Orofacial Myofunctional Therapy and it’s Role in Dental Health and SDB

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What is an Orofacial Myofunctional Disorder (OMD)?

- Includes at least one of the following:
  - Open mouth resting posture/mouth breathing
  - Incorrect placement of the tongue at rest
  - Incorrect placement of the tongue during a swallow
  - Noxious habits such as thumb/finger sucking

- Incidence as high as 38% of the population and 81% of children with articulation disorders
Development of a Swallow

- Infants are born with an infantile suckle

- Mature swallow pattern develops between 6 months-3 years

- The absence of proper occlusion often results in compensatory movements in the oral phase of swallowing
Proper “Rest” Position

- Tongue tip on alveolar ridge
- Tongue blade creating mild suction
- Freeway space
- Lips closed = Nasal breathing
Causes of OMDs

- Oral habits (thumb or finger sucking, clenching/grinding, lip or cheek sucking)
- Extended pacifier, bottle, sippy cup use
- Restricted airway (enlarged tonsils/adenoids, chronic allergies, deviated septum)
- Anterior or posterior tongue tie
- Physical/Developmental Anomalies
- Family hereditary
Form vs Function

- Form can affect function

- Function can affect form
  - Muscle always wins out

- Treating form does not necessarily change function
  - Habit appliances - Cribs/cages/rakes
Why do we care about OMDs?!

- Dental Malocclusions
- TMD
- Improper facial growth (long face syndrome)
- Under-developed oral-facial muscles
- Mouth breathing compromises overall health
- Slows ortho treatment and/or ortho relapse
- Atypical swallow pattern
- Difficulty chewing food (sloppy eaters)
- Speech/Articulation errors
- SDB (Sleep Disordered Breathing)
- Chronic peripheral pain issues (face, neck, back, headaches, etc)
- Oral hygiene
OMD Signs and Symptoms

- Open mouth posture at rest/Mouth breathing
- Loud, open mouth chewing/messy eating
- Scattered food/no bolus formation
- Puckered lips/movement in cheeks during swallow
- Tongue thrust or lingual dental stabilization during swallow
- Speech disorder
- Drooling
- Jaw sliding during speech and/or non-speech activities
- Low tone in face
- History of thumbsucking/pacifier use/extended bottle use
- Many dental caries
- Malocclusions
- “V” shaped palate vs. “U” shaped palate
- High and narrow palate
- Sharply defined rugae
- History of reflux
- History of snoring/OSA (obstructive sleep apnea)
What do OMDs look like?
OMDs and SDB-
What do we know?

• Kids need sleep- but the right kind!
  ◦ Need to breathe well for sleep to be
    restorative and promote optimal brain
    development
Proper facial development is key!

- What contributes to poor facial development?
  - Bottle feeding
  - Soft foods- wean babies to chewables
  - Thumbsucking/noxious habits
  - Pacifer use
  - Mouth breathing
OMDs and SDB - What do we know?

- A patent airway is critical to optimal health and craniofacial growth
  - Disruption in developmental process can result in skeletal and facial changes as well as changes in airway health
  - Consequences of mouth breathing on craniofacial growth predispose children to SDB
What do you see?
Enlarged tonsils and adenoids

- Chronic mouth breathing is associated with enlarged tonsils and adenoids.
  - T&A are exposed to bacteria and more allergens causing inflammation.
  - This forces the child into an anterior lingual resting posture and/or mouth breathing
  - T&A does not typically restore nasal breathing spontaneously
Why is mouth breathing bad?

Mouth Breathing

Decreased muscle tone/muscle dysfunction

Abnormal impacts on palatal and nasal airway growth

Enlarged tonsils and adenoids

Upper airway collapse and OSA
Why is nasal breathing good?

• Warms the air
• Humidifies the air
• Filters the air
• Releases Nitric Oxide
  ◦ Kills dust mites and viruses
  ◦ Reduces Inflammation
OMDs and SDB - What do we know?

- SDB/OSA are the end stage of a long history of poor breathing habits

- Catch children early to optimize craniofacial growth and minimize risk for long term health issues.
Can SDB and OSA be prevented?
Early Intervention is KEY!

- Chronic mouth breathing is easy to detect
- By creating good habits early on, we mitigate the need for many other interventions later on
- Once OSA is present, not everything can be reversed
- Must intervene as soon as habits that lead to poor facial growth are discovered.
Early Intervention

- New paradigm for airway and sleep management
  - Focus on PREVENTION!

- Don’t allow the end stage of OSA to happen
What should I add to my patient screening process?

- Open mouth posture at rest (mouth breather)
- Tongue and/or lip ties
- Lisp
- Noxious Habits (Thumbsucking, etc.)
- Enlarged Tonsils
- Sip a liquid, smile and swallow
- Malocclusions- ask why? Does pattern follow OMD?
- Snoring/Sleep apnea/Sleep Disordered Breathing
- TMJ/TMD and/or history of chronic neck pain
- High Narrow Palate
- Tongue Scalloping/Linea Alba
- Bruxism and clenching
FUNCTION, FUNCTION, FUNCTION!!

- Always screen for dysfunction
  - If dysfunction is not treated, full resolution of symptoms is unlikely.
    - TMD, SDB, orthodontics, speech therapy, etc
- Always ask yourself “Why?”
Treatment

- Must be multimodal and multidisciplinary
- SDB treatment means normalizing nasal breathing
  - TOTs
  - Tonsils and adenoids
  - Allergy control
  - Functional Orthodontics to open the airway

THEN....

Orofacial Myofunctional therapy
Who Should Be on the Team?

- Myofunctional Therapist
- Dentist/Orthodontist
- Allergist
- ENT
- Sleep Medicine Doctor
- PT
- SLP
- Oral Surgeons
OMT

- Therapy needs to include muscular retraining AND improved nasal breathing

- Research shows that OMT can reduce symptoms of SDB and ameliorate mild-moderate OSA.

  - When the orofacial complex is activated and working in harmony, it can reduce obstruction to the airway.

  - AHI decreases by 50% in adults and 62% in children
OMT

- Intervention requires reversal of bad habits
- Treatment must include jaw and airway growth, better breathing habits, and better postural habits.
OMT Treatment goals

- Habit Elimination
- Labial competence
- Increase strength of hypotonic muscles
- Proper lingual resting position
- Restore nasal breathing
- Proper swallow pattern
Resources

- www.iaom.com
- www.kiddsteeth.com
- www.tonguetie.net
- www.aomtinfo.org
- Orofacial Myology: International Perspectives by Hanson and Mason
- Gasp: Airway Health by Gelb and Hindin
Thank you!

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