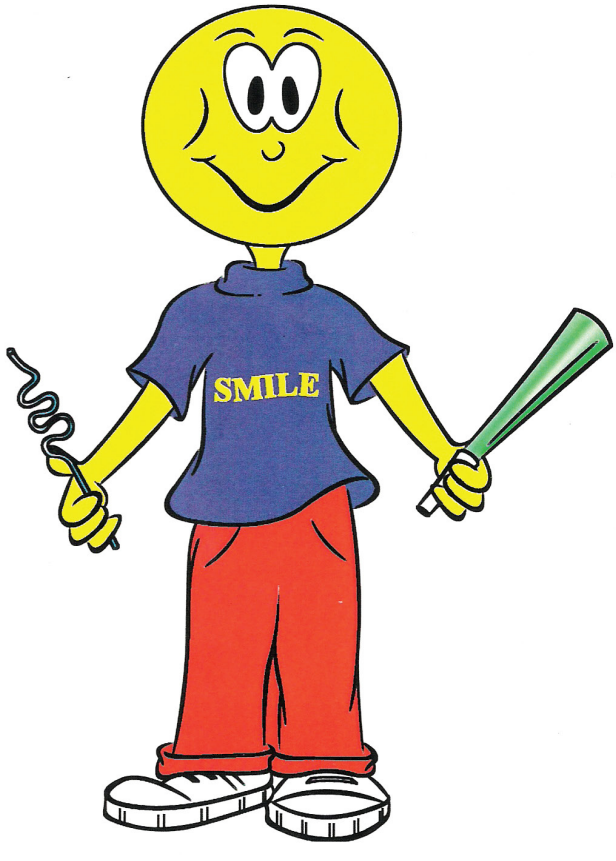
SMILE

SysteMatic Intervention for Lingual Elevation

A fun therapy program
for tongue-thrust remediation



Featuring
"Mr. SMILE"

Robyn Merkel-Walsh MA, CCC-SLP/COM®

Third Edition

ABOUT THE AUTHOR

Robyn Merkel-Walsh, MA, CCC-SLP, COM® is a Licensed Speech Pathologist with over 24 years of experience in the state of NJ. She is employed full time by the Ridgefield Board of Education and runs a private practice in Ridgefield, NJ.

Robyn specializes in Oral-Placement, feeding and Orofacial Myofunctional disorders in children. Her private practice focuses on Oral-Placement Disorders (OPDs), Orofacial Myofunctional Disorders (OMDs), Tethered Oral Tissues (TOTs), self-limited diets, severe articulation disorders and sensory-motor feeding problems. Robyn sees mostly children in her office, but works with patients across the lifespan. She conducts evaluations and Program Plans for children across the east coast. Her publications include, *SMILE (Systematic Intervention for Lingual Elevation), Art Talk, Handy Handouts,* and she co-authored *Sensory Stix, OPT-S Kit, , A Sensory Motor Approach to Feeding*, *The Functional Assessment and Remediation of Tethered Oral Tissues (TOTs)* and *OPT Goals for Speech Clarity*. She has also written several articles for the TalkTools® website, *The ASHA Leader,* and *Advance Magazine for Speech Pathologists*. She's been a guest author for Diane Bahr's Blog and invited to two podcasts by Conversations in Speech with Jeff Stepen.

Robyn is a lecturer for professional enhancement courses as part of TalkTools® Speakers Bureau. She has presented courses on Tongue Thrust and Lisps, TOTs, and Autism that have been offered for ASHA CEUs, and has conducted numerous webinars on topics such as: *Assessing the Oral Structure 101* and *OMD and Pediatric Feeding: What's the Buzz About?.* Robyn has lectured for numerous organizations including: The Apraxia Network, Bergen County Region V, The IAOM, AAPPSPA and the NJ Council for Exceptional Education. She has published poster presentations and live presentations at numerous ASHA conventions. She is actively involved in parental support groups for apraxia, TOTs and autism, and monitors an interactive Oral Placement Discussion Board on Facebook. Robyn was a chief clinician in a research project for the Moebius Foundation, and trains Level 3 and 4 TalkTools® candidates.

Robyn received both her undergraduate and graduate degrees from Montclair State University, where she was later invited to be an adjunct/clinical supervisor. She also taught classes at Bergen Community College and is a former clinical site coordinator for Seton Hall University. She is a member of ASHA, NJSHA, the NJEA, The IAOM, AAPSPA, Ankyloglossia Bodyworkers , ICAP and The Bergen County Apraxia Association. She has served on the Oral Motor Institute Board and is now the Board Chair. She is also a former board member of NJSHA.

Robyn has specialized training in oral-placement disorders, feeding, apraxia, Applied Behavioral Analysis, autism, orofacial myofunctional disorders, cranio-facial anomalies, Beckman Techniques and PROMPT. Robyn also has a specialized interest in integrative medicine and holistic healing.

FOREWORD

As a graduate student in speech pathology, I remember my professor briefly mentioning myofunctional disorders in my cleft palate class. “Class II malocclusion” was what seemed to be a rudimentary term, meant for memorization for a final examination. I looked upon it as a disorder secondary to some greater cranio-facial anomaly and thought I would never see these cases unless I worked at a cranio-facial center or at hospitals in an infant NIC unit.

My first job was in a multiply disabled school where I noticed half the children had an open mouth posture and a forward tongue carriages. I thought this must impact their speech; however, I did not see anyone in my program working on the problem. The children were getting great language therapy, but I never really saw anyone working on their speech production. I started giving all my children the standard “oral- peripheral exam” and I began to notice some interesting dentition, large tonsils, drooling and difficulty with volitional tongue movements. I knew I needed more tools in my tool box to help these children.

After I took my first course with Sara Rosenfeld-Johnson, my eyes were opened to a new world. Soon thereafter, I was in a public school program with elementary aged students. I came to see that they did not all have “developmental sound errors” but a myriad of orofacial myofunctional and oral placement issues that needed remediation. Child after child, referral after referral-- “I eat thoup with a thpoon," and ".....five, thix, theven," they would say! Missing teeth, diastemas, restricted frena and open mouth posture by the dozens. It was time to take some more TalkTools® Therapy courses as well as training with the IAOM and change the way therapy was being done in a public school.

The SMILE program evolved over two years. I utilized a combination of traditional orofacial myofunctional programs (*Swallow Right* by Roberta Pierce and *Swalloworks* by Char Boshart) and oral placement therapy along with traditional speech sound production. I realized without correcting the swallow and the placement of the articulators I could not remediate the speech sound errors. I have yet to meet a “tongue thruster” who does not interdentalize /l/, /d/, /t/, /n/, and, of course, more than half have a lisp. I could not find a program that addressed all of these, and so I had to write down what worked with my students and hence SMILE was developed and published with the support of my mentor Sara.

Without Sara Rosenfeld-Johnson and Lori Overland this program could not have been published. Their work has inspired me to be who I am, and to do what I do. I have studied Sara’s “Three-Part Treatment Program” and Lori’s sensory- motor feeding techniques which I later came to write a text about. The foundation of the SMILE program is built on these philosophies along with all I learned early in my career from Char Boshart, Diane Bahr and Roberta Pierce.

Fast forward to 2018 as I embark on my Certified Orofacial Myologist® journey, and complete the test and exam in 2019 . It was time to revise my SMILE Program to enrich it with all I have learned in the past two decades. Special credit to my amazing teachers Mary Billings and Dianah Davidson. I encourage all speech pathologists who work in the schools to look beyond the lisp and dive deeper into the WHY the articulation errors are occurring. You can avoid keeping kids in speech forever if you learn to discriminate phonological errors from phonetic placement errors from orofacial myofunctional errors. The latter of the two often need a multifaceted, multisensory approach and SMILE can help you just as it helped me.

ACKNOWLEDGEMENTS

Many thanks to Sara Rosenfeld-Johnson, M.S., CCC-SLP, and Lori Overland, M.S., CCC-SLP, for their brilliance, kindness, and support. Their contributions to the field of speech pathology are appreciated by all of the children, parents, and professionals who ave witnessed the amazing results of therapy that "just makes sense!"

Many thanks go out to my family Chris and Jaden who are the center of my universe, and my father Bob Merkel. Thanks to Aunt Janine for making all this possible. Thanks to my friends: Kelly Broderick, Kalene Gage, Dayna Burke, Gina Cassa, Jennifer Bartone and Diana Lara. I also thank my many friends and administrators of TalkTools® and the Ridgefield Board of Education.

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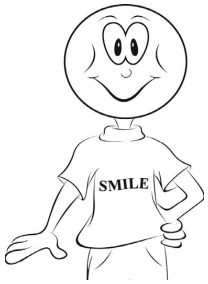
Finally, my personal thanks to all my students, clients, and their families for making my job fun-filled and rewarding!

In loving memory of Gerard Caracciolo , Roberta Pierce and Lawrence Dunn
In loving memory of my mother Louise DeRiso (nee Lawler).



"SMILE"
Letter to Parents

Dear: _____

Hello! I'm_____ , your child's speech pathologist. My goal is to help your child with his/her speech and swallowing. I will be starting a program called "SMILE." This is a systematic program involving speech and swallowing skills and is designed to work in approximately 9-18 months (plus maintenance), depending on the age of your child and the severity of the problem.

I am sure your dentist and/or orthodontist have talked to you about the importance of correcting your child's swallowing pattern in order to help with their plan of care. If not, I'll be happy to explain. The tongue is one of the strongest muscles in the body. Think of the tongue as rough ocean waves. Just as waves flatten out sand on beaches, the tongue's resting posture and position during speech and swallowing can cause changes in dental alignment. This is why we must treat oral habits, oral rest posture, swallowing and speech as a part of a comprehensive orofacial myofunctional therapy program.

All children are born with a protrusion / retraction swallowing pattern in order to protect the airway while nursing or feeding from a bottle. This is a suck-swallow-breathe pattern that is an innate infant reflex. This should change in the first 24-36 months to result in tongue tip elevation for swallowing. Sometimes, for a variety of reasons, it does not. When this happens it is often called a "tongue thrust". Tongue thrusting is just a symptom of an underlying problem. This may be due to:

- Early loss or injury to the teeth
- Chronic nasal congestion and/or allergies
- Enlarged tonsils and adenoids
- Thumb and finger sucking
- Nail biting
- Oral apraxia or dysarthria
- Feeding issues
- Cleft palate or other cranio-facial abnormalities
- Neurological impairments
- Tethered Oral Tissues (TOTs such as a tongue-tie)
- Narrow nasal passages/deviated septum
- Poor oral resting posture

Many, but not all, of these issues will be addressed as part of this program. For example, SMILE will address issues such as nail biting and thumb sucking; however, allergies and other health issues must be discussed with your pediatrician, dentist and /or otolaryngologist (ENT).

Most children with orofacial myofunctional disorders have co-existing articulation errors. The most common are difficulties with /s/, /z/, /ch/, /th/, /t/, /d/, /n/, /sh/, /l/ and /dz/. These are our "tongue sounds." In some cases /k/ and /g/ are affected due to poor lingual retraction and palatal elevation. Even if your child does not sound like he or she has articulation errors, the articulation units in this program are essential as they help position the tongue correctly during speech production. Blends like /sk/ are perfect for exercising tongue-up and back!

SMILE
HELPFUL HINTS FOR PARENTS/CAREGIVERS

- Have a mirror handy at all times. Children do better when they can see their mouth doing the exercises.

- Supplies such as horns, straws and tongue depressors are included in the SMILE kit. Keep a large plastic bag handy to carry the supplies to and from therapy sessions.

- Antibacterial soap or a high quality disinfectant should be used to clean all therapy supplies between sessions. Check with me for the latest products available.

- Sit with your child when he or she practices. Encourage him/her with words like:

way to go	fantastic	just one more time	excellent
keep it up	terrific tongue	super	stupendous
superb	the best	awesome	wonderful
how marvelous	incredible	simply the best	alright

- Since this program requires daily practice, charts will be used to practice on a week-to-week basis. You can reward your child with small tangibles just like we do in therapy. This will encourage your child to work extra hard. Here are some positive rewards:

stickers	candy	stay up later	relief from a chore
coins in a bank	marbles in a jar	special dessert	lunch out
pizza party	small toy	movie	time on a device

If you do not understand an exercise, or if your child has great difficulty with any of the exercises, please feel free to call with questions. It is better to not do the exercises than to do them incorrectly.

I encourage observation and training whether we are working in the schools, hospital or private sector. If you have any questions, don't hesitate to call me at_____.

Sincerely, _____

CONSIDERATIONS FOR SMILE PROGRAM

- It is advisable that each client purchase their own SMILE Kit, which is available from www.talktools.com. Each client will need their own tools to practice at home and booklet to have all the instructions required. The SMILE Program is copyrighted.

- The child should be at least four years-old and have the ability to understand directions given by the therapist. Children with more complex issues that can not follow directions or do not understand the goals should be treated with approaches such as Oral Placement Therapy for Speech Clarity and Feeding (Sara Rosenfeld-Johnson); A Sensory Motor Approach to Feeding (Lori Overland) and/or the teachings of Debra Beckman and Diane Bahr.

- Though child friendly the SMILE Program can be used with adults.

- SMILE is not designed to be a “cookie cutter” program but rather a guided path to help therapists achieve orofacial myofunctional therapy goals. The treating therapist is always best to know what is needed for their client/student/patient based on patient values, research and clinical data as a part of the ASHA Evidence Based Map. Modifications may be made accordingly and the SMILE program may be used in conjunction with other therapeutic methods such as PROMPT, Beckman Protocol and additional articulation tools.

- The child should have a patent nasal airway and be able to breathe through the nose with the mouth closed. If they cannot do this an ENT consult is required.

- The child may have a retainer, braces, or palatal expander; therefore, you may need to substitute or omit some of the candy/gum items if they are restricted by the orthodontist. With some devices you may need to put therapy on hold. This should be discussed with the orthodontist.

- The SMILE program is appropriate for pre-and post-frenectomy patients. Research shows that a frenulum cannot be stretched so an appropriate medical referral to a dentist, oral surgeon or ENT is always warranted when TOTs is suspected. SMILE should be started prior to surgery for neuromuscular re-education. In children with more severe deficits or under the age of four, please refer to *The Functional Assessment and Remediation of Tethered Oral Tissue*, by Robyn Merkel-Walsh and Lori Overland (2018).

- Registered Dental Hygienists who are Certified Orofacial Myologists® may complete this program with patients, but must defer articulation deficits to a licensed SLP with ASHA certification.

- Individuals with moderately weak to normal muscle tone benefit from this program. Many children with orofacial myofunctional disorder have weak oral muscles secondary to habitual open mouth posture and/or low tone. Children with dysarthria are not good candidates for the SMILE program. These clients would benefit most from the exercises in the book *Oral Placement Therapy for Speech Clarity and Feeding* by Sara Rosenfeld-Johnson, M.S., CCC-SLP, available through TalkTools®.

- Individuals with poor dissociation skills, chewing difficulties, orofacial myofunctional disorder and/or motor planning deficits may benefit from SMILE, since the program targets dissociation, coordination, strengthening and swallowing.

- SMILE is not designed for oropharyngeal dysphagia but is designed to target the oral phase of feeding. If you suspect oropharyngeal dysphagia, an appropriate medical referral as well as a referral to a speech-language pathologist with specific swallowing training is warranted.

- Children and adults with apraxia may not be able to engage in SMILE. These patients should be referred to an SLP with specific training in apraxia.

- If there are circumstances prohibiting the client from purchasing their own tools, the clinician can loan the items as needed and use a CDC approved intraoral cleaning solution to disinfect the tools and pass on to the next client. Note that tools with paper cannot be shared, nor can toothettes or wooden tongue depressors.

- If you are in a hospital or private practice please look into proper medical coding. A lisp or articulation errors that are directly the result of swallowing problems, airway or Tethered Oral Tissues are not developmental speech sound errors but rather a symptom of the orofacial myofunctional disorder. The CPT codes should reflect feeding and speech as should the ICD codes. Some insurance may require a medical prescription and /or pre-authorization.

PREREQUISITIES and PROGRAM SPECIFICS
SMILE PROGRAM

- TalkTools® horns (Appendix E) and straws (Appendix F) are used in conjuction with the SMILE program; however, for some children who start therapy services at an earlier age (i.e., preschool or kindergarten); it is often helpful to complete those programs before starting SMILE.

- Children and adults with an OMD often have poor jaw stability and jaw grading skills. The tongue and lower jaw usually move as one unit, which is indicative of poor jaw-tongue dissociation skills. It is imperative to assess these weaknesses and implement a TalkTools® Bite Block program prior to Lesson Four of the SMILE program. (All levels of Bite Blocks should be mastered by this lesson.) The Bite Block program is described in detail in *Oral Placement Therapy for Speech Clarity and Feeding* and is useful in assessment for the SMILE program. As described in the considerations, the client may work on the Bite Block and SMILE programs simultaneously but must complete all Bite Blocks before moving to Lesson Four, as the tongue exercises will require appropriate jaw stability for good jaw-tongue dissociation. We have included the full instructions in Appendix D for your convenience.

- Clients should master all the activities in one lesson before moving on to the next. The criteria should be set for 90% accuracy. If the client has difficulty with one exercise, assign specific exercises deemed appropriate in the current lesson until the difficult exercise is completed. Homework should not take more than 15 minutes and ideally should be done 3x a day for maximum progress. It is understood this is sometimes challenging especially in the school setting which is why the therapist is free to use their expertise to modify accordingly.

- Articulation drills are specifically used to complement the oral placement targets in each lesson that coordinate with the specific orofacial myofunctional tasks assigned. The drills are not designed to achieve articulatory accuracy in other phonemes. For example, if the target sound in the lip lesson is /b/, /m/ or /p/, you should not correct other errors if they should occur (e.g., an /s/ distortion).

- Pre-Screening and Post-Screening forms are included in this manual to help you define goals and objectives and monitor client progress. Please complete these forms before and after initiating the program. The pre-screening form also helps you determine whether or not the client is a good candidate for SMILE or if you need medical referrals or prerequisites like a Bite Block program.

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ASSESSMENT

Please read the following assessment information thoroughly, as it clearly defines and describes the most important procedures in an orofacial myofunctional diagnosis. A pre-screening assessment form can be found at the conclusion of this section. A full orofacial myofunctional and feeding assessment form is found in Appendix B.

PART I: MEDICAL HISTORY

Before initiating this program, it is important to assess the underlying cause(s) of the tongue thrust as it is often a sign and symptom of a medical or orthodontic condition. First an appropriate case history is needed (see Appendix A). After this is submitted review the case history with the patient/ family and consider the following to be "red flags": (Note: some terms will be described in more detail later in this manual.)

- ear infections
- sinus infections
- snoring
- history of enlarged tonsils and adenoids
- thumb or digit sucking
- late weaning from the bottle
- prolonged sippy cup use
- nail biting
- sleep disturbances
- palatine tori
- dental malocclusion
- atypical diastemas
- scalloping of tongue
- tethering of frena
- deviated septum
- chronic nasal congestion
- mouth breathing
- TMJ
- headaches
- high palate
- narrow palate

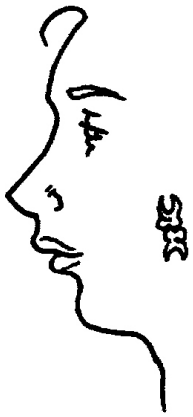
It is essential to gather information regarding health and habits so these issues can be addressed before or during implementation of the SMILE program. If there is a significant medical history you may need to refer to an otolaryngologist, dentist, oral surgeon, orthodontist or allergist for a consultation.

PART II: DENTAL MALOCCLUSION

Children with tongue thrust almost often present with some form of orthodontic issues. The word malocclusion refers to the relationship between the two dental arches. Many orthodontists and orofacial myologists use Angle's Classification System to define this relationship.

CLASS I: Neutroclusion
The relationship between the maxillary and mandibular molars is normal. The side profile is symmetrical. This is the standard for normalcy.

CLASS II: Distocclusion
This is where the jaw is retrognathic. The mandibular arch is situated posteriorly to the maxillary arch. The side profile is marked by a convex appearance. The convex marks are: the forehead prominent at the brows, with the mouth prominent, lips pushed outward, the chin receding, or sloping backward toward the throat. Class II has two divisions. In a Class II- Division 1, the molar relation is consistent with a Class II with the upper central incisors in an overjet. In a Class II –Division 2 the molar relationship is consistent with a Class II and the upper central incisors are in an overbite, sometimes a deep bite.



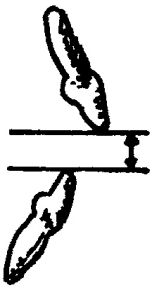
CLASS III: Mesiocclusion
The mandibular arch is situated anteriorly to the maxillary arch. The side profile has a concave appearance. The concave marks are: the forehead prominent above and flat at the brows. The chin is prominent at the point, sloping inward towards the lips. The mouth recedes.

CROSSBITE:

This is a form of malocclusion where a tooth (or teeth) has a more buccal (cheek) or lingual (tongue) position than its corresponding antagonist tooth in the upper or lower dental arch. In other words, crossbite is a lateral misalignment of the dental arches.

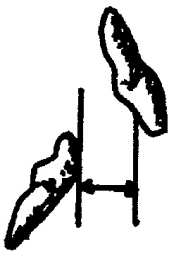
OPENBITE:

There is no contact between the central incisors (the two upper and lower teeth at the mouth midline).

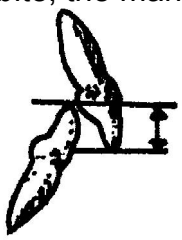


OVERJET:

Similar to the Openbite, there is no contact between the central incisors; however, in this case, the top teeth have a horizontal projection.



OVERBITE or UNDERBITE:
The relationship of the central incisors is not normal. In an overbite, the maxillary incisors overlap the mandibular incisors. In an underbite, the mandibular incisors overlap the maxillary incisors.



DIASTEMAS:
There are abnormal gaps/spaces between the teeth.

In all of the above classifications, orthodontics may be warranted and proper referrals should be made. It is important to note that many orthodontists now see children in the 3-7 year old age, and early intervention is desirable. Airway focused orthodontics and dentistry compliments orofacial myofunctional therapy.

PART III: ORAL PLACEMENT SKILLS

In assessing an orofacial myofunctional disorder, you are subsequently also testing oral placement skills. It is crucial to look at lip closure, jaw stability, jaw grading and jaw-lip-tongue dissociation skills in order to determine where to begin therapy. The following definitions are taken from *Oral Placement Therapy for Speech Clarity and Feeding*:

Dissociation: The separation of movement based on strength/stability in one or more of the muscle groups.

Grading: The controlled segmentation of movement based upon strength, stability and dissociation. It is the ability to control movement at any point through the range of movement.

