EXERCISES FOR SPECIFIC PROBLEM AREAS:

1. Correction of the unilateral or bilateral tongue flare:

A major frustration in therapy is flaring of the tongue. The following exercises will help to gain good tongue tone and control.
Symptoms include tongue markings (scalloping, ridges, and/or sores), protrusion of the tongue against or between the teeth, separation of the bite during the swallow, a feeling of the tongue being "too large" in the mouth, and/or burning or itching sensations.

The Pencil Pull:

Bite crosswise on a pencil or chopstick in the area of the first molars. Remain biting throughout the exercise. (The young child might do better with the smaller size of a chopstick or a person in pain may appreciate the softer texture of the chopstick.)
Part 1: Position the tongue under the pencil and curl the tip of the tongue up and against the pencil. Pull against the pencil as forcefully as possible for a count of 10. You should see the underside of the tongue only; the top-pinky part of the tongue is against the pencil; the tongue form should be in a "V" formation as much as possible.
Part 2: Position the tongue over the pencil and curl the tip of the tongue downward and against the pencil. Be careful to not curl too far over the pencil. You only want the tip of the tongue doing the pulling. In this position, you will see the pinky part of the tongue. Pull back against the pencil as hard as you can for a count of 10.
Repeat this process Three times in each position, alternating from under to over or vice versa.

The Tongue Blade Push:

Tape together three ¾ "wood tongue blades.
Place the tongue blade onto the tongue utilizing about 1½" of the tongue blade.
Retract the tongue posterior into the mouth until the tip of the tongue is behind the lower anterior teeth.
Tighten the tongue to FIT the size of the stick. You do not want the tongue curled up around the side edges of the stick.
Hold the stick within the grasp of your fist; begin to push in a flat-downward motion.
Your tongue should resist by pushing upward against the pressure of the stick. Do not let the tongue be pushed into the floor of the mouth. Ideally, you want to lift the tongue upward so you can see at least a 1" distance from the floor of the mouth to the stick.
Push and resist in a flat tongue position. Do not push forward or at an angle. Pretend your tongue is an elevator rising straight up to the top of your head.
Except for the lift of your tongue, there is no movement in this exercise because the tongue is resisting the push of the tongue blade/hand for a count of 10- 3-4x.

The Gum Push:

Best gum to use: SPRY gum with Xylitol (1 piece for small child/2 pieces otherwise)
Others: Ice Breaker Orbit (1 piece usually enough)
Chew up the gum…..roll it into a ball and place it on the middle of the tongue…tip to spot…with the middle and back tongue muscles, push the gum against the top of the mouth for a 10 count….the goal is a long, narrow, flat piece of gum.

The Button Twist Hold:

This picture is not quite correct because the mouth should be open…Tie a double or triple knot in the end of the "twist" cord…begin with two of the large buttons and each week add two buttons…place the large knot on the middle of the tongue…tip to the spot….hold the knot against the top of the mouth with the middle of the tongue….mouth open….hold for 1 minute

MYOMELT or ORAMOIST or XYLIMELT:

Place a Myomelt or an Oramoist or a Xylimelt into the palate in front of where the hard palate ends…tip on the spot…hold the middle/back of the tongue against the top of the mouth in contact with the Myomelt, Oramoist, or Xylimelt during the Reminder exercise and/or during the night….this more easily builds the ability of the tongue to rest across the top of the mouth.
I have also used one spot on each side of the top of the mouth to help create the sides of the town boundary lines and stop lateral spreading.

The Mint Hold/Suck:

Place a round, flat mint (such as an Ice Breaker sugar free mint) on the middle of the tongue…tip to spot…hold the mint against the top of the mouth during the Reminder exercise.
They can also suck the mint against the top of the mouth to develop more tongue strength, but they cannot move it around.

Tongue Pops:

The secret to this exercise is to achieve "CAVES" underneath the tongue, leaving the lingual frenum muscle in a stretched position, all by itself. The problem with this exercise is it sometimes causes lateral flaring of the tongue while creating back of the tongue strength.
In the pictures above, they are creating the caves without major lateral flare. One picture has excellent caves….the other has acceptable caves.

Place the tip of the tongue on the upper anterior ridge.
Pull the remainder of the tongue into the top of the mouth with suction.
When done correctly, the entire tongue is contained within the palate, there are "Caves" under the tongue as a result the posterior tongue muscles being pulled tightly into the palate, and the lingual frenum is left standing by itself in a full stretch.
Hold the stretch and caves for a count of 2, release the suction, and listen for the resounding "POP" sound. Repeat this procedure 10 times.

*If you have difficulty getting the back of the tongue to pull into the back of the top of the mouth, leaving the cave formation, do the following procedure prior to doing the exercise. Extend the tongue forward, take a chopstick and forcefully TAP across the back of the tongue and down the center of the tongue to the tongue tip. Do the Tongue Pop Exercise. If the "caves" are weak, you can encourage them by tapping with the chopstick on the under part of the posterior areas of the tongue on either side during the 2-count suction hold.
Repeat each time prior to doing the Tongue Pop exercise until you have good "cave" formations.
*If you have one side of the tongue that is not pulling up, but the other side is doing a great job, follow this procedure. Extend the tongue forward, take a chopstick and forcefully TAP down the side of the tongue that is weak (not performing well) to the tip of the tongue. Do the Tongue Pop Exercise. During the 2-count suction hold, tap the underside of the tongue on the weak side. Repeat each time prior to doing the Tongue Pop exercise until the tongue is pulling evenly on both sides.

