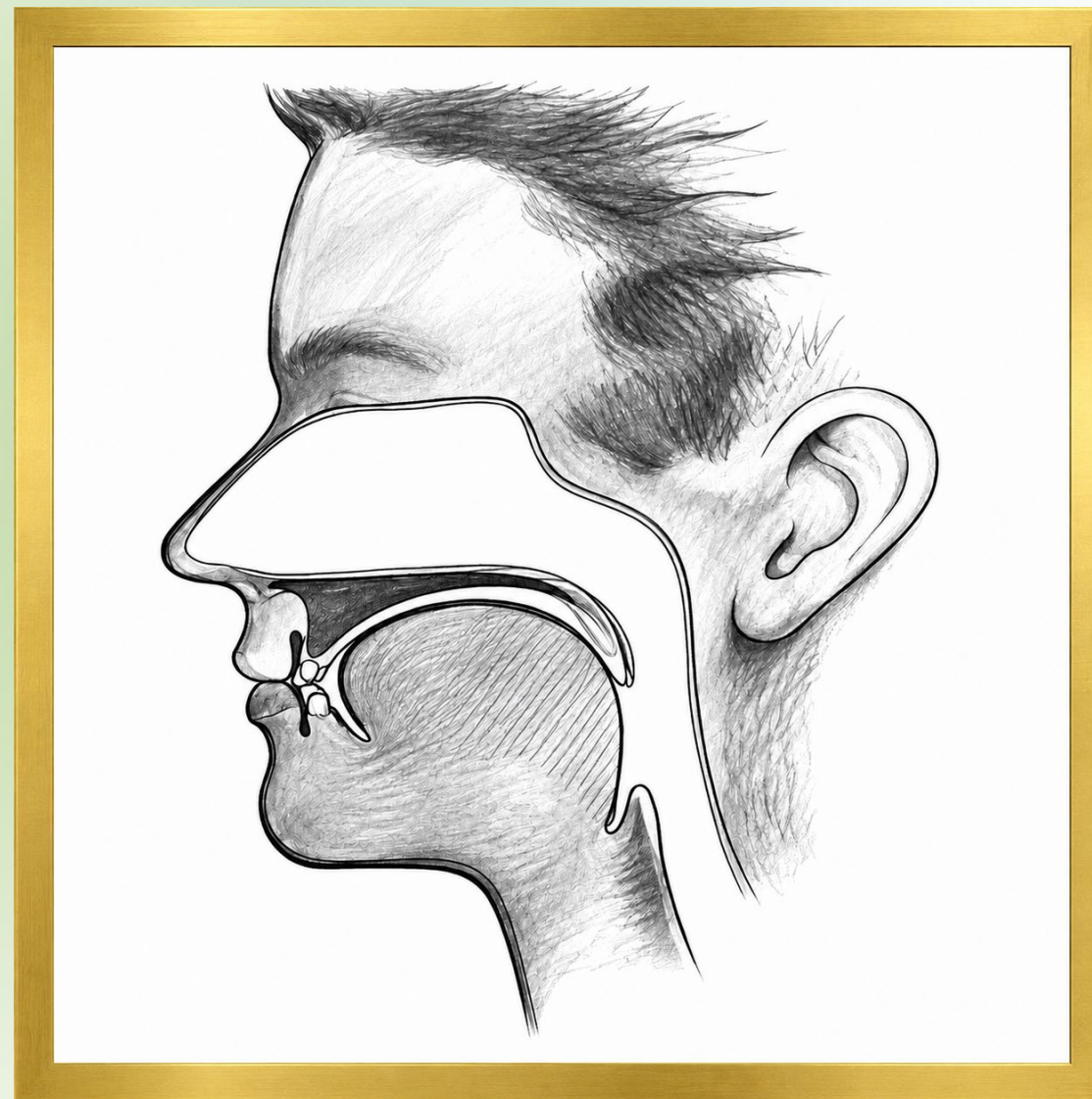
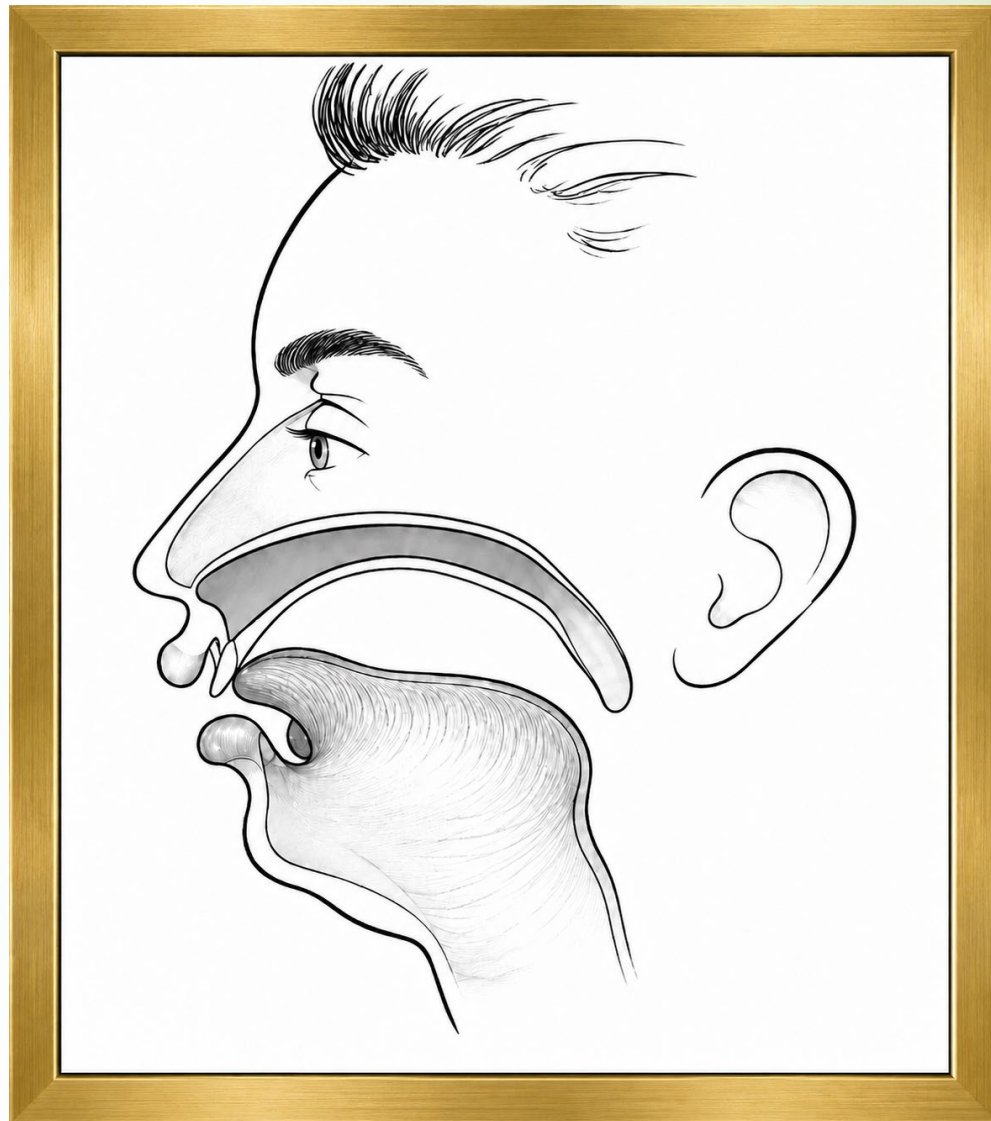
OMT Uses Repetitive Isometric And Isotonic Exercises

Key Orofacial & Upper Airway Muscles Targeted in OMT

TONGUE-MUSCLE GROUP		3. SOFT PALATE	4. SUPRAHYOID MUSCLES (support tongue & elevate hyoid)	5. BUCCINATOR
1. GENIOGLOSSUS (primary tongue protruder)	 Genioglossus Protrudes and depresses the tongue; key dilator of the airway.	 Soft palate (velum) Elevates to close off the nasopharynx during swallowing and supports airway function.	 Mylohyoid Geniohyoid Stylohyoid Digastric (anterior belly) Stabilize the hyoid bone, elevate the floor of mouth and assist in swallowing and airway patency.	 Buccinator Keeps the cheeks toned, maintains oral seal and aids in swallowing.
2. INTRINSIC TONGUE MUSCLES	 Superior longitudinal Transverse Vertical Inferior longitudinal Shape and control tongue posture, elevation, retraction and movement.	6. ORBICULARIS ORIS	7. PHARYNGEAL MUSCULATURE (dilator muscles)	
		 Orbicularis oris Closes and protrudes the lips; essential for lip seal and oral resting posture.	 Includes the superior, middle and inferior constrictors and other dilator muscles. Function: Keep the pharyngeal airway open during breathing and maintain airway patency during sleep.	

These muscles work together to support nasal breathing, proper tongue posture, swallowing, speech, and stable upper airway patency during sleep.

Oral Rest Posture



Current and Relevant Literature Review

GUIMARÃES ET AL., 2009

Randomized Controlled Trial (RCT)



**TARGETED OROPHARYNGEAL (MYOFUNCTIONAL) EXERCISES
SIGNIFICANTLY IMPROVED MODERATE OBSTRUCTIVE SLEEP APNEA.**

PRIMARY OUTCOME: AHI IMPROVED



22.4
events/hour
Baseline



13.7
events/hour
After 3 months
of exercises



≈39% REDUCTION

Apnea-Hypopnea Index (AHI)



First randomized controlled trial demonstrating that oropharyngeal exercises can significantly reduce OSA severity.