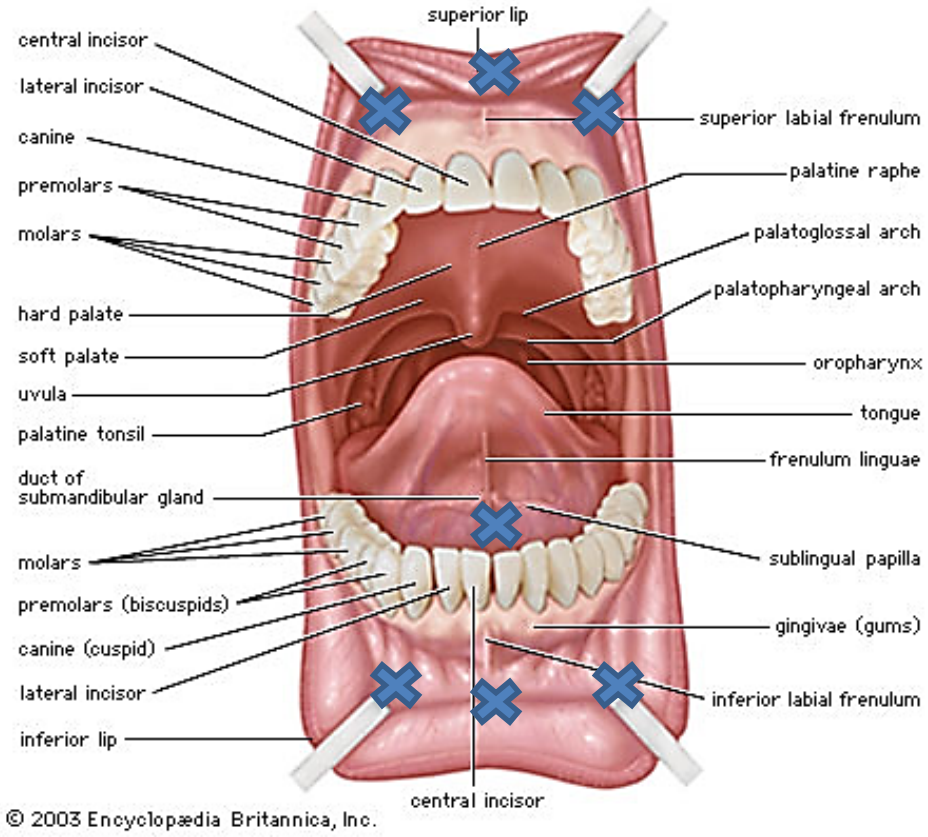
By assessing a client's ability to dissociate and grade the articulators (jaw, cheeks, lips, tongue), you are gathering information for target goals in the SMILE Program. For example, if there are no issues with lip closure or bilabials, it may not be necessary to implement Lesson Two. The pre- and post-screening directions will give you activities to assess these skills.

PART IV: SPEECH PRODUCTION

The most commonly associated speech disorder secondary to an OMD is a lisp. Some children present with bilateral distortions of /s/. These are usually the children with low tongue tip placement and a lateral tongue thrust where the lateral margins of the tongue push against the premolars. Other children present with interdentalized production of not only /s/ and /z/, but /t/, /d/, / l/, a nd / n/.You will see the tongue tip press against the central incisors or see the tongue tip come through the incisors on the swallow. Individuals with OMD may also have difficulties with /k/ and /g/ due to poor tongue retraction, as well as /r/, /ʃ/, /tʃ/, and / dʒ/.
When assessing a child with a tongue thrust, watch the placement of the articulators. The sounds may seem acoustically correct, but placement errors will be visually apparent. Standardized articulation tests do not look at placement but score on acoustics only. The Muscle Based Articulation Test by Sara Rosenfeld Johnson is highly recommended and is found in Appendix C. This test will help the clinician assess placement rather than just acoustics.

PART V: FRENA

The frena are important to examine as they may interfere with speech and swallowing. Frena can be restricted too short, too taut, or placed in an atypical location. Structural observation is important, but a functional assessment is even more relevant when discussing the impact on a person's oral functioning. There are seven oral frena that could be restricted resulting in orofacial myofunctional challenges that impact oral rest posture, structure, speech, and swallowing. The text *Functional Assessment and Remediation of Tethered Oral Tissue (TOTs)* by Merkel-Walsh & Overland (2018) provides an assessment protocol for TOTs. Sections of this assessment are included in the assessment form located in Appendix B.



PART VI: ORAL-RESTING POSTURE

The client may have an oral-resting posture that will impede therapy progress. For example, if the child is a mouth breather, this will promote a forward tongue carriage. The posture of the mouth at rest and during sleep can lead to differential dental eruption. Diagnostics will enable you to investigate whether or not mouth breathing is habitual or secondary to a medical condition. Note the child's lip and tongue posture at rest, as these issues will be addressed in the SMILE program. The medical history in conjunction with observation of oral resting posture will determine the need for medical referral(s).

PART VII: SWALLOWING

In order to diagnose tongue thrusting one must know the difference between a normal and an abnormal swallowing pattern:

Normal Swallow	Tongue Thrust
Tongue tip seals against hard palate	Tongue tip contacts the upper or lower front incisors
Lateral margins of the tongue contact gum ridge of the upper molars	Lateral margins of the tongue push between upper and lower molars
Back of tongue elevates	Entire surface of tongue blade elevates and the back of the tongue drops down
Lips are closed and relaxed	Lips are open, or pursed, then release quickly
Tongue is not visible	Tongue is usually visible either between the top and bottom teeth, or the lateral walls of the tongue spill over the bicuspid/ premolar region

The Volitional Wet Swallow Test is used in this program to assess swallowing function.

PRE and POST SCREENING INSTRUCTIONS

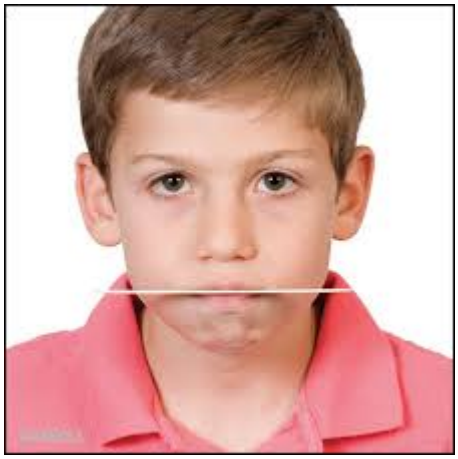
The pre- and post- screening form was designed to be as easy as possible to assess multiple skills in a short period of time. It is not to replace a full functional orofacial myofunctional assessment as found in Appendix B. Each task is described in detail to assist you with administration. Knowledge of the TalkTools® programs is desirable, but not required as tool directions are included in the appendices.

The SMILE program has the following prerequisites: 1) patent nasal airway, 2) normal frena, 3) ability to hold Bite Blocks 2-7 a, 15 seconds one time on each side, and 4) absence of temporomandibular joint dysfunction (able to open and close the jaw slowly without issues).

Here are activities to implement in order to fill out the pre-screening form:

Dental Malocclusion: The therapist should have the client bite in a natural position. Use a tongue depressor, lip retractor or other tool to retract the cheek on the right and then the left and assess the molar alignment looking at the mesial-buccal cusp tip of the maxillary first molar. Next observe the midline bite to note any diastemas, mammelons, or malocclusion such as a deep bite or underbite .Dental wear patterns are also important such as abfractions or gum recession . If you are not trained in this area, ask a trained dental professional to gather this data.

Lip Closure: A client must have a patent nasal airway to have a successful OMT program; therefore we want to assess if the client can sustain lip closure. Use a tongue depressor and place it in between the lips as shown. Ask the client to hold it in this position for 25 seconds. Note jaw stability and jaw-lip dissociation. If this cannot be done due to the inability to breathe through the nose, it is one of the markers for medical intervention prior to treatment.

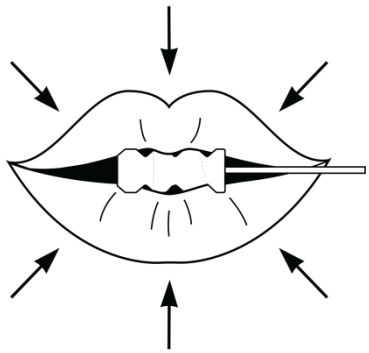


Jaw Stability: As aforementioned, jaw stability via the TalkTools® Bite Block Program is critical. Please refer to Appendix D for instructions. The client must be able to do levels 2-7 A to start SMILE.

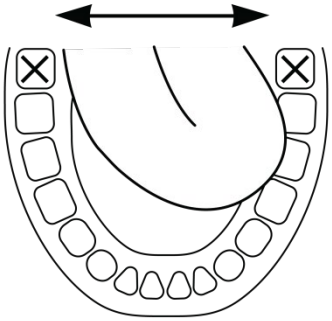
Jaw Grading: This skill is important because we want to ensure there is no temporomandibular joint

dysfunction that would prohibit the client from engaging in a wide variety of exercises that require an open mouth posture. To assess this skill, have the client slowly open and close the jaw and listen for popping or crackling. If this is heard make the appropriate medical referrals for medical clearance before implementing SMILE. If jaw sliding occurs, this is muscle based and Bite Blocks are recommended in conjunction with SMILE.

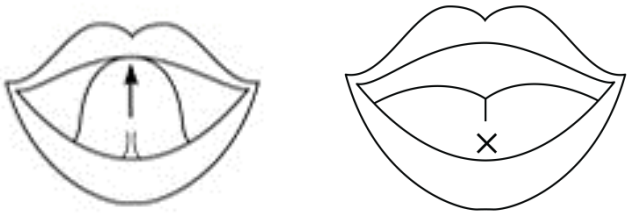
Jaw-Lip Dissociation: We want to get a sense of how well the client can dissociate the lips from the jaw. This is for baseline measures and not a pre-requisite for SMILE. Instruct your client to gently bite/ place their teeth together, and smile. Place a Toothette® perpendicular on the bottom lip. Have the client squeeze the tool with the top lip without opening or jutting the jaw. Repeat 10x. Note baseline skill.



Jaw- Tongue Dissociation: Similar to jaw-lip dissociation, we want to see if the client can move the tongue independently of the jaw. Place peanut butter, icing, honey or agave nectar on a Toothette® and place it in the client's right cheek toward the upper back molar. Have the client use the tongue tip to "taste" the sticky substance, Note if the jaw is sliding to the side of the stimuli as this is a sign of poor jaw-tongue dissociation. Have them "taste" or "lick" the toothette 5x and then switch sides repeating the cycle 2-3 x. If the Toothette® is too large, trim the wings with a sterile scissor.



Next, instruct the client to open the jaw to 6-7 jaw height (measure with Bite Blocks). Practice holding the tongue tip to the incisive papilla and then depressing the tongue with the tongue tip behind the lower central incisors. Repeat this 10x. Make notes on jaw sliding, fixing or any compensatory movements noted, including issues with range of motion.



Chewing: It is important to observe how a bolus is transferred, if the chewing surface is utilized and if the client uses a munch chew versus a rotary chewing pattern. Have the client take a bite of a bolus and observe. Make notes accordingly.

Speech: Have the client imitate words with /t/, /d/, /n/, /l/, /s/, /z/, /ʃ/, /tʃ/, /dʒ/ and mark any errors including placement errors. Bilabial sounds /m/, /p/, /b/ should also be observed and well as lip rounding for /w/, /u/, /o/.

Frena: As aforementioned a thorough assessment of the frena is important. Mark results here. If you suspect Tethered Oral Tissue, please refer to the appropriate medical professional prior to starting SMILE.

Oral Resting Posture: During the test session, allow the client to read, use an electronic device, color or watch TV. Note any concerns with oral resting posture such as parted lips or drooling.

Volitional Wet Swallow Test: This was originally developed by Dan Garliner. The instructions are as follows:

1. Have the client sip a small amount of liquid from a straw or cup.
2. Have the child trap the water by placing the tongue tip to alveolar ridge.
3. Close the teeth.
4. Smile and swallow.

Repeat the test 10 times.

If any of the following occur, put a minus sign in the box:

- lips purse
- tongue interdentalizes or pushes laterally on the swallow
- head tilts back
- bottom lip slides in under top teeth
- water leaks from the corners of the mouth

PRE-SCREENING FORM

Red Flags from assessment tools: _____

_____

_____

* denotes pre-requisite
WNL = within normal limits

Skill	WNL	NO (Remarkable)	Comments
Dental Malocclusion			
Diastemas and other dental anomalies			
Lip Closure* (tongue depressor between lips for 25 seconds)			
Jaw Stability* (client must be able to complete Bite Blocks 2-7a with a 15 second hold on both sides symmetrically			
Jaw Grading* (client must be able to slowly open and close the mouth without jerking motions)			
Jaw-Lip Dissociation			
Jaw-Tongue Dissociation			
Chews on Back Molars			
Utilizes a Rotary Chew Pattern			
Lip closure for m,p,b			

Lip rounding for w, u, o			
Tongue Retraction with tip elevation for t-d-n-l- s-z			
Tongue Retraction with back tongue side spread for ʃ, ʧ, ʤ			
Frena * (buccal, labial, lingual)			
Oral-Rest Posture			
Volitional Wet Swallow Test			

The child must achieve 8 out of 10 swallows to pass the test.

Swallow	1	2	3	4	5	6	7	8	9	10

NOTES:

_____

_____

_____

_____

_____

_____

_____

_____

Eligible for SMILE: _____ yes _____ no

PRE-SCREENING FORM
SAMPLE

Skill	WNL	NO (Remarkable)	Comments
Dental Malocclusion			Class II Division 1
Diastemas and other dental anomalies	☑		
Lip Closure* (tongue depressor between lips for 25 seconds)	☑		
Jaw Stability* (client must be able to complete Bite Blocks 2-7a with a 15 second hold on both sides symmetrically	☑		
Jaw Grading* (client must be able to slowly open and close the mouth without jerking motions)	☑		
Jaw-Lip Dissociation		☑	Poor, jaw movement
Jaw-Tongue Dissociation		☑	Jaw sliding
Chews on Back Molars	☑		
Utilizes a Rotary Chew Pattern		☑	
Lip closure for m,p,b	☑		
Lip rounding for w, u, o	☑		
Tongue Retraction with tip elevation for t-d-n-l- s-z		☑	Interdental lisp

Tongue Retraction with back tongue side spread for ʃ, ʧ, ʤ		☑	distortions
Frena * (buccal, labial, lingual)	☑		
Oral-Rest Posture		☑	Mouth breathing noted at times ENT referral warranted
Volitional Wet Swallow Test		☑	20% failed

The child must achieve 8 out of 10 swallows to pass the test.

Swallow	1	2	3	4	5	6	7	8	9	10
	+	-	-	-	+	-	-	-	+	-

NOTES: Child should be seen by the ENT, no congestion noted but mouth breathing may be from adenoids.

Eligible for SMILE: ___x____ yes _____ no

PROGRAM ADMINISTRATION: *A Note to Therapists*

BASIC FOUNDATIONS:

This program is designed to be presented systematically, in chronological order. Each lesson is divided into two parts:

1. Therapeutic activities
2. Homework/carryover page.

The principle of this program is that children with an orofacial myofunctional disorder usually need to work on three components to remediate and habitualize:

1. Oral Rest Posture
2. Articulation
3. Swallowing

To achieve these three goals, the child must have sufficient oral placement skills. What makes SMILE unique is it combines Oral Placement Therapy (OPT) with Orofacial Myofunctional Therapy (OMT). The therapist needs to be familiar with Sara Rosenfeld-Johnson's TalkTools® Horn and Straw Hierarchies to complete this program, as horns and straws will be used in conjunction with the SMILE program. The TalkTools® Horn Hierarchy is in Appendix E. The TalkTools® Straw Hierarchy is in Appendix F.

Lesson Three (Oral Rest Posture) and Lesson Four (The Lazy Tongue Buster) are interchangeable, meaning that if your client has severe difficulties with lingual elevation or cannot elevate the tongue volitionally, you can start with Lesson Four if necessary.

THERAPEUTIC INTERVENTIONS:

The therapist should complete each lesson in the therapy session. These lessons take approximately 45 minutes and can be done once or twice a week depending on the severity of the disorder. It is helpful for the parents or caregivers to observe you when you are working with children, as they will be asked to practice at home. A videotape of your session may be practical for school based therapy, but make sure legal documents are signed by both parties ensuring that videos meant for parent training are not used commercially or on social media. In some cases where distance and time are problematic, clients may attend one to two sessions a month but will have a slower progress rate because they are not moving on when they are ready some of the time; but they are still working towards their goals.

HOMEWORK GUIDELINES:

It is important that the child's caregiver understands this program will only work if it is practiced daily in the home. Homework charts are included.

- When the lesson is completed and you feel confident that the client understands the exercises and is trying to execute them to the best of his/her ability, assign those items for homework. If the client can only execute a few of the lesson's exercises, just assign those you feel would be appropriate.

- It is best not to combine lessons. That will happen in the review and maintenance sections. Let them focus on one goal at a time. That is why the lessons are divided based on developmental oral motor norms. It is always most appropriate, however, for the clinician to use their expertise and cater the program to the needs of the person.

- It is recommended that the client use a mirror at home.

- The therapist should copy and file the homework data from each client weekly. This can be used for insurance purposes or an IEP. If the child cannot do the exercise correctly, and you feel he/she would practice them incorrectly at home, reassign the homework from the previous session, and work on new exercises in therapy until the child is ready to work on them at home. For example, if the child can execute all of the Lip Closure Exercises but cannot do exercise #2, assign the exercises in the Lip Closure section until exercise #2 is mastered to 90%.

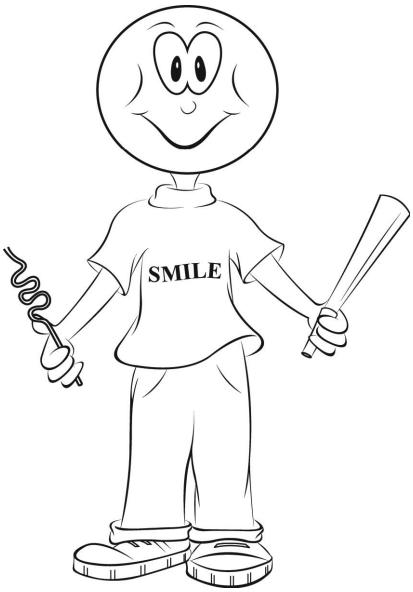
TalkTools® HORN and STRAW HIERARCHIES (see Appendices E and F for full instructions.):

1. Horns and straws will be used in conjunction with this program; however, some children who start therapy at an earlier age, will benefit from completing the horn and straw hierarchies before this program begins. The child should do the horns and straws as outlined in the program as reinforcement, and should review even if he/she has completed the hierarchy.

2. Specific horns and straws will be used: TalkTools® Horn #2, and Horns #7-12. TalkTools® Straws #4-7 will be used as well, when the client starts to drink liquids. A child on this program must have good lip closure and lip rounding skills. If the client has difficulties, it is suggested that the client completes TalkTools® Horns #1-6, and TalkTools® Straws #1-3 before starting the SMILE program.

3. The client should complete the horns and straws at their own pace; however, each lesson will introduce specific horns and straws as guidelines. All horns should be mastered by Lesson Seven. If they are not mastered by that level, continue therapy sessions by reviewing exercises (Lesson Six) and practicing the horns until mastery is achieved. All straws must be mastered before cup drinking can begin as cup drinking requires anti-gravity and may be more challenging than the straw. While cup drinking generally comes before straw in typically developing infants for the purpose of this program it will come after.

SMILE
THERAPEUTIC INTERVENTIONS

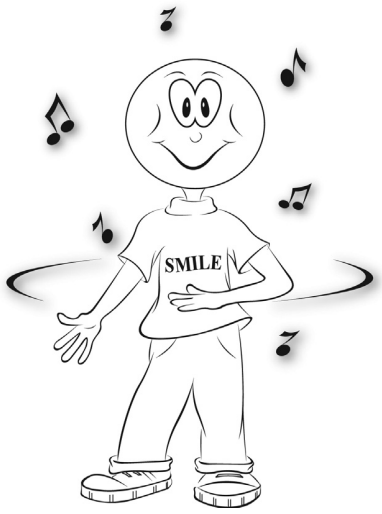


Hello! I'm Mr. Smile. I'm going to be around for the next few months or so while you work on your swallowing and speech. First, let's talk about a few very important things this week. You'll need to know what our goals are, and how we'll meet them. Let's learn about our SMILE vocabulary!

Part A: SMILE Vocabulary:

"*The Smile Spot.*" This is the spot located right behind your top teeth. Touch it with your finger. See? It is kind of bumpy! We'll do many exercises and sounds that will mention this spot!

"*The Dancer*." When you dance, you move! All of our exercises will have a Dancer and a Sleeper. The Dancer does the movement and the Sleeper stays still.



"*The Sleepers*." The Sleepers are the muscles that stay still while another muscle is dancing!

"*The Smile Swallow*." This is our main goal. A perfect swallow, with our tongue up and our head, neck and jaw still. The tongue is the Dancer in the swallow and the head, neck and jaw are the Sleepers!

"The Sad Swallow." This is our swallow that we are trying to correct. In a Sad Swallow, the neck, jaw and head do all the dancing, and our tongue slides forward. We don't want Sad Swallows!

Reasons for Sad Swallows:

nail biting mouth breathing thumb sucking weak muscles

We'll talk about these later in our program!

<u>Part B: Learn Your SMILE Parts!</u>

Look in the mirror and point to these SMILE parts:

right cheek	left cheek	top lip	bottom lip
tongue tip	sides of	top teeth	bottom teeth
molars	tongue	top of tongue	hard palate

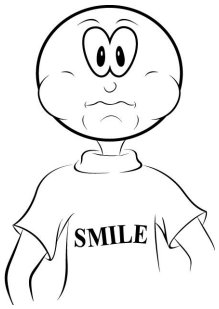
LESSON ONE
Cheek Exercises

We're going to start our SMILE program with some cheek exercises!
Do these exercises twice a day and mark them down on the SMILE Cheek Chart. Our goal is to work the buccinators to support lip closure, rounding, intra-oral suction and more! You will need:

- latex gloves (If the child is allergic to latex, use tight- fitting vinyl gloves.)
- toothbrush
- damp washcloth
- small, ball-shaped lollipop
- mirror

Cheek #1: Massage your cheek with a wet washcloth from the ear to the corner of your lips. First use it warm and rub each cheek 20 times, and then try cold on each cheek 20 times. This will help wake up those tired cheek muscles!

Cheek #2: Bite your back teeth together and close your lips. Breathe in through your nose and blow up your cheeks. Look in the mirror. You should look like a chipmunk. If you can't do this, put some water in your mouth, swish it around. Now try it again without the water. Repeat this exercise 10 times.



Cheek #3: Put on your gloves. Now, without water in your mouth:

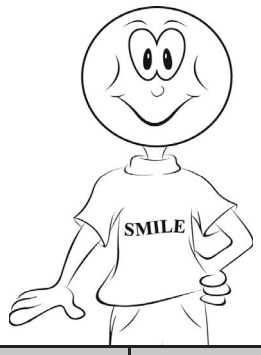
1. Place two gloved fingers (pointer and middle) inside your mouth against your right cheek
2. Press your finger into the inside of your cheek
3. Try to push your cheek against your finger. Count to five as you continue constant pressure. Repeat this on the left. Do this cycle three times.

Cheek #4: Take out a small, ball-shaped lollipop and a toothbrush. Practice rubbing these items on the inside of your cheeks rubbing up and down, both sides, 10 times each side with each item.

Note to Therapist: Remember, the client must be able to complete all exercises in the lesson to 90% accuracy before moving on to the next lesson. If the client can do all the exercises with the exception of one or two, reassign all the exercises in this lesson for homework until the client can achieve the exercise. If this takes more than two weeks, the client is missing a prerequisite skill. Please refer to the Criteria and Assessment sections of this book, as well as Oral Placement Therapy for Speech Clarity and Feeding by Sara Rosenfeld-Johnson.

HOMEWORK PRACTICE CHART: CHEEK EXERCISES

Your therapist has filled in practice dates for you to follow. Remember, you must do these two times a day. Put a smiley face each time you practice. By the end of the week, you should have two smiles for each day!



CHEEKS														
1														
2														
3														
4														

LESSON TWO
Lips Lips Lips!

Our lips are very important for speech and swallowing. In this lesson we will focus on practicing lip closure and rounding for speech and swallowing. Lip closure is also desirable for the way our mouth should be at rest.

In this lesson the lips are the Dancers, and the head, neck, tongue and jaw are the Sleepers!

Since there are many exercises in this lesson, it will take us a few sessions to complete.

Our goals are:

- Lip closure (orbicularis oris)
- Lip retraction (risorious, buccinators, depressor anguli oris, zygomaticus major and minor)
- Lip rounding (buccinator, orbicularis oris)
- Lip protrusion (mentalis, orbicularis oris)

You will need:

- A small mirror
- Non-flavored Toothettes®
- Latex gloves (If the child is allergic please use tight fitting vinyl gloves.)
- Lip gloss or Vaseline®
- Peanut butter or marshmallow fluff
- Mini marshmallows
- TalkTools® Horns #2 and #7
- Bubbles

PART A: Lips Together!

