Depending upon whom one asks, trained orofacial myologists give responses to this question as though they come from different planets. Several define it as a specialty area that deals with sleep apnea and methods of treating it. Others report a definition that describes methods of determining ankyloglossia and how to treat patients post frenectomy. Still others state that their main concern is airway and the promotion of various techniques such as Buteyko. A large number state that their passion relates to specific orthodontic appliances or systems and their positive affects on facial form and airway. Many relate to the time-held beliefs that swallowing techniques are the underpinnings of orofacial myology. More and more websites are popping up and stating that normalizing the resting postures is the number one target. And great numbers come to the specialty area to expedite habituation of speech disorders. What a disparate list of goals and definitions!

- Be certain that you and your associates have a solid foundation and ample experience in the science and treatment components of orofacial myology before moving too far off center into related areas.
- Do not make assumptions and do not proselytize. Appreciate the fact that there are those among us who do not share your enthusiasm for your particular “pet” interest.
- Look for opportunities to meet with and study with those who come from different backgrounds and have different treatment goals. Encourage them to back up their approaches with as much scientific evidence and therapeutic evidence as possible and be prepared to do the same in return.

Thank you for being our readers and please always feel that you have a personal connection with us and know that we are here if you want to share information, dates of important events, or just keep in touch! Hope to see you all at some event in the near future.

Sandra
WHETHER OR NOT TO TREAT CHILDREN WITH DOWN SYNDROME

By: Robert M. Mason, DMD, PhD

I discuss here what orofacial myologists should know before considering whether to treat the OMDs seen in children with Down Syndrome. (You probably already know that there is no “s” after Down; that is, it is not Downs syndrome, but instead, Down Syndrome).

**PRIMARY MORPHOLOGIC CHARACTERISTICS**

This genetic syndrome (Trisomy 21 Syndrome) has many facial and oral morphological characteristics which are important to evaluate when considering treatment of the OMDs usually seen in individuals with this syndrome. The primary features of interest to orofacial myofunctional clinicians are: a small maxilla with maxillary retrusion, a small nasopharynx, an acute cranial base angle, an adenoid mass that often occludes the posterior entrance into the nose, a normal size tongue in a small oral cavity, varying levels of cortical functioning, and difficulty maintaining a nasal breathing pattern.

Let’s go through these characterizing features individually. The **maxillary retrusion** seen in children with Down Syndrome is related to the maxilla being small in overall size. A small maxilla results in a reduction of the area of the nasal cavity that delimits establishing and maintaining a nasal method of breathing.

The **nasopharynx** is also small due to the retruded maxilla, but as well, the angle of the cranial base is usually somewhat acute in children with Down Syndrome, as well as being a characteristic of other midfacial retrusion syndromes. You can gain a perspective about the impact of an acute cranial base angle on the depth of the nasopharynx by observing the drawing at the end of this article of a lateral view of the angulation changes seen in the cranial base. With an acute cranial base angle, the distance between the posterior wall of the pharynx and the posterior entrance into the nose (the posterior choanae) is diminished, thus narrowing the horizontal diameter of the nasopharynx and further hampers the ability of children with Down Syndrome to habituate a nasal mode of breathing.

As you know, the **adenoid mass**, when present, forms an attachment on the posterior wall of the pharynx, extending vertically to the base of the skull and laterally, may occasionally circle and close over the opening of the Eustachian tubes that are located on the lateral walls of the pharynx, resulting in many bouts of otitis media. The adenoid mass may impinge on the posterior opening into the nose (posterior choanae) and in doing so, can interfere with the flow of air in or out of the nose. The consequence of these upper airway interferences is that children with Down Syndrome will adapt by repositioning the tongue forward as a means of maintaining the airway, to make up for the reduction in size of the nasopharynx and nasal cavity. Mouth breathing is obligatory with most children with Down Syndrome.

Dr. Dan Subtelny, an orthodontist, described the tongue in individuals with Down Syndrome as a "relative macroglossia"; that is, children with Down Syndrome have a normal size tongue in a small oral cavity; accordingly, there is no true macroglossia present. The tongue appears macroglossic because it protrudes, but the mandible to which it is attached is normal in size and yet, the maxilla to which it also relates is small. The oral cavity is small because of the retruded and small maxilla, and the tongue naturally adapts to the small areas above by posturing forward.

With Down Syndrome, the normal size tongue and mandible, coupled with a small nasopharynx and maxilla, result in the tongue resting and functioning forward. As mentioned above, this protruded rest position helps to maintain the airway, and oral breathing is the result.