CLINICAL BENEFITS



Reduced snoring



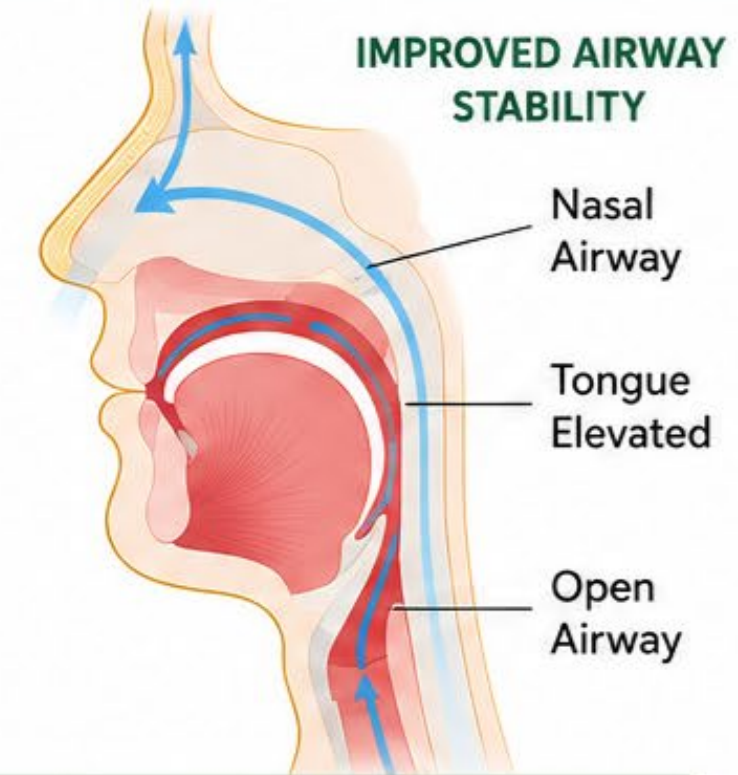
Improved daytime sleepiness



Improved sleep quality



Improved upper airway muscle function



Stronger muscles = more stable airway during sleep



**CLINICAL
SIGNIFICANCE**

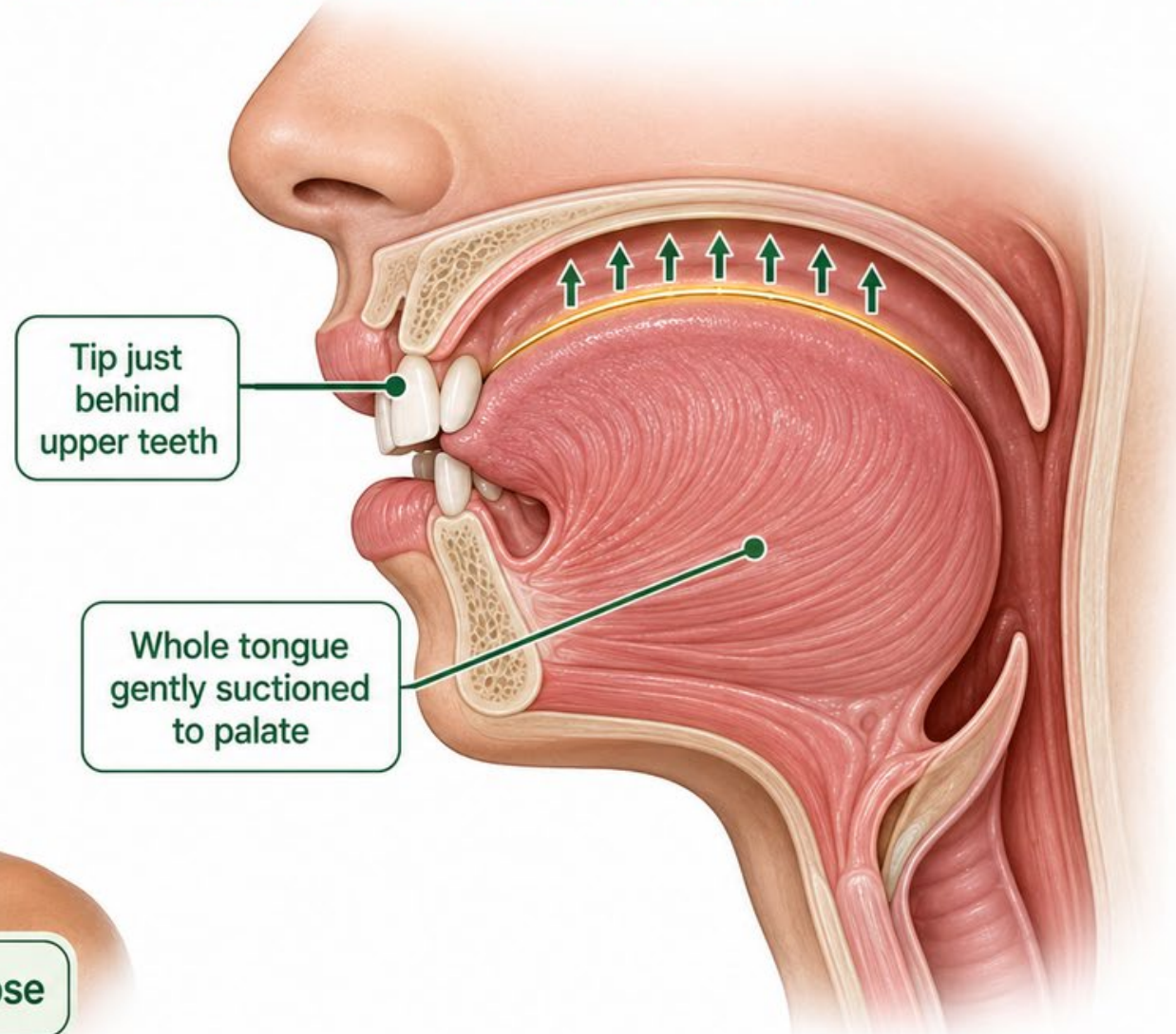
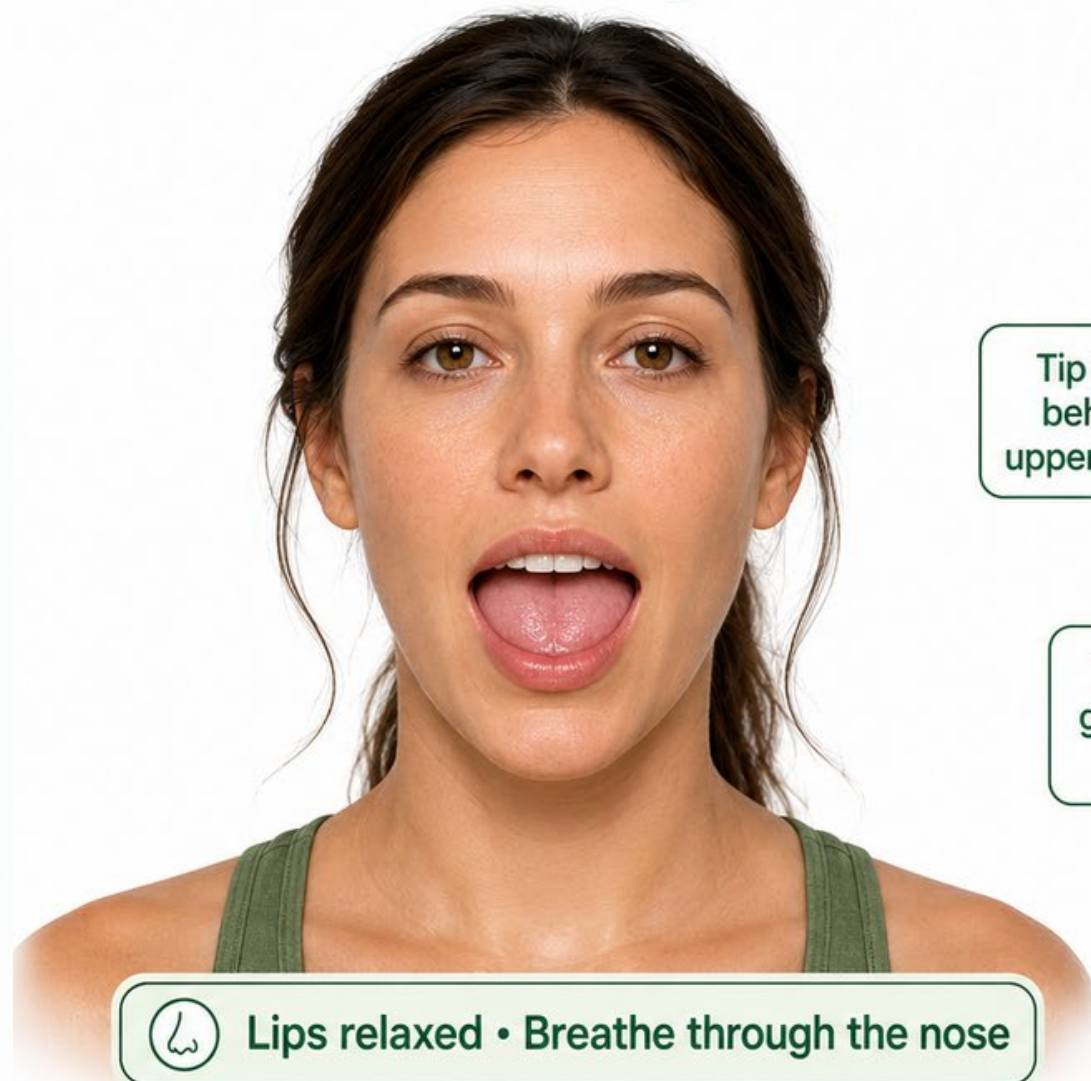
This landmark RCT provides high-quality evidence that targeting the muscles of the upper airway can significantly reduce OSA severity and improve patient-reported outcomes.



Guimarães KC, Drager LF, Genta PR, Marcondes BF, Lorenzi-Filho G.
Am J Respir Crit Care Med. 2009;179(10):962–966.

Foundational Exercise for Airway Function

Tongue-to-Palate Suction Hold



Lips relaxed • Breathe through the nose

1 Tongue-to-Palate Suction Hold

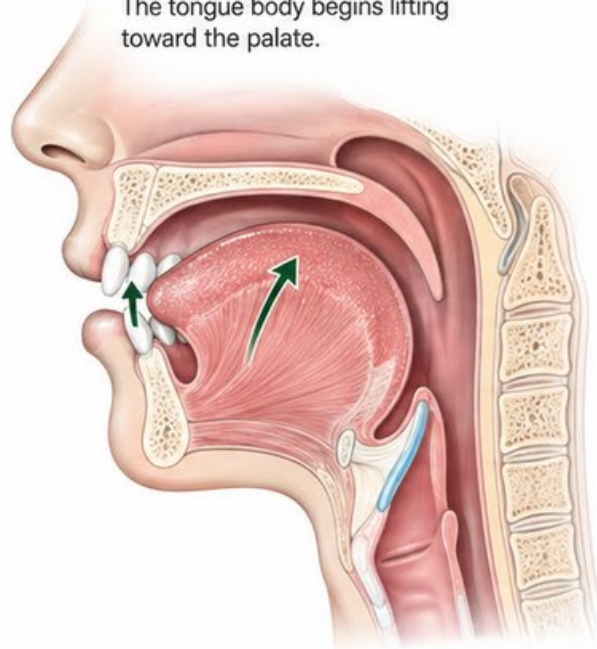
- Genioglossus
- Intrinsic Tongue
- Airway Stability

Foundational Exercise for Airway Function

Tongue Elevation & Posterior Lift-and-Release

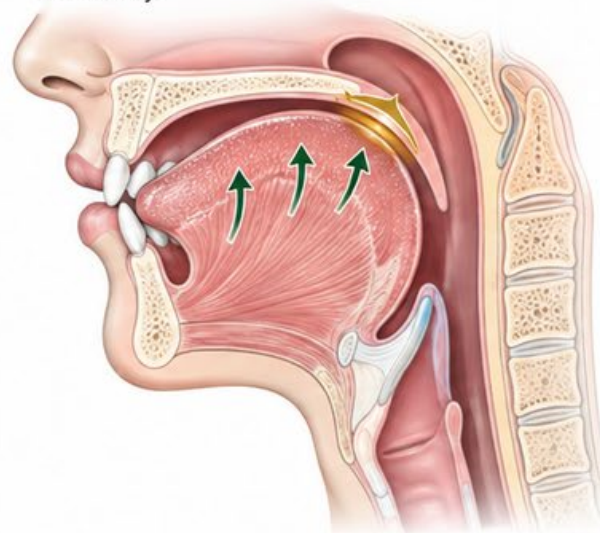
1. Elevate

Tongue tip rests just behind the upper front teeth at the alveolar ridge. The tongue body begins lifting toward the palate.



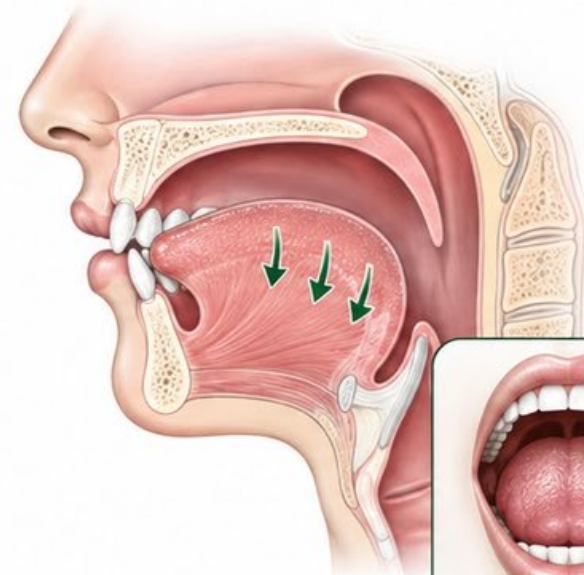
2. Posterior Lift

Keep the tongue tip anchored while the middle and back of the tongue lift firmly toward the posterior hard palate/soft-palate region. This narrows the space below the palate without blocking the airway.



3. Controlled Release

The posterior tongue lowers slowly and smoothly while the tongue tip remains gently positioned near the spot. Relax and return to a neutral position.



Front View

Open, relaxed mouth with tongue elevated.