Lips #1: Squeeze your lips together as tightly as you can. Hide them away from sight. Count to 10 in your head and rest. Repeat this five times. (Children with upper lip tissue incompetency from a severe overbite or overjet may not be able to master this exercise. You may move on if this occurs.)

Lips #2: Squeeze your lips together and let them “pop”. Make this sound 10 times. Rest and repeat. Now try this with some sticky stuff like peanut butter on your lips. Feel the difference.

Lips #3: Put lip gloss or Vaseline on your lips. Rub them together. Concentrate on your lips being closed. Do this activity for 60 seconds. Rest and repeat three times.

Lips #4: Sit in a chair with good back support. Your feet should be flat on the floor or supported by an object, like a box. Now your therapist or helper will hold TalkTools® Horn # 2, the harmonica, at a 90 degree angle and you will blow it 25 times. Your helper will be sliding the harmonica back and forth, from corner to corner of your lips, but make sure your head and jaw are sleeping! It should take you two seconds to get from corner to corner. Remember... the lips are the Dancers here.

PART B: Lip Rounding!

Lips #5: Pucker your lips tightly into a fishy face. Hold for 10 seconds. Release and repeat five times.

Lips #6: Blow kisses. Make sure your head, neck and jaw are still. Make sure you hear that "kissy" sound. Blow 20 kisses. Rest and repeat this exercise three times.

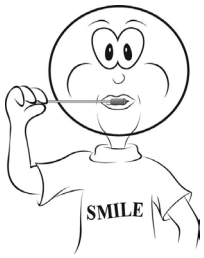
Lips #7: Use the TalkTools® Bubble Tube, which contains non-toxic bubbles. Hold the wand directly in front of the lips, one inch away. Round the lips tight and say a whispered "HOOOOO". Watch a big beautiful bubble form. Blow five bubbles using this technique.

Lips #8: We will now begin TalkTools® Horn #7. Use Horn #7 as directed in the Horn Hierarchy instructions. PART C: Lip Strength and Tone and Dissociation!

PART C: Lip Strength and Tone and Dissociation!

Lips #9: Pucker your lips tightly and feel the pull. Now stretch into a smile. Do this slowly, so that you feel each movement. The jaw is the Sleeper in this exercise and must remain still. Repeat 10 times.

Lips #10: Place a mini marshmallow between your top and bottom molars on either side. Bite down\ gently. Smile nice and wide. Place a Toothette® on your bottom lip and squeeze with the top lip. Keep your lips flat in the smile posture. Repeat five times.



Lips #11: Pucker your lips and place your index fingers on either side. Try and pull the pucker apart with fingers, but resist with your lips. Feel those muscles working! Repeat five times.

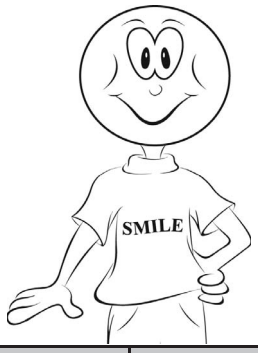
Lips #12: Place the tip of your gloved finger on the inside of your top lip on the gum ridge. Tighten your lips against your finger. Go all the way around your top and bottom lips stopping and tightening until you have gone all the way around.

Lips # 13: If the child is ready, start TalkTools® Horn # 8. You may need to wait until the child masters TalkTools® Horn # 7.

Note to Therapist: Remember that the child must be able to complete all exercises in the lesson to 90% accuracy before moving on to the next lesson. If the child can do all the exercises with the exception of one or two, re-assign all the exercises in this lesson for homework until the child can achieve the exercise. If this takes more than two weeks, the child is missing a pre-requisite skill. Please refer to the Criteria and Assessment sections of this book, as well as *Oral Placement Therapy for Speech Clarity and Feeding* by Sara Rosenfeld-Johnson

HOMEWORK PRACTICE CHART: LIPS LIPS LIPS

We are working on many different lip exercises. Do only the exercises in the chart that are circled by your therapist and practice them twice a day. Your therapist has written in the dates to practice. Put a smiley face each time you practice. By the end of the week, each date should have two smiles!



LIPS														
1														
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13														

LIPS: ARTICULATION THERAPY AND HOMEWORK

The sounds "b", "p", and "m" are our lips together sounds. "w" is our lip rounding sound. Let's do some articulation drills to help exercise our lips! These exercises will be outlined in a weekly regimen on the homework page.

/B/ Bombardment

/b/ initial	/b/ medial	/b/ final
ball	lullaby	cab
bam	baseball	slob
bat	gabble	rob
bar	celebrate	cob
bet	racquetball	web
bell	submarine	Abe
bum	tuba	gob
bill	acrobat	blab
bit	cabinet	robe
beat	table	dab
beam	zebra	grab
beak	lobster	lab
bun	turbo	vibe
bake	doorbell	bribe

Tongue Twisters:

1. Bill always blabs about baseball and basketball.
2. Barbara bought bells, a broom and boots.
3. Bill the beagle barks at boys playing ball.
4. Don’t grab the lab bottles that might break!
5. The beak on the bird is not blue.

Practice with /p/

/p/ initial	/p/ medial	/p/ final
pal	laptop	wipe
punch	puppy	cap
pants	diaper	cop
Paul	depot	rap
pill	toothpick	gripe
pot	pompoms	weep
pail	tapping	reap
pug	wrapping	tip
pit	carpet	top
pick	caterpillar	mop
pole	leopard	stop
poke	serpent	cup
put	paper	rip
poem	computer	grip

Tongue Twisters:

1. Please put the pot of pebbles on the porch.
2. Peter plays piano with Paula.
3. Pick up all the pits, pills, poems and pompoms.
4. Put the pickles in the soup recipe.
5. Pat pleases his puppy by petting him playfully.

/m/ Mouth Moves

/m/ initial	/m/ medial	/m/ final
mom	woman	ham
Matt	batman	Pam
mine	grammar	Sam
mall	glamour	ram
meet	groomed	wham
make	doomed	hum
mass	boomer	dumb
mark	chimney	costume
my	Christmas	room
mother	hamper	perfume
mutt	llama	assume
meal	computer	resume
mash	gloomy	gum
munch	remake	some

Tongue Twister:

1. My mom makes marvelous marshmallow munches.
2. Madeline's mutt named Max mashes up mud.
3. Matt's Christmas tree is in the room under the chimney.
4. Do you munch macaroni on Mondays?
5. Mary will meet me at the mall to buy a computer.

/w/ Words

/w/ initial	/w/ or /o/ medial	/w/ or /o/ final
when	thruway	plow
where	underwear	eyebrow
what	viewing	go
why	bewilder	no
water	knowing	know
wink	blowing	blow
wade	sewing	so
waddle	yellowing	row
wait	mowing	stow
wall	toenail	yellow
woman	going	Eskimo
wet	stow away	mow
well	away	doe
wit	milky way	toe

Tongue Twisters:

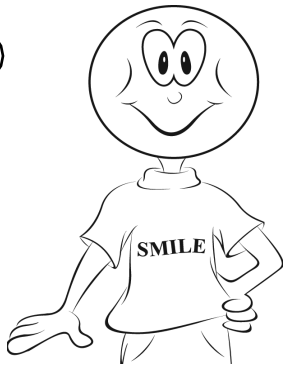
1. Where are you going with Wendy and Wally?
2. That woman is all wet from the water slide at the water park in Washington.
3. The wall is wet with wacky yellow paint.
4. Wanda the waitress will wait on tables on Wednesday.
5. Do you want to wait until we can eat watermelon?

More Lip Artic Practice!

Will you make me peanut butter pancakes please?
Mary and Paul are my pals from Baltimore, Maryland.
May I watch my movie on Monday?
Billy and Bob went to the beach and got wet from the waves.
Wanda the whale wades in the water and blows water out of her blowhole.
Bob munches on potato pancakes, watermelon, and banana bread.
Make a bulletin board with pretty paper and many pictures.
I woke up on Wednesday and went for a walk with Wendy.
Patty put peanuts in the blender and made peanut butter.
We went away for the weekend to Washington.
Where do you want to go to watch the movie?
Paul took me to a baseball game in Brooklyn.

HOMEWORK PRACTICE CHART:

LIP SOUNDS On each date you are assigned a different list to practice. For extra fun, you can also practice the "More Lip" tongue twister list as an additional exercise on any day you choose. Put a smiley face in each date you practice!

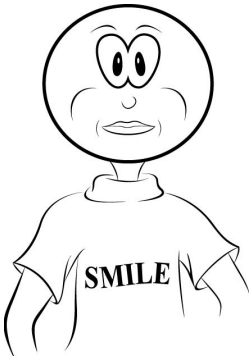


Exercise							
/b/ words							
/b/ tongue twisters							
/p/ words							
/p/ tongue twisters							
/m/ words							
/m/ tongue twisters							
/w/ words							
/w/ tongue twisters							

LESSON THREE
Oral Rest Posture

Mr. Smile is here to talk to you about the way your mouth looks when it is resting. Rest time occurs between speech and eating, like when you read or watch TV. In this lesson, we will work on exercises to help us improve our rest posture.

First, let's look at the correct way our mouth should look at rest.



1. Lips are closed, but not held too tight.
2. The teeth are closed naturally, not clenched.
3. The tongue is touching the Smile Spot (reviewed in Lesson One).
4. Breathing is through the nose.

Now here is an example of poor rest posture:

Look in the mirror and see how your mouth looks when it is resting. Let's get to work! Here's what you will need:

- nose flutes (2)
- a small mirror
- a cotton ball
- TalkTools® Horn #2 (harmonica), and TalkTools® Horn #9
- lip gloss or Vaseline®
- Cheerios®
- mini marshmallows

Note to Therapist: This lesson requires clear nasal passages and the absence of nasal obstruction. If your client has a medical condition that prevents nose breathing, you should omit exercises 1 and 2 and refer to an ear, nose and throat specialist. In addition, this lesson does call for some lingual elevation tasks. If your client has difficulty, you may do Lesson Four first.

ORAL REST #1: The Nose Flute: The first step in good oral rest posture is breathing through the nose, not the mouth. A nose flute can be used to establish volitional nasal airflow. Use a nose flute to practice the feeling of air coming through your nose. First you must learn how air can come through your nose using three simple steps. After you complete the three steps you can blow your nose flute!

(Therapist: Do steps A-C until mastery is achieved. Then you can start using the flute itself. Once the child can blow the flute five times in a row, you can assign this task for homework, omitting steps A-C.)

Instructions from:
Oral Placement Therapy for Speech Clarity and Feeding
by
Sara Rosenfeld-Johnson, M.S., CCC-SLP
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STEP A:

1. Place a small mirror under the child's nose, while he/she holds the mouth closed.
2. Talk about the fog that the nasal air flow creates on the mirror.
3. Repeat five times before moving to step B.

STEP B:

1. Place a small mirror under the child's nose, while he/she holds the mouth open.
2. Instruct the child to "sniff out" to make the "fog" on the surface of the mirror bigger.
3. Repeat five times before moving to step C.

STEP C:

1. Place a cotton ball on the surface of the mirror, close to the child's nose.
2. Instruct the child to "sniff" out in order to move the cotton ball over the mirror's edge.
3. Repeat five times before moving to the flute.

NOSE FLUTE:

1. Demonstrate the position and sound of the nose for the child by using your own
2. Place the upper portion of the flute under your nose.
3. Open your mouth and place the lower portion inside your lower lip.
4. Make sure there is a complete seal around your opened nose and mouth.
5. Exhale firmly through your nose, this is called a "sniff".
6. Repeat five times; rest and repeat flute sequence again three times for a total of 15 blows.

ORAL REST #2: Now that you know what it feels like to blow through your nose, let's practice it! First, make sure your lips are closed. Hold one finger under your nostrils and breathe in and out of your nose 20 times. Continue this exercise for 5-10 minutes. Think only about your breathing.

ORAL REST #3: Lip closure is a very important part of good rest posture. Let's blow our TalkTools® (Horn #2) harmonica and TalkTools® Horn #8 (see Horn Hierarchy on page 15). Continue working on the TalkTools® Horn Hierarchy until you complete Horn #12. All Horns should be completed by Lesson Seven.

ORAL REST #4: In order to practice more lip closure, let's review an important lip exercise. Put Vaseline or lip gloss on your lips, then rub them together. Do this exercise while reading a book or watching TV; this way, closing your lips becomes a habit.

ORAL REST #5: When our mouth is resting, we want a nice, relaxed jaw. Let's practice opening and closing the jaw very slowly so we can feel the difference. Open your jaw slowly and count to five in your head, then close your jaw slowly and count to five again. It helps to lightly touch where your top and bottom jaw meet, right in front of your ear lobes. Concentrate on relaxing the jaw and feeling the difference between open and closed. Repeat this 10 times.

ORAL REST #6: Now that we know what it feels like to have a closed jaw, place one mini marshmallow per side or one Cheerio® per side on your far back molars (both sides). Bite down softly and hold this position while counting to 60 in your head. Rest and repeat three times.

ORAL REST #7: We know all about what our nose, lips and teeth should be doing. Now it is time to add the tongue. Open your jaw. Hold your tongue tip to the SMILE Spot. Close your jaw. Hold this position while you count to 10. Rest and repeat. Each time you do it, see if you can hold it longer and longer. Work your way up to 50 seconds.

ORAL REST #8: Place a Cheerio® on your SMILE Spot. Place your tongue tip in the hole and hold it with your teeth closed. Concentrate on where your tongue is, because this is where your tongue should be all of the time when your mouth is resting. Everything is sleeping now except your tongue tip. Try this exercise while watching TV or reading a book. When you gather too much saliva, you may chew, swallow and start with a new Cheerio®. Do this for 30 minutes a day.

HOMEWORK PRACTICE CHART: ORAL REST POSTURE

Every day for the next week or so you will be working on your oral rest posture. Some of the exercises are done in a group and others are done while you are reading a book, listening to music, or watching TV. This helps make your new rest posture a habit. Follow the chart and place a smiley face in the box every time you practice! Your speech therapist has written in dates for you to follow.

GROUP #1: Do these exercises in order twice a day!

Rest 1														
Rest 2														
Rest 3														
Rest 5														
Rest 6														
Rest 7														

GROUP #2: Do each of these exercises once a day for 20-30 minutes while watching TV, reading, or listening to music!

Rest 4														
Rest 8														

LESSON FOUR
Lazy Tongue Buster

Our main goal in this lesson is to strengthen our tongue muscles so that we can work on the New Swallow. We're moving along just great. In this lesson the tongue is the Dancer and all of the other muscles are the Sleepers! It is very important to closely monitor the position of the jaw and head during these exercises to make certain that the dancing tongue is doing the work. This lesson will take several sessions to complete.

Note to Therapist: This lesson may take three to six weeks to complete. Assign no more than two sections or 6-8 exercises for homework each week. For example, you may assign exercises 6-11 and the Tongue-Up Words. Remember that the client must have mastered all levels of the TalkTools® Bite Block Program before initiating this lesson.

What you will need:

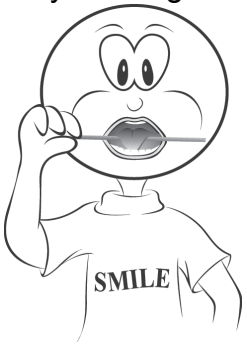
- Tongue depressors
- Whistle straw or drinking straw
- Lollipop
- Peanut butter, fluff or jelly
- TalkTools® Horns # 9-12

The lingual exercises that follow will target these goals:

- Tongue/Jaw Dissociation
- Tongue/Lip Dissociation
- Lingual Elongation (transverse)
- Lingual Retraction (hyoglossus, styloglossus)
- Lingual Lateralization (superior and inferior longitudinal)
- Lingual Elevation (superior longtiudinal)
- Back Tongue Side Spread (vertical palatoglossus)
- Lingual-Palatal Suction
- Lingual Coordination
- Establishing a Tongue Bowl for bolus management and swallowing (transverse,vertical)

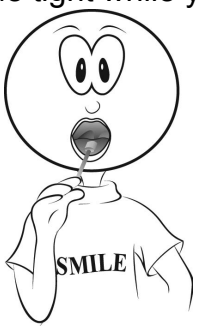
LINGUAL PROTRUSION:

TONGUE #1: We need to stick our tongue straight out without touching the lips and teeth, and with a "sleeping" jaw. Look in the mirror and stick out your tongue nice and straight and tight. If this is hard, use a "magic stick" (tongue depressor) under your tongue , to hold your tongue away from your lips and teeth. Try to remove it and hold your tongue in the same position. Repeat 10 times.



TONGUE #2: Look in the mirror. Stick out your tongue as you did in #1. Now let your tongue get floppy (it will probably rest on your bottom lip), then tighten it and watch it get skinny. Repeat this 10 times.

TONGUE #3: Stick out your tongue and use a small ball-shaped lollipop to "brush" the top of your tongue blade. Make sure you hold the tongue tight while you do this. Stroke 10 times. Rest and repeat five times.



LINGUAL RETRACTION:

TONGUE #4: Use the tongue depressor to hold your tongue tip down to the floor of your mouth (do not apply resistance just use the tool to guide the placement). Practice lifting the back of your tongue-up in little lifts. If needed, you can say "ah-ah-ah" to start if this is too difficult. Do this 20 times.

TONGUE #5: Use the tongue depressor to hold your tongue tip down once again. Now practice saying "cookoo." Repeat the word 20 times.

TONGUE #6: At this point you will start with TalkTools® Horn #9 and continue at the pace of the client until they master all horns up to #12. All horns should be mastered by Lesson Seven: The New Swallow.

LINGUAL LATERALIZATION:

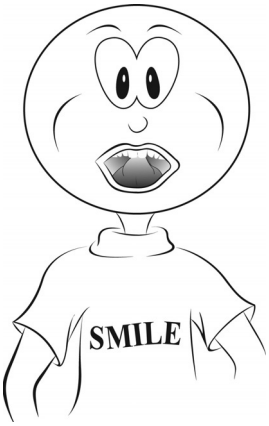
TONGUE #7: Place some peanut butter or other sticky substance on the bottom back molars. Use your tongue tip to lick the food off of your back teeth. Make sure only your tongue is dancing during this exercise. Do 10 licks on each side, alternating left and right each time.

TONGUE #8: Place the small ball-shaped lollipop on the inside of the right cheek. Use your tongue tip to lick the lollipop 10 times. Switch sides and repeat.

LINGUAL ELEVATION:

TONGUE #9: Place the whistle straw or drinking straw across the tongue so that your tongue and the straw form a "+" sign. Practice curling your tongue tip up towards the straw, and place your tongue tip to the Smile Spot. Do this 10 times. Rest and repeat three times for a total of 30 lifts. Your tongue should be inside of your mouth once elevated.

TONGUE #10: Place your tongue-up to the SMILE Spot. Hold it for 60 seconds with your jaw opened wide. Feel the stretch!



TONGUE #11: Stick out your tongue nice and straight (see #1). Now tap the tip of your tongue with the magic stick (tongue depressor) 10 times. Place your tongue to the SMILE Spot and hold for 10 seconds. Rest and repeat five times.

LINGUAL-PALATAL SUCTION:

TONGUE #12: Open your jaw and place your tongue tip to the SMILE Spot. Press your tongue tip tight and then release and you will hear a popping sound. Make sure your jaw is sleeping while you do this. Pop 20 times. Rest and repeat.

TONGUE #13: Open your jaw and place your tongue tip and midsection of the tongue blade against the hard palate. Now tighten your whole tongue and release. You will hear a clucking sound. Cluck 20 times. Rest and repeat.

LINGUAL COORDINATION:

Now we will do a specific series of exercises that will help us form the pattern of the New Swallow. The principles are:

1. Tongue tip to the SMILE Spot
2. Tongue blade to the hard palate
3. Velar elevation

The first set of exercises will help these movements in isolation. The final exercise, called “The Swallow Shuffle,” will help you practice the sequence of movements you will need for your New Swallow.

TONGUE #14: Place your tongue tip to the SMILE Spot. Now place your tongue tip behind the bottom teeth on the gum ridge. Do this up and down movement 20 times. Rest and repeat.

TONGUE #15: Place your tongue tip to the SMILE Spot and your tongue blade on the hard palate. Cluck 20 times quickly.

TONGUE#16: Stick your tongue straight out and then pull it way back in a smooth, controlled motion. Repeat 20 times. Next, repeat this exercise in a stop and go motion (stick out, stop, pull back, and stop). Repeat stop-and-go 20 times.

TONGUE #17: Get a cup of water. Try to gargle small amounts of water for 5-10 seconds. Keep your head slightly tilted with your nose pointed towards the sky. Spit out the water and repeat five times.

"The Swallow Shuffle"

For this exercise you will complete the following steps precisely in this order:

1. Tongue tip up and down (#14), five times
2. Tongue cluck (#13), five times
3. Back tongue lifts without the tongue depressor (#4), five times

Repeat this pattern 10 times with a brief rest period in between each trial.

Note to Therapist: Remember, the client must be able to complete all exercises in the lesson to 90% accuracy before moving on to the next lesson. If the client can do all of the exercises with the exception of one or two, reassign all of the exercises in this lesson for homework until the client can achieve the exercise. If this takes more than two weeks, the client is missing a prerequisite skill. Please refer to the Criteria and Assessment sections of this book, as well as *Oral Placement Therapy for Speech Clarity and Feeding* by Sara Rosenfeld-Johnson.

“Lazy Tongue Buster Articulation”

(Note to the therapist: Only correct placement and sound errors for the target phoneme. For example, if you are working on the /t/ word list and the child produces a w/r error, do not correct it. Only correct the /t/ errors.)

There are many tongue-up sounds that can help us practice our SMILE Spot placement. First let’s look in the mirror and practice these sounds, watching our tongue tip go to the SMILE Spot each time we produce:

“T” “D” “L” “N”

Try practicing these sounds paired with different vowels like:

ta te ti to tu
da de di do du
la le li lo lu
na ne ni no nu

Now let’s try some words that start with SMILE Spot sounds!

TONGUE-UP WORDS

target /t/	target /d/	target /n/	target /l/
tummy	dad	no	love
ten	dumb	not	light
ton	dud	near	lit
tell	dull	neat	lap
tip	dime	nickel	lamb
Tim	dam	nip	litter
toll	dare	nun	load
toe	dear	Ned	lonely
toad	dim	Nancy	liar
tour	dead	nab	lie
tingle	deal	nag	lip
tile	deem	net	lick
tin	den	none	lint
tick	dirt	nope	lug
Tina	dude	knob	lab
term	duel	note	lad
test	done	knock	leaf
time	dial	knoll	Lou
turtle	Dan	know	loose

BACK TONGUE SOUNDS

There are also sounds that help us practice back tongue elevation. They are the sounds /k/ and /g/. Let's practice some of these words! The /k/ and /g/ are in all positions of the words.

Targets: /k/ and /g/

Kid	kick	crumbs	black
gag	grab	gunk	coo-coo
calm	wacky	speckle	goo
glue	guts	crackle	gawk
gum	go	Carrie	Gus
guy	girl	computer	bag
rag	whack	attack	pack
tag	weak	meek	bleak
fog	hog	pig	wig
dig	kid	Kyle	piglet
lag	crackle	grape	cried
truck	tag	tug	plug
bug	rug	pickle	tickle
wrinkle	packed	stack	dog
cat	carrot	cattle	cow

FRONT-TO-BACK WORDS

Now we will practice words that bring our tongue from front to back! Some of the "words" are silly, so don't worry about what they mean. Concentrate on where your tongue is being placed.

tug	tic	dig
lug	lick	nuk
nag	neck	dog
deck	tog	teak
teeg	dug	nike
leek	log	like
loog	leg	doog
toog	lek	deg

HOMEWORK PRACTICE CHART: LAZY TONGUE BUSTERS

This lesson will take several weeks of practice in order to get your tongue ready to start swallowing correctly. Your therapist will assign exercises by circling the items you will need to practice, and by writing the dates in for you. You will practice the assigned exercises twice a day. Put a smiley face each time you practice.

