REST POSTURE THERAPY

Roberta B. Pierce

I am happy to have this opportunity to share with you today a relatively new concept which has worked very successfully for me in my practice for the past several years.

The first time I stood in this podium and publicly stated that rest posture had more of an influence on the teeth than did swallowing was at the IAOM convention in Lake of the Ozarks, MO., in 1977. That was 9 years ago this week. Some of you vehemently agreed with me, some of you violently disagreed with me, but most of us, me included, didn't do anything significant to change the way we did therapy. We have continued to talk about tongue thrust swallowing, 6 to 8 pounds of pressure, 2000 times a day. I can understand that - I do it myself - it makes a tremendous impression on the patient and the parent - it gets them and me really psyched up to change this dreadful behavior - - - but it's simply not true. We cannot continue to ignore the research evidence that light, continuing forces have more of an impact on occlusion than strong, intermittent forces.

We continue to do therapy for correcting the tongue thrust swallow and many of us have been very, very successful in doing so BUT, the success has come because the clinical programs we use to correct the swallowing pattern have a strong rest posture component. Those of us who document tooth movement by the use of photographs, video tapes, study models and/or x rays consistently show improvement in occlusion before and after tongue thrust therapy - but is it the change in swallowing or the change in rest posture which allows this improvement to occur? I contend that what we are doing with our exercises is to reposition the tongue in the roof of the mouth and to achieve a lips - closed resting posture. If we begin to see that as the goal for therapy, then we begin to see that that goal can be accomplished in far fewer lessons than we traditionally put these patients through. This makes the patient and parent happier because it can be accomplished with less an investment of time, energy, and money; it makes the referring dentist more willing to refer patients; and it makes the therapist's job much easier when you can get into the patient's mouth and life for a brief period, make your changes, then get back out again as quickly and efficiently as possible. The parent, the patient, and the therapist do not have to maintain that high level of enthusiasm and motivation over a prolonged period of time. The cosmetic improvement in the face is very obvious and very immediate. We know all these things to be true, but, boy, is it hard to change! My challenge to you today is to "put your money where your mouth is." If you believe that rest posture is more impor-

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tant than swallowing, then start putting more emphasis on rest posture and less emphasis on swallowing. As the commercial states, "Try it. You'll like it."

I still do a "traditional" tongue thrust therapy program with many of the patients who are referred to me. But, more and more I find myself recommending a Rest Posture program, and I've been really pleased with the results. Each individual candidate for treatment should be evaluated in terms of type, degree, and progressiveness of malocclusion; presence of associated oral behaviors; and maturity, attitude, and motivation of the child and parent.

I would like for us to focus now on diagnostic considerations.

DIAGNOSTIC INDICATIONS FOR INTERVENTION

A patient is usually identified initially by the dentist or orthodontist as having an unacceptable oral habit which is thought to contribute to an orthodontic problem. The role of the oral myologist is to fully describe the oral behavioral characteristics involved, and to determine whether or not therapy is indicated. While it is usually fairly easy to determine whether or not a child has a "tongue thrust", it is much more difficult to determine whether or not the child should be enrolled in therapy and what type of therapy is most appropriate for an individual child.

The purpose of the diagnostic session is to answer these three questions:

1. Does the patient have a rest posture or tongue thrust problem?
2. Is the rest posture or tongue thrust swallow detrimental to occlusion or articulation?
3. Is this patient an appropriate candidate for therapeutic intervention?

DIAGNOSTIC QUESTIONS

1. Does the patient have a rest posture or tongue thrust problem?

Throughout the diagnostic session, the therapist observes the patient in an attempt to answer this question. Rest posture is usually easy to assess because the patient assumes an habitual resting posture whenever attention is diverted. Swallowing, however, may be more difficult to assess because the patients are aware that their behaviors are being observed. As a result of bringing swallowing to a conscious rather than a subsconscious level, they may modify their natural swallowing pattern. Some patients may over-exaggerate protrusions of the tongue, while others will try actively to keep the tongue from coming forward. The therapist must be aware that the swallowing pattern the patient uses during the diagnostic session is similar to, but not always the same as, habitual swallowing pattern.