Tongue Pop Variations:

Once the Tongue Pop is established, vary the exercise with the following procedures.

Tongue Pops and Swallow:
Do three Tongue Pops in a row (but always holding the Pop for a 2-count).
On the fourth Tongue Pop, do not release the suction. Hold the "Caves" as you bite your teeth together; continue to hold the suction of the "caves" as you swallow. The lips are open and pulled back as you swallow. Repeat the full exercise 5 times.

Tongue Pops/Open & Close/Swallow:
Do three Tongue Pops in a row (holding the Pop for a 2-count).
On the fourth Tongue Pop, do not release the suction. Hold the "Caves" as you open and close, open and close, open and close, open and close, bite and swallow, lips back.
Repeat the full exercise 5 times.

Tongue Point and Tongue Trace:

The lips are open and pulled back, the mouth is open.
POINT the tongue forward in a Narrow "V" Formation. The tongue should extend "outside" the lips, not touching the lips, and held in a narrow point for a count of 1-2-3.
Move the tongue to the Right corner of the mouth, still maintaining the narrow "V" point, and hold the "V" formation for a count of 1-2-3.
Move the tongue to the Left corner of the mouth, holding the "V" formation for a count of 1-2-3.
Move the point to the top anterior ridge and hold the point for a count of 1-2-3.
With the tip of the tongue, trace a path across the top of the mouth, keeping the pointed "V" formation, and keeping in the center of the top of the mouth. Trace all the way to the soft palate-uvula area. Trace slowly back across the top of the mouth to the anterior ridge area.
Repeat the tongue points and tongue trace 4 times.

*If you cannot form a pointed tongue-"V" formation, do the following.
Extend the tongue forward. With a chopstick, TAP forcefully down the center of the tongue from the back to the tip. Hold the chopstick ahead of the tip of the tongue giving the tip of the tongue something to Point to. Point for a 1-2-3 ct. Move the chopstick to the corner of the mouth, point the tip to the chopstick for a 1-2-3 ct. Move the chopstick to the other mouth corner, point the tip to the chopstick for a 1-2-3 ct. Repeat this each time you do the exercise until the tongue can point independently in all directions.

The Snake:

This exercise is like the tongue point, but with a unique variation. You might not be able to use it at first because they do not have the capability with the back tongue muscles as yet, but once you develop them you can pull this exercise in.
Using a "bubble wand", point the whole tongue into a narrow "V" formation with the tip of the tongue pointing into the middle of the circle…hold for a 3 count…then retract the tongue, keeping it in a point, until the back of the tongue touches the throat…then have them say the "UNK" sound with the back of the tongue hitting the back of the top of the mouth….repeat 5X

Brush and Swallow:

With a toothbrush proceed as follows:

With a motion, posterior to anterior, TRACE the toothbrush 2x along the right side of the top of the mouth, 2x along the left side, and 2x down the center of the top of the mouth.
Extend the tongue forward forming a "V" formation, TRACE the toothbrush along the SIDES of the tongue from the back to the tip, 2x on the right side and 2x on the left side. Then 2x down the center of the tongue. Attempt to keep the tongue pointed straight ahead while doing the tracing. Immediately, place the tongue into the top of the mouth with the tip on the ridge, the tongue totally across the top of the mouth, the sides contained within the palate, BITE, Lips Back, and Swallow. Repeat the full procedure 5x.
*This exercise can be done any time you brush you teeth for extra practice or for maintenance.

Tapping:

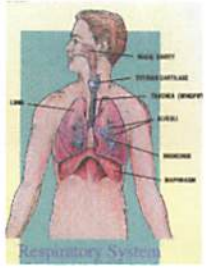
With a chopstick, tap across the back of the tongue, down each side, down the middle, and across the back of the top of the mouth…..follow with a stretch, bite, swallow….repeat 5x

2. ***Achieve Nasal Breathing/Lips Closed Posture:***

It is critical to achieve Nasal Breathing and a Lips Closed posturing with the therapy process.
It is possible to affect the following areas:

1. Allergic rhinitis
2. The "long face" syndrome.
3. Night sleep difficulties such as restless sleep, snoring, sleep apnea, and open mouth breathing.
4. Head-neck body posturing.
5. The environment for a palatal resting tongue posture and a palatal-posterior swallowing pattern.
6. TMJ related symptoms (jaw sounds, pain, deviation, ear ringing or buzzing, and head/neck pain)

It is important to determine etiological factors that would inhibit or prevent successful treatment. These would include a deviated septum, enlarged turbinate, polyps, grossly enlarged tonsils and/or adenoids, severe allergies, and/or a high arched-vaulted palate. Seek professional consultation and treatment as needed.
When the nose is not being utilized for breathing, mucous continues to be produced and stagnates inside the nose as a "boggy pond" causing an allergic reaction, increased swelling occurs, and nasal airway capability is compromised.
It is essential to initiate air moving across the tissue of the nose and to clean the nasal passageways.