Keep the jaw still



Do not push on the teeth



Breathe through the nose

2 Tongue Elevation & Posterior Press

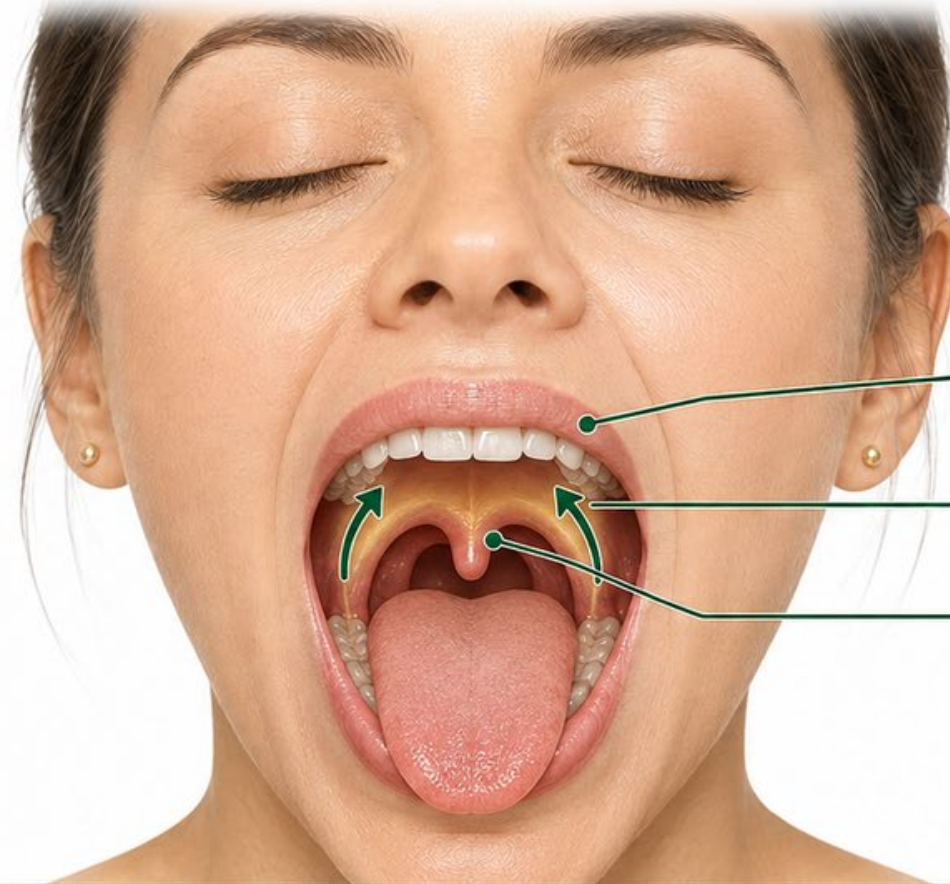
● Intrinsic Tongue

● Genioglossus

● Tongue Elevation

Foundational Exercise for Airway Function

Soft Palate Lift — Silent Yawn



Soft palate lifts

Uvula rises

Throat space
gently opens



Inhale gently through the nose •



Feel a quiet yawn •

Relax •



3 Soft Palate Lift (Silent Yawn)

● Soft Palate

● Pharyngeal Muscles

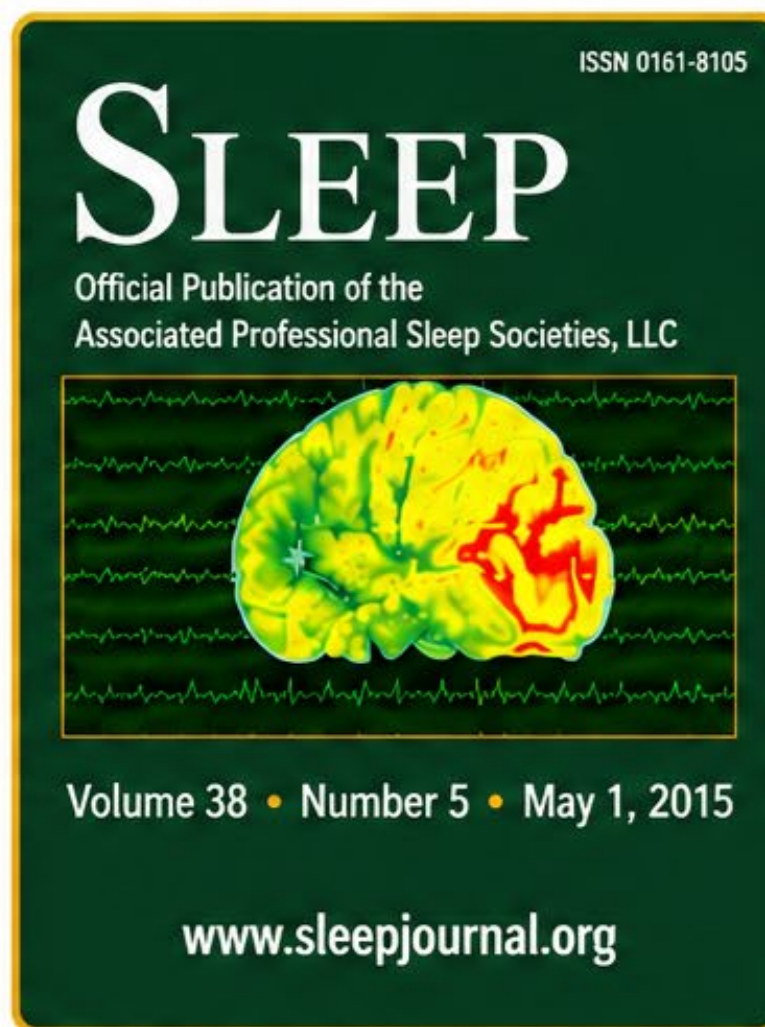
● Airway Patency



MYOFUNCTIONAL THERAPY TO TREAT OSA: REVIEW AND META-ANALYSIS

Myofunctional Therapy to Treat Obstructive Sleep Apnea: A Systematic Review and Meta-analysis

Macario Camacho, MD¹; Victor Certal, MD²; Jose Abdullatif, MD³; Soroush Zaghi, MD⁴;
Chad M. Ruoff, MD, RPSGT⁵; Robson Capasso, MD⁵; Clete A. Kushida, MD, PhD⁶



CONCLUSION:



DECREASES AHI

- **~50%** in adults
- **~62%** in children



IMPROVES:

- O2 Nadir
- Snoring
- Sleepiness

“*Myofunctional therapy
could serve as
an adjunct to other
OSA treatments*”



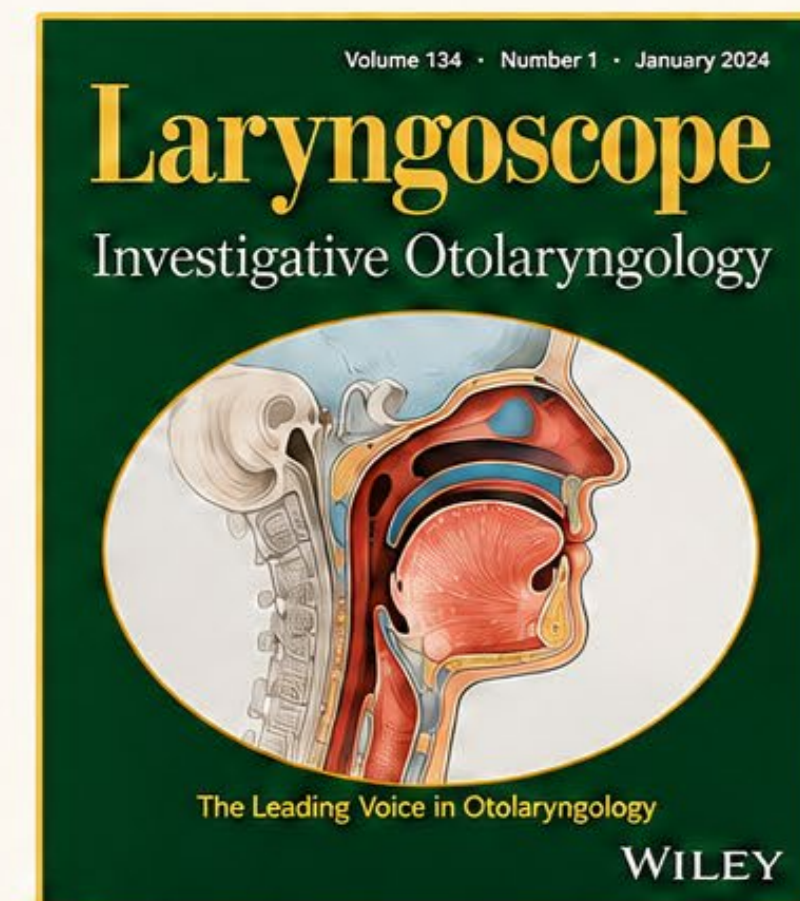
MYOFUNCTIONAL THERAPY TO TREAT OSA: REVIEW AND META-ANALYSIS

Orofacial Myofunctional Therapy for Obstructive Sleep Apnea: A Systematic Review and Meta-Analysis

Saba ES, Kim H, Huynh P, Jiang N.

Laryngoscope. 2024;134(1):480–495.

doi:10.1002/lary.30974



CONCLUSION:

Current evidence demonstrates that orofacial myofunctional therapy:

- ↓ Improves AHI
- 🔊 Reduces snoring
- zzz Improves daytime sleepiness
- O₂ Improves oxygen saturation
- 🌙 Improves sleep quality

“ Orofacial myofunctional therapy should be considered an evidence-based adjunct to standard obstructive sleep apnea treatments. ”



UPDATED EVIDENCE (2024)

A decade after Camacho, higher-quality evidence continues to support OMT as an evidence-based adjunct within multidisciplinary OSA management.



Three studies, one consistent direction

The evidence for OMT progressed from a landmark trial to broader and more rigorous synthesis

2009

GUIMARÃES

LANDMARK RCT

31 adults

AHI ↓ ≈39%

22.4 → 13.7 events/hour

WHY IT MATTERS

Established the first controlled evidence that targeted oropharyngeal exercises can reduce moderate OSA severity and symptoms.

2015

CAMACHO

SYSTEMATIC REVIEW

11 studies • 145 patients

Adult AHI ↓ ≈50%

Also improved oxygen nadir, snoring and sleepiness

WHY IT MATTERS

Showed the benefit was not limited to one trial and positioned OMT as a promising adjunct to other OSA treatments.

2024

SABA

RCT-ONLY META-ANALYSIS

7 RCTs • 310 patients

Adult AHI ↓ 10.2/hr

Improved sleepiness, sleep quality and minimum O₂

WHY IT MATTERS

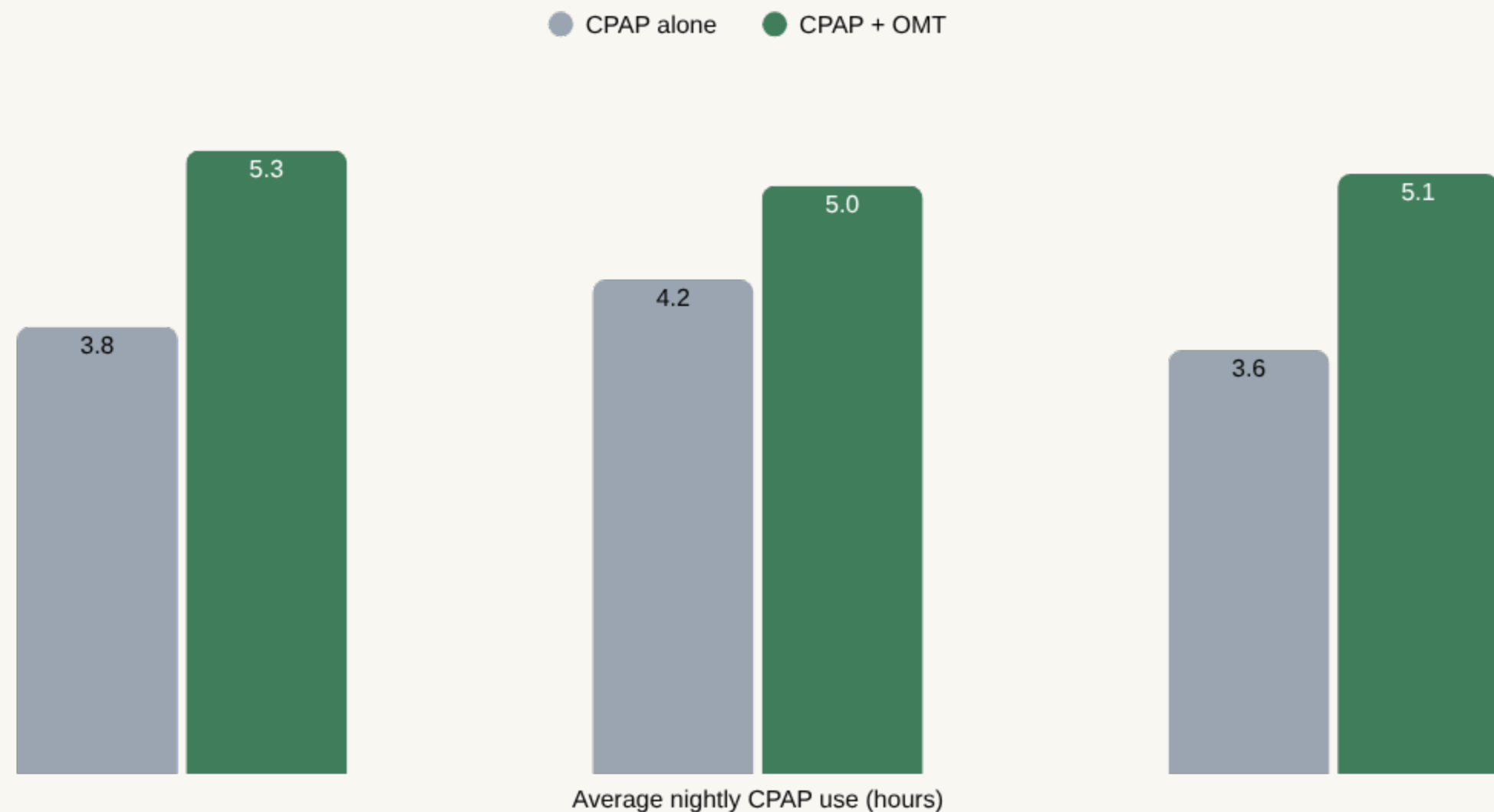
Strengthened the adult evidence using randomized trials while highlighting adherence and the need for longer-term research.