LINGUAL PROTRUSION

Date														
1														
2														
3														

LINGUAL RETRACTION

Date														
4														
5														
6														

LINGUAL LATERALIZATION

Date														
7														
8														

LINGUAL ELEVATION

Date														
9														
10														
11														

LINGUAL-PALATAL SUCTION

Date														
12														
13														

HOMEWORK PRACTICE CHART: LAZY TONGUE BUSTERS

LINGUAL COORDINATION

Date														
14														
15														
16														
17														

THE SWALLOW SHUFFLE

Date														
Shuffle														

ARTICULATION DRILLS

Date														
up														
back														
front-to-back														

LESSON FIVE
Oral Habits

Now that we have worked on strength and coordination in our cheeks, lips and tongue, we want to make sure we do not have any bad habits that will interfere with our New Swallow and tongue position.

HABIT #1: Look in the mirror and notice the position of your lips and tongue. Is your mouth open? Is your tongue outside of the mouth? Is your tongue touching your teeth? Uh-oh! We need to work on good rest posture.

- Put your tongue to the SMILE Spot.
- Close your teeth so that your back molars meet.
- Close your lips.

Now practice this rest position for 15 minutes while watching TV or reading a book. This will be done three times a day.

HABIT #2: Placing objects in the mouth and other poor oral habits can hamper therapy progress. Give yourself a sad face if you:

- bite your nails
- bite your drinking straw
- suck your thumb
- lick your lips to the point that they are chapped and cracked
- chew on pencils
- rest your top teeth on your bottom lip

Instead of these poor oral habits, why not try

- chewing sugarless gum, rather than biting or licking your lips
- wearing clear nail polish and reapplying it daily to discourage nail biting
- sucking on hard candy instead of chewing pencils or other inappropriate objects
- having your parents check you at night to make sure you are not sucking your thumb (if this habit
- persists consider using a regimented program)
- wearing lip gloss or Vaseline® for awareness of lip closure
- keeping a circular candy that has a hole in the middle in your mouth (hold the candy to the magic spot so you are aware of tongue placement)

On the homework page you will see a chart of the poor oral habits. Be honest with yourself and check the grid each time you catch yourself doing one of them. You can also check off each time you remember to do the replacement habit!

HOMEWORK PRACTICE CHART: ORAL-HABITS

Your speech therapist has discussed oral habits with you. Use the chart to practice Habit #1 three times a day, and to chart your oral habits. Your therapist has written in the dates for you.

Habit #1							
Habit #2							
Habit #3							

Poor Oral Habits

lick lips							
bite bottom lip							
suck thumb							
bite fingernails							
leave mouth open							
chew on pencils							
bite on straw							

Good Oral Habits

chew gum							
wear lip gloss							
candy pressed to the SMILE Spot							
closed lips							
stopped biting nails							

LESSON SIX
Review #1

We have taken the first steps to correcting our swallow. In order to make sure we are ready to begin working on the swallow, we need to review some of the basic exercises over the next week. Use the practice chart and review exercises from Lessons One to Five in order to complete these practice charts. Each day you are assigned five exercises plus a word list to complete. You will do the exercises twice a day.

Note to Therapist: You can use this practice chart at any time to maintain strength and coordination!

DAY ONE

CHEEK #1: Massage your cheeks with the wet washcloth. First use it warm and rub each cheek 20 times, and then try cold on each cheek 20 times. This will help wake up those tired cheek muscles! LIPS #1: Squeeze your lips together as tightly as you can. Hide them away from sight. Count to 10 in your head and rest. Repeat this five times.

LIPS #2: Squeeze your lips together and let them "pop." Make this sound 10 times. Rest and repeat. Now try this with some sticky stuff, like peanut butter, on your lips. Feel the difference!

TONGUE #1: We need to stick our tongue straight out without touching the lips and teeth, and with a "sleeping" jaw. Look in the mirror and stick out your tongue nice and straight and tight. If this is hard, use a "magic stick" (tongue depressor), under your tongue to hold your tongue away from your lips and teeth. Try to remove it and hold your tongue in the same position. Repeat 10 times.

TONGUE #2: Look in the mirror. Stick out your tongue as in #1. Now let your tongue get floppy (probably resting on your bottom lip), then tighten it and watch it get skinny. Repeat this 10 times.

/B/ Bombardment

/b/ initial	/b/ medial	/b/ final
ball	lullaby	*cab*
bam	baseball	slob
bat	gobble	rob
bar	celebrate	cob
bet	racquetball	web
bell	submarine	Abe
bum	tuba	gob
bill	acrobat	blab
bit	cabinet	robe
beat	table	dab
beam	zebra	grab
beak	lobster	lab
bun	turbo	vibe

DAY TWO

CHEEK #2: Bite your teeth together and close your lips. Breathe in through your nose and blow up your cheeks. Look in the mirror. You should look like a chipmunk. If you can't do this, put some water in your mouth, swish it around. Now try it again without the water. Repeat this exercise 10 times.

CHEEK #3: Put on your gloves. Now, without water in your mouth:

1. Place two gloved fingers inside your mouth against your right cheek.
2. Press your finger into the inside of your cheek.
3. Try to push your cheek against your finger. Count to five. Do three times on each side.

LIPS #3: Put lip gloss or Vaseline® on your lips. Rub them together. Concentrate on your lips being closed. Do this activity for 60 seconds. Rest and repeat three times.

LIPS #4: Sit in a chair with good back support. Your feet should be flat on the floor or supported by an object, like a box. Your therapist or helper will hold TalkTools® Horn # 2, the harmonica, at a 90 degree angle, and you will blow it 25 times. Slide the harmonica back and forth but make sure you keep your head and jaw sleeping! Remember, the lips are the Dancers here.

TONGUE #3: Stick out your tongue and use a small ball-shaped lollipop to "brush" the top of your tongue blade. Make sure you hold the tongue tight while you do this. Stroke 10 times. Rest and repeat five times.

Practice with /p/

/p/ intial	/p/ medial	/p/ final
pal	laptop	wipe
punch	puppy	cap
pants	diaper	cop
Paul	depot	rap
pill	toothpick	gripe
pot	pompoms	weep
pail	tapping	reap
pug	wrapping	tip
pit	carpet	top
pick	caterpillar	mop
pole	leopard	stop
poke	serpent	cup
put	paper	rip
poem	computer	grip

DAY THREE

CHEEK #4: Take out a small, ball-shaped lollipop and a toothbrush. Practice rubbing these items on the insides of your cheeks, both sides, 10 times each side with each item!

LIPS #5: Pucker your lips tight into a fishy face. Hold for 10 seconds. Release and repeat five times.

LIPS #6: Blow kisses. Make sure your head, neck and jaw are still. Make sure you hear that "kissy" sound. Blow 20 kisses. Rest and repeat this exercise three times.

LIPS #7: Use the bubble tube, which contains non-toxic bubbles. Hold the wand directly in front of the lips, one inch away. Round the lips tight and say a whispered "HOOOOO". Watch a big beautiful bubble form. Blow five bubbles using this technique.

TONGUE #7: Place some peanut butter or other sticky substance on the bottom back molars. Use your tongue tip to lick the food off your back teeth. Make sure only your tongue is dancing during this exercise. Do 10 licks on each side, alternating each time, left - right.

Tongue-up Words

target /t/	target /d/	target /n/	target /l/
tummy	dad	no	love
ten	dumb	not	light
ton	dud	near	lit
tell	dull	neat	lap
tip	dime	nickel	lamb
Tim	dam	nip	litter
toll	dare	nun	load
toe	dear	Ned	lonely
toad	dim	Nancy	liar
tour	dead	nab	lie
tingle	deal	nag	lip
tile	deem	net	lick
tin	den	none	lint
tick	dirt	nope	lug
Tina	dude	knob	lab
term	duel	note	lad
test	done	knock	leaf
time	dial	knoll	Lou
turtle	Dan	know	loose

DAY FOUR

LIPS #8: We will now begin TalkTools® Horn #7. Use Horn #7 as directed in the Horn Hierarchy on page 15.

LIPS #9: Pucker your lips tightly and feel the pull. Now stretch into a smile. Do this slowly so that you feel each movement. The jaw is the Sleeper in this exercise and must remain still. Repeat 10 times.

LIPS #10: Place mini marshmallows between your top and bottom molars on either side. Bite down gently, and smile nice and wide. Place a Toothette® on your bottom lip and squeeze with the top lip. Keep your lips flat, in the SMILE posture. Repeat five times.

TONGUE #8: Place the small, ball-shaped lollipop on the inside of the right cheek. Use your tongue tip to lick the lollipop 10 times. Switch sides and repeat.

TONGUE #4: Use the tongue depressor to hold your tongue tip down to the floor of your mouth. Practice lifting the back of your tongue up in little lifts. If needed, you can say "ah-ah-ah" to start if this is too difficult. Do this 20 times.

Targets: /k/ and /g/

kid	kick	crumbs	black
gag	grab	gunk	coo-coo
calm	wacky	speckle	goo
glue	guts	crackle	gawk
gum	go	Carrie	Gus
guy	girl	computer	bag
rag	whack	attack	pack
tag	weak	meek	bleak
fog	hog	pig	wig
dig	kid	Kyle	piglet
lag	crackle	grape	cried
truck	tag	tug	plug
bug	rug	pickle	tickle
wrinkle	packed	stack	dog
cat	carrot	cattle	cow

DAY FIVE

LIPS #10: Place mini marshmallows between your top and bottom molars on either side. Bite down gently, and smile nice and wide. Place a Toothette® on your bottom lip and squeeze with the top lip. Keep your lips flat in the smile posture. Repeat five times.

LIPS #11: Pucker your lips and place your index fingers on either side. Try and pull the pucker apart with your fingers, but resist with your lips. Feel those muscles working! Repeat five times.

TONGUE #5: Use the tongue depressor to hold your tongue tip down once again. Now practice saying “coo-coo.” Repeat the word 20 times.

TONGUE #6: At this point you will start with Horn #9 and continue at your own pace until you master all horns up to #12. All horns should be mastered by Lesson Seven, The New Swallow.

TONGUE #9: Place the straw across your tongue so that your tongue and the straw form a “+” sign. Practice curling your tongue tip up, toward the straw. Do this 10 times. Rest and repeat three times for a total of 30 lifts.

Front-to-Back Words

tug	tic	dig
lug	lick	nuk
nag	neck	dog
deck	tog	teak
teeg	dug	nike
leek	log	like
loog	leg	doog
toog	lek	deg

DAY SIX

LIPS #12: Place the tip of your gloved finger on the inside of your top lip on the gum ridge. Tighten your lip against your finger. Go all the way around your top and bottom lips, stopping and tightening until you have gone all the way around.

TONGUE #10: Place your tongue up to the SMILE Spot. Hold it for 60 seconds with your jaw opened wide. Feel the stretch!

TONGUE #11: Stick out your tongue nice and straight (see #1). Now tap the tip of your tongue with the "magic stick" (tongue depressor) 10 times. Place your tongue to the SMILE Spot and hold for 10 seconds. Rest and repeat five times.

ORAL REST #1: The Nose Flute: The first step in good oral rest posture is breathing through the nose, not the mouth. A nose flute can be used to establish volitional nasal airflow. Use a nose flute to practice the feeling of air coming through your nose. First you must learn how air can come through your nose using three simple steps; after you complete them you can blow your nose flute!

ORAL REST #2: Now that you know what it feels like to blow through your nose, let's practice it! First, make sure your lips are closed. Hold one finger under your nostrils and breathe in and out of your nose 20 times. Continue this exercise for 5-10 minutes. Think only about your breathing.

Tongue Twisters:

1. Where are you going with Wendy and Wally?
2. That woman is all wet from the water slide at the water park in Washington.
3. The wall is wet with wacky yellow paint.
4. Wanda the waitress will wait on tables on Wednesday.
5. Do you want to wait until we can eat watermelon?

DAY SEVEN

TONGUE #12: Open your jaw and place your tongue tip to the SMILE Spot. Press your tongue tip tight, then release, and you will hear a popping sound. Make sure your jaw is sleeping while you do this. Pop 20 times. Rest and repeat.

TONGUE #13: Open your jaw and place your tongue tip and midsection of the tongue blade against the hard palate. Now tighten your whole tongue and release. You will hear a clucking sound. Cluck 20 times. Rest and repeat.

TONGUE #14: Place your tongue tip to the SMILE Spot. Now place your tongue tip behind the bottom teeth on the gum ridge. Do this up-and-down movement 20 times. Rest and repeat.

ORAL REST #3: Lip closure is a very important part of good rest posture. Let's blow our harmonica and Horn #8 in order to work on lip closure (see Horn Hierarchy on page 15). Continue working on the Horn Hierarchy until you complete Horn #12. All Horns should be completed by Lesson Seven.

ORAL REST #5: When our mouth is resting, we want a nice relaxed jaw. Let's practice opening and closing the jaw very slowly so we can feel the difference. Open your jaw slowly and count to five in your head, then close your jaw slowly and count to five again. It helps to lightly touch where your top and bottom jaw meet right in front of your ear lobes. Concentrate on relaxing the jaw and feeling the difference between open and closed. Repeat this 10 times.

More Lip Artic Practice!

Will you make me peanut butter pancakes please?
Mary and Paul are my pals from Baltimore, Maryland.
May I watch my movie on Monday?
Billy and Bob went to the beach and got wet from the waves.
Wanda the whale wades in the water and blows water out of her blowhole.
Bob munches on potato pancakes, watermelon, and banana bread.
Make a bulletin board with pretty paper and many pictures.
I woke up on Wednesday and went for a walk with Wendy.
Patty put peanuts in the blender and made peanut butter.
We went away for the weekend to Washington.
Where do you want to go to watch the movie?
Paul took me to a baseball game in Brooklyn.

HOMEWORK PRACTICE CHART: REVIEW

Each day you will be assigned a different group of exercises to practice. Write the date in the space next to the assigned day. You will practice the assigned exercises two times a day. Put a smiley face ☺ in each exercise you practice.

DAY ONE:	**DATE:**	
Cheek #1		
Lips #1		
Lips #2		
Tongue #1		
Tongue #2		
/b/ words		
DAY TWO:	**DATE:**	
Cheek #2		
Cheek #3		
Lips #3		
Lips #4		
Tongue #3		
/p/ words		
DAY THREE:	**DATE:**	
Cheek #4		
Lips #5		
Lips #6		
Lips #7		
Tongue #7		
“Tongue-up” word list		
DAY FOUR:	**DATE:**	
Lips #8		
Lips #9		
Lips #10		
Tongue #8		
Tongue #4		
“Tongue-back” word list		

HOMEWORK PRACTICE CHART: REVIEW

DAY FIVE:	**DATE:**	
Lips #10		
Lips #11		
Tongue #5		
Tongue #6		
Tongue #9		
“Front-to-Back” word list		
DAY SIX:	**DATE:**	
Lips #12		
Tongue #10		
Tongue #11		
Oral Rest #1		
Oral Rest #2		
More Artic-Tongue Twisters		
DAY SEVEN:	**DATE:**	
Tongue #12		
Tongue #13		
Tongue #14		
Oral Rest #3		
Oral Rest #5		
More Lip Artic Practice		

LESSON SEVEN
The New Swallow

Wow! You have been working very hard and now you are ready to learn the New Swallow. For this lesson you will practice the New Swallow with an open jaw so that your therapist and helper can see exactly how you are swallowing. Let's review the steps to practice!

(Note to the therapist: The client must be able to explain the steps to the New Swallow and be able to do SWALLOW #2: Tongue Cup before they practice the New Swallow at home. If necessary, you can have the client practice the Tongue Cup for homework before executing the swallow. Once Swallow #2 is achieved, assign #3 for homework even if they cannot do it properly in therapy. Sometimes the client will achieve the New Swallow at home after practicing. You may also assign Lesson Six simultaneously with Lesson Seven in order to maintain strength and coordination.)

For this lesson you will need:

- 8-16 ounces of cold water
- two cups
- TalkTools® Straw #4 (uncut)
- a bib or smock, if desired
- mirror

SWALLOW #1: Let's learn correct mouth positions for the swallow.

"The Dancers": Tongue and Soft Palate
"The Sleepers": Jaw and Lips

1. Open your jaw
2. Tongue to the SMILE Spot
3. Slurp all mouth contents to midsection of the tongue - "The Tongue Cup!"
4. Think about your tongue Tip-Middle-Back
5. Swallow! (without closing your lips or teeth)

Study this and be able to say it without looking. Know the Dancers and Sleepers!

SWALLOW #2: Tongue Cup. Now we will learn to hold little mouthfuls of water or saliva in the mid- section of the tongue. Let's call this a "Tongue Cup." Just like you can hold liquid in a cup, you can hold liquid with your tongue. Use TalkTools® Straw #4 to take a very small amount of water. Now, put your tongue to the SMILE Spot and trap that water with your Tongue Cup! Hold for a count of five and spit it out in an empty cup (don't swallow it because we are not ready yet). Repeat this 20 times.

SWALLOW #3: New Swallow. Since we learned to trap that water with our "Tongue Cup," we are now ready to swallow. Get in front of the mirror. Review the steps in Swallow #1 out loud. Take a very tiny sip of water. Now get ready to swallow ...1 ...2 ...3 ...4 ...go! How did it feel? Did your tongue push against your teeth? Did your lips or jaw move? You must practice this until you can do it 100 % correctly. You'll do this exercise three times a day, with 4-6 ounces of water. That should be 20 swallows a practice session. Chart your swallows using the Swallow Monitor on the Homework Practice Charts.

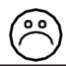
HOMEWORK PRACTICE CHARTS: THE NEW SWALLOW

Your therapist will assign either the Tongue Cup or New Swallow for homework. Do only the exercise that is circled by your therapist. Practice the assigned exercise three times a day. You'll do this exercise with 4-6 ounces of water. That should be 20 trials a practice session. Your therapist has written in the dates to practice. You should have three checks for each day of the assigned exercise by the end of the week.

Before you swallow, say the steps for the New Swallow out loud at each practice session!

DATE																					
Tongue Cup																					
New Swallow																					

You will use the Swallow Monitor one time a day to self-monitor whether you had a smile swallow or a sad swallow. When you use your New Swallow draw a smiley face. When you use an old swallow, draw a sad face.

SWALLOW MONITOR:  **= A New Swallow**  **= an old habit swallow**

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

LESSON EIGHT
Chew, Review and Swallow!

PART 1: CHEW

Now that we have learned the New Swallow, we must learn to chew properly and form a ball of food, called a "bolus," in the middle of our tongue. You will find that some foods are easier to chew than others. For this lesson we will use Lori Overland's Chewing Hierarchy.

The goal of the hierarchy is to teach a graded, lateral chew with tongue-tip dissociation and movement of the bolus across midline. Move to the next level in the hierarchy when the child can independently demonstrate the skill you are working on with a stable jaw and dissociated tongue movement. This lesson may take several sessions to complete.

For the Chewing Hierarchy component of this lesson you will need:

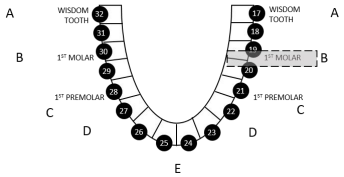
- A red or yellow Chewy Tube® (depending on the size of the oral cavity)
- A pretzel stick, carrot stick or crunchy Cheeto® (crunchy strip)
- A licorice stick (chewy strip)
- A strip of meat (i.e., a long, thin chicken nugget, strip of steak or hot dog*)

Note to Therapist: You will need to start each level of the hierarchy with the Chewy Tube®. When that level is mastered with the Chewy Tube®, move to the crunchy texture on the same level. When the child can successfully chew the crunchy texture at the designated level, move to the chewy strip of food. When the client can successfully chew the chewy texture, move to meat. You are not focusing on swallowing at this point, just chewing. For homework, you will only assign the level on the hierarchy that the client independently demonstrated in the therapy session. Be sure to assign the exercises in Part 2, "Review and Swallow," for homework in conjunction with the Chewing Hierarchy. Continue this lesson until the Chewing Hierarchy is completed.

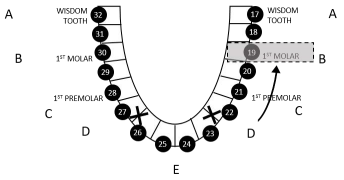
** For vegetarians: Meats can be omitted for those clients who are vegetarians; the difficulty of chewing and swallowing meats is related to the dryness/texture. Vegetarians may not have a comparable food item; therefore they would just work on crunchy, and chewy items.*

CHEWING HIERARCHY

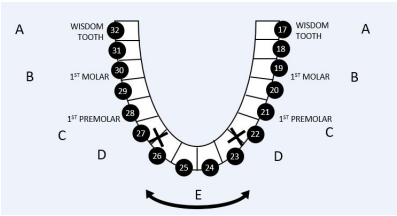
The goal of this hierarchy is to teach a graded, lateral chew with tongue-tip dissociation and movement across midline. Use a thin bolus such as a “veggie stick,” thin pretzel, or crunchy Cheeto®. Move to the next level in the hierarchy when the child can independently demonstrate the skill at the level you’re working on with a stable jaw and dissociated tongue movement.

1. 

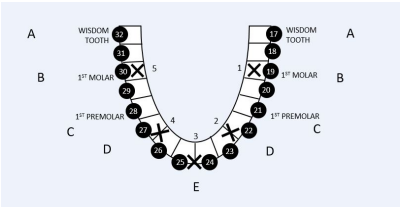
Present a stick-shaped bolus perpendicular to the lateral molar ridge. Support the child’s jaw, if necessary, to prevent jutting. Encourage 2-3 repetitive bites. Alternate sides. Repeat 4-5 times, as the child will tolerate. This will facilitate a graded lateral chew.

2. 

Present a stick-shaped bolus at the lateral incisor. Support the child’s jaw, if necessary, to prevent jutting or sliding. Quickly move the bolus perpendicular to the lateral molar ridge. Alternate sides. This should facilitate tongue-tip pointing and movement of the bolus from lateral incisor to the molar ridge.

3. 

Present a stick-shaped bolus on the lateral incisor. Support the client’s jaw to prevent jutting or sliding if necessary. Encourage the client to bite. Quickly present the bolus to the opposite lateral incisor. Alternate the side on which you start. This will encourage tongue-tip pointing and tongue lateralization across midline.

4. 

Five Point Bite: Present the stick-shaped bolus perpendicular to the lateral molar ridge. Support the child’s jaw, if necessary, to prevent jutting or sliding. Move the bolus around midline to the opposite molar ridge as marked. Make sure the child takes small graded bites. This will encourage tongue lateralization across midline.

HOMEWORK PRACTICE CHART: CHEWING

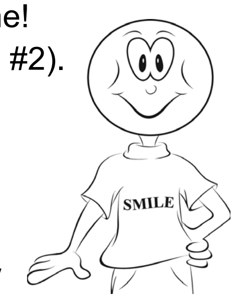
Your therapist will assign chewing exercises for homework based on the level you mastered in your speech therapy session. At your level, you must chew three types of food textures each day, just like you did in your therapy session. You will need a crunchy strip of food (like a pretzel), a chewy food (licorice stick) and a strip of meat (if applicable). Only practice the items circled by your therapist.