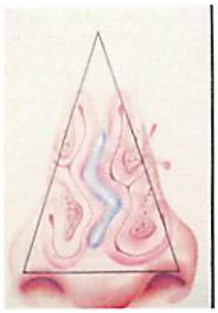
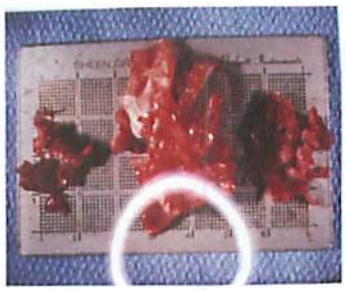
Diaphragmatic Breathing:

Initially teach this exercise in a reclined position, tongue across the top of the mouth, lips closed. Describe the action of the diaphragm-tummy area moving as a "balloon" would move. When you "fill it" with air, the balloon gets bigger, moving the hand upward. When you "empty it" of air, the balloon gets smaller, moving the hand downward. Place their hand on the area of the diaphragm, at the base of the rib cage. This, of course, is the action of the diaphragm moving upward to push the air out of the lungs and then pulling downward to create a vacuum and pull air into the lungs.

Describe the function of the nose to the patient.
Inside the nose is the nasal septum, three boney projections on each side of the nose called turbinate. These are actually long tubes inside the nose that heat the air to 98.6 degrees instantly and humidify the air. The lining of the nose is covered with a bed of hairs called cilia whose job it is to filter the air. Under the cilia are cells that produce a wet sticky mucous designed to trap the dirt particles and to moisten the air. When air is not moving in and out of the nose, mucous continues to be produced, but it causes irritation and swelling that further creates a congestive nasal state. We are going to "wake up" the inside of the nose and get it to function correctly.

With the lips closed, tongue on the spot, hand on the diaphragm, have them breathe in through the nose using the diaphragm, feeling the air under the hand, moving it upward. "Fill" for a count of three. Now breathe out all of the air through the nose, emptying the "balloon" completely, moving the hand downward; "Empty" for a count of 3; then hold without breathing for a 2-3 count. This allows for a build-up of very essential CO2 in the body and facilitates the release of oxygen into the bloodstream. (For more information, study the Buteyko Breathing concept)
Repeat this SLOW-RHYTHMIC breathing for 3 minutes.
As soon as the breathing is easy to do on the back, do it sitting up, for 3 minutes. Continue the breathing exercise 2x each day, one time sitting up (good to do before homework) and one time on the back (this is good to do at bedtime).

Often you will see patients that have blockage of the airway. An ENT evaluation with x-rays and/or an MRI is necessary to determine if there is the need for airway surgery to straighten the septum, trim the turbinate, remove polyps, open the opening to the nose, remove boney growths, adenoids, tonsils, etc. that would be blocking the airway. Following are pictures that give you examples of airway issues, including a boney growth completely blocking the airway of one of my patients. No amount of nasal washing will help these patients. They require proper diagnostic techniques and surgical intervention to open the airway sufficiently.

The other airway….the posterior airway:

It is essential that the posterior airway be diagnosed also. There should be 11mm of space between the wall of the throat and the angle of the jaw and posterior tongue. As you can see in the first picture, the posterior airway is very minimal whereas the other picture is quite large. Sleep apnea patients generally have very narrow posterior airways. If the mandible is placed too far back in the face, it creates this problem. Orofacial dysfunction adds to the problem, but can be corrected with the therapy. Sometimes with therapy and achieving lip closure and nasal breathing, the mandible actually moves forward creating more airway space. Otherwise it will be necessary to open the airway via orthodontic and/or surgical intervention.

The Breather:

This was designed for sports and to create the ability for increased breathing capabilities.

1. Begin with the easiest resistance settings
2. Inhale deeply and forcefully for 2-3 seconds feeling your abdomen expand. Pause 1 second-exhale with enough force in order to feel the abdominal muscles contract. You should be hearing an audible flow of air for effective training. This requires a fairly intense level of effort, but not to the point of exhaustion.
3. Continue inhaling and exhaling approximately 6-10 times per minute-this is one set. Relax ½-1 minute-Repeat-Limit daily training the first week to 5-6 sets, gradually increasing to 10-20 sets.
4. After maintaining the training level for approximately one week, increase the inhalation resistance from # 1 to #2 setting.
5. Continue increasing the resistance. It may take many weeks, but check your tolerance by increasing the resistances and trying it. For maximum benefit, reaching the #5, inspiratory and #4 expiratory settings is necessary.
6. Practice "huff coughing" if you are congested. A "huff cough" requires you to breathe in slowly and deeply, then flap your arms up and down as you exhale 2 to 3 smaller bursts of air creating a huffing sound.

Provent:

This is another product used in the nose to produce better breathing through air resistance.

***Exercise to Open Airway*:**

***Thoracic Stretch*:**
Lie on your side with one arm and hand stretched underneath and behind you; place the other arm over your body and stretched behind you, bringing both arms toward your neck as far as possible; your head should be resting on a small pillow; practice the diaphragmatic breathing technique for 2-3 minutes.

***Nasal Washing*:**

Just as we wash the body to become clean, it is necessary to wash the inside of the nose to aid in removing the stagnant mucous build-up and, ultimately, reduce the swelling. Sinus and middle ear infections can begin in the nose.

Use a Nasal Saline solution purchased at the drug store, on-line, or made fresh daily (1 t. table salt, a pinch of baking soda, and 1 pt. Pure water prepared in a clean glass bottle and at, or about, body temperature). Do the nasal washing procedure 1-2 times each day. "Xlear" is a product made with xylitol and is very effective in treating critters causing infection. "Entsol" nasal spray is a pure saline that is buffered and hypertonic and excellent at breaking up mucous and reducing swelling. "Neilmed" has the Nettie Pot as well as a spray for getting nasal saline into the nose. I find these products more effective than just nasal saline sprays.
Method 1-for young children
Soak a clean washcloth with saline; place against the nostril on one side; snuff the moisture into the nose; repeat several times in each nostril; blow the nose.
Method 2
Wash the hands; pour saline into the palm; snuff the saline into one nostril; spit out any drainage that goes into the mouth; repeat several times in each nostril; blow the nose

Method 3
Purchase an ear syringe with a bulb tip; fill the syringe with saline; place the bulb into the nostril; spray into the nose; spit out any drainage that goes into the mouth; repeat several times in each nostril. Blow the nose.