During the diagnostic session, the examiner must gather and evaluate all available evidence: case history information, associated oral behaviors, occlusion, tongue placement and movement during swallowing, tongue resting position, and speech articulation. Keen observation, combined with knowledge of growth and development of the oral structures and maturation of the swallowing pattern, enables the clinician to identify oral habits which would be labelled "tongue thrust."

2. Is the rest posture or tongue thrust swallow detrimental to occlusion or articulation?

Many individuals swallow with a tongue thrust pattern over a lifetime without any apparent problems with dental occlusion or speech. At present, there is insufficient evidence of a link between the variety of problems referred to as tongue thrust and dental occlusion to state categorically whether or not tongue thrust causes orthodontic or speech problems. Weiss and Van Houten (1972) introduced the terminology "benign" and "detrimental" to differentiate between a thrusting pattern which does not appear to be doing any damage (benign) and one which is closely associated with malocclusion and/or misarticulation (detrimental).

3. Is this patient an appropriate candidate for therapeutic intervention?

If there is a tongue thrust problem present and if it appears to be detrimental to occlusion or articulation, the clinician must make decisions regarding what type of treatment would be most appropriate. It is important for the clinician to participate as a member of the "team" with the referring dentist or orthodontist.

One of the obstacles to establishing a firm recommendation as to whether or not certain children should be enrolled in therapy has been the limited choices in the mind and experience of the oral myologist. Should this child be enrolled in a "tongue thrust" therapy program or should all concerned "wait-and see" if the child outgrows the

problem? One alternative to the traditional tongue thrust program is an abbreviated program with the major focus on rest posture.

Whether the child should be enrolled in a full-scale tongue thrust therapy program or a modified rest posture program puts the decision in a different perspective. If it appears that a rest posture program alone is likely to be successful and to enable the patient to self correct the swallowing pattern, that would be the treatment of choice. However, if the patient appears to be a persistent or chronic tongue thruster with a wide variety of the typically associated oral behaviors, then it may be advisable to recommend a "traditional" tongue thrust therapy program.

Rest Posture Therapy

The goals of rest posture therapy are (1) to achieve a lips closed resting posture, and (2) to reposition the resting tongue in the roof of the mouth.

These goals are accomplished primarily through the use of muscle exercises drawn from the repertoire of treatment techniques in the tongue thrust literature.

The typical rest posture program might consist of lessons once a week for four to six weeks, with additional follow-up appointments scheduled at six month intervals. Specific exercises which could be used in a rest posture therapy program are presented in the Appendix.

Lip Exercises

Children for whom this therapy is recommended have "incompetent" lips. Lip incompetence is defined in dentistry as the inability to close the lips without strain, resulting in an habitual lips open resting posture. The overall purpose of lip exercises is to achieve functional lip closure by reducing or eliminating lip incompetence. The exercises are designed to increase strength and tonicity in the lip muscles. Before treatment, the upper lip usually rides high, exposing the upper incisors and gingival tissue, while the lower lip is flaccid and usually protrudes in a pout. After successful treatment, the patient should be able to maintain a comfortable closure without stressing the circumoral musculature. There is consistently a vast improvement in cosmesis as a result of this therapy.

Tongue Exercises

Children for whom this therapy is recommended generally rest with the tongue positioned against the lingual surface of the incisors or between the upper and lower anterior teeth. As with the lips, there can be a discrepancy between the size of the tongue and the size of the oral cavity. The literature on growth and development, particularly as it relates to the shaping of the palate, seems to emphasize the need for the tongue to be positioned in the roof of the mouth as soon as possible, so that the contouring of the palate and possibly the shaping of the mid and lower face regions can get full advantage from morphological factors.