Individuals with Down Syndrome show a wide variation in cortical functioning ability. Those with reduced cortical functioning will often lack the ability to control the vertical movements of the tongue in therapy, replying instead on horizontally-directed tongue patterning. For such patients, substituting a tongue tip rest position at the lower incisors helps to provide a good starting position for the tongue for speech and swallowing therapy. Achieving this rest position depends on an ability to breathe normally with the tongue reposisioned to a rest position at lower incisors. FYI - it is a myth that a tongue at lower incisors rest position leads to negative dental changes. (This myth needs to be eliminated among orofacial myofunctional clinicians, as it is unfounded and untrue).

Children with Down Syndrome often exhibit flaccid tongues that lead to a reduction in ability to perform well on oral diadochokinetic testing. When the starting position for speech is with the tongue protruded, producing vertical tongue movements is further compromised, as is the starting position for speech sound productions.

THE IMPORTANCE OF OBTAINING A LATERAL CEPH ON INDIVIDUALS WITH DOWN SYNDROME

Having said the above, if you contend that orofacial myofunctional therapy can be successful with children with Down Syndrome to: 1) retract a protruded tongue, 2) achieve a lips-together rest posture and 3) maintain a nasal pattern of breathing, within an environment of the delimiting morphologic factors identified and discussed above - would it not be indicated to obtain (as a minimum diagnostic assessment) a lateral cephalometric x-ray film to evaluate the posterior airway, the size of the adenoids, (and the faucial tonsils that compete for the same space as the posterior tongue), and to also assess the nasal cavity and the ability of a child to breathe nasally? I have yet to see any report of lateral cephalometric findings in children with Down Syndrome that have been recommended to undergo therapy.

POOR NASAL HYGIENE

It should also be remembered that since children are notorious for having poor oral hygiene, they also have poor nasal hygiene;
they also have poor nasal hygiene; that is, they do not do well in keeping their noses clean and free of debris which interferes with nasal breathing. It would be no surprise to find that children with Down syndrome would exhibit poor nasal hygiene that would further exacerbate the other upper airway interferences characteristic of individuals with Down Syndrome. It is no secret that most children have to be reminded to blow their noses, and many have to be taught how to perform this task.

INTRAORAL EXAMINATION
Among the considerations in performing therapy with children with Down Syndrome, an intraoral exam of the posterior airway is also recommended. Can the posterior pharyngeal wall be easily observed? How does the soft palate elevate, and does it do so normally, elevating up to the plane of the hard palate?

Is a child under consideration for therapy able to retract the tongue and sit with lips together? This task will not be possible with most children with Down Syndrome, however, with continued facial and pharyngeal growth extending into the teenage years, therapy might then be possible following vertical and horizontal growth expansion of the pharynx, maxilla, and the normal reduction in size (involution) of tonsils and adenoids that usually begins around ages 9-12 years.

OMT THERAPY FOR DOWN SYNDROME CHILDREN
For any advocates of early myofunctional therapy for children with Down Syndrome, I wonder on what basis that therapy is recommended? I also wonder what diagnostic information has been collected on such children that would encourage a clinician to attempt to reposition the tongue, achieving a nasal pattern of breathing with a lips-together rest posture? For most children with Down Syndrome, this would be impossible as per the delimiting morphological factors detailed above. The very minimum of diagnostic evidence to evaluate a child's candidacy for therapy with Down Syndrome would include a lateral cephalometric scan. Is this done? Most likely, no.

In the early 1980s, some well-meaning Japanese and Canadian clinicians decided separately that they would undertake a surgical tongue reduction in children with Down syndrome - to improve their appearance. The real motivation for surgery was from parents who were concerned about the appearance of their children. The parents also thought that tongue reduction surgery would improve speech. Such clinical experiments, done in good faith, failed for a variety of reasons including the finding that the tongue resumed its previous protruded position even after a surgical reduction in size.

Altogether, and according to the characteristics discussed here, the role of OMT with children with Down Syndrome is questionable and those who are providing and advocating for such therapy have not reported any long-term successes from any short-term successes claimed. In the teenage years, however, some individuals with Down Syndrome may become appropriate candidates for therapy following the additional pharyngeal and facial growth that has occurred. Some individuals may then be able to be taught an anasal pattern of breathing.

A few added thoughts: One of the worst things a clinician can do is underestimate a child's ability. A rule to live by, that you hopefully already practice is that it is better to over-estimate a client's abilities and mental capability than to under-estimate and find out later that you were wrong. Such is the case with many teenagers and adults with Down Syndrome.