Method 4
This method is the excellent (especially for chronic sinus issues) and utilizes a WATER PIK dental irrigation instrument. You will need to purchase a "GROSSAN" Nasal Adapter from Hydromed, 1-800-560-9007.
Set the Water Pik at the lowest setting; fill the basin with saline; place the adapter into the nostril; lean over the sink; turn on the Water Pik at the lowest setting and allow the solution to run through the nostril and empty through the mouth or the other nostril using approximately ½ of the basin of saline. Repeat in the other nostril. You might experience a feeling of "pressure"

initially, but then it will flow freely. If the water will not flow at all, there is the probability of airway blockage and you need to consult with an ENT specialist.

Method 5
If using one of the sprays recommended, tip the head back, fit the bulb of the dispenser into the nostril, sniff as you spray (for about 2 seconds); do the other nostril, sniff as you spray; sniff several times to get the spray as completely into the nose as possible; then blow your nose until clear.

The Buteyko Breathing "nose clearing" technique is highly effective for the control of nasal congestion build-up, but should be accompanied by learning to "breath less" air volume. Often we combine the Buteyko method with orofacial myology (especially with a history of asthma). There is excellent information, available books and videos, and referral information on-line.

***Lip Closure Techniques*:**

Lips closed posture requires effort to teach the subconscious mind to keep the lips closed as a rest posture and to utilize the nasal airway for breathing. Begin by having the patient sit with the tongue on the ridge behind the upper front teeth and across the top of the mouth, lips closed and for 5 minutes, 2x each day. Build the amount of time to higher and higher increments.
Once they are up to a 30-minute range, they are doing nasal washing, and they are practicing the breathing techniques, do the following exercise.

***Lips closed with Cotton Rolls and Tape*:**

Place a l ½" dental cotton roll under/inside the upper lip and under/inside the lower lip; close the lips together; tape the lips closed with three pieces of 1" hypoallergenic cloth or paper tape in an **"X"** formation and a cross piece for stability; the tongue should be resting on the ridge and across the top of the mouth; allow 60 minutes to pass before removal of the cotton rolls and tape. Repeat until lip closure is easier and lip contours have improved. (This exercise helps in a short upper lip and full lower lip situation)

***Motivational Games for Lip Closure*:**

***The Penny Game*:**
All family members should assist in this game of monitoring the person who is working to achieve lip closure.
EACH TIME the mouth is observed closed, reward with a penny.
When you say "WYT" or "Where's Your Tongue?" and they respond with a "thumbs up" sign, indicating the tongue is on the ridge and across the top of the mouth, reward them with an extra penny.
When the lips are not closed, say the "code word" of "ZIPPER", indicating that they need to "zip their lips". They have to pay you a penny if they hear the word "zipper". It is important that they say "Thank You" each time they hear the code word "zipper"rather than a negative response.

Reward them with 5 cents if they awake with their lips closed.

***The Toothpick Game or The Check Game*:**
The people monitoring him/herself for the lip closed and tongue up posturing play this game. Each time they are aware of the tongue being in the right position and the lips are closed, they place a toothpick in a cup. At the end of the day, you give them a penny for every toothpick earned....OR....they put a check mark on a piece of paper or 4X5 card...count up the check marks at days end and reward with a penny for each check mark earned.

***The Poster*:**
The poster helps you to know if they have the concept of correct and incorrect oral-facial habits. Each day, find 3 pictures of people using correct oral-facial habits such as keeping the mouth closed, sleeping on the back, and good body posture. Paste onto a piece of poster paper.
Each day, find 3 pictures of people using incorrect oral-facial habits such as carrying the mouth open, exhibiting stress in the face, lip biting, pen biting, smiling with the tongue forward, leaning on the face, sleeping on the stomach, poor body posture, etc.
The same type of observation can be done with a 3-minute magazine or newspaper search where they thumb through and point to a picture and say, "correct", "incorrect".

***Code Words*:**

Use a "code word" to help correct a habit...for example the code word "Giraffe" for good head-neck-body posture....when the child hears the word Giraffe, he must correct his posture. It is more positive than telling them to "sit up straight", "stand up straight", "stop slouching!"

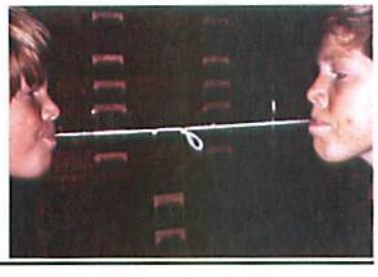
3. Increase lip strength and tone:

Lip strength:

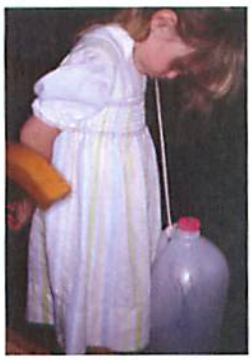
Tugs:

String two 1" flat buttons with different colors on each end of the string with a knot in the middle. Place one button in front of the teeth and behind the lips...put the other button in the palm of your hand and wind the string around your hand until you are about 6" from your lips....tighten your lips around the button...with your hand, pull the button out of the lips by pulling straight forward. (If the lips are working uneven on one side, place the button in the weak side and pull)...repeat 10x

Tugs of love:



Place one of the buttons in the patient's lips and the other button in another person's lips….tug against each other trying to win the contest between you. Remember that if your lips are weak, you are going to lose a lot at first, but that will change rather quickly as your lips get stronger! Repeat 10x



***Jug Lift*:**
String a 1" flat button; place the button between the lips and the teeth; bend over at the waist; measure the string from the button to the handle of a one gallon empty plastic jug with a lid on it; cut the string and tie it to the handle. Add a small amount of water into the jug; bend at the waist, pick up the jug with the button between the lips and the teeth; lift the upper torso, but keep the head looking toward the floor, keeping the lips parallel with the floor and tucking the chin toward the chest; hold the jug suspended for a 10count; repeat 4 times. It is important that the lips are working "equally". If one lip is stronger, you will see one lip working tight against the button and the other lip bulging. Decrease the amount of water until both lips are working equally. Each time the exercise is easy, increase the amount of water in the jug to the point where it is a challenge to hold for the full count of 10.

Lip Tone:

***Paper Plate Hold*:**

Use a thick type of picnic plate; cut the edge off one side to make a flat-straight edge; pull the lips back over the teeth; insert the plate; you want the "pinky" part of the lips to disappear as the plate is being held; if the plate is too heavy to hold in a flat-extended position, cut off some more of the plate until you can hold it level and not expose the pinky part of the lips.
Repeat 4 times for a 10 count hold.

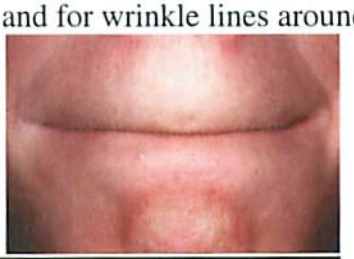
Pumping:
Place ¼ t. of salt into a juice glass of water….take a mouth full of the water and pump it 10x, slowly, under the upper lip…spit out the water and take a new mouth full….pump it 10x into the lower lip….spit out the water and take a new mouth full….pump it 10x into the right cheek….spit out the water and take a new mouth full….pump it 10x into the left cheek.
Do not let the face pull to the side….keep it aligned in the center as you pump. This makes the lip-cheek tissue more flexible and effective with the following exercises.

***Upper Lip Stretch*:**

With the thumbs and index fingers, grab hold of the Upper lip keeping the fingers and thumbs touching on either side of the lips; pull straight down for a 10 count (the tissue of the lip will blanch white when the pull is sufficient) Repeat 4-5 times

***Lip-Cheek Trace*:**

With the lips closed, place the tongue under the upper lip; move the tongue slowly in a circle, pushing as far up and out as possible; trace the tongue into the cheek, into the lower lip, into the other cheek, and back to the upper lip. DO NOT move the jaw in the direction the tongue is moving. Keep the jaw centered and make the tongue do the work.
Do 4 circles in a rotation to the left and then 4 circles in a rotation to the right
This exercise is excellent for relieving stress in the mouth and face…good for the TMD patient, the clencher, the bruxer, the facial stress person, and for wrinkle lines around the mouth.

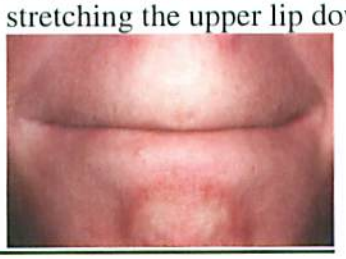


Lip Massage:

Pull the upper lip down over the teeth until lip is pulled back over the teeth…do not move the upper lip throughout the exercise. Move the lower lip over the upper lip (you might need to use your fingers to pull the lip up at first); press the lower lip against the upper lip and roll the lower lip down and back under the upper lip….repeat 6x

Lip Roll:

Place the index finger under the upper lip….press the finger against the upper lip as you do a complete rotation of the finger stretching the upper lip downward….repeat 6x



Lips Smacks and Lip Press:

Press the lips together for a count of 5…pinky part of the lips should disappear; then "smack" the lips apart….repeat 6x

Button Twist:

Place the knotted end of string between the front teeth….move the lower lip forward to "pick up" the string like a shovel on a dump truck…lift the string and dump it into the mouth….hold the accumulating string in the floor of the mouth with the tongue, but do not use the tongue to pull the string into the mouth….lift the buttons until they are touching the lips….do 1-2x
Start with two buttons and increase each week by 2 buttons until you have 8-10 buttons.

Tube Roll:

Place a 4-5" piece of rubber tubing inside/under the upper lip…roll the tubing into the lower lip with the lips closed and not using the tongue for help…you can give a nudge with your fingers at first or if needed with braces…When you get the tubing into the lower lip, hold the position for a count of 3….move to upper lip…hold the position for a count of 3….Do a total of 10x each position.

3. ***Achieving Bilateral Function of the Support Team Muscles:***

Bilateral function of the masseter, posterior temporalis, and the pterygoid musculature is necessary for balanced and correct jaw joint function, to achieve balanced facial contours, and a stable bite relationship.