The tongue exercises utilized position the tip of the tongue on the SPOT, the dorsum of the tongue against the hard palate, and the back of the tongue against the soft palate. As with the lip exercises, the purpose is not to strengthen the tongue muscles but rather to reposition the tongue to assume a comfortable resting position in the roof of the mouth.

Clinical Population

Several general guidelines will be given as to the characteristics of the population for whom rest posture therapy, rather than swallowing therapy, might be the treatment of choice.

1. The 5, 6, or 7 year old child with a history of digit sucking which persisted throughout the preschool period. Children in this age group are frequently referred to orofacial myologists for elimination of the thumb habit. Rest posture therapy might be initiated immediately or at a 3 to 6 month interval after elimination of a digit sucking habit.

2. The 7, 8, or 9 year old child with both rest posture and tongue thrust swallowing problems. Within this age group, there is a good possibility that a tongue thrust swallow will self-correct, perhaps with no therapeutic intervention at all. An abbreviated rest posture therapy program should enhance the chances that the swallowing pattern will progress through this transition. Until we have better prognostic indicators of which children will self-correct and which will not, it seems appropriate to provide the more conservative approach, rest posture therapy. Following rest posture therapy, the child should be seen for re-checks

every six months for at least a two year follow-up period. This allows the clinician to observe rest posture, swallowing, and dental growth and development during the critical stage of mixed dentition. If the tongue thrust swallow persists throughout this period, and if it appears to be having a deleterious effect on occlusion or articulation, additional therapy for teaching and habituating the correct swallowing pattern may be initiated during the recheck period.

3. Adolescents and adults for whom lip incompetence and/or protrusive tongue resting posture appears to be the major concern. These patients may or may not have an aberrant swallowing pattern. This is the most difficult category to describe and define because it is a clinical judgement (an educated guess or gut level instinct) as to whether these patients should be enrolled in rest posture therapy or tongue thrust therapy. If the tongue pressures during swallowing appear to be closely associated with the patient's malocclusion, it is probably adviseable to do an entire tongue thrust therapy program. However, if it appears that resting posture is "detrimental", but swallowing pattern is "benign", then rest posture therapy would be the recommended treatment.

APPENDIX
Practice Chart

Throughout this therapy, it will be necessary for you to practice all exercises three times every day.

This week, chart your practice sessions. We have given you a sample chart to either use or adapt to your own method. Give yourself a star, a happy face, a sticker, or whatever, each time you practice. Record each practice session faithfully and return your chart next week.

DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7



Make practicing a HABIT!

LESSON 1

The most important thing for you to remember during this therapy is that you have a SPOT. This SPOT is behind your teeth on your alveolar ridge, the same place that you should make a "t" or "d" sound. You may need help finding this SPOT, but once you have it, don't lose it. To help you remember just where your SPOT is, Mom can cover it with toothpaste, honey, vanilla extract, or other goodies.

Exercise No. 1 - Tongue Tip on the SPOT

During this week, we will practice placing the tongue tip up on the SPOT. Put a rubber band on the very tip of your tongue. Now move your tongue tip up to the SPOT. Each time you practice today, keep the rubber band on your SPOT for 1 minute; tomorrow, 2 minutes; the next day, 3 minutes, etc., adding another minute every day.

Exercise No. 2 - Tongue Stroking

Using a swizzle stick, start as far back as you can on the lateral border of the right side of your tongue. Move the stick slowly to the tip of your tongue. Now do the same thing on the left side, moving from back corner to tip. Alternate sides. Stroke each side 10 times

Exercise No.3 - Tongue Clicks

Practice making a scolding sound or tongue click. This sound is made with only the tongue tip hitting the SPOT. Do 50 tongue clicks at each practice session.

Exercise No. 4 - Balloon Blow

Pretend that your upper lip is a balloon. Blow up the balloon by using air that you trap inside your mouth. Hold for 5 seconds.