EVIDENCE PROGRESSION • Single RCT → pooled literature → updated randomized evidence

Clinical takeaway: OMT is best positioned as an individualized adjunct within comprehensive OSA care.

OMT may help patients use CPAP more consistently

Diaféria et al. • Randomized four-group clinical trial • 100 men with OSA • 3 months



OVERALL ADHERENCE

30% → 65%

CPAP alone CPAP + OMT

Clinical meaning

OMT added to CPAP improved device use and tongue/soft-palate strength. The clearest added benefit was adherence—not a substantially greater AHI reduction while CPAP was worn.

Credibility note: Small groups, men only, and more professional contact in the OMT groups; larger diverse trials are needed.

OMT Shows Promising Evidence and Should Encourage Thoughtful Integration

- Consider that studies vary in: Exercise protocols, adherence in measurements, and outcome reporting.
- OMT is not a replacement for CPAP, MAD, or other, but an **ADJUNCTIVE THERAPY** adherence, increasing strength and neuromuscular coordination.



The focus has shifted toward identifying which patients benefit most, recognizing opportunities for early intervention, and determining how to integrate OMT effectively into multidisciplinary airway and sleep care to optimize long-term outcomes.



IDENTIFY

Identify which patients benefit most.



RECOGNIZE

Recognize opportunities for early intervention.



INTEGRATE

Determine how to integrate OMT effectively into multidisciplinary care.



OPTIMIZE

Optimize long-term outcomes for airway and sleep health.



A strategic shift from “Does it work?” to “Who benefits, when, and how do we integrate it best?”



THE STOMATOGNATHIC SYSTEM



— INTEGRATED NEUROMUSCULAR SYSTEM FOR FUNCTION, STRUCTURE & HEALTH —

COMPRISED OF:



TEETH & THEIR SUPPORTING TISSUES

- Enamel, dentin, pulp
- Periodontal ligament
- Gingiva, alveolar bone



MANDIBLE & MAXILLA

- Upper (maxilla)
- Lower (mandible)
- Supporting bony structures



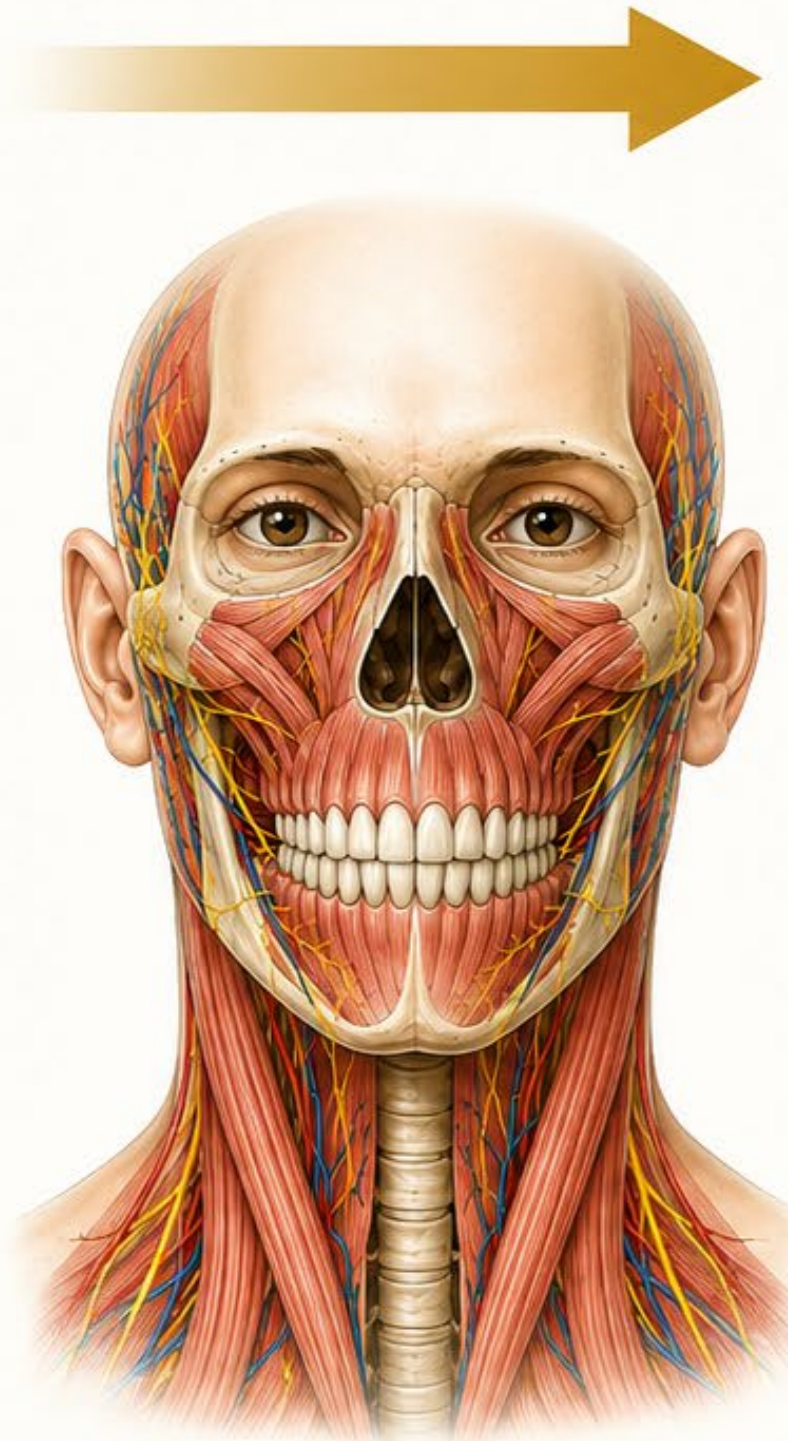
TEMPOROMANDIBULAR JOINTS & MUSCULATURE

- TMJs (right & left)
- Muscles of mastication
- Suprahyoid & infrahyoid muscles
- Facial expression muscles



NERVE & VASCULAR SYSTEMS

- Cranial & peripheral nerves
- Arterial supply
- Venous & lymphatic drainage



FUNCTIONS:



MASTICATION

Efficient chewing and grinding of food for proper digestion and nutrition.



DEGLUTITION (SWALLOWING)

Safe and coordinated transfer of food and liquids from mouth to stomach.



SPEECH

Articulation of sounds for clear and effective communication.



RESPIRATION

Supports nasal breathing and airway patency for optimal oxygenation.



POSTURAL SUPPORT

Maintenance of the posture of the head, mandible, tongue and hyoid bone for functional stability and balance.

Orofacial Myofunctional Disorder (OMD)

Signs and Symptoms

What Are (OMD's) Orofacial Myofunctional Disorder?

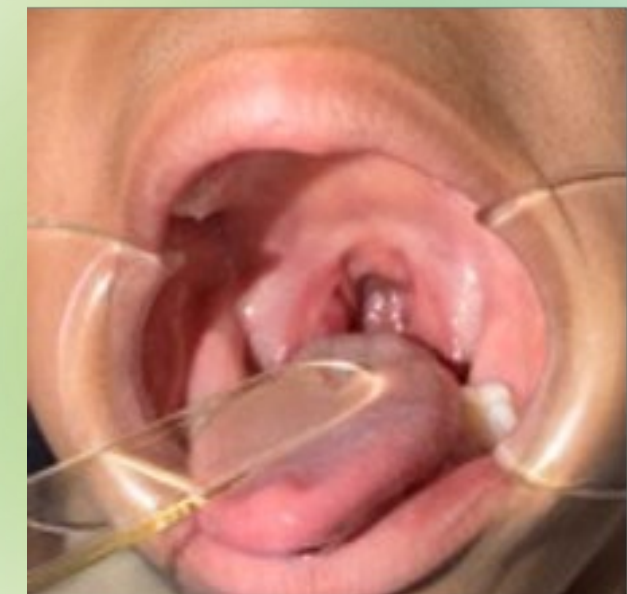
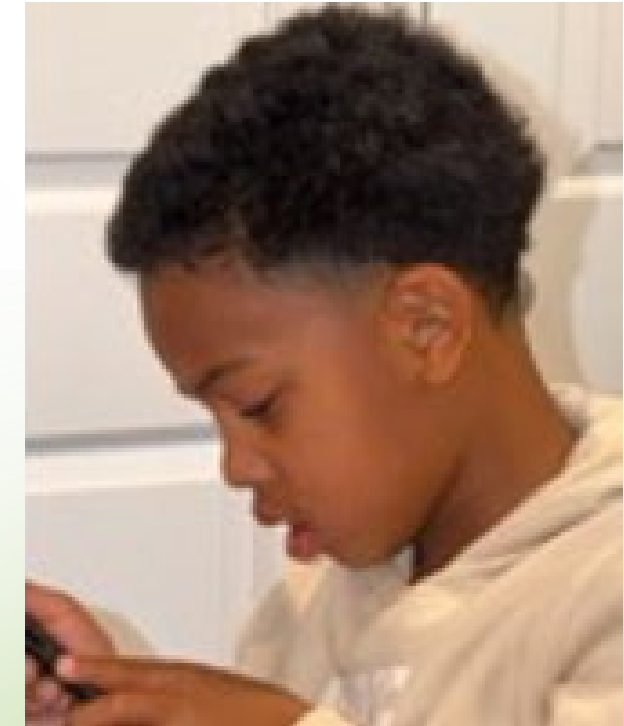
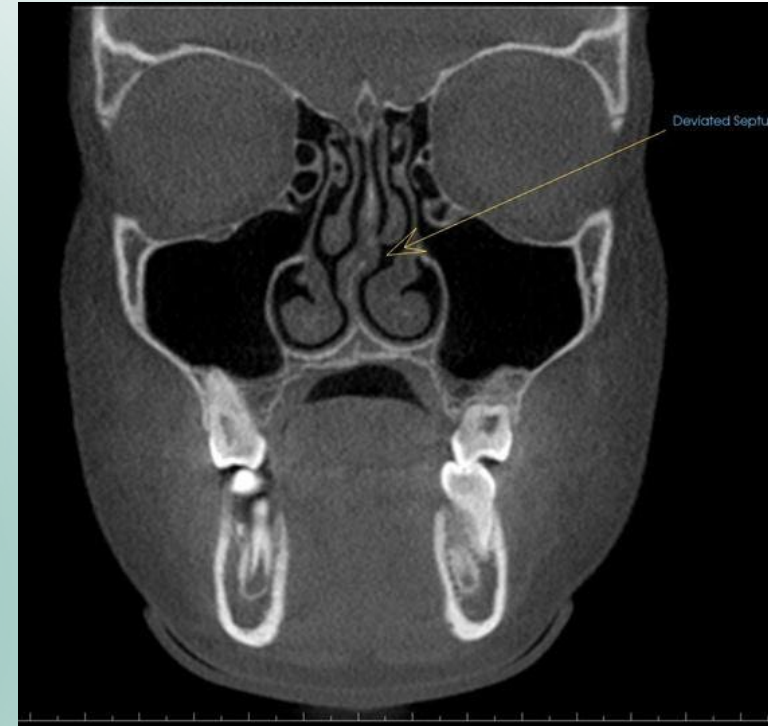
**Abnormal pattern involving the muscles and functions of the face,
lips, tongue, jaw, and airway.**