Tube Bounce:

At a medical supply store, purchase surgical tubing, approximately ¼" in diameter and tubing that is thick enough to provide resistance when placed between the teeth to chew on it. Buy 3Ft. and cut the tubing into lengths of l l/2".
Place a piece of tubing between the posterior teeth on each side; keep the lips open and pulled back; begin to "bounce and squeeze", "bounce and squeeze"; feel over the ears in the area just over the ear lobe (a small dished out area on the head just about the ear); you should feel the posterior fibers of the temporalis muscle bulging in-and-out; if you do not feel this, it is generally because the lower jaw is too far forward.
Continue the "bounce and squeeze" activity for 1 full minute.
If you have a dysfunctional pull of the face/jaw to one side more than the other, use just one piece of tubing on the opposite side of the dysfunctional pull until there is balanced function of the muscles.

Wafer Squeeze:

You will need to purchase the "K.M. Therabite Wafer" from Lancer Orthodontics, 1-800-854-6222. The wafer will be wide enough to be used placed between the teeth, at night, to stop tooth grinding, to keep the tongue from protruding into the teeth, or to keep the cheeks from between the teeth. BUT, it will too wide for the "wafer squeeze" exercise. Trim about 1/8" off the sides. For a young child, you may need more off the sides and some trimmed off the back edges.

Place the wafer between the teeth, making sure that you have some of the wafer protruding in front of the teeth; the teeth remain in contact with the wafer at all times; the lips are open and pulled back; "squeeze" the teeth together (you will see the wafer bend downward during the "squeeze"); release the pressure and "squeeze" again; repeat this process for 1 minute; feel over the ears to be sure that the posterior fibers of the temporalis muscle are bulging in-and-out.

If there is a tooth or teeth that have a small opening from the wafer, cut a piece of thick rubber band (like that off a bunch of broccoli), and slide it under the tooth to make contact.

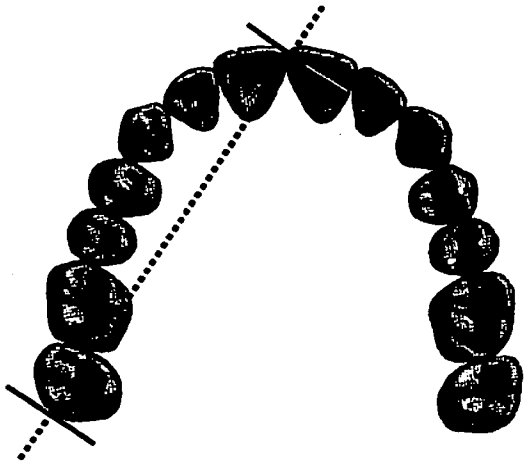
If there are teeth that do not touch the wafer (such as in an open bite), cut smaller pieces of the wafer and place then stacked onto the full piece of wafer until you have contact with the teeth; place a small orthodontic elastic around the pieces to hold in place. You will not see the "bend" of the wafer when you have this many pieces, but you should still feel the muscles over the ear working. As the teeth move, remove the pieces until you have tooth contact on both sides with the wafer.

The Myo Munchie:

Measure to be sure you have the correct size.
Insert the Myo Munchie; close the lips; chew into the appliance with an up and down motion only; when you feel muscle fatigue, stop munching for a while to rest the muscles, then continue munching; be sure to wash and dry the appliance before storing.
Begin with a few minutes and build to extended lengths of time of 20 minutes or more, at least 2x a day.

Take a straight edge, such as a coffee stir stick or a popsicle stick and measure from the back outside edge (distal-buccal) of the back tooth in the upper (maxillary) arch. Measure from that point to the point between the two central front teeth.

The small munchie measures at 1½ inches.
The small PLUS measures at 1 5/8 inches.
The medium measures at 2 inches and is deeper.



So, if the patient measures over 1½ inches, please order a small PLUS, etc. If any are too large, they can be easily trimmed, using a small scissors.

Generally speaking, the small fits ages 1 to 6, the small PLUS about ages 7-10 and the medium age 9 or 10 to small adults (or those without wisdom teeth).

If the patient measures more than 2 inches, the myo-munchie will not fit satisfactorily, so please be accurate in your measuring.

Bilateral Chewing:

Bilateral chewing of all food is necessary for the support of the jaw joints and maintaining balance of the oral-facial musculature. GUM chewing is very damaging because it is a continuous unilateral activity.
Practice with crackers that are approximately 1" square. Place the cracker on the tongue; move the cracker to the posterior teeth on one side; bite the cracker in half and move half of the cracker to the other side; chew the cracker "equally" on both sides at the same time using the back molars; chew with the lips closed and without movement of the tongue forward to the lips; chew the cracker until it is in a near-liquid state; gather the cracker into a bolus or ball of food on the BACK of the tongue; place the tip of the tongue on the upper anterior ridge, bite, keep the lips open and pulled back; swallow with the back tongue muscles.
Begin to practice with food, but keeping the size of the bites approximately 1" square, chewing on both sides equally and chewing 20-30 times, gathering the pile of food on the back of the tongue, and swallowing with the tongue on the ridge, the teeth together, and with the lips closed, but without any lip activity to help facilitate the swallow.

With all food, remember to watch the size of your bites, to chew bilaterally, chew 20-30 times, chew with the lips closed, and gather and swallow correctly.

4. **Back of the Tongue Control:**

Successful therapy is dependent on gaining control of the swallow with the back of the tongue. The following are exercises that will help achieve this.