THERAPY PERSPECTIVES FOR INDIVIDUALS WITH DOWN SYNDROME
The development of a treatment strategy in treating OMDs in patients with Down Syndrome should involve a decision as to whether to work on the deficits that a client possesses, or work on strengths identified. Individuals with Down syndrome function well in the horizontal plane of space; they can easily protrude the tongue but have difficulties with controlled vertical movements of the tongue. With regard to the ability to protrude, a reasonable target for linguopalatal sounds is the back of upper teeth rather than the alveolus. In some cases, using the lingual surfaces of lower incisors is an appropriate target, since /t/, /d/, /n/, /l/ can be made with acoustic acceptability with the tongue tip being released from a contact at the lower incisors. Sibilants are easily produced with the tongue tip at the lower incisors, with airflow passing over the blade of the tongue and then released between the upper and lower incisors that are slightly apart, thus creating the sibilance that defines these sounds. Also, all /r/ sounds can be produced acoustically normal with the tongue tip at or released from a lower incisors contact.

For older clients and teenagers, working to reduce the flaccidity of the lateral surfaces of the tongue may aid in repositioning the tongue at rest. As all children grow, and as the mandible also grows, teenagers children with Down Syndrome may have the ability to retract the tongue at rest by adapting to growth changes that have occurred in the vertical plane. Those that are successful are seen on lateral cephalometric x-ray films to have adapted to a lower position for the hyoid bone. The hyoid is a good marker to assess tongue adaptation. Accordingly, some teenagers and adults with Down Syndrome are able to respond to exercises to achieve lip competence and assume a more appropriate, less protrusive tongue rest posture as growth occurs. Growth into the teenage years involves vertical, transverse, and horizontal growth of the jaws and vertical growth of the pharynx. This results in increased oropharyngeal room in the teen years for patients with Down syndrome to be taught more adaptive skills and oral postures that can result in improved facial appearance.

The key to choosing appropriate individuals with Down Syndrome for your therapy is thorough evaluation to identify those individuals who may benefit from your skills. I would insist on obtaining a lateral cephalometric scan in an orthodontic office and some help from a friendly orthodontist to evaluate the cephalometric data and evaluate the cephalometric landmarks in the oral cavity.

DIAGNOSTIC THERAPY
I also endorse diagnostic therapy. Whenever you are unsure of the value of therapy and want to try in spite of whatever reservations may be involved, it is recommended that if you proceed, you do so within the perspective of diagnostic therapy. In that way, you clearly identify the purpose of your work and that there may be delimiting factors that will cause you to cease and desist therapy at some point. In every case, you will certainly learn something.

CRANIAL BASE ANGULATION (THE PHARYNGEAL WALL IS LOCATED RELATIVE TO THE CRANIAL BASE ANGULATION)
Are you taking good, quality photographs of your therapy patients? Photographs are a very important part of the patient records that you keep. Just like measurements, photos can be a quantifiable way to track progress with our patients. Often, the changes that we achieve happen gradually. We may completely miss the transformation if we are not comparing side by side pictures from before, during and after therapy. Patients/parents LOVE seeing the esthetic changes associated with better Oral Rest Posture and better function. Don’t forget to send a copy to the referring Orthodontist. Professional looking “before/after” collages aren’t just helpful for patient records….they are a great marketing tool as well!

Feeling intimidated by the photo-taking, collage-making process? Attendees of the upcoming Symposium and Live Streaming will have the opportunity to learn much more about this topic! Stay tuned for future opportunities as well!
For the Past 39 years the Mexican Association of Communication, Audiology, Otoneurology and Speech (AMCAOF) has been updating and disseminating information about human communication. Members are therapists and highly trained medical professionals, committed to their patients through research, prevention, diagnosis, treatment and rehabilitation of many conditions and diseases.

Since its founding in 1977, AMCAOF, has been spreading their knowledge through biennial National Conferences and international symposiums. As part of this continuous updating, Diana Acevedo, one of our Neo-Health graduates, was invited this month to enlighten participants about the benefits of Orofacial Myology, among other related topics.

Diana Acevedo, M.S. CCC-SLP, is a Senior Bilingual Speech Language Pathologist who received her Bachelor's degree from Purdue University and her Master's in Communication Disorders from Arizona State University. Diana has more than 16 years of experience, working at recognized institutions such as Duke Medicine, UIC Craniofacial Center, and University of Chicago Hospitals.

During her presentation, she demonstrated the use of the Quick Tongue Tie Assessment tool and invited Mexican therapists to start researching Orofacial Myology. Thank you Diana for spreading the news!