	Chewing #1			Chewing #2		
Dates	**Crunchy**	**Chewy**	**Meat**	**Crunchy**	**Chewy**	**Meat**

	Chewing #1			Chewing #2		
Dates	**Crunchy**	**Chewy**	**Meat**	**Crunchy**	**Chewy**	**Meat**

PART 2: REVIEW and SWALLOW

While we are learning to chew, let's not forget about the New Swallow! For this lesson, you will review Lesson Seven, Swallow #2 (this time with TalkTools® Straw #5) and Swallow #3 (also with TalkTools® Straw #5). This is a great way to build muscle strength for speech while you are practicing your swallows. Use the practice charts below to monitor your swallows at home!
Start over time to close the mouth in a more natural position (jaw height level #2).



SWALLOW MONITOR: ☺ = A New Swallow ☹ = An Old Habit Swallow

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

LESSON NINE
Straw Drinking Fun

In previous lessons we used the TalkTools® Straw Kit to practice swallows in isolation, meaning that we took one step at a time. In this lesson we will practice drinking liquids through TalkTools® Straws #5-7 with our New Swallow. Drinking through these straws will help keep the jaw stable so that we can focus on tongue tip elevation and tongue retraction for our New Swallow. You may use any beverage desired. Carbonated beverages are especially helpful because the bubbles give our tongues more information. A really good recipe to help locate the liquid on your tongue is "Swallow Soda!"

At this point in your swallowing program you will do all your drinking through a therapeutic straw, and you will only be allowed one eight-ounce glass of liquid with meals to ensure that you are swallowing liquids correctly. You may drink as much as you like before and after meals; however, you may not have more than eight ounces with meals.

Refer to the TalkTools® Straw Hierarchy in Appendix F for more information.

Recipe for Swallow Soda:

- four ounces of lemonade, citrus punch or cranberry juice
- two ounces of seltzer water or club soda
- four ice cubes

Put ice in a glass, pour in juice and soda water. Do not stir.

(If the child does not like the flavor of this mixture, you may use any liquid of your choice, as long as it is six ounces.)

Now that you have your special soda and know how to use the straws, let's start practicing the New Swallow with continuous drinking! Remember the jaw should be in a more natural position by this point in time.

STRAW #1: Make sure you are sitting on a chair with good back support, and that your feet touch the floor. If they do not touch the floor, support them with a box or other sturdy object. *Hold the cup of Swallow Soda near your breastbone so that TalkTools® Straw #5 goes into your mouth easily, between your lips without having to tilt your head forward. Once this is accomplished you may take a sip through the straw and swallow it with the New Swallow. Do this slowly, one sip at a time, leaving only 3-5 seconds between each swallow. You should take your lips off of the straw each time you swallow to make sure you are in the correct swallow position. Make sure your head is up and you are not biting the straw. Do 10 swallows with TalkTools® Straw #5. This is called "Swallow-Rest-Swallow Drinking". Rest and repeat until all the liquid is gone. You will continue this exercise right up the straw hierarchy (#5,6,7). You will use the Straw assigned by your therapist for all drinking.

STRAW #2: Repeat all the directions in the exercise above; however, we will make it more difficult by removing the 2-3 second rest period between swallows. This is called "Continuous Drinking." You will not take your lips off the straw while drinking. Start with TalkTools® Straw #5 and work all the way up to TalkTools® Straw #7 on the hierarchy. Your therapist will tell you which straw to use. Drink two ounces at a time. Stop and rest for one minute. Repeat this pattern until you have completed drinking the entire glass.

HOMEWORK PRACTICE CHARTS: STRAW DRINKING

These charts are separated by Rest Swallows (Straw #1) and Continuous Swallows (Straw #2). You will need six ounces of cold liquid (preferably Swallow Soda) for each chart to be completed. Your therapist will write which Straw you should be using to complete the lesson. Remember that you should use your designated straw all day long; however, you must chart one six-ounce glass of liquid (Swallow Soda) once a day in order to learn self-monitoring. Put a sad face in the box each time you use your old swallow. Count how many swallows you do in total and write it in the "# of Swallows" box at the end of the chart. Your parents should help you.

DATES	USE STRAW #	# of Swallows

STRAW #2 / Continuous Drinking

DATES	USE STRAW #	# of Swallows

LESSON TEN
Swallowing Solids

We are now ready to swallow solids. First we must think about the textures of foods, because some foods are easier to swallow than others. Then we must discuss the start position, or the place where you want all the chewed food (the bolus) to be before you swallow it. You need to collect the food and put it on the top of your tongue, right behind the tip.

Here is a list of the three food categories we will work with, and examples of foods you can choose from:

Smooth Foods	Crunchy Foods	Challenge Foods
pudding	pretzels	sandwiches
ice cream	potato chips	meats
yogurt	carrot/ celery sticks	pizza
apple sauce	cheese doodles	pasta with sauce
tapioca	crackers	macaroni and cheese
pureed bananas	hard cookies	chocolate bar
cream of wheat/ oatmeal	breadsticks	salad
mashed potatoes	dry cereal	
creamed spinach	bagel chips	

The smooth foods are the easiest because you can put them right on the top of your tongue (Start Spot), trap them like a liquid, and swallow. The crunchy foods are harder because you must chew them correctly (as we learned in Lori Overland's Chewing Hierarchy), then move the bolus to the Start Spot before swallowing. Finally, the challenge foods are the hardest because of multi-textures and the way in which these foods spread across the mouth.

We will do 10 swallows in a row for each type of food. It can be done at mealtime or as a snack.

We will practice swallowing food three times a day. For this lesson, we swallow one type of food at a time. For example, if you plan to do swallows with pretzels first, you will chart 10 swallows of pretzels. At dinner you can chart swallowing mashed potatoes, and when you are finished you can then chart swallows with meat (if applicable).

The general guidelines are:

1. Open your mouth and place the food with a fork or spoon as follows:

- Smooth Foods: on the Start Spot
- Crunchy Foods: on the back molar ridge
- Challenge Foods: on the back molar ridge

2. If a crunchy or challenge food, chew the food as taught in Lori Overland's Chewing Hierarchy. Gather the food up with your tongue to form a ball on the Start Spot.

3. Put your tongue to the SMILE Spot, keep the jaw still and initiate a swallow. Repeat up to three times if food remains in your mouth.

4. Do not use liquids to wash down food. Remember to drink before or after your practice swallows.

5. You may want to try this in front of a mirror.

To make sure you understand this procedure, we will practice charting foods in speech today!

Note to Therapist: While introducing all three food types is usually most natural and time effective, some children will need more work on smooth foods before they can handle crunchy and textured foods. In some cases, children may do better with the crunchy foods because they provide more sensory feedback as to where the food is located in the mouth. You may decide to focus on one food type for an entire week and introduce a new type the following session. This is acceptable in this program. Use the Solid Swallow charts to designate food types for the child.

HOMEWORK PRACTICE CHART: SWALLOWING SOLIDS

Your therapist will designate what types of food he or she would like you to swallow this week. Only complete the food types that are circled by your therapist. Write in the food choices you have made to complete your exercises, then keep track of your 10 swallows and how well you are doing. Put a smiley face for a good swallow and a sad face for a swallow that has any of our old swallow traits as listed below:

- Head tilts back or front
- Tongue slides in between your teeth, down, or out of your mouth
- It takes more than three swallows to get the food down

Date	Food	Your Choice	1	2	3	4	5	6	7	8	9	10
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											
	smooth											
	crunchy											
	challenge											

LESSON ELEVEN
SMILE Swallowing and Speaking

You have now learned the New Swallow with liquids and solid foods. It is time to make the New Swallow a habit. To do this you must really concentrate on the way you swallow all foods and drinks. You must even think about the way in which you swallow saliva.

Before each meal, we will do warm-up exercises to get the mouth ready for our SMILE Swallow. This will include:
10 Tongue Pops (Lesson Four/#12)
10 Swallow Shuffles (Lesson Four)
5 Isolated Swallows (Lesson Seven/#2, with or without a liquid)

Certain speech sounds, like the ones we practiced in our tongue lessons, also help our tongue go to the SMILE Spot. Therefore, we will also review SMILE Spot sounds and tongue twisters in this lesson.

We will be charting our meals and using visual reminders to help us each day.

SMILE #1: Each day we will chart three eight-ounce glasses of liquid, which you will drink from a cup. When we drink from a cup we are working against gravity, because we have to tilt our head forward to a certain degree. We need to make sure that you are keeping the head straight up. Make sure your lips, not your teeth or tongue, are on the cup/glass brim. Sip the liquid and think about your SMILE Spot and your New Swallow. Take one sip at a time until you feel comfortable with continuous drinking. You will chart cup drinking three times a day. This can be done independently, or at mealtime. A raised lid coffee cup can help!

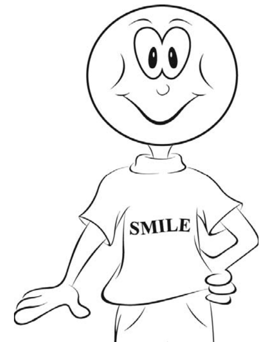
SMILE #2: Mealtime will now be devoted to the SMILE Swallow. In therapy, you will color a placemat called “SMILE HELPERS” (found on page 78). Your therapist or parents will laminate this so that you can use it each time you eat.

SMILE #3: At each meal, you will choose two food items to chart. You can now eat mixed textures. For example, take a bite of meat (if applicable), chart the swallow and then do a bite of mashed potatoes, etc. Your meal charts should be next to you at each meal. This will remind you to keep working toward the SMILE Swallow.

SMILE #4: Articulation practice lists will help exercise your tongue muscles. Your word lists will be selected based on your speech skills. There are four sections:
/s/ and /z/; /t/ and /d/; /l/; /ʃ/ and /tʃ/.

HOMEWORK PRACTICE CHARTS: SMILE SWALLOWING

LIQUIDS: Chart three eight-ounce glasses of liquid each day, which you drink right from the cup or glass. You may do these charts at any time of the day, including mealtime. Put a smiley face for every SMILE swallow and a sad face for every old habit swallow. You will chart up to 20 swallows, depending on the amount of liquid you can tolerate.



Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

HOMEWORK PRACTICE CHARTS: MEALTIME / MIXING TEXTURES

You will chart meals three times a day. Choose two foods to chart at each meal. Write in your food choices below the name of the meal. Put a smiley face ☺ for a correct swallow and a sad face ☹ for a tongue thrust swallow.

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

HOMEWORK PRACTICE CHARTS: MEALTIME / MIXING TEXTURES

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Breakfast	1	2	3	4	5	6	7	8	9	10
Lunch	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Dinner	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**

Speaking with a Smile

Note to Therapist: Some children with myofunctional disorders have subsequent phonological disorders, and some do not. If your client has a severe articulation disorder, it is suggested that you combine activities from *Oral Placement Therapy for Speech Clarity and Feeding* with your traditional therapeutic methods. Since tongue elevation has been targeted in previous lessons, you may now start working on any articulation errors while continuing with this program. These lists are for drills with children with placement errors secondary to the tongue thrust pattern. You may combine your own therapeutic methods when using these sheets.

Placement: Tongue Retraction/Tip Elevation or Depression

Practice these words and tongue thrust busters three times each.

Initial	Medial	Final	Blends
silly	weasel	office	nest
some	tassel	kiss	rest
sit	baseball	buzz	straw
suck	blessing	does	steam
so	kissing	was	speak
same	pleasing	bliss	stuck
sat	fuzzy	rose	sticky
sick	whistle	pose	skunk
simple	risen	nose	nasty
say	race car	bass	desk
sun	pencil	shoes	hairspray
summer	bracelet	address	switch
celery	website	mouse	basket
sandwich	eraser	pause	screen

Thruster Buster Tongue Twisters!

1. Sing seven songs about sunny summer Sundays.
2. The mouse ran into the scary house and scared all the kids away.
3. I stacked pencils, erasers and markers on my school supply shelf above the sink.
4. Dolphins, sturgeon, salmon, oysters, clams and sea bass all swim in the salty sea.
5. The race car sped right past the stop sign, and the police sergeant put on his siren.
6. I made a super salad with seafood, celery, salt, basil and dressing.
7. I got dressed and put on my shoes, socks, pants, sweater and baseball cap.
8. Sam stayed inside on Saturday because he had a stomach virus.
9. I like sports such as basketball, soccer, baseball, swimming and tennis.
10. Steve celebrated his seventh birthday with pizza and ice cream cake.

/t/ and /d/

Placement: Tongue Retraction with Blade Elevation

Initial /t/	Medial /t/	Final /t/	Blends /t/
toe	retail	meet	trot
time	bottle	feet	trout
team	metal	cat	trolley
to	detail	bat	burnt
tie	Peter	hat	true
tea	heater	seat	court
tell	footprint	foot	trouble
toad	Utah	suit	trust
temp	octagon	root	track
tease	sweater	boot	trap
telephone	letter	cute	fort
tile	better	rate	treat
test	meeting	state	belt
teddy	restful	note	tremble
tool	water	boat	gelt

Initial /d/	Medial /d/	Final /d/	Blends /d/
dog	waddle	bad	drum
done	window	had	drink
dud	wilder	plaid	dry
dip	daddle	red	bald
dam	Maddy	bed	held
duck	puddle	head	drip
dud	saddle	read	drag
dip	reading	blood	yard
dirt	huddle	thud	drew
dust	cuddle	road	draw
dump	odor	toad	weird
ding	muddy	I'd	drawer
different	codes	weed	dread
Dan	thunder	lied	dresser
Diane	blunder	tied	cord

Thruster Buster Tongue Twisters!

1. Don't dump soda bottles or water bottles on the street.
2. Danny and Dayna took a trip to Tahiti in September and to Disneyland in October.
3. Terrible odors are rotten pea pods, old meat, mold, mildew and burnt food.
4. I had to put all of my different toys and trinkets in the treasure trunk that Dad bought me.

5. To get good grades, read, write letters, watch educational TV., and don't play too many video games.
6. On vacation I like to eat tropical fruits and drink fruity drinks like fruit punch and lemonade.
7. We went camping in the woods and saw toads, trout, ducks and deer.
8. Dad told me to tidy up my closet, dust the dresser and put my toys away.
9. My friend Peter always wants to go to the sandwich shop to order turkey, roast beef and mustard.
10. I went to the movies and saw a ridiculous cartoon about a character that was half cat and half bird.

/L/

Placement: Tongue Retraction with Tip Elevation

Initial /l/	Medial /l/	Final /l/	Blends /l/
luck	ballroom	pill	flyfly
love	peeling	dill	plow
light	jolly	fillll	pleat
lunch	realize	peel	bleed
lip	railing	real	blow
lick	yelling	deal	curl
lemon	dealing	still	hurl
listen	bracelet	pal	airplane
load	falling	ball	blue
loony	yelled	fall	blink
list	wheeled	mole	twirl
lime	called	eel	whirl
lint	bowling	feel	plead
lurk	boiled	you'll	blank
lost	healing	I'll	blunder

Thruster Buster Tongue Twisters:

1. I like to lick lemon-lime lollipops.
2. I would love to have lunch with Lisa and Lori on the boardwalk in Belmar.
3. Your pal Al called at eleven o'clock to tell you he would be late.
4. I went bowling with Uncle Lenny to the bowling alley on Lexington and Eleventh Avenue.
5. I fell on the sidewalk and got a bloody elbow and a painful pulled muscle in my ankle.
6. I'll call Sally on the telephone, and I'll tell her to tell Linda to call Ally who will then call Leo.
7. I made a blunder on the spelling test when I forget to put an "l" at the end of "pail."
8. I lost my bracelet in the living room while I was watching television.
9. Nelly went roller-blading while Lori played with Lucky the chocolate lab.
10. The airplane flew from Dallas to Fort Lauderdale and then went to the Dominican Republic, a tropical island.

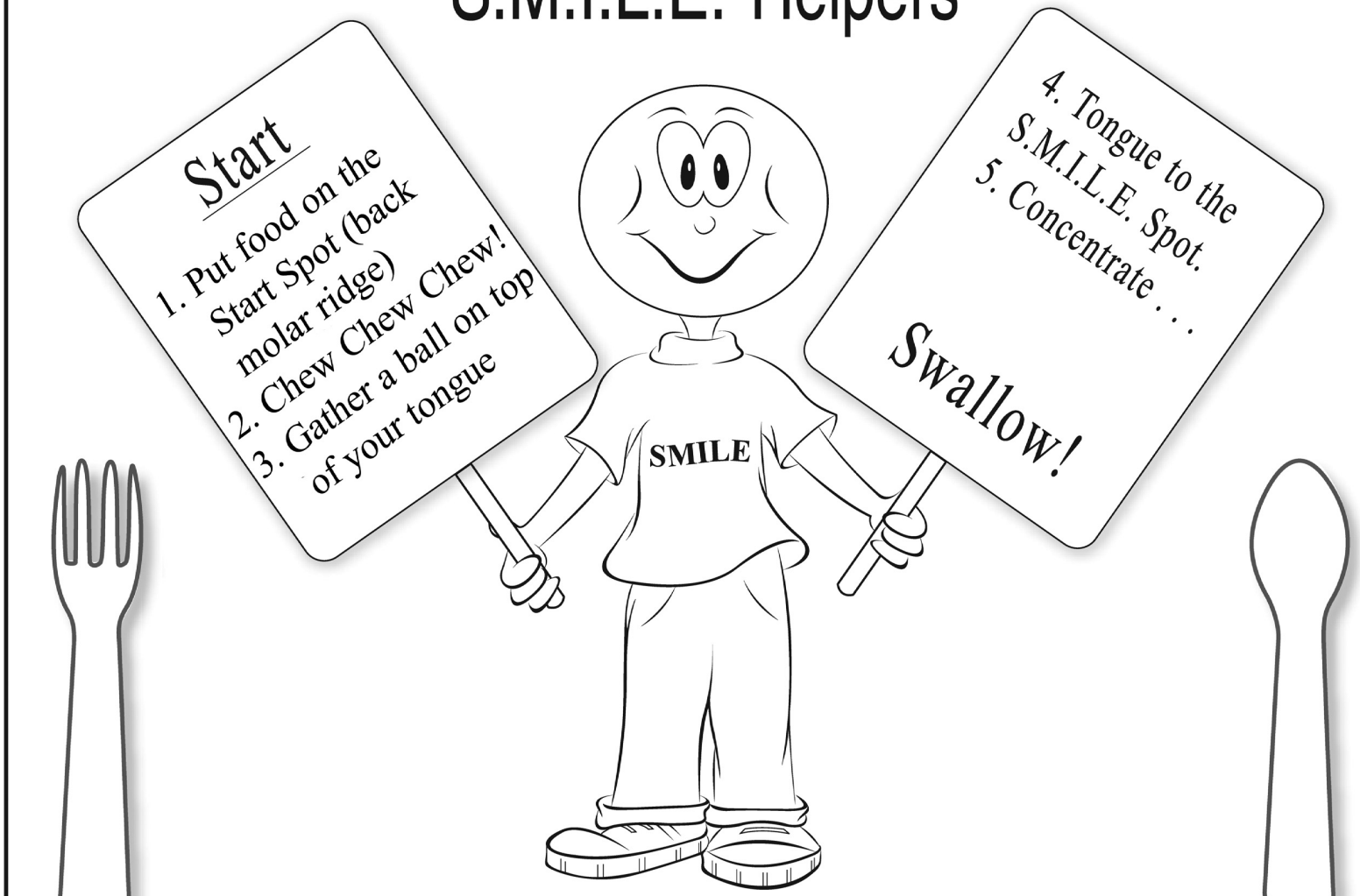
/ʃ/ and /tʃ/

Placement: Tongue Side Spread with Blade Elevation + Lip Protrusion

Initial	Medial	Final
chat	ashes	witch
shut	witchy	rich
chip	bashful	dish
shy	touch-up	knish
cheetah	itchy	flush
shirt	brushing	touch
chum	blanched	brush
ship	washing	pitch
chili	bashful	flinch
shoop	dashing	ash
chump	flashy	rash
shame	achoo	cash
child	watching	ouch
shack	couches	pouch
chirp	washed	wash

1. You should wash the dishes before rushing to watch television.
2. The chili had chopped meat, chopped onions and chili peppers.
3. Ouch! I have this itchy rash that I keep scratching!
4. It's a shame that you are so bashful because you are dashing.
5. The rich man was shy about showing off his flashy mansion.
6. The paint on the house was scratched, so we gave it a touch-up.
7. We lunched on shrimp with potato chips at the fish shop.
8. Did you check on the child to make sure he brushed his teeth and washed his face?
9. I sure would appreciate a cash refund for these checkered chino pants.
10. Hush! Charlie is sleeping on the couch.

S.M.I.L.E. Helpers



Remember to keep your jaw and head still

LESSON TWELVE
Review #2

We have almost completed the SMILE program. For the next few weeks, we will work on maintaining our New Swallow, and try to make it a habit. This will take some review of previous exercises learned in Lessons One through Eleven. Every day you will go through a series of exercises, which will help you swallow and speak with tongue elevation at all times.

Note to Therapists: At this point you want to reassess your client and monitor his/her progress carefully. Some clients may need extra articulation help. Others may need extra time spent on a particular food texture. Use your clinical judgment when assigning a series of exercises to perform on a daily basis.

Review Exercises (all labeled as they were in previous lessons):

Cheeks, Lips and Tongue:

CHEEK #2: Bite your teeth together and close your lips. Breathe in through your nose and blow up your cheeks. Look in the mirror. You should look like a chipmunk. Repeat 10 times.

LIPS #2: Squeeze your lips together and let them "pop." Make this sound 10 times. Rest and repeat. Lips & Tongue: Blow horn #12, 25 times, following the Horn Hierarchy instructions found on page 15.

TONGUE #1: (Protrusion) Stick your tongue straight out without touching the lips or teeth. Hold it for a few seconds. Rest and repeat 10 times.

TONGUE #7: (Lateralization) Place some peanut butter, or other sticky substance, on your back molars. Use your tongue tip to lick the food off of your back teeth. Make sure only your tongue is dancing during this exercise. Do 10 licks on each side, alternating each time left to right.

TONGUE #5: (Retraction) Use a tongue depressor to hold your tongue tip down. Now practice saying "cookoo." Repeat the word 20 times.

TONGUE #10: (Elevation) Place your tongue to the SMILE Spot. Hold it for 60 seconds with your jaw opened wide. Feel the stretch!

Swallow Shuffle:
1. Tongue tip up and down - five times
2. Tongue cluck - five times
3. Back tongue lifts - five times

Swallowing Charts:

1. Chart one eight-ounce glass of liquid using Straw #7 (up to 20 swallows.)
2. Chart one eight-ounce glass of liquid daily using a cup (up to 20 swallows.)
3. Chart one meal daily (up to 20 swallows.)

HOMEWORK PRACTICE CHARTS: REVIEW #2

For the next two weeks you will be in a maintenance phase. This will strengthen your muscles to help make your New Swallow a new habit!

Please do the exercises in the order in which they are written. You have charts for weeks 1 and 2.

Date							
Cheek #2							
Lips #2							
Horn #13							
Tongue #1							
Tongue #7							
Tongue #5							
Tongue #10							
Swallow Shuttle							

Swallowing Charts: Put a smiley face for a New Swallow and a sad face for an old swallow!

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

HOMEWORK PRACTICE CHARTS: REVIEW #2

Swallowing Charts: Put a smiley face for a New Swallow
and a sad face for an old swallow!

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

HOMEWORK PRACTICE CHARTS: REVIEW #2

Week 2

Date							
Cheek #2							
Lips #2							
Horn #13							
Tongue #1							
Tongue #7							
Tongue #5							
Tongue #10							
Swallow Shuffle							

Swallowing Charts: Put a smiley face for a New Swallow and a sad face for an old swallow!

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

HOMEWORK PRACTICE CHARTS: REVIEW #2

Swallowing Charts: Put a smiley face for a New Swallow and a sad face for an old swallow!

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Swallowing	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Liquid/Straw																				
Liquid/Cup																				
Meal																				

Note to Therapist before Lesson Thirteen:

1. At this point your client should be able to swallow correctly when he or she is concentrating. The challenge is habitualizing the new pattern. In some severe cases, or in cases where there has been the introduction or removal of an orthodontic appliance, it may be necessary to stay with Lesson Twelve, combined with articulation therapy, for several weeks.