K-Sounds and Swallow:

(Purchase some Styrofoam bite blocks from Practicon 1-800-959-9505 or a 1" rubber dental bite block)
Place the bite block between the posterior teeth on one side; say the sound "Kaa", 4 X, allowing the middle of the back of the tongue to jump up and hit the middle of the top of the mouth in the region between the back molars where the hard and soft palate join together; at the end of the fourth "Kaa" sound, SQUIRT, with a *stream* of water from a squirt bottle, over the back of the tongue onto the area where the soft palate and uvula join; swallow the water with just the *back tongue muscles,* the tip of the tongue is pointed toward the floor of the mouth (if the tip will not stay down, hold it down with your thumb until the back tongue muscles are able to swallow on their own).
Review: Bite on the bite block; say 4 "Kaa" sounds; squirt; swallow with only the back of the tongue; repeat 5 times.
If you have difficulty, lie down on your back and do the exercise.
Next week: Do the same exercise, but when you do the swallows, the first time do the squirt and swallow; the next time, do not squirt, but swallow without the prompt of the squirt; alternate as you do the sounds and swallows, 6 times.

The Three-Step Swallow:

Step One: Say the sound "CAW" (like the sound a crow makes) using the middle of the back of the tongue to lift up and hit the middle of the top of the mouth where the hard and soft palate join together; tip of the tongue is down and pulled back to assist the back of the tongue.
Step Two: Keep your mouth stretched open and swallow with only the back of the tongue, keeping the tip of the tongue down in the same position as when saying the "Caw" sound.
Step Three: Place the whole tongue across the top of the mouth with the tip on the ridge and the rest of the tongue against the palate; stretch open; then bite together; lips are open and pulled back; swallow, feeling the back of your tongue touching your throat.
Review:

- Say three "CAW" sounds
- Swallow with only the back of your tongue, mouth open, tip down
- Tongue across the top of the mouth, stretch, bite, lips back, swallow, feeling the back of the tongue touching the throat
- Repeat 5 times.

Three Back Swallows:

All three exercises are done with you lying on your back.
Step One: With the mouth open, tip of tongue down, squirt a stream of water over the back of the tongue onto the soft palate; swallow with only the back of the tongue. If the tip of the tongue is lifting upward or trying to push forward, hold it down with the thumb until it no longer is fighting you and the back of the tongue can swallow easily on its own. Repeat 10 times

Step Two: Bite the teeth together; place the tip of the tongue on the anterior ridge and the rest of the tongue across the top of the mouth; squirt a stream of water into the side of the mouth on the right and then a stream of water into the side of the mouth on the left; swallow the water, keeping the tongue in place (except you should feel the back of the tongue pull back and touch the throat) and the lips open and pulled back. Repeat 10 times

Step Three: Place a chopstick between the teeth at the bicuspid/molar area and bite on it; place the tongue behind the stick with the tip of the tongue on the upper anterior ridge; squirt a stream of water into the floor of the mouth; slurp and swallow the water (do not let the tongue move off the ridge and keep the lips open and pulled back) Repeat 10 times.
Review:

- Back of the Tongue Swallows 10x (Mouth open-swallow with only back of tongue)
- Side Squirt Swallows 10x (Biting, tongue across the top, squirting into the sides)
- Stick Squirt Swallow 10x (Bite on stick, tongue on ridge, squirt into floor of mouth)

UNK, CAW, ARK SOUNDS & SWALLOWS:

Repeat 10 "Unk" sounds, 10 "Caw" sounds, 10 "Unk" sounds with the middle of the back of the tongue hitting the middle of the back of the top of the mouth, tip is down and pulled back; Bite together, tongue on the ridge and across the top, lips open and pulled back, swallow feeling the back of the tongue touch the throat.
UNK, CAW, ARK sounds-10x each-bite and swallow 1x…..Repeat 5 times

ALSO…..to achieve better middle and back of the tongue control, use any/all of the exercises given at the beginning of the paper for unilateral or bilateral tongue flare.

5. Head-Neck-Body Posture Techniques:

There are many forms of exercise available to aid in strengthening the muscles of posture. It is important to influence, if possible, the slumped shoulder, head projected forward, slouching, and/or back lordosis posturing.
If necessary, refer for help to a chiropractor, cranial osteopath, Feldenkrais or Alexander technique practitioner, deep tissue massage, an orthopedic MD, or other body/movement practitioners. Techniques such as Yoga, Tai Chi, Qi Gong, or other body movement therapies would be very beneficial, also.
There are excellent exercises in the "Anderson Book of Stretch" that you can utilize.

Wall Back Hold:

Against a smooth flat surface, stand with your back on the door/wall….be sure your bottom is touching, that all of your back is touching, and your shoulder blades are touching…knees slightly bent…feet away from the wall a little….head up straight…hold position for 30 seconds….move into the wall back hold slide part of the exercise.

Wall Back Hold-Slide:

Maintaining your bottom, back, and should blades against the door/wall, begin to slide up and down the wall for a period of 30 seconds….always test with your hand to be sure your back is staying flush with the wall.

The Sling Shot:

Sitting up straight, place the Latex Band flat against the head near the base of the skull, holding the ends of the band with your hands pulling the band forward….with the chin level, move the head straight back over the shoulders while pulling forward on the band with your hands….hold this position for a 10 count…. do not lift the chin or tip the head back… repeat 2X for a total of 3x.

Group 1 Posture Exercises
Group 2 Posture Exercises
Group 3 Posture Exercises
Group 4 Posture Exercises
Group 5 Posture Exercises

Body Balancing Techniques: Ed-U-K-Educational Kinesiology

You will have patients that have coordination issues, they reverse letters, they have processing of information issues, they have difficulty "getting" the exercises…..have them to these exercises prior to performing their set of oral facial exercises.