Now, try the same exercise pretending that your lower lip is a balloon. Blow up the "balloon" and hold for 5 seconds.

Alternate between upper and lower lip until you have blown up each lip 5 times.

LESSON 2

Exercise No. 1 - Fat Tongue/Skinny Tongue

It will be necessary for you to learn to control the muscles in the sides of your tongue. For this exercise, protrude your tongue slightly so that the tip rests on your lower lip. Tense the muscles so that your tongue is very narrow; then relax it so that the sides of your tongue touch the corners of your mouth. Make your tongue skinny for three seconds, then make it fat for three seconds. Do this 10 times at each practice session.

Repeat this exercise with your tongue tip on the SPOT.

Exercise No. 2 - Tongue Tapping

Using your swizzle stick, tap firmly on the dorsum of your tongue 20 times.

Then bite your back teeth together and lift your tongue up to the roof of your mouth, with the tip on the SPOT. Hold your tongue in this position for a count of 20.

Exercise No. 3 - Cotton Roll

A strong upper lip is important in establishing and maintaining the proper oral-facial muscular balance. Put a cotton roll behind your upper lip and curl your lip around the cotton roll. "Play with" the roll while you watch TV for 10 minutes. Your lower lip may move slightly but try to keep it almost motionless as you work the muscles in the upper lip.

Exercise No. 4 - Tongue Pops

Tongue pops are extremely important to help strengthen the muscles in the blade of your tongue. Place your tongue tip on your SPOT. Keep it there as you suck up hard on the blade for five seconds and drop it straight down with a POP. If you are using the tongue tip to pop, you are doing it incorrectly. Be sure that the lingual frenum is stretched and that the muscles in the blade of the tongue are doing all the work.

Tongue pops should be done often, but not rapidly. Be sure that you hold the correct tongue pop position for 5 seconds before you POP. Do at least 20 tongue pops at each practice session.

PARENT ASSIGNMENT

Have someone check EVERY night after you are asleep to see whether or not your mouth is closed. The observer should mark a plus (+) if your mouth is closed; a minus (−) if your mouth is open; a plus/minus (±) if your mouth is closed but your lips are apart.

S	M	T	W	Th	F	S

Exercise No. 5 - Tongue Tip Tasks

Simple tasks can be done while you keep your tongue tip on the SPOT; for example, setting the table or making your bed.

Each day do three tasks with your tongue tip on the SPOT. Be aware that you are consciously controlling your tongue tip. Remember to keep your teeth together and your lips closed. Use a rubber band for at least two of the tasks each day.

All accomplished tasks should be charted. Each task should last about 5 minutes.

DAY 1	1. 2. 3.
DAY 2	1. 2. 3.
DAY 3	1. 2. 3.
DAY 4	1. 2. 3.
DAY 5	1. 2. 3.
DAY 6	1. 2. 3.
DAY 7	1. 2. 3.

LESSON 3

Exercise No. 1 - Tongue Stroking & Tapping

At each practice session and before each meal you eat at home:

1. Stroke each side of your tongue, alternately, 10 times with a swizzle stick.
2. Tap your tongue 20 times, then lift it to the roof of your mouth for a count of 20.

Exercise No. 2 - Button Pull

Place the button behind your lips so that it is between your lips and your teeth. Wrap the end of the string around your index finger and pull gently. Feel the muscles in your lips tighten as you try to hold the button in place. Practice this exercise for ten minutes three times each day as you watch television or read a book.

Exercise No. 3 - Muscle Stretch

If you have been practicing tongue pops faithfully, the muscles in the middle of your tongue are ready to do this new exercise. Put your tongue up in the TONGUE POP position, but don't pop it. Hold your tongue up there tightly as you open and close your jaw. Count how many times you can open and close and still keep your tongue correctly in place. Begin with 10 muscle stretches and increase your number until you can do 100 easily without stopping.