2. Additional word lists are available in the Word Appendix found on page 90 and 91. In other cases, you will find that articulation and swallowing skills have improved simultaneously. For those children without secondary speech clarity issues, you will be right on track.

3. It is suggested that you assign the next lesson (thirteen), with follow up sessions every other week, if the child can swallow correctly at least 85% of the time in therapy sessions with satisfactory articulation continue with this schedule. If the child can swallow correctly, but articulation errors remain, continue weekly sessions, and use Lesson Thirteen to help habitualize the swallow.

4. It is also important to contact the orthodontist at this point to discuss goal maintenance. Some children should continue to be monitored for three to six months. In Lesson Fourteen, there are charts the child can follow and a parent log sheet to monitor progress at home.

5. Before discharging the child from therapy, make sure the child can pass the Post–Screening form found after Lesson Fourteen on page 92 and 93.

LESSON THIRTEEN
Habit Helpers That Make Us SMILE!

We have accomplished so much. You have a lot to SMILE about! Now we have to make sure that you are using your New Swallow as a natural habit, just like blinking your eyes. Visual and auditory reminders will help us remember to use the New Swallow daily. You will use these Habit Helpers for the next six to eight weeks. You will not chart these activities because you need to learn to think about your swallow on a regular basis. Here are some steps to help:

HABIT #1: Select a bracelet or necklace that you like. It doesn't have to be a fancy piece of jewelry; it could be just a simple string. When you see it throughout the day, it will remind you to use your SMILE swallow.

HABIT #2: You must swallow even your saliva with a SMILE. Two times a day you will think about how you are swallowing your saliva while you watch your favorite TV show, or while you listen to your favorite song. Sometimes it helps you if you suck on a small fruity candy so that you are aware of swallowing your own saliva. Think about tongue placement to the SMILE Spot. Now, every time you see your favorite TV show, or hear your favorite music, you will be reminded to use your SMILE swallowing.

HABIT #3: You must think about the way you swallow when you eat and drink. You do not have to chart your swallows, but you should be aware of them. Use your placemat at mealtimes to help you focus on your swallow.

HABIT #4: Red will now be your Habit Helper. Every time you see the color red, remind yourself to use your SMILE swallow.

HABIT #5: When you brush your teeth, you should practice the Swallow Shuffle five times. This will help remind your muscles of what they need to do when you are swallowing.

HABIT #6: Eat a sugar-free lollipop, juice bar or ice pop as often as possible. Practice licking up/ down, left/right and tap your tongue tip. Make sure your jaw and lips are sleeping. This will also help keep your tongue muscles strong!

LESSON FOURTEEN
Now You Are Smiling!

Congratulations! If you are on Lesson Fourteen, you are now SMILING when you swallow! For the next three months you will need to practice SMILE exercises several times a week in order to maintain the skills you have learned in our program. This is very important for both your teeth and your speech production. Simply follow the maintenance program by choosing three exercises out of the 15 listed activities. You will do three a day, three times a week. For example on Monday you may choose exercises 1, 5 and 8. On Wednesday you could do exercises 2, 3 and 10, etc. It is best to alternate the exercises to ensure you are maintaining all your muscle memory for the SMILE swallow.

MAINTENANCE PROGRAM

1. Have a lollipop. Concentrate on tongue movements. Let your jaw sleep and the tongue dance inside your mouth. Up, down, right, and left. Remember our previous SMILE exercises with the small ball-shaped lollipop. Work those tongue muscles.
2. Brush your teeth with a soft toothbrush. Stimulate your tongue muscles by brushing the top of your tongue and the sides of your tongue. Follow this with gargling mouthwash. You are exercising the back of your tongue and your soft palate.
3. Relax while watching your favorite 30-minute TV show. Keep a small piece of paper and pencil with you. Make a slash mark on the paper each time you swallow your own saliva. Make sure you are using your SMILE swallow.
4. Chew a piece of sugarless gum (only if you don't have braces or a retainer!). Keep moving the gum from your right back molar to the left. Keep your lips closed while chewing.
5. Review the Swallow Shuffle 10 times: Tongue Tip Up and Down, Tongue Cluck, Back Tongue Lifts.
6. Choose any word list (t/d/n/l/s/z/k/g) and say the words two times each.
7. Monitor your oral habits. Make sure you are not biting your nails, sucking your thumb, biting your drinking straw, etc. (For a complete list of good oral habits, see Lesson Five.)
8. Drink an eight-ounce cup of liquid sip-by-sip using the "Tongue Cup" method.
9. Eat an entire meal, focusing on your chewing. Remember to use your back molars and collect the food into a ball, or bolus, before swallowing.
10. Use your favorite drinking straw provided in your therapy program. Drink a 12-ounce can of juice or soda using your continuous drinking swallows.
11. Get out a dictionary. Look up 20 words that begin with "s". Create five tongue twisters using the words. Say them out loud two times each.
12. Review the Chewing Hierarchy exercises in Lesson Eight.
13. Review the Lingual Elevation Exercises (#9, #10, and #11) in Lesson Four.
14. Chart your swallows for one snack. Put a smiley face every time you use the SMILE swallow and a sad face each time you know you slipped!
15. Watch yourself chew, swallow and speak in a mirror. SMILE with pride!

Write in the dates you practiced, and check off the exercise you completed. Remember to choose three exercises, three days a week!

WEEK 1

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 2

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 3

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 4

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Write in the dates you practiced, and check off the exercise you completed. Remember to choose three exercises, three days a week!

WEEK 5

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 6

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 7

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 8

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Write in the dates you practiced, and check off the exercise you completed. Remember to choose three exercises, three days a week!

WEEK 9

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 10

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 11

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WEEK 12

DATE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

WORD APPENDIX

This Appendix contains word lists that can be used for traditional articulation therapy in conjunction with the SMILE program and the corresponding lessons for lip closure, lip rounding, lingual elevation and lingual retraction. All words have the designated sounds in the initial position of the words.

Lip Closure

ball	pig	pun	mug	mitt
money	pill	bill	mutt	mushroom
miss	but	tip	pat	mop
pole	big	burp	puddle	mackerel
pat	must	mapping	magnet	bone
bust	bin	bow	pasta	pistol
battle	pink	pickle	piglet	buff
minister	mother	mustard	parachute	ballroom
putt	buckle	purr	parrot	manners
packing	push	match	million	

Lip Rounding

when	where	why	what	wish
waddle	wanted	whisker	whip	wind
whimper	wasp	worm	warming	wishful
whammy	weren't	winking	wiggling	wig
western	wax	whip	wetter	woman
whopper	wicker	wade	warlock	witch
wives	whoop	wombat	whiner	white
woolly	weird	weakling	Washington	washer
wide	wintergreen	willful	Willy	Wanda
wilbur	wafer	waterfall	Wally	Winnie

Lingual Elevation

talk	tow	tip	tickle	tester
tackle	tamper	torn	tie	tidbit
time	dump	donut	dimples	dingy
detest	dowel	diner	dinner	dial
design	diet	dancing	design	dugout
laying	limp	learning	liar	linger
list	lower	loose	lipstick	lamp
lag	lawful	nighttime	noose	nine
nickel	null	knit	knife	knight
sign	summer	singer	simple	sun
song	sundry	Saturday	Sunday	supper
sip	straw	stinger	spooky	spill
string	straight	strange	spoof	spy
spunk	stay	stump	stage	stinky
zest	zany	zap	zoo	zebra

Lingual Retraction

kick	can	cable	cast	crazy
crumble	crack	crumb	crust	creed
cash	coal	cool	cold	cope
Kim	Kyle	Kathy	kid	kip
cap	cat	keep	kept	kit
cow	kettle	kin	kill	kangaroo
guilty	gilt	gum	gash	glad
gloomy	grumpy	grown	grin	grope
grim	greedy	good	gosh	game

POST-SCREENING FORM

Treatment Notes: _____

_____

_____

Skill	WNL	NO (Remarkable)	Comments
Dental Malocclusion			
Diastemas and other dental anomalies			
Lip Closure (tongue depressor between lips for 25 seconds)			
Jaw Stability (client must be able to complete Bite Blocks 2-7a with a 15 second hold on both sides symmetrically			
Jaw Grading (client must be able to slowly open and close the mouth without jerking motions)			
Jaw-Lip Dissociation			
Jaw-Tongue Dissociation			
Chews on Back Molars			
Utilizes a Rotary Chew Pattern			
Lip closure for m,p,b			

Lip rounding for w, u, o			
Tongue Retraction with tip elevation for t-d-n-l- s-z			
Tongue Retraction with back tongue side spread for ʃ, ʧ, ʤ			
Frena (buccal, labial, lingual)			
Oral-Rest Posture			
Volitional Wet Swallow Test			

The child must achieve 8 out of 10 swallows to pass the test.

Swallow	1	2	3	4	5	6	7	8	9	10

NOTES:

_____

_____

_____

_____

_____

_____

_____

_____

Eligible for discharge _____ yes _____ no

APPENDIX A
SMILE CASE HISTORY

Case History Form

Name:	Date of Birth:
Address:	Home: Cell:
Referring physician:	Date of evaluation:

Birth History (please provide details where applicable)

Were there any complications during pregnancy? ____yes ____no

Did you carry your baby full term? ____yes ____no

Were there problems during delivery? ____yes ____no

Did your baby require any special care after delivery? ____yes ____no

Please indicate your child's:

birth weight _____ length/ height _____ Apgar score _____

Percentile of weight _____ Percentile of length/height

_____ **Medical History**

Does your child have a medical or educational diagnosis? ____yes ____no

Does your child have any of the following?

_____Frequent Colds ____ Bronchitis _____Strep/Sore Throat ____ Chronic Congestion

____Recurrent Middle Ear Infections _____Asthma _____ Seasonal Allergies

____ Food Allergies (Please List: _____)

_____Cardiac Issues _____Hearing Issues _____ Laryngomalacia _____Tracheomalacia

_____Constipation _____Diarrhea _____Reflux/GERD _____ Frequent spit up

_____Frequent vomiting (after 6 months of age) _____ Failure to thrive

_____Snoring _____ Restless sleeper _____Diagnosis of sleep apnea

____ bed wetting

Has your child ever been on medication?

Is your child currently on medication?

Dental History

Has your child been seen by a dentist? ____yes ____no

Does the dentist have any concerns about structure? ____yes ____no

_____ high palate _____ crowding _____ spaces between the teeth _____ cavities

_____ teeth grinding/bruxism _____ tongue-tie _____ lip tie _____ plaque ____thrush

Feeding History

Are there any concerns about nutritional status? ____yes ____no

Do you have any concerns about feeding safety? ____yes ____no

Has your child had a swallow study? (If so please attach the results) ____yes ____no

Prior to birth, how did you plan to feed your baby? Breast____ Bottle_____

How did you end up feeding the baby? Breast____ Bottle_____

Did you seek assistance with breastfeeding? PCP_____ Lactation Consultant_____ SLP _____

Was a lip or tongue tie identified? ____yes ____no

Were you encouraged to /discouraged from seeing a specialist?

Did you child have any difficulty breastfeeding/bottle feeding?

_____Difficulty latching _____crying _____ gagging _____coughing _____reflux

____dribbling

Other: _____

At what age did you introduce spoon feeding?

Did your child have any difficulty with smooth pureed food?

____ coughing ____ gagging ____choking ____vomiting

____spitting out food ____food refusal

Chunky pureed food?

____ coughing ____ gagging ____choking ____vomiting

____spitting out food ____food refusal

At what age did you introduce solid foods?

Did your child have any difficulty with dissolvable solids (ie: cheerios, puffs)?

____coughing ____gagging ____choking ____vomiting, ____spitting out _____ food refusal

Did your child have any difficulty with soft vegetables/fruits?

____coughing ____gagging ____choking ____vomiting, ____spitting out _____ food refusal

Did your child have any difficulty with chicken/meats?

____coughing ____gagging ____choking ____vomiting, ____spitting out _____ food refusal

At what age did your child stop breast or bottle feeding?

Did your child have difficulty transitioning to a straw?

Did your child have difficulty transitioning to a cup?

Is your child on a special or restricted diet (i.e. gluten free, dairy free)? ____yes ____no

If so, please describe:

Does your child have a self- limited diet ? ____yes ____no

If so, please describe:

Does your child have any food aversions? ____yes ____no

Please indicate difficulties with taste, texture, temperature, color, size and/or shape:

Are mealtimes longer than normal? ____yes ____no

Would your child prefer to graze rather than sit for a meal? ____yes ____no

Please chart what your child eats (item and amount), in the following *Five Day Baseline Diet*:

	Day 1	Day 2	Day 3	Day 4	Day 5
Breakfast					
Snack					
Lunch					
Snack					
Dinner					
Snack					

Oral-Motor/Oral Habits:

Has your child had excessive drooling? ____yes ____no

Did your child use a sippy cup for more than 3-6 months? ____yes ____no

Does your child currently use a sippy cup? _____ yes _____ no

Does your child suck his/her thumb or digits? ____yes ____no

Did your child use a pacifier? ____yes ____no If so, for how long?

Does your child currently use a pacifier? _____ yes _____ no

If yes how often?

Does your child exhibit open mouth posture and mouth breathing? ____yes ____no

Does your child bite his/her nails? _____ yes _____no

Speech

Is your child's speech intelligible to the familiar listener? ____<25% ____ 25-50% ____50-75% ____75>%

Is your child's speech intelligible to the unfamiliar listener? ____<25% ____ 25-50% ____50-75% ____75>%

Does intelligibility change as your child moves from single words to sentences?

Do you have any concerns about sound production?____ yes ____no

If yes, what sound(s) does your child have difficulty producing (circle sounds that apply)?

B	M	P	W	T	D	N	L	K
G	H	R	Sh	Ch	J	S	Z	J
R blends	L blends	S blends	K blends	TH	VOWELS	F	V	

Therapy

Has your child been seen by a lactation specialist: ____ yes ____ no

*Name of IBCLC:

Has your child been seen for feeding therapy? ____ yes ____ no

*Name of treating therapist:

Has your child been seen for speech therapy? ____ yes ____ no

*Name of treating therapist:

Has your child been seen for occupational therapy? ____ yes ____ no

*Name of treating therapist:

Has your child been seen for orofacial myofunctional therapy: ____yes ____no

*Name of treating therapist:

ADDITIONAL INFORMATION: (feel free to use the back of this form)

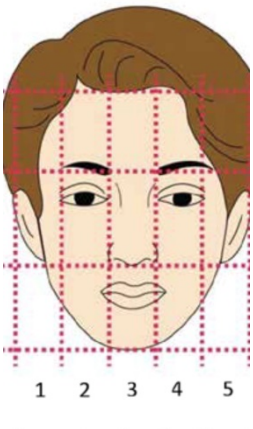
APPENDIX B
SMILE ASSESSMENT FORM

Oral Motor, Oral Placement and Orofacial
Myofunctional Evaluation Chart

WNL= within normal limits -T=hypotonia +T=hypertonia
R= Remarkable S= severely impaired -D= Poor Dissociation
NA= not applicable O=observed H= History Of
MD= medical referral

Hard Tissue/Bone Analysis

Mesocephalic (normal)		Profile -Straight/Orgnathic (I)	
Dolichocephalic (narrow angles)		Profile Convex/ Retrognathic (II)	
Brachycephalic (wide angles)		Profile Concave/ Prognathic (III)	
Symmetrical		Jaw Retrusion	
Asymmetrical		Palatal Arch Width	
High palate		Palatine tori	
Wide palate		V shaped palate	
Narrow palate		U shaped palate	
Flat palate		Excessive rugae	
Clefting		Deviation of palate	



Jaw/Dentition

Molar Classification Right Class I ___ Class II ____ Class III____ Crossbite____	Midline shift Left _____ Right _____
Molar Classification left Class I ____ Class II ___ Class III____ Crossbite____	Inclination: Maxillary: buccal / lingual Mandibular: buccal /lingual
Posterior Description Open bite molars ___ Crossbite____ Scissor bite _____ Open bite bicuspids ____ Edge to edge ____	Dental Wear: Excessive _____ Abfractions _____ Recession _____ Diastemas y_____ n _____ Location:
Splaying _____	TMJ: Bruxing ____Clenching_____ Popping____Clicking _____ Locking _____Asymmetry_____ Ear pain_____Crepitus _____
Canting _____	Bite Block baseline
Jaw resting posture High ____ mid ____ low _____	Bite Tube Baseline
Anterior Classifications Class II division 1 _____ Over Jet _____ mm Open Bite _____ mm Class II division 2 _____ Deep bite ____% Class III _____ End to end_____ Anterior Crossbite_____	Orthodontics:

Soft Tissue and Airway

General Asymmetry of the palate _____ Clefting of lip / tongue _____ Gag reflex _____ Hypotonia _____ Hypertonia _____	Mandibular frenulum Blanching _____ Diastema _____ Limited ROM _____
Abnormalities Mucocele (injury bumps) _____ Linae alba (from chewing) _____ Cheek biting / sucking _____ Fibroma _____ Sublingual tori _____ Nursing pads _____	Buccal Frenulum Upper R/L _____ Lower L/R _____
Uvula Bifid _____ Deviated R/L V	Lingual frenulum Kotlow Classification I II III IV Coryllos and Genna 1 2 3 4 5 Color: Tightness: Eiffel Tower Submucous Fibers
Tongue: Geographic _____ Scalloped_____ Thrush_____ Fissures_____ Asymmetrical_____ Cankers_____	Tonsils and adenoids +1 +2 +3 +4 Mallampati Score: Class I II III IV Removed adenoids Removed tonsils

Maxillary labial frenulum Kotlow Classification: I II III IV Blanching_____ Diastema_____ Limited ROM_____	<u>Patent Airway</u> Nasal obstruction_____ Deviated septum_____ Snoring_____ Mouth breathing_____ Clavicular breathing_____
Lips: Philtrum short / long _____ High naso-labia angle_____ Superior labial position_____ Weak strength_____	<u>Surgeries or Injuries:</u>

Oral Habits/Oral Resting Postures:

Teeth grinding		Spitting	
Thumb sucking		Digit sucking	
Mouthing objects		Jaw Tensing	
Open mouth posture		Drooling	
Mouth Breather		Lingual rest posture	
Chronic Anterior Tongue Posture		Labial Rest Posture	
Tongue suckling		Other	

Sensory:

Over-responsive		Olfactory sensitivity	
Under –responsive		Tolerates vibration	
Texture sensitivity		Tolerates tooth brushing	
Visual sensitivity		Seeking oral input	
Sound sensitivity		Has a sensory diet	

Coordination and Dissociation: (R= remarkable, D=dissociation issues):

JAW		LIPS		TONGUE	
Stability- masseter, temporalis		Closure-orbicularis oris		Protrusion-genioglossus	
Grading- platysma, masseter, temporalis, anterior belly digastric, mylohyoid, , lateral pterygoid		Retraction-risorious, buccinators, depressor anguli oris, levator anguli oris		Retraction-hyolglossus, styloglossus	
		Rounding-buccinator, orbicularis oris		Lateralization-superior and inferior longitudinal	
		Protrusion-mentalis, orbicularis oris		Tip Elevation-superior longitudinal Depression- inferior longitudinal, genioglossus,	
				Back tongue side spread- vertical palatoglossus	
				Tongue elongation-transverse	
				Tongue cup-transverse , vertical	
				Back tongue elevation-palatoglossus, styloglossus	

Oral imitation: _____

Phonation tasks (horn, bubbles) _____

Other TalkTools baselines: _____

TalkTools® Pre-feeding and Feeding: (notes indicate concerns)

	Pre-feeding	Feeding
Reflexes		
Breast		
Bottle		
Straw/Cup		
Spoon		
Solids		
With targeted interventions		

Defensive to various foods	
Gagging and vomiting	
Prolonged bottle use	
Used sippy cup for more than 3-6 months	
Had breast feeding issues	
Had difficulties transitioning textures	

Self-limited diet	
Food allergies	
Food intolerances	
Liquids	
Pureed foods	
Solids	
Additional :	

Sample Meals:

Breakfast:

Lunch:

Dinner:

Snacks:

Liquids:

Orofacial Myofunctional Considerations:

Placement of food in the mouth		
Mastication Patterns		
Transit mobility		
Bolus collection		
Labial Seal		
Swallow Type	Upper dental _____ Interdental _____ Lower dental _____ Bilateral thrust _____ Unilateral thrust _____	
Compensatory patterns observed		
Oral cavity after swallow		
Movement with swallow- issues noted with	Obicularis oris Pursing ____ Protruding _____ Open mouth ____	Mentalis Tight flaccid
	Risorius Retraction to assist with transfer	Masseters Absent Over-active

Muscle Based Articulation Test:

Placement	Phoneme	Comments
Lip closure	M	
	B	
	p	
Tongue Retraction with Blade Elevation	n	
	D	
	T	
Tongue Retraction with back elevation	ɜ	
Lip rounding	W	
Lower lip retraction	F	
	V	
Low jaw	H	
Tongue retraction with back elevation and blade/tip down	K	
	G	
Tongue retraction with lip elevation	L	
Tongue retraction with tip elevation/depression slight protrusion	S	
	Z	
Tongue side spread lip protrusion	ʃ	
	tʃ	
	dʒ	
Tongue retraction with side spread and lower lip tension	R	
Tongue protrusion	θ	
	ð	

DX:

	Oral Phase Dysphagia
	Feeding Mismanagement
	Orofacial Myofunctional Disorder
	Orofacial Hypotonia
	Self Limited Diet
	Other Speech Disturbance
	Apraxia
	R/O TOTs -Tongue/Ankyloglossia
	R/O TOT-Lip
	R/O TOTs - Buccal
	Bruxism
	Dentofacial Anomaly
	Oropharyngeal Dysphagia
	Cleft Palate and /or lip

Treatment Plan Notes:

Feeding _____

OPT _____

OMT _____

TOTS pre /post op _____

PROMPT _____

Medical Referrals:

1.

2.

3.

4.

5.

APPENDIX C
Muscle Based Articulation Test
Sara Rosenfeld-Johnson, MS, CCC-SLP

TalkTools® Muscle-Based Articulation Form

Tools:

1) Muscle-Based Articulation Form (MBAF)
2) Clinician's choice of standardized articulation assessment tool

Note: *This form is not intended for use as a standardized test. Its purpose is to track the client's production and monitor muscle movements.*

Goals:

1) Identify the client's muscle-based deficits during production of consonant and vowel phonemes at the syllable, word, and/or conversational levels.
2) Easy-to-read tracking form allows for quick reference when developing therapy goals.
3) Track client's muscle movements over time to demonstrate the relationship between improved muscle skills in non-speech exercises and their relation to improvements in speech clarity.
4) For use by therapists trained in muscle-based therapy techniques. This form is not intended to teach therapists how to identify abnormal muscle movements; rather, it is a tool for documenting observations of client productions.
5) Document client's muscle movements during speech production when provided with a cuing system (optional).

Note: *It is important to watch the client's articulators (jaw, lips and tongue) as you administer the articulation profile to determine if the client is using the correct muscle movements to produce each phoneme. A phoneme may be interpreted as normal (based purely upon the acoustic production) but will be graded as abnormal if the articulators are not positioned correctly. Correct productions determined through phonation patterns alone do not necessarily indicate normal muscle movement or verify the absence of compensatory strategies. Since we know that phonemes develop in a sequence based upon articulator skills, errors in placement for an earlier-developing phoneme may result in a normal acoustic production (i.e., an interdental production of / t, d, n, or l /), but because tongue retraction is lacking, this incorrect placement may result in an interdental production of later-developing phonemes (i.e., / s and z /).*

Step #1:

Administer selected articulation assessment. It will be important to either:

a. Videotape the assessment administration for later review of muscle movements; or
b. Maintain focus on the client's articulators during productions, making notes on muscle movements in addition to assessing clarity.