**It may interfere with normal breathing, oral resting posture,
chewing, swallowing, speech, sleep, and craniofacial
development.**

Common Signs and Symptoms

Airway & Breathing

- Mouth breathing
- Nasal obstruction
- Lip incompetence
- Enlarged tonsils



Common Signs and Symptoms

Oral Function

- Tongue thrust
- Low tongue posture
- Poor chewing
- Dysfunctional swallow



Common Signs and Symptoms

Craniofacial

- **Narrow palate**
- **Crowding**
- **Open bite**
- **TMJD**



Common Signs and Symptoms

Sleep & Symptoms

- Snoring (Snore Lab)
- Fatigue
- Poor sleep quality



Common Signs and Symptoms

Sleep & Symptoms

- Behavioral/attention concerns
- Grinding teeth
- Bedwetting



Early sleep-disordered breathing predicts later behavioral difficulties

Bonuck, Freeman, Chervin & Xu • Pediatrics, 2012

11,000+

children followed from infancy through age 7

Symptoms tracked

Mouth breathing • Snoring • Witnessed apnea

SDB symptoms were associated with:

40%

**more behavioral
difficulties**

AT AGE 4

60%

**more behavioral
difficulties**

AT AGE 7

BONUICK ET AL. (2012) • KEY PEDIATRIC EVIDENCE

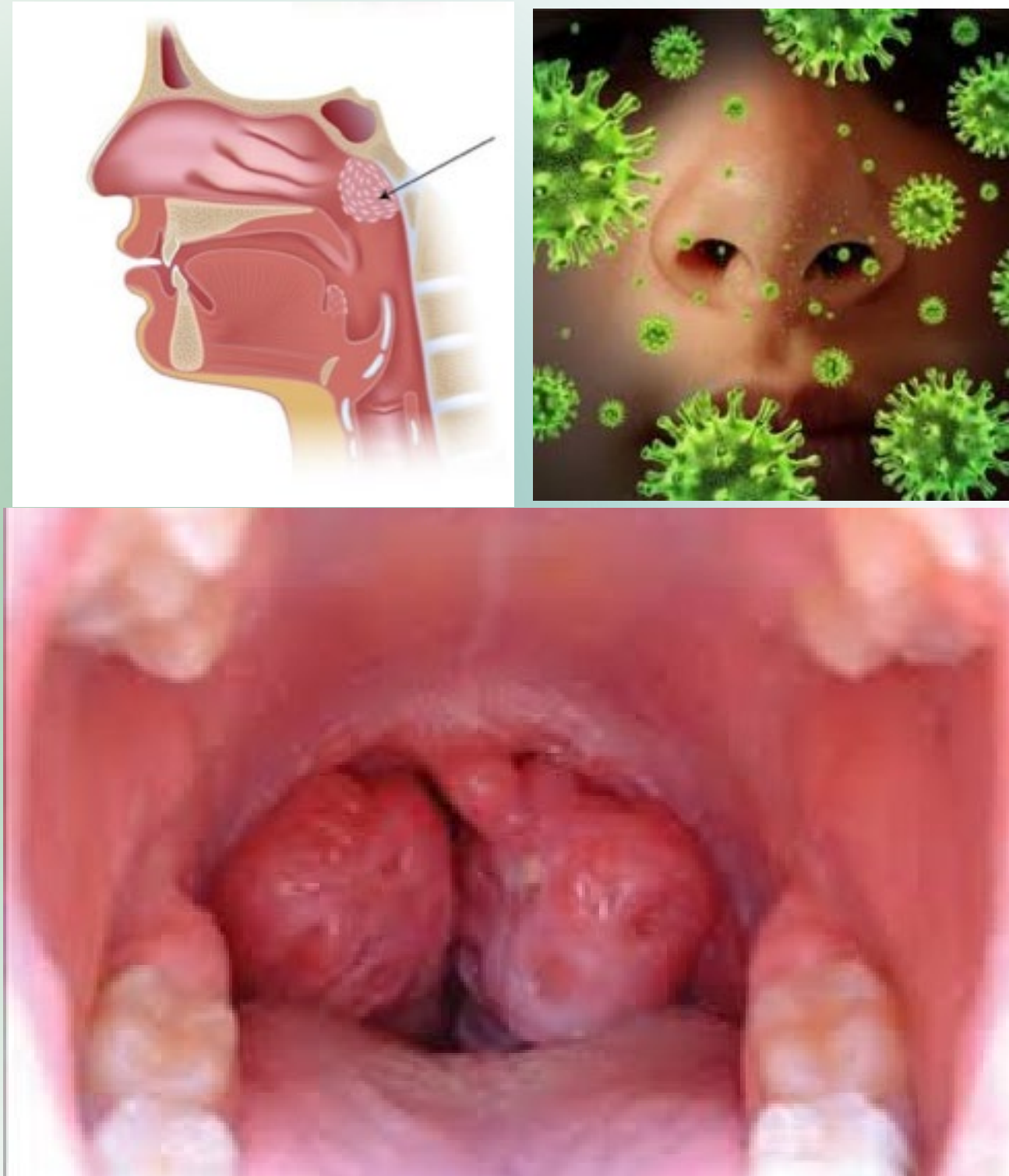
Snoring, mouth breathing, and witnessed apnea in early childhood should not be dismissed as harmless habits. Even symptoms beginning in infancy were associated with persistent behavioral difficulties at school age.

Orofacial Myofunctional Disorder (OMD)

Root Causes

OMD Root Causes

Airway

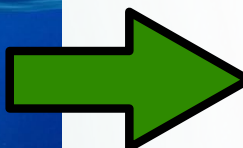
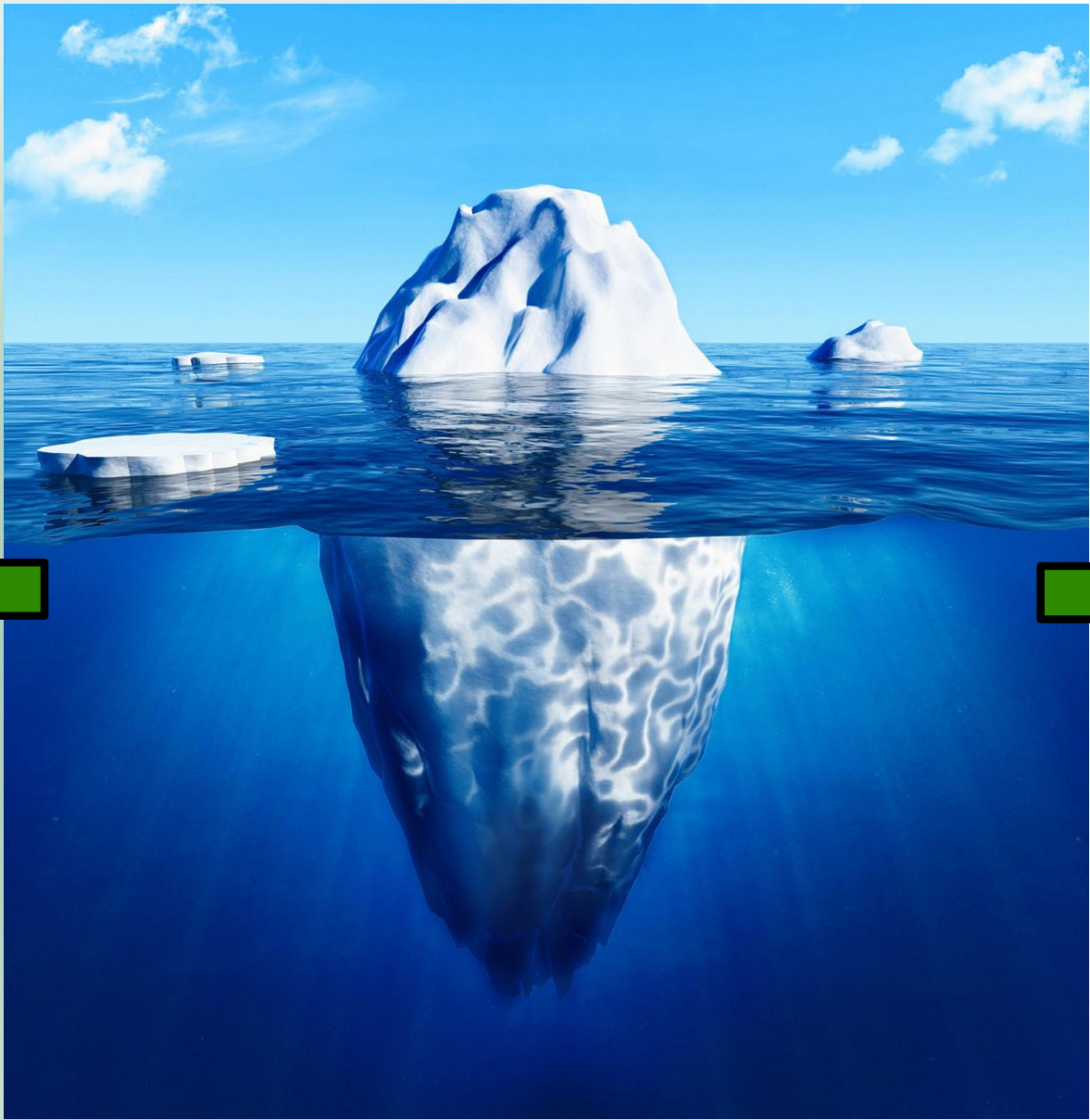
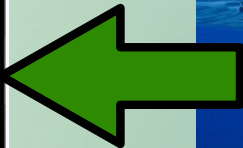


OMD Root Causes

Tongue tie

TRMR-TIP
Assessment of:
Anterior Tongue Mobility
Tongue to Incisive Papilla (TIP)

	
Grade 1: TRMR-TIP > 80% Significantly Above Average	Grade 2: TRMR-TIP 50-80% Average
	
Grade 3: TRMR-TIP < 50% Below Average	Grade 4: TRMR-TIP < 25% Significantly Below Average



TRMR-LPS
Assessment of:
Posterior Tongue Mobility
Lingual Palatal Suction (LPS)

	
Grade 1: TRMR-LPS > 60% Significantly Above Average	Grade 2: TRMR-LPS 30-60% Average
	
Grade 3: TRMR-LPS < 30% Below Average	Grade 4: TRMR-LPS < 5% or unable Significantly Below Average