Exercise No. 4 - M & M Squash

Place an M & M on the blade of your tongue. Lift the tongue so that the tip is on the SPOT and the M & M is touching the hard palate. Hold it there until the candy coating breaks. Do 3 M & M's at each practice session.

Exercise No. 5 - 2 Elastic Rest Posture

This week, we will use two rubber bands to practice the correct resting posture of the tongue, lips, and mandible.

Place one elastic on the blade of your tongue, where you put the M & M. Place the other one on the tip of your tongue.

Raise your tongue to the roof of your mouth, so that both rubber bands are touching your palate. Keep your lips closed and your teeth together or almost touching while you do this exercise.

Maintain the correct resting posture while you watch one thirty minute T.V. program each day.

LESSON 4

The way you chew is important. When the food is in your mouth, it should be way back so your chewing teeth (molars) do all the work.

Be sure that you chew some on the right side and some on the left side. As you chew and gather the food your tongue must never push forward against your teeth. Chew with your lips closed.

When you are eating or drinking, do not let your tongue come down and forward to meet the fork or glass. Keep your tongue on the SPOT as the utensil approaches your mouth.

At each practice session, eat several crackers or cookies and think carefully about your chewing pattern. Gather each bite into a nice round ball (bolus) before you swallow it. Teeth together, tongue on the SPOT, smile, swallow. Remember to chew properly (and that means SLOWLY) every time you eat.

Do not use liquid to help wash down the food. Drink only one small (8 ounce) glass of liquid with each meal. You may drink as much as you want before, after, and between meals but limit yourself to one glass during the meal.

Exercise No. 1 - Lip Stretch

Using all of the muscles in your upper lip, S-T-R-E-T-C-H your lip so that it curls down over your upper teeth. Hold this position for 5 seconds, then relax and gently close your lips for 5 seconds.

Reverse the procedure and S-T-R-E-T-C-H your lower lip so that it curls up over your lower teeth. Hold this position for 5 seconds, then relax and close your lips for 5 seconds.

S-T-R-E-T-C-H both lips at the same time; hold for 5 seconds then relax and close your lips.

Exercise No. 2 - Rest Posture

Your tongue should be in the roof of your mouth, your teeth should be together or almost touching, and your lips should be closed AT ALL TIMES when you are not talking or eating.

*Author's note. There are a variety of ways to accomplish this goal. Reminder signals and signs can be used effectively with patients of all ages. The method most often used, with modifications if needed, is explained in *SWALLOW RIGHT: A Program for the Correction of the Deviate Swallowing Pattern in Young Children*.

"The most comprehensive and most effective method for correcting rest posture is the 5¢, 10¢, and 25¢ program. Both parent and child are well-motivated and work very conscientiously on this approach.

The first week, the child is given twenty nickels by the parent. The nickels are placed in a small dish close to where the child spends much of his time. Each time the parent observes the child with "mouth hanging open" and/or "tongue hanging out", she removes a nickel from the dish. It is important that she doesn't say anything to the child (i.e. verbal nagging) but it is highly recommended that she be quite noisy about getting the nickel out of the dish. At the end of the first week, the child can keep any money which is left and he can spend it ANYWAY he wants.

The second week, the child receives ten dimes. Thus, he must work twice as hard to have any money left at the end of the week.

The third week, there are four quarters, which means the child can "get caught" only four times during the whole week. It is usually suggested that if the child loses all four of Mom's quarters before the week is over, he must get additional quarters out of his own piggy bank. If the child has lagged at all in motivation up to this point, the situation changes drastically when his own money becomes involved.

The next week, the child receives two half dollars; and the final week, a single dollar bill.

If you should encounter the rare child who is not motivated by money, candy bars or similar treats can be substituted. We have successfully used 15 miniature Hershey bars the first week, 7 regualr size Hershey bars the second week, and one giant bar the third week."

These four lessons are scheduled once a week for four weeks. The patient is then seen for a follow-up in 4 to 6 weeks.