Step #2:

In this step you will be using data from the articulation assessment to begin to fill out the MBAF. Instructions below describe each section of the form:

a. CONSONANTS and VOWELS:

This section lists each consonant and vowel in the Standard English dialect.

1) Begin by finding the desired phoneme in the consonant column on the left hand side of the form.
2) In the column to the right of the selected phoneme, note the position in which the targeted sound appeared within a word. As indicated in the Key on the back of the MBAF, "I" = initial position, "M" = medial position, and "F" = final position.
3) Place a mark in the appropriate position box as indicated in the Key ("✓" = correct production, "—" = incorrect production, "/ " = not targeted). Remember that correct production requires that the phoneme is produced using both the standard acoustical markers and the muscle-based position markers; it must sound and look correct.

b. **MUSCLE CHARACTERISTICS:**

This section lists the appropriate muscle movements for the selected phoneme. Muscle movements are broken down into three areas: jaw height, lips, and tongue.

i. *Jaw Height*: There are 3 main categories of jaw heights:
   1. High
   2. Medium
   3. Low

ii. *Lips*: There are 5 main categories of lip positions:
   1. Closed
   2. Open
   3. Rounded
   4. Lower Lip Retraction/Tension
   5. Lower Lip Protrusion/Tension

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iii. *Tongue*: There are 6 main categories of tongue positions:
1. Blade Retraction
2. Tongue Back Elevation
3. Tongue Tip Elevation
4. Tongue Tip Depression
5. Back of Tongue Side Spread
6. Blade Protrusion

1) In this step you will identify the client's muscle characteristic for each phoneme.
2) After locating the desired phoneme and marking its position (as described in the steps above), progress to the three-column section labeled Jaw Height / Lips / Tongue.
3) For each phoneme, the normal muscle movements are printed on the form. If a client produces the phoneme using a correct movement, no further documentation is required (no markings = correct placement or movement).
4) If an incorrect placement or movement is found it should be documented on the line next to the normal movement. *Example:*

Phoneme	Jaw Height	Lips	Tongue
p	High Medium	Closed _____	Blade Ret _____

Note: *When more than one option is listed under the muscle characteristic, this indicates one of the following:*

a) If the two positions are separated by a " / ", then there are two options for that muscle position. If the client produces either of the listed movements it will be graded as correct; if they do not, record the incorrect movement on the line. *Example:*

Phoneme	Jaw Height	Lips	Tongue
r	Med/High LOW	Lower Lip Tension_____	Blade Ret B-T SS _____

b) When two heights are separated by a "→", it indicates that the muscle position changes during the production of the phoneme. If your client does not produce this transition, record the incorrect movement on the line. *Example:*

Phoneme	Jaw Height	Lips	Tongue
aʊ	Low --> Medium LOW	Open --> Rounded OPEN	Blade Ret, Lax B-T SS _____

Additional examples can be found on the last page of these instructions.

c. PHONATION

This section lists the appropriate voicing and resonation patterns for the selected phoneme. The column labeled "V" will be used to record voicing, while the column labeled "R" will be for resonation.

i. *Voicing*: This column lists the appropriate voicing pattern for each phoneme.
1. In this step you will track the client's muscle characteristic for a specific phoneme.
2. After completing the preceding steps for the phoneme in question, move to the two-column section labelled Phonation.
3. In the voicing column, the normal voicing pattern for the phoneme is listed. As described previously, if the client produces the phoneme with correct voicing, no further documentation is required.
4. If an incorrect voicing pattern is found, it should be documented on the line next to the correct pattern. *Example*:

Phoneme	Voicing
b	Yes NO__

Additional examples can be found on the last page of these instructions.

ii. Resonation: This column lists the appropriate resonation pattern for each phoneme.
1. For each phoneme, the normal resonance pattern is listed. As before, no documentation of correct resonance is required.
2. If an incorrect resonance pattern is found, it should be noted on the line next to the normal pattern. *Example:*

Phoneme	Resonance
b	Oral NASAL__

d. TACTILE CUE

This column is used for documenting the client's production abilities with the addition of a tactile cue, allowing you to determine and note whether or not phoneme production is improved with the use of a tactile cueing system.

Note: *Use of the "Cue" column is optional. It is designed for clinicians who are trained in the use of tactile cueing, and will be helpful when writing therapy goals.*

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i. After a client makes an unsuccessful production and position, muscle characteristics, and phonation are recorded, a cue may be attempted.
ii. Use the desired tactile cue to determine if the additional information will improve phoneme production.
iii. Note the position of the desired phoneme according to the Key, using "I" to indicate initial position, "M" for medial position, and "F" for final position, and place a mark in the appropriate position box " ✓ = correct production, "—" = incorrect position, "/ " = not targeted).

e. PRODUCTIONS

This section lists the level of production possible for the selected phoneme.

1. In this step you will track the client's highest level of standard production for each phoneme.
2. There are three possible levels of production, each with a corresponding column: Syllable, Word, and Conversation.
3. There is no correct or incorrect level of production; it will be based on the level presented in your pre-selected articulation assessment in addition to conversational speech sampling.
4. Begin by identifying the client's highest level of standard production of the targeted phoneme.
5. Once you have determined the highest standard level of the phoneme, determine its position (I = initial; M = medial; F = final).

6. Note the child's production according to the Key. A "✓" will be used to indicate correct production, "—" for incorrect position, and "/ " if the level is not targeted.
   Example:

Phoneme	Syllable			Word			Converstation		
b	✓	✓	✓	✓	-----	-----	✓	/	/

f. COMMENTS

Additional comments and notes can be recorded here.

Step #3:

Information on the MBAF can be used for a variety of purposes, including:

1) Review of the client's abnormal productions to determine specific muscle-based therapy goals;
2) Documentation of the client's specific muscle movements during speech production in the initial assessment, and then over a period of time, allows progress in speech clarity and its relation to muscle-based activities to be easily tracked;
3) The MBAF provides space to document the client's productions with cues if necessary, and for three levels of production: syllable, word and conversation.

Example Documentations:

Scenario 1

Desired production: initial "d," as in "duck"
Client produced: "duck" with normal muscle movements
Documentation on the MBAF would read:

		I	M	F	Jaw Height	Lips	Tongue	V*	R*	Tactile Cue			Syllable		
10	d	✓			High_____	Closed _____	Blade Ret	No___	Oral___	I	M	F	I	M	F

Scenario 2

Desired production: final "p," as in "cup"
Client produced: "cup" with tongue tip contacting upper lip to create /p/ sound
Documentation on the MBAF would read:

		I	M	F	Jaw Height	Lips	Tongue	V*	R*	Tactile Cue			Syllable		
1	p			----	High medium	Closed open	Blade Ret TT Protruded	No___	Oral___	I	M	F	I	M	F

Scenario 3

Desired production: initial "t," as in "tree"
Client produced: "tree" with tongue tip contacting upper lip to create /t/ sound
Documentation on the MBAF would read:

		I	M	F	Jaw Height	Lips	Tongue	V*	R*	Tactile Cue			Syllable		
12	j	✓	----	✓	High_____	Closed open	Blade Ret TT Protruded	No___	Oral___	I	M	F	I	M	F

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Muscle-Based Articulation Assessment Form

Client's Name: _____ Therapist:_____
Date:_____ Chronological Age: _____
Client Status: Initial Program Plan _____ Probe # _____ Discharge Summary ____

CONSONANTS					MUSCLE CHARACTERISTICS			PHONATION			PRODUCTIONS												COMMENTS
		I	M	F	Jaw Height	Lips	Tongue	V*	R*	Tactile Cue				Syllable			Word			Conversation			
										I	M	F	I	M	F	I	M	F	I	M	F	
1	p				High _____	Closed _____	Blade Ret _____	No ____	Oral ____														
2	m				High_____	Closed _____	Blade Ret _____	Yes ____	Nasal ____														
3	n				High_____	Open _____	Blade Ret. TT Elev _____	Yes ____	Nasal ____														
4	w				Medium _____	Rounded_____	Blade Ret _____	Yes ____	Oral ____														
5	h				Low _____	Open _____	Blade Ret _____	No ____	Oral ____														
6	b				High_____	Closed _____	Blade Ret _____	Yes ____	Oral ____														
7	g				Low _____	Open _____	Blade Ret, T-Back Elev Blade/Tip Dep _____	Yes ____	Oral ____														
8	k				Low _____	Open _____	Blade Ret, T-Back Elev Blade/Tip Dep _____	No ____	Oral ____														
9	f				High_____	Lower Lip Retracted _____	Blade Ret _____	No ____	Oral ____														
10	d				High_____	Open _____	Blade Ret. TT Elev _____	Yes ____	Oral ____														
11	ŋ				Medium_____	Open _____	Blade Ret, T-Back Elev Blade/Tip Dep _____	Yes ____	Nasal ____														
12	ɹ				High_____	Open _____	Blade Ret B-T SS _____	Yes ____	Oral ____														
13	t				High_____	Open _____	Blade Ret. TT Elev _____	No ____	Oral ____														
14	ʃ				Medium_____	Rounded_____	B-T SS _____	No ____	Oral ____														
15	tʃ				High_____	Rounded_____	Blade Ret. Back-T-SS _____	Yes ____	Oral ____														
16	l				Medium_____	Open _____	Blade Ret. TT Elev _____	Yes ____	Oral ____														
17	r				Med/High____	Lower Lip Retracted _____	Blade Ret. Back-T-SS _____	Yes ____	Oral ____														
18	ʤ				High_____	Lower Lip Retracted _____	B/Tip Elev, B-T SS _____	Yes ____	Oral ____														
19	θ				Medium_____	Open _____	Blade Prot _____	No ____	Oral ____														
20	v				High_____	Lower Lip Retracted _____	Blade Ret _____	Yes ____	Oral ____														
21	s				High_____	Open _____	Blade Ret T-T Elev/Dep _____	No ____	Oral ____														
22	z				High_____	Open _____	Blade Ret T-T Elev/Dep _____	Yes ____	Oral ____														
23	ð				Medium_____	Open _____	Blade Prot _____	Yes ____	Oral ____														

VOWELS					MUSCLE CHARACTERISTICS					PHONATION			PRODUCTIONS												COMMENTS
		I	M	F	Jaw Height		Lips		Tongue	V*		R*	Tactile Cue			Syllable				Word				Conversation			
1	e				Medium _____		Open _____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
2	ʌ				Medium _____		Open _____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
3	u				Medium _____		Rounded_____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
4	ə				Medium _____		Open _____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
5	ɔ				Medium _____		Rounded_____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
6	ɪ				High_____		Retracted_____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
7	a				Low _____		Open _____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
8	ɒ				Low _____		Rounded_____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
9	i				High_____		Retracted_____		Blade Ret, Tense B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
10	ʊ				High_____		Rounded_____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
11	æ				Low _____		Open _____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
12	aʊ				Low → Medium _____		Open → Rounded _____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
13	oʊ				Medium 5→ Medium 4 _____		Rounded_____		Blade Ret _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
14	ei				Medium → High _____		Open → Retracted _____		Blade Ret, Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
15	ai				Low→ High _____		Open → Retracted _____		Blade Ret → Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
16	ɔi				Low→ High _____		Rounded → Retracted _____		Blade Ret → Lax B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
BLENDS																											
1	pl				High→ Medium _____		Closed → Open _____		Blade Ret → Blade Ret, T-T Elev _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
2	gl				Low→ Medium _____		Open _____		Blade Ret, T-Back Elev Blade/Tip Dep → Blade Ret, T-T Elev _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
3	fl				High→ Medium _____		Lower Lip Retracted → Open _____		Blade Ret → Blade Ret, T-T Elev _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
4	br				High→ Medium/High _____		Closed →Lower Lip Tension _____		Blade Ret → Blade Ret, B-T SS _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	
5	st				High→ Medium _____		Open _____		Blade Ret, T-T Elev/Dep → Blade Prot _____	Yes ____		Oral ____	I	M	F	I	M	F		I	M	F		I	M	F	

Key:		
	"✔" + Correct Production	"-" Incorrect Production	"/" = Not Targeted
	I = Initial Position	M = Medial Position	F = Final Position
	V = Voicing	R = Resonation	DNA = Did Not Attempt
	Blade Ret = Blade Retraction	B-T SS = Back of Tongue Side Spread	TT Elev = Tongue Tip Elevation
	Blade Prot = Blade Protrusion	T Back Elev = Tongue Back Elevation	TT Dep = Tongue Tip Depression

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APPENDIX D
Bite Block Instructions

TALKTOOLS® JAW GRADING BITE BLOCKS (Jaw Height Level #2 - #7)

Disinfect therapy tools before use.

This set of tools (six Graduated Bite Blocks) is designed to teach symmetrical jaw strength at each **jaw height position** as a component of developing jaw stability, dissociation and grading. Jaw stability, dissociation and grading are prerequisites for the development of standard co-articulation of all speech sounds. The tools are first used to diagnose jaw stability or instability and are then used as the therapy tool for exercise to create jaw stability. **Read ALL of the directions prior to implementing this program to ensure success.**

Assessment Suggestions:

1. As part of the assessment you will need to determine if the weakness in the jaw musculature is **symmetrical** or **asymmetrical**. Speech is characterized by symmetrical jaw strength which is sufficient to support jaw grading in addition to dissociated lip and tongue movements.
2. There are three exercises at each Bite Block Level. You will need two sets of **TALKTOOLS® Jaw Grading Bite Blocks** to implement all of the exercises. The Bite Blocks are numbered according to **Jaw Height**. Therefore, there is no #1 Bite Block, as this jaw height would be achieved with the teeth closed in a natural bite posture. The Bite Blocks are numbered 2 through 7 representing jaw heights 2 through 7 on the chart below as these heights are used in speech production.

1	
2 3	**High**
4 5	**Medium**
6 7	**Low**
8	

3. The assessment has been completed when the client does not meet the required criteria at any level on any of the three exercises. The highest level before failure is where you will begin your exercises in therapy and at home.
4. Jaw exercises should be used even when there is excessive tongue protrusion. The jaw exercises will address tongue retraction goals.
5. The jaw assessment and exercises must be performed in the natural bite position. Working in a jaw slide or jaw jut position is compensatory and therefore will not be successful.
6. In order to avoid injury to the jaw the following principles must be acknowledged in each of the exercises: A. Monitor to ensure that the client is not using whole body compensatory postures to pull back on the Bite Blocks; the resistance should be localized to the jaw musculature.
   B. If the client uses excessive force in the jaw, the tempromandibular joint may be injured.
   C. The client should only be biting hard enough to keep the Bite Block from being pulled out of his/her mouth.
   D. Do not work beyond the prescribed number of repetitions.
7. The following three exercises are presented in a hierarchy. You will complete them in the following order in both the assessment and in therapy:
   Exercise A - Bite Block
   Exercise B - Twin Bite Blocks for Symmetrical Jaw Stability
   Exercise C - Bite Block for Jaw Stability
8. Use the chart on Page 3 as you work through the assessment portion of these directions to determine where to begin.

Assessment Procedure (Diagnostic)

1. **Bite and Hold:** Begin with the **#2 Bite Block**. You must first establish that the client can bite and hold the Bite Block without resistance. Place the tip of the **#2 Bite Block** on the surface of the lower back molar on the left side of the mouth, extending out the front of the mouth as pictured below. Instruct the client to use a natural bite posture. (**Natural Bite:** The optimal bite alignment that can be achieved with the existing jaw and dental structures.) Tell the client to hold

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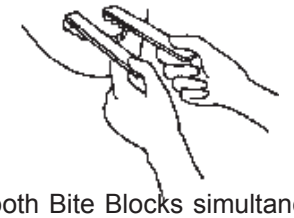
progress to Step 2 below. If they do not reach criteria, write down the number of seconds achieved before failure and your assessment is over. Proceed to "Using Bite Blocks for Exercise" on Page 3, Step #2.

2. **A. Bite Block:** Place the tip of the **#2 Bite Block** on the surface of the lower back molar on the left side of the mouth, extending out the front of the mouth as pictured above. Instruct the client to use a natural bite posture.
   - Explain to the client that you are going to pull the Bite Block forward (towards you) using an isometric pull, working up to 15 seconds with no compensatory postures (tension in the neck or body, pulling the head back, using extensor patterns). **Note**: An isometric pull is a pull that is strong enough to make the client work only slightly harder to keep the Bite Block from being pulled out of his mouth. It is not so hard as to require the client to bite down with such tension that you see a bulge in the cheek muscles.
   - Repeat on the right side.
   - Criteria for Success: Hold the natural bite posture on the **#2 Bite Block** for 15 seconds, while maintaining the isometric pull, on alternating sides of the mouth, 1 time. If the client can achieve this criteria, refer to Figure A and place a check mark in the boxes under **Bite Block #2**, **A. Bite Block Exercise** Left and Right side. Progress to Step 3. If they do not reach the criteria, write down the number of seconds achieved before failure on the Left and Right and your assessment is over. **Note:** If the client cannot hold the Bite Block for equal amounts of time on the Right and Left side an asymmetry is present. Proceed to **Using Bite Blocks for Exercise, Step 3, Exercise A.**

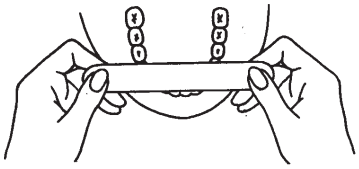
Note: *If your client pulls forward as you are using the isometric pull, there are three possible reasons:*
You are pulling too hard. In this case, use less resistance.
You are working at too high a level. In this case, return to a lower level.
The behavior is habitual rather than functional. In this case, use the Therapy Pillow as a tactile cue.

3. **B. Twin Bite Blocks for Symmetrical Jaw Stability**: Instruct the client to open his/her mouth. Place the tips of the **#2 Bite Blocks** on the surface of the lower back molar on both sides, extending out the front of the mouth, as pictured below:



   - Instruct the client to bite down on both Bite Blocks simultaneously, using a **natural bite**. While maintaining a natural bite posture, pull both **#2 Bite Blocks** forward (towards you) using an isometric pull. Your goal is to use slight, symmetrical resistance.
   - Criteria for Success: Hold the natural bite posture on the twin **#2 Bite Blocks** while maintaining the isometric pull on both sides of the mouth simultaneously for 15 seconds, 1 time. If the client can achieve these criteria, place a check mark in the box under **Bite Block #2, B. Twin Bite Blocks for Symmetrical Jaw Stability** and progress to Step #4. If the client does not reach the criteria, write down the number of seconds achieved before failure and your assessment is over. Proceed to **Using Bite Blocks for Exercise, Step 3, Exercise B.**

4. **C. Bite Block for Jaw Stability:** Instruct the client to open his/her mouth. Place the **#2 Bite Block** on the surface of the lower teeth horizontally, extending from the sides of the mouth as on the next page.



- Instruct the client to bite down, using a **natural bite**. While maintaining the natural bite posture, pull the ends of the **#2 Bite Block** forward, using an isometric pull. Your goal is to use slight, symmetrical resistance.
- Criteria for Success: Hold the natural bite posture on the **#2 Bite Block**, while maintaining the isometric pull forward on both sides of the mouth simultaneously, for 15 seconds, 1 time. If the client can achieve these criteria, place a check in the box under **Bite Block #2, C. Bite Block for Jaw Stability,** and progress to Step 5. If they do not reach the criteria, write down the number of seconds achieved before failure and your assessment is over. Proceed to **Using Bite Blocks for Exercise, Step 3, Exercise C.**

5. Repeat Steps 2, 3 and 4 using the **#3 Bite Block**. If the client can achieve the criteria for all 3 exercises with the **#3 Bite Block**, place the check marks in the appropriate boxes and progress to Step 6. If the client fails at any level, write down the number of seconds achieved before failure and your assessment is over. Proceed to **Using Bite Blocks for Exercise, Step 3.**
6. Continue with **Bite Blocks #4 thru #7** following the same criteria. If the client can achieve the criteria for all three bite blocks at each level of Bite Blocks and there is a check mark in each box, progress to the **TalkTools® Jaw Exercisers.** If the client fails at any level, your assessment is over. Proceed to **Using Bite Blocks for Exercise, Step 3.**

Tool	A. Bite Block Exerci	B. Twin Bite Blocks f Symmetrical Jaw Stability Exercise	C. Bite Block for Jaw Stabili Exercise
Pre-requisite			
Bite and Hold	___10 sec. R ___ 10 sec. L (1X)		
Bite Block #2	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)
Bite Block #3	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)
Bite Block #4	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)
Bite Block #5	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)
Bite Block #6	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)
Bite Block #7	___15 sec. R ___ 15 sec. L (1X)	___15 sec. R & L (1X)	___ 15 sec. (1X)

1. Begin at the highest level before failure as determined in your assessment as noted on the chart above, remembering the chronology of the exercises:

   Exercise A - Bite Block
   Exercise B - Twin Bite Blocks for Symmetrical Jaw Stability
   Exercise C - Bite Block for Jaw Stability

2. If the client fails at the prerequisite level (**Bite and Hold**), you will begin by teaching them to Bite and Hold. Refer to Page 1, **Step 1, Bite and Hold.** Once achieved, begin at **Exercise A- Bite Block**

3. You will begin your therapy at the highest level before failure as indicated above on the assessment sheet. For example:
   - If failure is at Exercise A, you will begin at Exercise A. Once 15 seconds is mastered on both sides, one time, you will then proceed to Exercise B, then C. Once all of these have been mastered, you will return to Exercise A using the next level Bite Block.
   - If failure is at Exercise B, you will begin at Exercise B. Once 15 seconds is mastered one time, you will then proceed to Exercise C. Once these have been mastered, you will return to Exercise A using the next level Bite Block.
   - If failure is at Exercise C, you will begin at Exercise C. Once 15 seconds is mastered 1 time, you will then proceed back to Exercise A using the next level Bite Block.

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Exercise A- Bite Block

1. The following ratio of repetitions will be critical to the successful completion of Exercise 1:
   A. Symmetrical weakness (Both sides of the jaw are equally weak): **(1 unit = 1X Left for 1X Right)**
   B. Asymmetrical weakness:
      1) Both sides of the jaw are weak, but one side is weaker: (Client did not meet criteria on either side and one side was weaker)
      (1 unit= 2X to the weaker side for every 1X to the stronger side)
      2) Only one side of the jaw is weak: (Client meets criteria of 15 seconds on one side but not the other)
      (1 unit= 1X to the weak side only)
2. Begin at the highest level before failure, as determined in your assessment, using the appropriate ratio.
3. Practice this Step 10 times per day as Homework for a minimum of 1 week before moving onto the next level or Step, working up to 14 seconds on each side.
4. Once the client achieves 15 seconds, 1 time on each side, progress to **Exercise B** with the same level Bite Block.

Exercise B - Twin Bite Blocks for Symmetrical Jaw Stability

1. This technique will follow **Exercise A- Bite Block**.
2. Begin at the highest level before failure.
3. This exercise should not be attempted when there is asymmetrical jaw strength at the target level. By using Twin Bite Blocks you will be teaching jaw symmetry.
4. Inhibit all compensatory body postures associated with the completion of this task (i.e. using the whole body to pull back on the Twin Bite Blocks).
5. Practice this Step 10 times per day as Homework for a minimum of 1 week before moving onto the next level or Step, working up to 14 seconds.
6. Once the client achieves 15 seconds, 1 time, progress to **Exercise C** with the same level Bite Block.

Exercise C - Bite Block for Jaw Stability

1. This technique will follow **Exercise B- Twin Bite Blocks for Jaw Stability.**
2. Begin at the highest level before failure.
3. Practice this Step 10 times per day as Homework for a minimum of 1 week before moving on to the next level or Step, working up to 14 seconds.
4. Once the client achieves 15 seconds, 1 time, progress to the next level of Bite Block and begin again with **Exercise A.**

Remember:

- It is now time to repeat exercises A, B, and C using the next level of Bite Block.
- Continue to repeat exercises A, B, and C with all levels of the Bite Blocks.
- Teaching the client to chew on his/her back molars will be a valuable supplement to this exercise.
- Once you have completed all exercises at all levels of **Bite Blocks #2 thru #7,** progress to the
- **TalkTools® Jaw Exercisers.**

Disinfection Information: DO NOT place these tools in the dishwasher to clean. Most TalkTools® products are reusable and should be thoroughly cleaned or sterilized between uses. If this is a concern, please contact your local Center for Disease Control for further guidance.