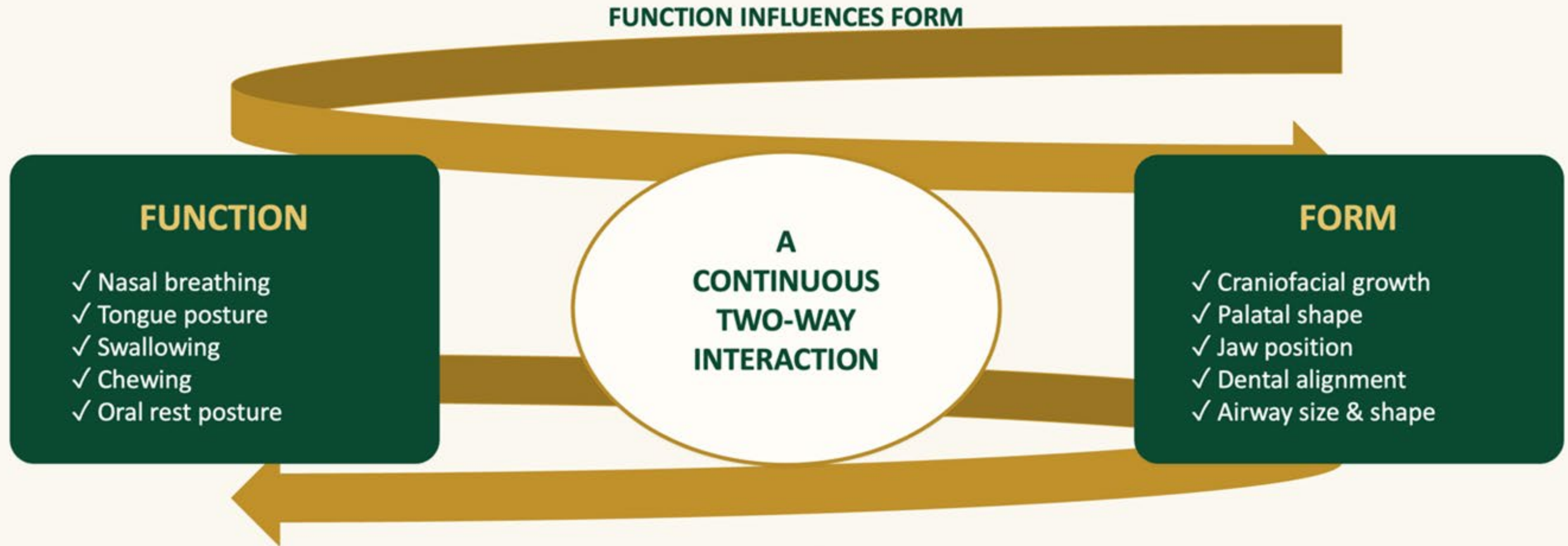
OMD Root Causes

Prolonged Oral Habits



FORM & FUNCTION / FUNCTION & FORM

Melvin Moss's Functional Matrix Theory—simplified



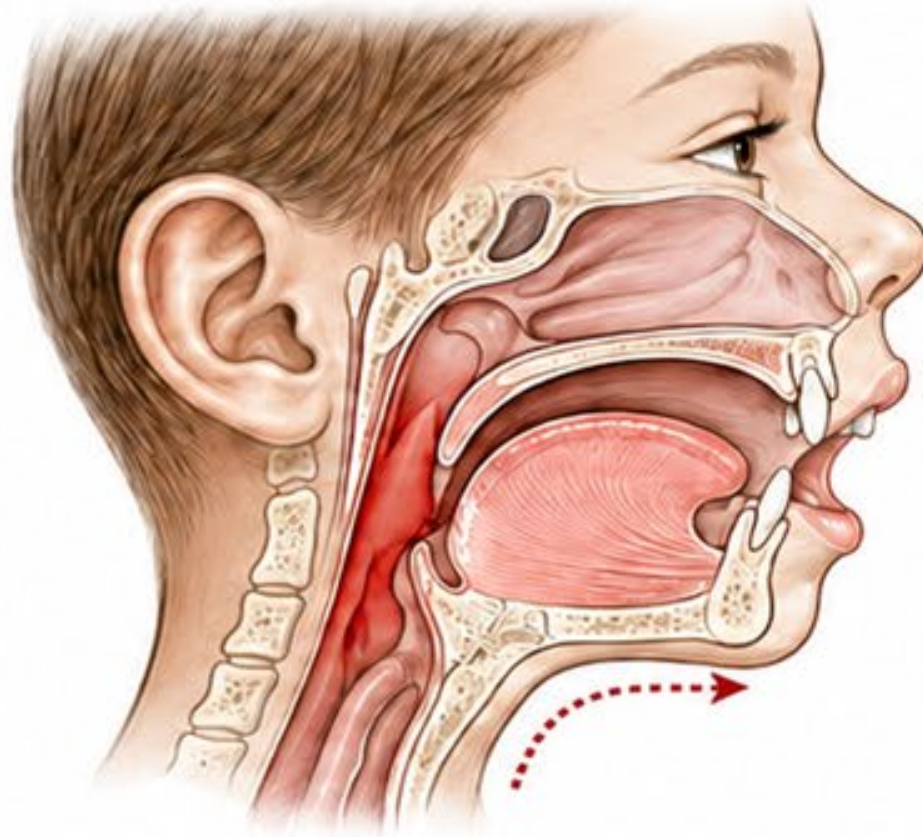
FORM INFLUENCE'S FUNCTION

Structural adaptations can support—or challenge—future function.

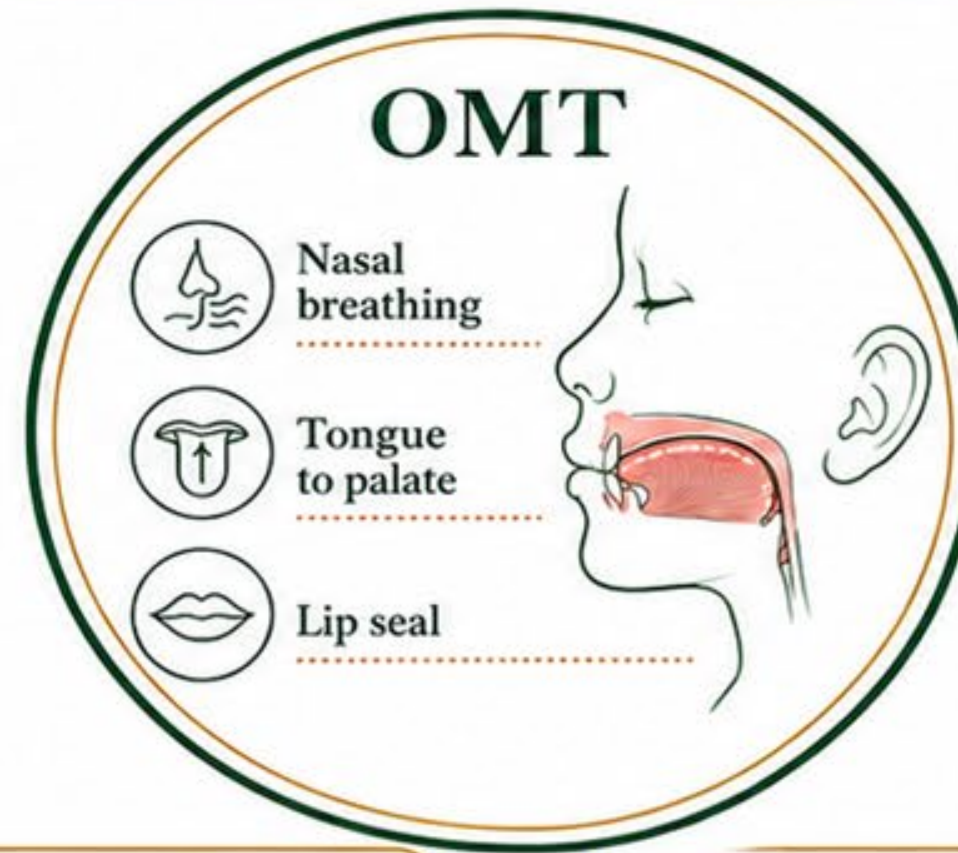
Healthy function supports healthy form. Dysfunction can create a reinforcing cycle.

OMT & Craniofacial Growth in Children with OSAHS

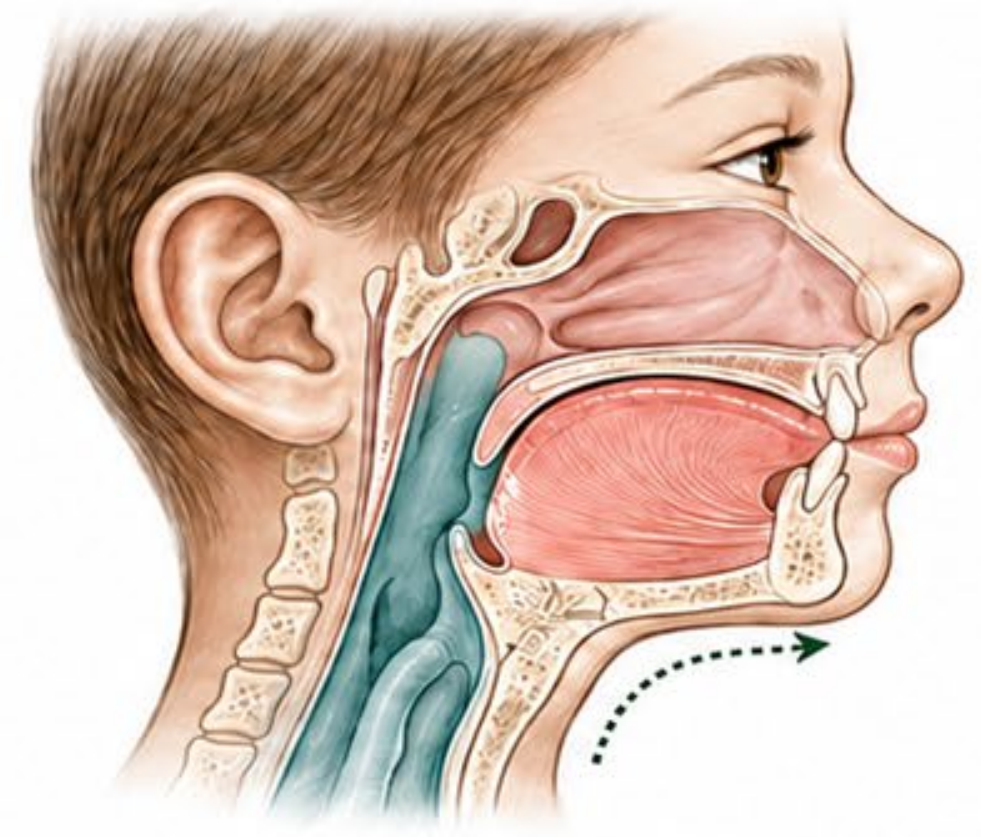
Dysfunctional Pattern



Neuromuscular re-education over time



More Favorable Function



Habumugisha et al., 2022 | Controlled Trial

- 224 children, ages 6–10
- 1-year treatment • cephalometrics + dental models
- STANDS OUT:** Objective structural measurements
- Improved dental arch development, overjet/overbite, lip competence, and mandibular growth direction

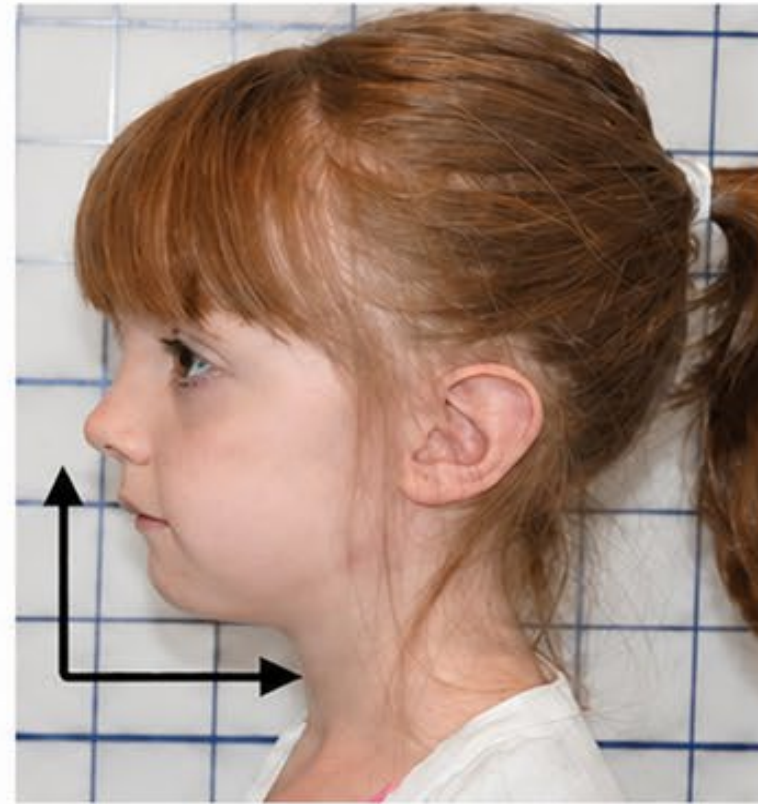
Liu et al., 2023 | Systematic Review

- 9 pediatric studies
- OMT may improve craniofacial function and morphology
- STANDS OUT:** Benefits increased with duration + compliance
- Evidence is promising; more high-quality RCTs are needed



Early functional correction may help guide more favorable dentofacial growth.