Drink a glass of ***water*** **first**
Cross Crawls:

In a standing position, bring the left knee upward and cross the body to the right side; at the same time, bring the right arm across the body to form an "X" with the left leg; hit the forearm area of the right arm onto the top of the leg, just behind the knee; move the leg and arm back to a normal position. Bring the right knee upward and cross the body to the left side; at the same time, bring the left arm across the body to form an "X" with the right leg; hit the forearm area of the left arm onto the top of the leg, just behind the knee; move the leg and arm back to a normal position. Alternate this kicking and arm motion until you have completed 10 "X" cycles with each side.

Side Kicks:

In a standing position, kick the leg across the midline of the body without bending the knee and cross the midline of the body without bending the opposite arm….do the other leg and arm forming an X with the arm and leg each time…repeat 10 cycles with each side

Brain Buttons:
Standing or sitting: Place one hand over the belly-button area; place the thumb and index finger tips on either side of the sternum and just under the collar bones approximately 2 " apart; massage the finger and thumb back and forth for a count of 20. Switch hands and repeat for another count of 20.

The Diamond Gait (by John Diamond, M.D.)

This is a *walking exercise;* walk briskly, swinging your arms, shoulders back, head erect, eyes looking at trees (not bushes); and as you walk, you will do the following *in rhythm to your feet*: On the *first step,* breath in through the nose, lips are closed, tongue across the top of the mouth and pushing upward forcefully; on the *second, third, and fourth steps,* open your mouth, exhale the air, as you say out loud, "HA", "HA", "HA"(like the beat on a Tom-Tom with more emphasis on the first "HA"). Repeat the process, breathing in with the mouth closed, pushing upward with the tongue, and exhaling through the mouth as you say, HA, Ha, Ha.
Walk continuously, BUT your breathing in and your HA, HA, HA *must be in rhythm with the steps that you are taking.* Also, your left arm and right leg should be in coordination, not walking like a wooden soldier with the left arm and left leg together. The legs and arms must alternate, opposite leg and arm motion.
Repeat for 3-5 minutes. Avoid doing turns; walk in a large circle; walk on grass or dirt if possible. This is an effective healing exercise and body balancing technique.

6. **Jaw Shifting:**

On occasion, you will have a patient that shifts the bite to the side during speech sounds, upon opening or closing, when smiling, or as a habit pattern. There are other causes for the jaw to shift that need to be ruled out by a specialist (such as a tumor, a fractured condyle, a displaced disc, etc.), but often it is just because the oral facial muscles are working in dysfunction.

If the jaw is shifting to the right, you need to work with your tubing only on the left until the muscles begin working as a team and the shifting stops.

Tube Bounce unilaterally:
Place the tube on the opposite side of the pull; do the tube bounce exercise unilaterally.

If the shift is only forward, you would do the normal tube bounce and wafer squeeze exercises. If the shift is to the side as well as forward, do the tube bounce on the opposite side of the pull, but do the wafer squeeze to work the masseter, temporalis, and pterygoid muscles equally and to teach the lower jaw to function more posterior (test the muscles over the ears to be sure the posterior temporalis muscles are activating when doing the exercise).

Fist Push:
Sitting in a chair at a table or desk, place your fist under the chin with the elbow on the table (but make sure the head is level and not tipped up or down)
Open the bite one inch….now try to open more, but with the resistance of the fist pushing upward on the chin….hold the resistance for a 10count….rest and repeat 3x.
Be sure the jaw is not opening in a forward position…it needs to be in the position you wish it to ideally be in when opening and closing.

Habits:

It is necessary to correct poor habit patterns that contribute to a jaw shift

1. Sleep position…no hands or arms under the face…pillow only on the ear and up the head, not on the side of the face…preferably sleep on the back, but with no objects or animals resting on the face.
2. Nail or cuticle biting…These habits move the mandible forward and/or to the side to accomplish the biting habit
3. Lip, cheek, tongue, pen, object biting or sucking….These habits move the mandible forward and/or to the side
4. Gum Chewing…unilateral over activity
5. Musical Instruments….a musical instrument needs to be played correctly to avoid abnormal placement of the jaw and/or pressure on the face/jaw.
6. Head, neck, body posture….poor postural habits (especially carrying the head to one side, mouth open posture, standing with more weight on one side of the body, slouching)
7. Impact hobbies….(such as shooting of a gun with impact to one side of the face/jaw)
8. Leaning…leaning with the hand to the side of the face or chin is deadly to creating abnormal jaw posturing
9. Unilateral chewing of foods….it is best to chew foods equally on both sides at the same time
10. Jaw rest posture….the jaw, at rest, should always be in a position where there is a slight freeway space between the teeth, but in a position that can bite correctly to swallow. At rest, the jaw should never be held to the side and/or forward.
11. Water bottles…sucking on a water spout of a water bottle brings the jaw forward…drink from the bottle or cup
12. Cigarettes, pipes, toothpicks, etc…..anything help for periods of time between the teeth can cause abnormal muscle patterns and jaw posturing
13. Crooked smiles
14. Sippy Cups…sippy cups are a no-no…teach the child to drink from a cup…there is one cup on the market that comes as a sippy cup, but use the lid that has openings to teach the child to drink from a cup.

The sippy cup portion causes poor oral development, an anterior open bite, forward jaw placement, a narrow palate/arch, long facial form. If used, it should only be in a situation such as traveling in the car, for a drink, but take the cup away when finished.