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APPENDIX E
Instructions: TALKTOOLS® Original Horn Kit

TALKTOOLS® HORN KIT INSTRUCTIONS

Most TalkTools® products are reusable and should be thoroughly cleaned or sterilized between uses. If this is a concern, please contact your local Center for Disease Control for further guidance.

Horn Blowing Hierarchy: This Horn therapy has many benefits. It addresses deficits in abdominal grading, is a prerequisite for improving velopharyngeal functioning and targets specific speech sounds. In combination with the "Straw Drinking Hierarchy," it is an invaluable technique for eliminating tongue thrusting. It can also be used to reduce or even eliminate drooling.

About this Kit:

1. These instructions are included with the Original Horn Kit, Lip Protrusion Horn Kit and Tongue Retraction Horn Kit. The horns included will vary by kit. We have included an extra Horn #12 as you will most likely need 2 to complete this level of functioning.

2. **Disinfection Information:** Horns with Paper parts (#9, #11 and #12) cannot be sterilized and therefore are only approved for use with one client. **Do not place any of these in the dishwasher to clean.**

Suggestions for Horn Blowing Therapy

1. As in all oral placement work, the client must be placed in a stable posture. For some clients, horn blowing will be impossible if attempted in a seated posture. Clients who do not have postural stability in a chair and who are "fixing" to stabilize should begin this activity in a supine position on an incline mat (wedge).

2. Do not let the clients hold any horn until you can trust them not to use a compensatory posture (biting, lip retraction or shoulder elevation).

3. Establish that the horns are therapy tools and should not be used as toys by either clients or their siblings. When not used for practice, these tools should be kept out of reach.

4. Monitor to ensure that the client is not using **compensatory body postures** (e.g. shoulder elevation, whole body elongation, teeth biting or lip retraction).

5. Follow the horn hierarchy from #1 through #12 when your goal is to improve abdominal airflow strength as a prerequisite for expanding oral statement length (MLU) or for drooling control. The horns in the kit are designed to increase the abdominal demand in very small increments to ensure success.

6. Use the horns for specific speech sound teaching as described on the right side of the picture form. For example, if the target sound is /sh/, begin at the lowest level horn for that sound. In this case, Horn #3 would be where to begin.

7. **Criteria for Success:** Each horn must be blown 25 times in rapid repetitions, using only lips and abdominal grading with no compensatory postures, before moving on to the next horn. 25 repetitions guarantee 1 repetition with the next level horn. These criteria should be met for any age client.

8. **You should never use 2 horns simultaneously. Once you have met the criteria for success on a horn you will not go back to that horn.**

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WARNING: Therapy tools should not be used without therapist or parent supervision.

9. **Duration of airflow** is important as you progress through the hierarchy and must be implemented as part of the program. The longer you blow a horn, the longer the contraction of the abdominal muscles, lip and tongue muscles is sustained. Co-articulation is superimposed on airflow. Increased grading of airflow (through tension in the abdominals) allows for increased syllable/words in production.

#1 = any duration	**#2 =** 1 sec.	**#3, 4 =** 1+ sec.
#5, 6, 7, 8 = 2 sec.	**#9 =** 2+ sec.	**#10, 11, 12 =** 3 sec.

Note:

1. Flat-mouthed horns will work on lip closure to address drooling control and on phonemes that require a) lip approximation, b) lower lip retraction and c) lower lip tension.
2. Round-mouthed horns will work on lip rounding phonemes.
3. The harder the client is required to blow using lip protrusion with tension, the more tongue retraction you will obtain.

ASSESSMENT

1. In this step you will determine which of the 12 horns in the **TALKTOOLS® Original Horn Kit: Targeting Airflow Hierarchy / Abdominal Grading** you will use with each individual client.
2. Begin with Horn #1.
3. Place the tip of the mouthpiece on the client's lower lip at midline, instructing the child not to bite on the horn. **Remember: The client does not hold the horn.**
4. Instruct the client to blow the horn. One of the following scenarios will be observed:
   a. If the client is unable to blow the horn due to a lack of sufficient volitional airflow, continue to work on this horn in subsequent sessions, or go back to the Pre-Hierarchy Horn (not included).
   b. If the client is unable to blow the horn because he/she does not understand the concept of blowing to create a sound, return to either "Ah in Supine" (*Oral Placement Therapy for Speech Clarity and Feeding* by Sara Rosenfeld- Johnson, M.S., CCC-SLP) or to the Bubble Blowing hierarchy.
   c. If the client can blow the horn but is using a compensatory posture, inhibit that posture with verbal cues or touch. Consultation with an O.T. or a P.T. may be necessary if you are not familiar with these techniques. Once the posture is inhibited, instruct the client to blow this same horn again.
   d. The client can blow the horn but is using clavicular breathing (rising of the chest) rather than abdominal grading (tension in the abdominals). Place your hand on the abdominals and add weight to the muscle by applying slight pressure to the abdominals as they blow the horn. Continue to add weight until the client initiates the movement in the abdominals on his or her own. Do not progress to Horn #2 until abdominal grading is present without cues.

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e. If the client can blow the horn successfully 25 times in rapid repetitions, without assisted jaw elevation or assisted lip closure, progress to the next horn on the hierarchy. As your skills improve in using horns for therapy you will be able to estimate at which level you should begin this diagnostic component of therapeutic horn blowing. Monitor to ensure that the correct duration is being used for each horn. Refer to the chart and TalkTools Duration Tube activity.

f. Once you establish the highest level the client achieves successfully, just before failure, use that horn in treatment.

5. Re-assess the client 1 time per week to determine the next week's homework.

TREATMENT/HOMEWORK

1. Send the horn home for homework. The client practices at the level determined in Assessment, each day for one week.

2. The therapist or caregiver places the tip of the mouthpiece on the client's lower lip horizontally at midline. The client is then instructed to blow the horn; monitor to ensure that there are no compensatory postures and that he or she is using the abdominal muscles.

3. Remove and replace the horn after each repetition to re-establish the correct position in the mouth.

4. Have the client work up to blowing the horn 25 times in rapid repetitions.

   Note: Clients with asthma and those working on Horn #12 should take a 30 second break at intervals of 10 repetitions.

5. Progress to the next horn on the hierarchy and repeat Steps 1 thru 4 until all horns have been mastered.

   Note: 1. Jaw stability may be superimposed only on Horn #1 and Horn #2.

   2. Use the TalkTools® Therapy Charts to track the client's progress.

   3. Use the TalkTools® Homework Sheets to track home practice throughout the week.

Note from Sara: Please go through these programs slowly, as muscle skills need time to develop. Many children will be working on this program for 2 to 3 years.

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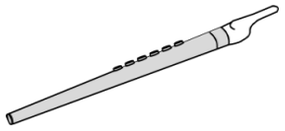
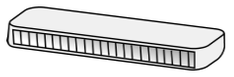
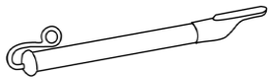
Oral Placement Goals

1. 

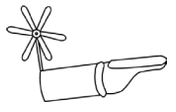
1. Lip Closure:
Bilabial sounds / m - b - p /
- Lower lip / f - v - r /
- Drooling control

2. 

2. Lip Closure:
Bilabial sounds / m - b - p /
- Lower lip / f - v - r /

3. 

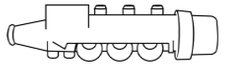
3. First Level Lip Rounding:
- Lower lip / f - v - r /
- Prerequisite for lip rounding sounds / w - oo - ʃ - ʧ - **D /**

4. 

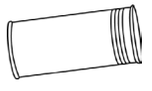
4. Lip Closure:
Bilabial sounds / m - b - p /
- Lower lip / f - v - r /
- Drooling control

5. 

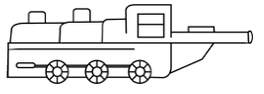
5. Lip Closure:
Bilabial sounds / m - b - p /
- Lower lip / f - v - r /
- Drooling control

6. 

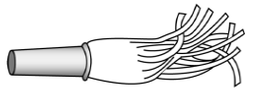
6. Second Level Lip Rounding:
- Prerequisite for lip rounding sounds / w - oo - ʃ - ʧ - ʤ /

7. 

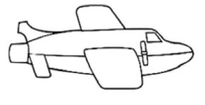
7. Low Jaw, Open Mouth Sounds:
(vowels) / ah - eh - ih - uh /

8. 

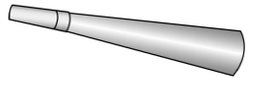
8. Lip Closure:
Bilabial sounds / m - b - p /
- Lower lip / f - v - r /

9. 

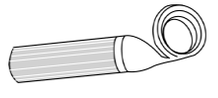
9. Lip Protrusion / Tongue Retraction:
/ w - oo - ʃ - ʧ - ʤ - s - z - t - d - ɛ - r /

10. 

10. Lip Protrusion / Tongue Retraction:
/ w - oo - ʃ - ʧ - ʤ - s - z - t - d - ɛ - r /
Graded airflow

11. 

11. Lip Protrusion / Rapid Tongue Retraction with Release:
/ w - oo - ʃ - ʧ - ʤ - k - g - r /

12. 

12. Lip Protrusion / Tongue Retraction:
/ w - oo - ʃ - ʧ - ʤ - s - z - t - d - ɛ - r /
Graded airflow

Note: The horn hierarchy has been reconfigured to reflect recent clinical data. This hierarchy was tested and validated by Quest Engineering Solutions (Billerica, MA.). For a copy of "Test Report #Q08024" please contact TalkTools Therapy.

#1 = any duration	**#2 =** 1 sec.	**#3,4 =** 1+ sec.
#5, 6, 7, 8 = 2 sec.	**#9, 10 =** 2+ sec.	**#11, 12, =** 3 sec.

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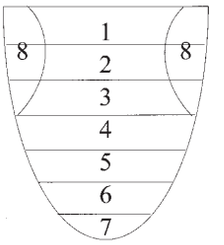
WARNING: Therapy tools should not be used without therapist or parent supervision.

APPENDIX F
Instructions: TALKTOOLS® Original Straw Kit

TALKTOOLS® STRAW KIT

Disinfect therapy tools before use.



Straw Drinking Hierarchy: This technique can be used with very young children, as well as with adults. It has been used successfully with clients who evidence severe cognitive deficits as well as those with normal intelligence. Therapeutic straw drinking is an effective technique for achieving tongue retraction and inhibiting tongue thrust. It addresses the eight levels of tongue grading. The number of the straw corresponds with the numbered part of the tongue as pictured below. As you progress thru the hierarchy, each straw addresses the new location as well as previous locations.

About this kit:

1. This kit includes all tools necessary to complete the entire Straw Hierarchy. Because we cannot test each straw at our facility before sending them out, we have included an extra Straw #1 in the kit as this straw, if not used appropriately, will break. It is made of soft plastic to allow you to cut it.
2. **Disinfection Information: Do not place tools in the dishwasher to clean, as they will melt.**
3. One of each straw required for Thickened Liquids is included in the kit. For replacements, Straw A is a McDonald's milkshake straw. Straw C and D can be purchased at a local grocery store.

THIN LIQUIDS

Suggestions:

1. The **Straw Hierarchy for Thin Liquids** is designed as a home program. Each new straw or "Step" should be introduced by the therapist and then sent home for daily practice.
2. The straws should be used with the any tight fitting lid cup. The client should be taught to hold the cup (not the straw) if independent.
3. The client will only use one straw on the hierarchy at a time. Once a straw is mastered it will not be used again.
4. **You may only use a lip block with Straws #1 thru #4 (Straw#1 and #4 have built-in lip blocks)**
5. When drinking through the existing straw on the hierarchy becomes easy, the criteria for introducing the next straw has been met. **Criteria for Success** involves:
   - No liquid leakage or air leakage between the lips.
   - The jaw should be relatively still/stable, indicating jaw-tongue dissociation (a pronounced up/down or forward/backward movement of the jaw will be noted if the client continues to use a suckle pattern).
   - The lips should be slightly protruded. (Lip retraction is noted when the muscle fatigues or secondary to a lack of lip-jaw dissociation.)
   - The client should not be pushing into the lip block for support on Straw #4. The client should be able to drink 4 ounces of liquid in 2 minutes or less.
   - **Do not transition from one straw to the next in less than one week**
6. In the ideal world, the client drinks all thin liquids, all of the time, through the targeted straw on the hierarchy.
7. Single sips or repetitive sips are allowed until completion of Straw #4. From that point on only single sips are encouraged.
8. Teach the client to use both hands to hold the cup at midline.
9. A DVD entitled *Straws as Therapy Tools* teaches the technique and the reasons for its inclusion in a speech therapy program. It is designed for therapists, parents, teachers, etc. The complete instructions can also be found in the book, *Oral Placement Therapy for Speech Clarity and Feeding*, by Sara Rosenfeld-Johnson, M.S., CCC-SLP.
10. You will begin with either Straw #1 or Straw #4. These straws will be cut to the appropriate length by the parent or therapist as described in **Step #1.** The therapist who has been trained in these techniques should determine which straw you begin with. If unsure, refer to the 1-hour instructional DVD *Straws as Therapy Tools* for detailed instructions or begin with Straw #1.
11. If upon introduction of a new therapy straw you see the tongue protrude more than previously noted, you have moved too quickly and should go back to the previous straw. Clients with severe tongue protrusion prior to the introduction of Straw Therapy may continue to do so through Straw #4. You **only** progress to Straw #5 if the tongue is retracted within the lips at the conclusion of Straw #4.

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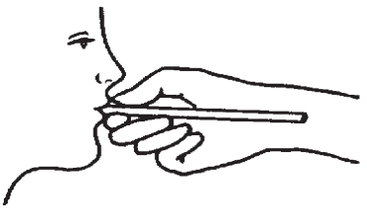
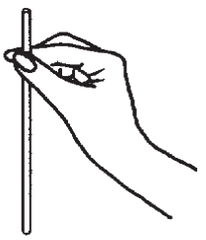
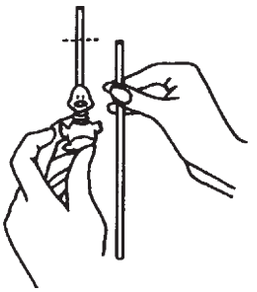
Straw Drinking Hierarchy for Thin Liquids (water, juice, milk, etc.)

Note: Very slightly thickened liquid may be used, but only if swallowing difficulties have been identified.

Step #1

1. Begin with Straw #1 or #4 only as recommended by the therapist. Note: If you are not an oral placement trained therapist, it is recommended that you refer to the *Straws as Therapy Tools* DVD for detailed instructions on implementing this program.
2. Allow the client to drink the thin liquid independently for a few seconds.
3. Pinch the straw next to the client's lips, where the straw enters the mouth.
4. Remove the straw and measure the amount of straw that was in the client's mouth.

5. Use the same measurement, the length identified in #4 of this step, to measure from the lip block on Straw #1 or #4 toward the tip of the straw as pictured above. Cut off the remaining portion of the straw tip. File the cut end to remove any rough edges. The amount of straw remaining should be the same length as the measurement that was in the child's mouth.
6. Send this straw home for no less than one week or until success is reached. See #4 under Suggestions: Criteria for Success.

   Note: If the client is initially biting on the straw for support as he/she is drinking, give him/her jaw support using your non-dominant hand. Implementing activities to strengthen the jaw and increase jaw-lip dissociation simultaneously with this program is recommended to reduce this compensatory pattern (ie. TalkTools® Jaw Grading Bite Blocks or other TalkTools® jaw strengthening tools). Assisted jaw stability should be given at all times until he/she gains the necessary jaw stability or until the straw is cut to ¼ inch above the lip block to eliminate the client chewing through the straw.

Step #2

1. Use the same straw that the client used for home practice.
2. Cut the straw tip by 1/4".
3. Send this straw home for a minimum of one week or until success is reached.

Step #3

1. Continue to cut the straw tip in 1/4" increments until the entire tip is only 1/4" long. (This may be 1 cut or several, depending on the initial length)
   Note: The tongue may still be protruded with some clients.
2. Allow at least one week, after each new cut, for home practice. **When this is easy, progress to Step #4.**

Step #4

1. Introduce Straw #2. Secure the lip block 1/4" from the straw tip. Place a small rubber band under the lip block to secure it in place.
2. When drinking through this straw is easy, progress to the next straw in **Step #5**.
   Note: The tongue may still be protruded with clients who began with excessive protrusion.

Step #5

1. Introduce and use Straw #3 in the same manner as described in **Step #4**. Do not wrap a rubber band under the lip block. If the client pushes the lip block down, return to straw #2.
2. When drinking through this straw is easy, progress to the next straw.
   Note: The tongue may still be protruded with clients who began with excessive protrusion.

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Step #6

1. Introduce and use Straw #4 in the same manner as described above. This straw has a built-in lip block (the first twist).
   If you began with Straw #1, cut this straw to ¼ inch above the first twist before giving it to your client.
2. When drinking through this straw is easy, progress to the next straw in **Step #7**.
   Note: By this point, the tongue must be completely retracted in the mouth and the jaw stable. The client should be drinking with a lip protrusion/tongue retraction draw. If not, return to a lower level on the Straw Drinking Hierarchy or remain on this straw until criteria is reached. Working on other activities such as *TalkTools® Ice Stix* syringe feeding technique, chewing on the rear molars and gum chewing are encouraged as adjunct activities to stimulate tongue retraction.

Step #7 – Note: Begin the Straw Hierarchy for Thickened Liquids at this time.

1. Introduce Straw #5 by allowing the client to drink 3-4 ounces of a thin liquid independently. Observe to ensure that the appropriate lip protrusion/tongue retraction is being used habitually. If the client has difficulty with this concept secondary to cognitive or sensory deficits, try using a piece of medical tape placed ¼ inch below the tip of the straw. The tape acts as a tactile cue, not a lip block, to remind the child where his/her lips should be. Do not let the client use his/her fingers as a cue. There is no lip block on this straw. **PLEASE DO NOT ADD ONE**. Return to straw #4 if the client continues to put more than 1/4" of this straw tip in his/her mouth.
2. Transition to a "**single-sip technique**". Change the instructions as follows:
   a. "Place the straw between your lips."
   b. "Draw the liquid until you feel it in your mouth."
   c. "Remove the straw."
   d. "Close your lips and teeth."
   e. "Put your tongue tip up behind your top teeth"
   f. "Swallow."
   Note: If cognition prohibits the client from following these instructions, attempt to teach the single sip technique at least 1 time per day with the assistance of the therapist or caregiver and allow the client to use his/her habitual pattern at other times using the same straw. The habitual pattern must be with the ¼ inch straw tip. A true single sip is achieved with 1 draw on the straw to get the liquid into the mouth.
3. When drinking through this straw is easy, progress to the next straw in **Step #8**.
   Note: Some clients may not learn the single sip technique; you may still proceed to the next straw.

Step #8

1. Introduce and use Straw #6 in the same manner as described in "Step #7" (no lip block).
2. Introduce and use Straw #7 in the same manner as described in "Step #7" (no lip block).
3. Introduce and use Straw #8 in the same manner as described in "Step #7" (no lip block).

THICKENED LIQUIDS

Straw Hierarchy for Thickened Liquids (introduce at the same time as STRAW #5 on the Straw Hierarchy for Thin Liquids). Monitor to ensure that only ¼ inch of the straw tip is in the mouth / between the lips. You may use a piece of medical tape placed ¼ inch below the tip of the straw as a tactile cue.

Step #1

1. Begin with Straw A (jumbo straw). Cut the jumbo straw to 4".
2. Use 3-4 ounces of nectar or a liquid of the same consistency as nectar.
3. Place the nectar container on the table in front of the client.
4. Instruct the client to lean forward and down to drink the nectar through the straw. This posture will increase tongue retraction. He/She may use either a single draw/swallow or a repetitive draw/swallow. If the table is too tall, have the client pull his/her chair back and hold the container in the lap.
5. Drink 3-4 ounces of this texture, one time per day, for a minimum of a week or until it becomes easy.

Step #2

1. Continue to use Straw A.
2. Increase the texture of the food source to puree consistency, and repeat the instructions described in Step #1.
3. Drink 3-4 ounces of this texture, one time per day, for a minimum of a week or until it becomes easy.

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Step #3
1. Continue to use Straw A.
2. Increase the texture of the food source to yogurt consistency, and repeat the instructions described in Step #1.
   Note: Avoid yogurt with pieces, as they will clog the straw or may be aspirated.
3. Drink 3-4 ounces of this texture, one time per day, for a minimum of a week or until it becomes easy.

Step #4
1. Continue to use Straw A.
2. Increase the texture of the food source to pudding consistency, and repeat the instructions described in Step #1.
3. Drink 3-4 ounces of this texture, one time per day, for a minimum of a week or until it becomes easy.

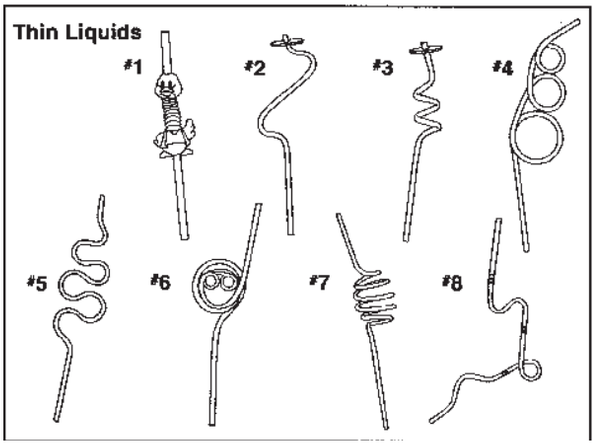
Step #5
1. **From this point on you will only be changing the straw—not the consistency of the thickened liquid. In other words, for the remainder of the thickened liquid hierarchy you will only use a pudding consistency.**
2. Repeat the same technique and posture as described above using Straw B (8” jumbo straw).
3. Drink 3-4 ounces of pudding consistency through Straw B, one time per day, for a minimum of a week or until it becomes easy.

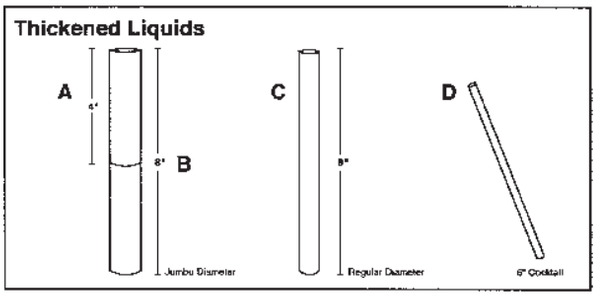
Step #6
1. Repeat the same technique and posture as described above using Straw C (regular diameter straw).
2. Drink 3-4 ounces of pudding consistency through Straw C, one time per day, for a minimum of a week or until it becomes easy.

Step #7
1. Repeat the same technique and posture as described above using Straw D (6” cocktail straw).
2. Drink 3-4 ounces of pudding consistency through Straw D, one time per day, for a minimum of a week or until it becomes easy.

Note from Sara: Please go through this program slowly, as muscle skills need time to develop. Many clients will be working on this program for 2 to 3 years.

Straw Hierarchies





Most TalkTools® products are reusable and should be thoroughly cleaned or sterilized between uses. If this is a concern, please contact your local Center for Disease Control for further guidance.

This hierarchy was tested and validated by Quest Engineering Solutions (Billerica, MA.). For a copy of “Test Report #Q08024” please contact TalkTools Therapy

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