Case

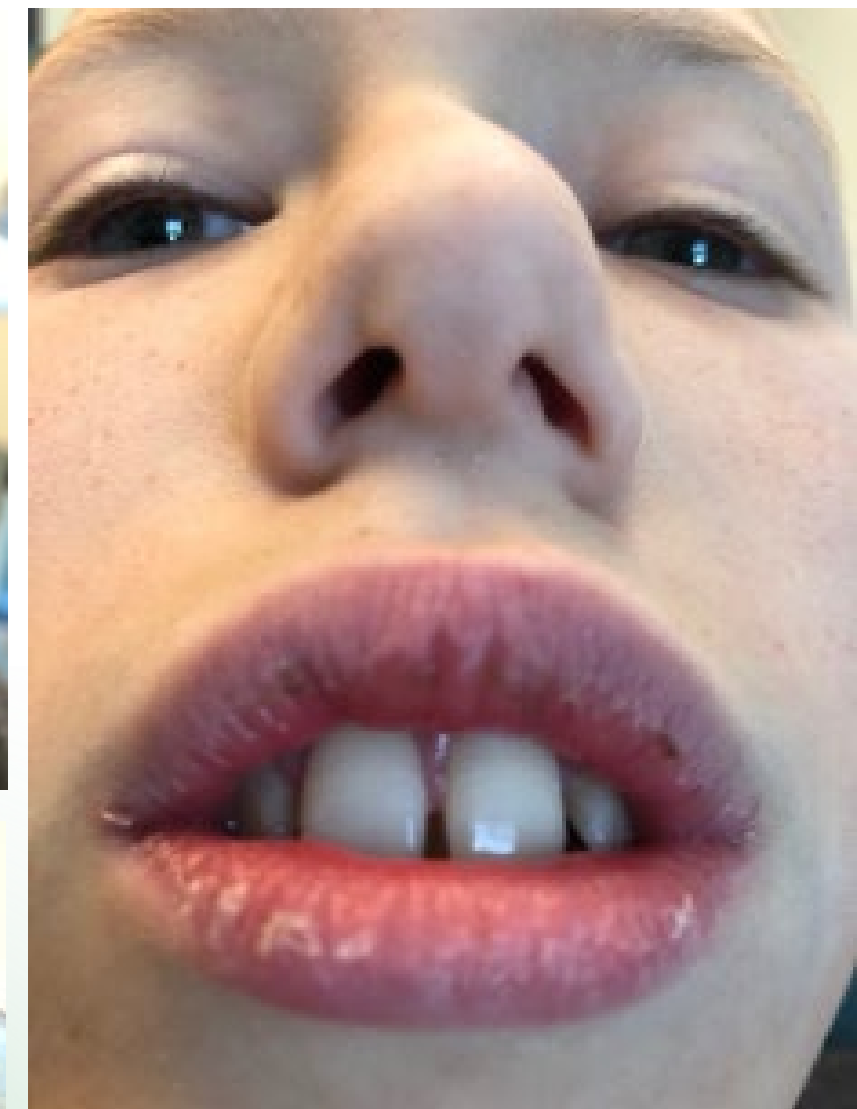


Case Study I

Case Study I



Posture



Chapped lips/
nasal disuse

High narrow palate



Overbite

ت Case Study



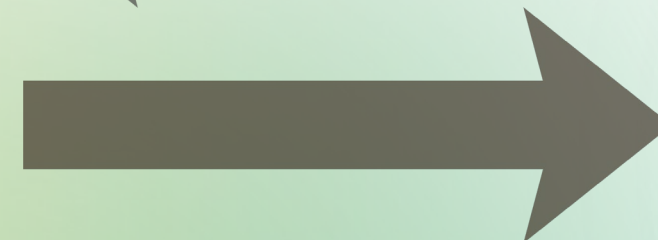
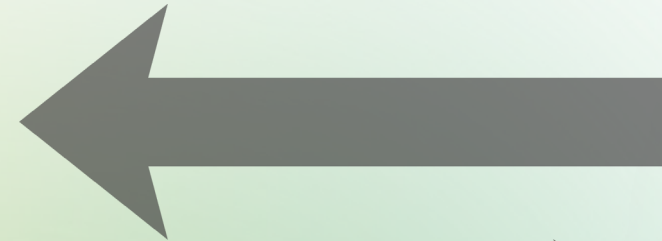
Better bite

Better posture/mouth closure

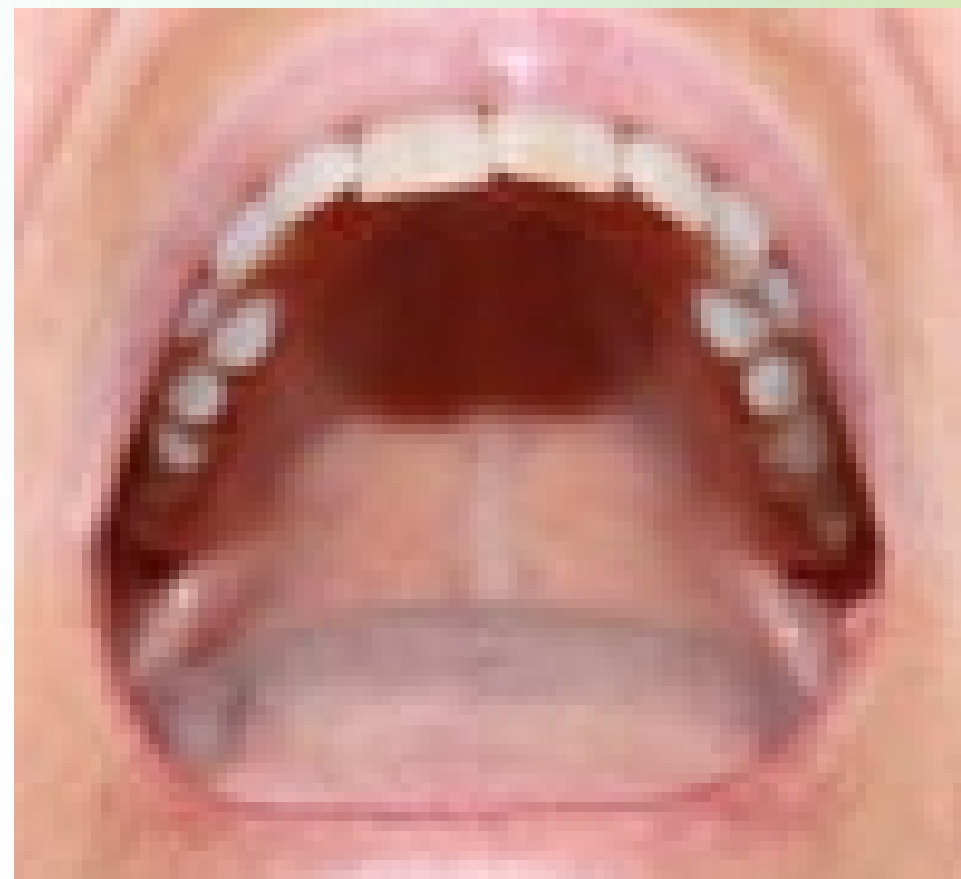
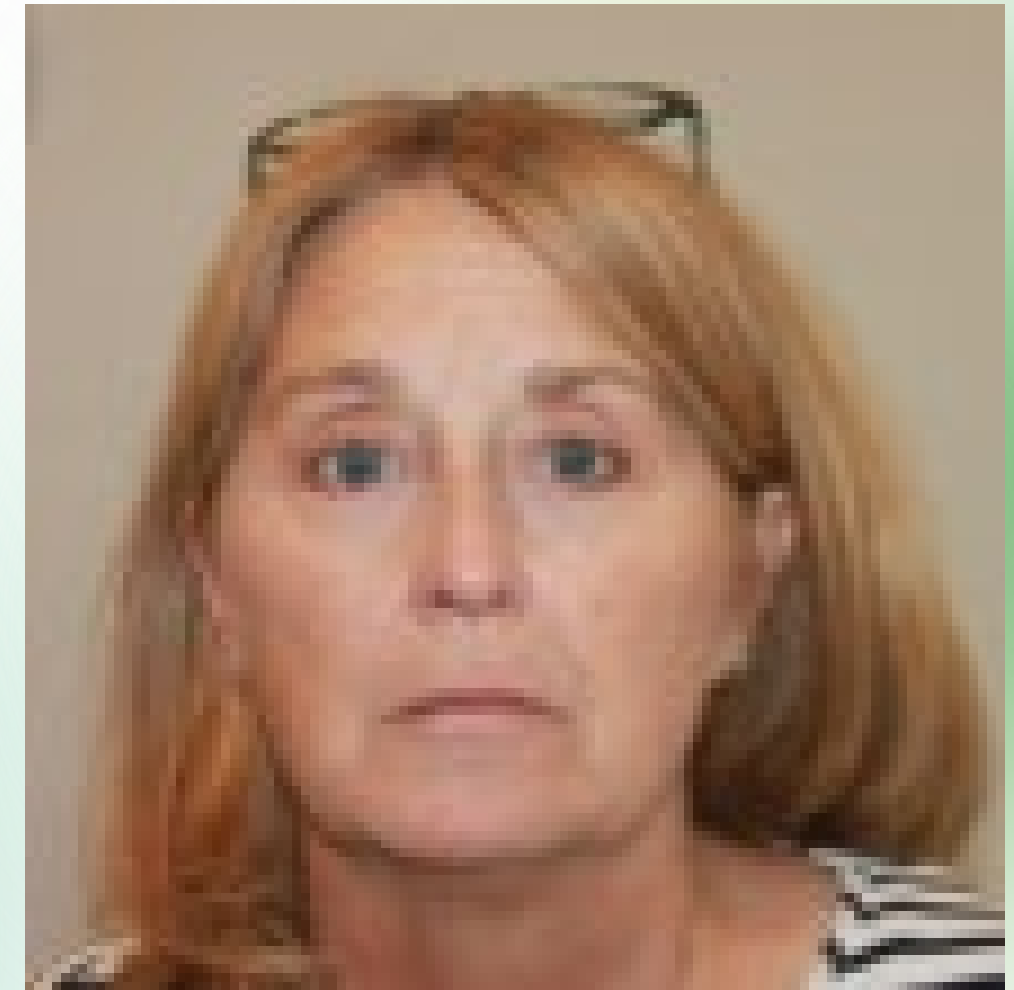
نت Case Study



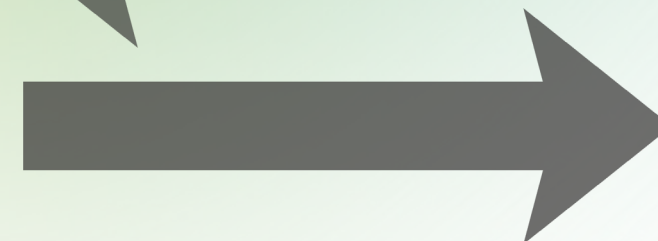
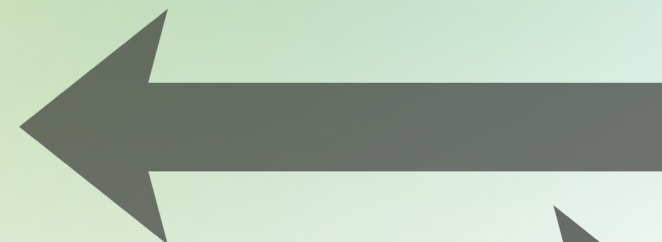
Before