If you work with Medicaid, you know that the eligibility of your patients can change in one day without notice. You also know that Medicaid HMO plans can be a real nightmare if you are not on top of their system every day. Susana Montoto, a Florida SLP, asked her husband to design something easy to be used at her small office. She didn’t have time to learn complicated programs, so she asked for a simple App to check her Medicaid patients’ benefits every day, save the eligibilities and also alert her of any change in benefits. Her husband created EligiPro, an affordable, cloud based service that automates the time-consuming verification process, leaving her more time to do what she really loves....therapy. A few days ago she was telling us about her new office tool, and how what was supposed to be a little app for her practice has become popular for other therapists working with Medicaid. We asked her if we could share the news for the benefit of our readers. You can find the app at www.EligiPro.com. As explained, it is not free but they have service plans ranging from the single independent therapist to multi-provider clinics. It is a simple, friendly and affordable program created by a therapist for therapists. You can contact Susana personally at info@eligipro.com to learn more or suggest additional options for her EligiPro app.
Call for Posters for the 2017 IAOM Annual Convention

Shira Kirsh, the Poster Chair and Presentation Moderator for the International Association of Orofacial Myology 2017 convention, has recently announced the Call for Posters for the 2017 IAOM Annual Convention.

The IAOM is a multidisciplinary group of health professionals comprised mostly of speech pathologists, registered dental hygienists, dentists, orthodontists and allied health professionals who share knowledge/expertise. This Convention offers opportunities to broaden our knowledge about clinical/didactic strategies to improve assessment, diagnosis, treatment and evaluation processes practiced on a global basis. Please consider submitting a Poster and/or attending this conference!

The development of a Poster usually starts with a question like Who? What? When? Where? How? Why? Today, research is infused into everything we do. It promotes collaboration between researchers and clinicians, enriching the work of both groups while forming our academic/clinical education. Your research is valuable and we hope to share your ideas. Please consider the following poster categories:

- Brief research reports on experimental studies
- Applied or theoretical research that is completed or underway
- Clinical case studies that were intriguing
- Clinical innovations in service delivery to clients
- Systematic review of literature on a topic that needs further explorations
- Student leadership projects in Orofacial Myofunctional Therapy (teamed with an IAOM mentor)

Deadline for Submission of Proposals: June 1, 2017
Notification of Acceptance: July 7, 2017
Email Submissions at: iaom2017postersession@gmail.com

Please contact the IAOM if you have questions regarding Poster submissions via email at iaom2017postersession@gmail.com and visit www.iaomconvention.com periodically for emerging details regarding the convention.
Susana Montoto
I graduated from the University of Buenos Aires, Argentina, as a Speech Language Pathologist over 16 years ago. I am the Owner and Therapy Director of Therapy Alliance, Inc. since 2009, having 4 Speech Language Pathologists and 4 Speech Language Pathologist Assistants in my clinic.

I took the “Basics to Habituation” course with Sandra Holtzman, MS, SLP-CCC, COM in 2011, and I did a refresher course in 2016. I decided to take the training because I felt that I needed answers about function/structure related to speech disorders. The results were unbelievable! It is a hands on course and the way Sandra teaches exceeded all my expectations.

During the course, I learned a lot of very helpful information that I could use in my clinic to increase the caseload and the quality of the therapy such as the following:
* To make correct referrals to other professionals (dentists, oral surgeon, ENT), and the importance of team-work with them.
* To recognize barriers that interfere with speech treatment (ankyloglossia, tonsils/adenoids, etc.)
* To use Orofacial Myology to reduce length of treatment.

In my personal experience, when my daughter was born, I noticed that she had a short lingual frenum. Pediatricians and ENT’s did not want to release it. After the course I realized the importance of releasing the lingual restriction. I looked for an oral surgeon who would understand the needs of my daughter in regard to the restricted lingual frenum, and he immediately agreed to release it without any hesitation.

I will always be thankful to Sandra for sharing all of her information, research, photos, and experience. I also appreciate her hands on approach during the course, demonstrating to the participants how to implement Orofacial Myology treatment on a daily basis.

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Orofacial Myology: From Basics to Habituation
Certification Track: Intensive Course

28 Hour Approved Course presented by
Sandra R. Holtzman
MS, CCC/SLP, COM
Becky Ellsworth,
RDH, BS, COM
And the participation of:
Dr. Robert Mason
DMD, PhD, ASHA Fellow

Offering courses that provide you with a learning experience that participants have called “Life Changing”

2017 Offerings

| Apr 06 - 09       | Albuquerque, NM |
| May 18 - 21       | Las Vegas, NV   |
| Jun 22 - 25       | Chicago, IL     |
| Aug 10 - 13       | Montreal, CA    |
| Sept 14 - 17      | NY/ NJ          |
| Nov 09 - 12       | Orlando, FL     |
| Dec 07 - 10       | St. Augustine, FL |

Additional offerings per request

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R: Techniques and Interventions To Correct /r/
Orofacial Myology/Tongue Thrust: Level 1 Course
Tongue Tie 101 for SLPs: What Is Our Role?