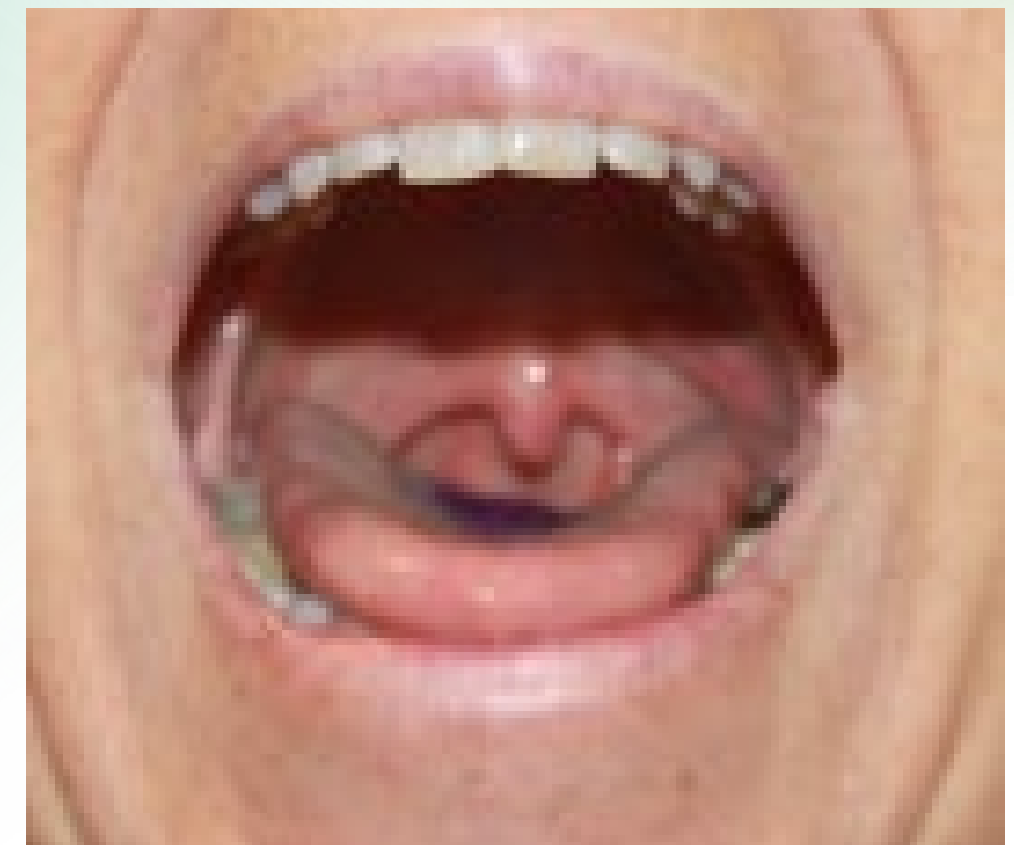
After



Class IV



Class I-II



OMT REFERRAL SCREENER

QUICK SCREEN. EARLY REFERRAL. BETTER AIRWAY & SLEEP OUTCOMES.



Consider referral to an Orofacial Myofunctional Therapist (OMT) if patient has ≥ 2 findings.

1. BREATHING



- ☐ Mouth breathing
- ☐ Nasal obstruction
- ☐ Snoring
- ☐ Restless sleep

Ask: Do you breathe through your mouth during the day or at night?

2. ORAL REST POSTURE



- ☐ Lips parted at rest
- ☐ Low tongue posture
- ☐ Teeth not gently touching

Ask: Are lips closed and tongue resting on the roof of the mouth?

3. TONGUE FUNCTION



- ☐ Tongue thrust swallow
- ☐ Difficulty with certain sounds
- ☐ Poor tongue control or mobility

Ask: Does the tongue push on teeth when swallowing or speaking?

4. HABITS



- ☐ Thumb/finger sucking
- ☐ Nail biting
- ☐ Pacifier use past age 3
- ☐ Cheek/lip biting

Ask: Does the patient have or have had detrimental oral habits?

5. FACIAL POSTURE



- ☐ Head forward posture
- ☐ Open mouth posture
- ☐ Tired facial expression
- ☐ Dark circles

Ask: Does facial posture appear strained or habitually open?

6. TONSILS (BRODSKY)



- ☐ Grade 2 or higher
- ☐ History of recurrent infections

7. DENTAL / PALATE



- ☐ Crowding / narrow arch
- ☐ High arched palate
- ☐ Crossbite / open bite

8. TONGUE-LIP TIE



TONGUE TIE LIP TIE

- ☐ Restricted tongue movement
- ☐ Notching of tongue tip
- ☐ Upper lip tie with gap

9. SWALLOWING



- ☐ Mentine (chin) strain
- ☐ Cheek or lip tension
- ☐ Multiple swallows

10. SLEEP / DAYTIME



- ☐ Snoring
- ☐ Restless sleep
- ☐ Daytime fatigue
- ☐ Poor focus / behavior



WHY REFER?

OMT addresses the muscle function behind airway, sleep, and craniofacial development—complementing your medical or dental treatment.



REFER TO OMT

for comprehensive evaluation and myofunctional therapy.



POTENTIAL BENEFITS

- ✓ Improved nasal breathing
- ✓ Better sleep quality
- ✓ Improved oral function & posture
- ✓ Support for growth & treatment stability



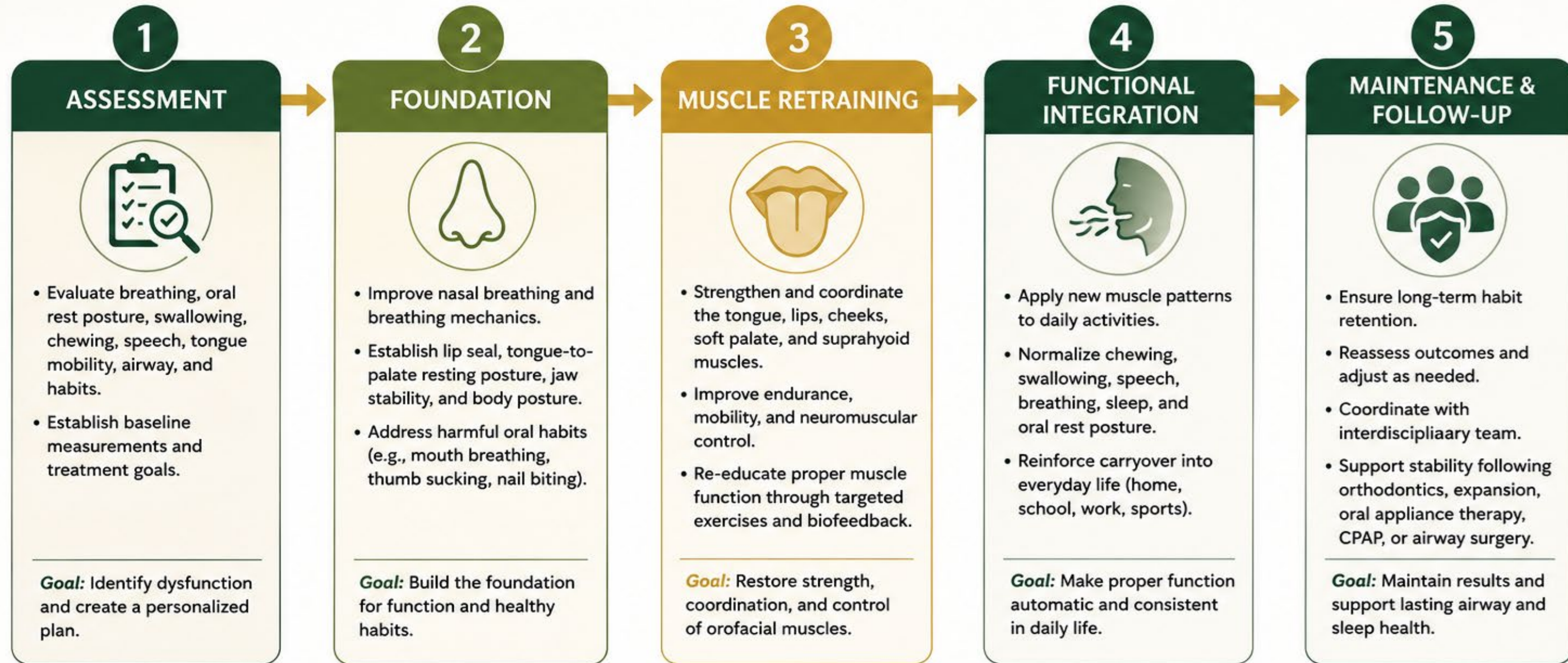
ADDRESS FUNCTION. SUPPORT STRUCTURE. IMPROVE AIRWAY. ENHANCE LIVES.

*Early intervention
makes a difference.*

OMT Program

PHASES OF AN OROFACIAL MYOFUNCTIONAL THERAPY (OMT) PROGRAM

A Structured Pathway to Restore Function • Support Structure • Improve Airway & Sleep



OMT is more than exercises—it's a process of neuromuscular re-education that restores *functional breathing, swallowing, and oral posture for lasting airway health.*



Questions you may get asked and answers you may have.

What do you think about OMT?

Do you think it could help?

"I believe you could benefit from an OMT evaluation because healthy breathing depends on both structure and function." OMT helps retrain the muscles that support breathing, oral posture, swallowing and speaking.

It's like PT for the face, mouth and breathing muscles



Collaborative Pathway: Integrating OMT into Airway Care



1. PHYSICIAN (Sleep/ENT/Peds)

- Evaluate airway & sleep concerns
- Order appropriate testing
- Identify OMD signs or risk factors
- Discuss OMT & refer

2. DENTIST/ ORTHODONTIST

- Assess oral structure, occlusion & growth
- Identify functional issues impacting airway
- Initiate or coordinate structural treatment as needed
- Refer to OMT

3. OMT THERAPIST

- Comprehensive orofacial myofunctional evaluation
- Develop individualized OMT program
- Train in breathing, oral posture, swallow & neuromuscular re-education
- Educate & empower patient/caregivers

4. TEAM COLLABORATION

- Share findings & updates
- Align treatment goals
- Adjust plan as needed
- Monitor progress together

5. OPTIMIZED OUTCOMES

- Improved airway function
- Better sleep quality
- Improved oral function & posture
- Enhanced quality of life
- Long-term stability



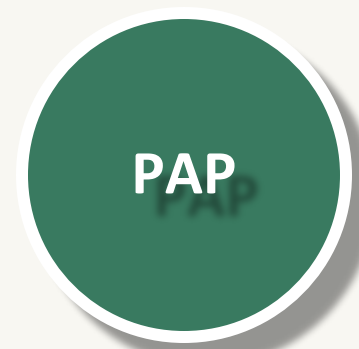
ONGOING FOLLOW-UP & LONG-TERM CARE
Continuous evaluation, support, and adjustment
for lasting results.

Teamwork. Communication. Function. Better Airway Health.



One Size Doesn't Fit All

Sleep and airway care should be matched to the patient—not the modality.



CPAP / APAP



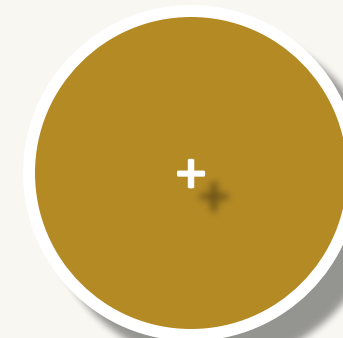
Oral Appliance



Adult / Child Expansion



MMA / Airway Surgery



Nasal, Positional &
Lifestyle Care

Patient needs guide the plan: one modality may be enough—or several may work together.

Thank you



Thank you

"The future of airway care isn't about one specialty having all the answers—it's about each of us contributing our expertise. When we restore both structure and function, we give our patients the greatest opportunity to breathe better, sleep better, and live healthier lives."

Professional Resources & Referral Organizations

Referral Directories

✓ IAOM.org

✓ AOMTinfo.org

Professional Organizations & Education

✓ [World Dental Sleep Society](http://WorldDentalSleepSociety.org)

(dentofacialsleep.org)

✓ [Airway Health Solutions](http://AirwayHealthSolutions.com)

(airwayhealthsolutions.com)

✓ [The Breathe Institute](http://TheBreatheInstitute.com)

(thebreatheinstitute.com)

✓ [PAANY](http://PAANY.org)

(paanny.org)



AOMT Coffee Klatsch



Gifts/QR Codes

References for MSS 2026



Screening Tool for MSS 2026



**Questions patients and parents may have and answers you can
use along with analogies for MSS 2026**



Questions you may still have about OMT for MSS 2026





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