Frontal Lisp, Lateral Lisp, Distorted R

Pam Marshalla, MA, CCC-SLP, Speech-Language Pathologist

Morning: Lisps

Afternoon: Distorted R

Speech Improvement vs. Speech Pathology

• A century ago SLP started by doing speech improvement.
  • Example: Child says “Thee my too?” instead of “See my shoe?”
  • Example: Child says “It’s a wed wabbit!” instead of “It’s a red rabbit.”

• **Speech Improvement:** Speech improvement is the process of correcting word productions. Anyone can do speech improvement. Anyone can tell a child: “Say, “Shhhhoe” or “Say, “Rrrrrred.” Engaging in speech improvement is how we started out. We began as “teachers with an interest in speech.” But anyone can do that today: Parents, teachers, teach aids, speech aids, grandmothers, nannies, babysitters. Anyone can provide lessons in speech improvement.

• **Speech-Language Pathology:** The speech-language pathologist’s job is to go much deeper than the process of simple speech improvement. Our job is to engage in the diagnosis and remediation of articulation and phonological deficits. Our job includes showing others how to do speech improvement. But that is secondary to what we really do. Today we are going to talk about what we really do.

Meet and Greet
Articulation Therapy

Charlie Van Riper is the one who said that we can’t just have clients repeat **words** as a way to improve speech. The work has to revolve around **phonemes**. He said to start by seeing if the child can imitate your phoneme. If he can, then move on to the syllable, the word, and so forth. **The key is correct imitation of the phoneme.**

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>SAMPLE</th>
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<tbody>
<tr>
<td>Isolation</td>
<td><strong>Ssss</strong></td>
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<tr>
<td>Syllable</td>
<td><strong>Soo</strong></td>
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<tr>
<td>Word</td>
<td><strong>Soup</strong></td>
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<tr>
<td>Phrase</td>
<td><strong>Tomato soup</strong></td>
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<tr>
<td>Sentence</td>
<td>I ate a bowl of tomato <strong>soup</strong>.</td>
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</table>

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>SAMPLE</th>
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<tbody>
<tr>
<td>Paragraph</td>
<td>I like tomato <strong>soup</strong> and I wanted to eat it. But it felt cold. I put the <strong>soup</strong> in the microwave to heat it up. Then it got very hot and I had to wait for it to cool. The tomato <strong>soup</strong> warmed me up.</td>
</tr>
<tr>
<td>Conversation</td>
<td>Level I– Talk about <strong>S</strong>. Level 2– Talk about <strong>soup</strong>.</td>
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Phonetic Placement Method

*What if a client cannot imitate a phoneme correctly?*

Van Riper said that if a client cannot imitate a phoneme correctly within a few minutes, we must do more. He said we must resort to the old-time **phonetic placement methods**.

“For centuries, speech correctionists have used diagrams, applicators, and instruments to ensure appropriate tongue, jaw, and lip placement…

“These **phonetic placement methods** are indispensable tools in the speech correctionist’s kit…

“Every available device should be used to make the student understand clearly what positions of tongue, jaw, and lips are to be assumed.”

Van Riper (1954) *Speech Correction*, p236-8
The Reason for Our Troubles  
A Misleading Classic View of Tongue Function

<table>
<thead>
<tr>
<th>Lingua-dental</th>
<th>Lingua-alveolar</th>
<th>Lingua-palatal</th>
<th>Lingua-velar</th>
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<tbody>
<tr>
<td>Th, Th</td>
<td>T, D, N, L, S, Z</td>
<td>Sh, Zh, Ch, J, Y</td>
<td>K, G, Ng, R</td>
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This sagittal view causes misunderstandings about tongue positions for phoneme productions because it is a midline view only. We need to understand what the whole tongue is doing in order to teach our clients what to do.

Modern Electropalatometry

Developed by Samuel Fletcher  
Brigham Young University

Photos from Logometrix
Ultrasound Technology

Basic Horseshoe Shape

Real Tongue Positioning

S and Z

Ch and J

Sh and Zh

Two phases

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We have known this for a very long time

Detail from Borden and Busse (1925) *Speech Correction.* New York: Crofts.

Movement Perspective

All movements are made with an interplay of mobility and stability. Stability allows for advanced and accurate mobility.

Proximal stability
Core strength

S = Stability
M = Mobility
Production of T

Normal adult speaker using modern day electropalatography

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Lateral bracing

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Start of closure

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Maximum Contact

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End


Correct Sibilant Production

Correct sibilant production requires that the tongue stabilizes at the back lateral margins, and then simultaneously lifts on both sides from back-to-front in a **stripping action**.

**S and Z**

**Sh and Zh**

**Ch and J**

Two phases
### Evidence: Experience through the last century

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Title</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elizabeth Nemoy &amp; Sara Davis (1937)</td>
<td>“The Correction of Defective Consonant Sounds” (Best pre-Van Riper book)</td>
<td>E Position (Can’t get a phoneme? Start with E.)</td>
</tr>
<tr>
<td>Noam Chomsky &amp; M. Halle (1968)</td>
<td>“The Sound Patterns of English” (First phonology book; They used x-ray analysis)</td>
<td>Neutral Position; Position for /l/ (I wish they had called it “Starting Position”)</td>
</tr>
<tr>
<td>Leo Kofler (1887)</td>
<td>“Art of Breathing: As the basis of tone-production for singers, elocutionist, etc.” (Written before the IPA)</td>
<td>To fix a lisp, first teach “That cramming of the sides of the tongue against the molars”</td>
</tr>
<tr>
<td>Pam Marshalla (Various publications beginning in 1982)</td>
<td>Shoulders of the Tongue Back Lateral Margins Points of Stability</td>
<td>Starting Position Tongue Stability Zones of Stability</td>
</tr>
</tbody>
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### Tongue Position: Mature vs. Frontal Lisp

Say “sixty” correctly many times in a row and note your tongue anchors. Now alternate between correct and frontal lisp. Note the lack of appropriate back-lateral anchoring.

<table>
<thead>
<tr>
<th>Mature Speech</th>
<th>Frontal Lisp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tongue is in.</td>
<td>Tongue is out.</td>
</tr>
<tr>
<td>Tongue is stable.</td>
<td>Tongue is unstable.</td>
</tr>
<tr>
<td>Tongue is anchored at the back-lateral margins.</td>
<td>Tongue is not anchored at the back lateral margins.</td>
</tr>
</tbody>
</table>

Frontal Lisp: The tongue is not anchored appropriately. The jaw also is out of position as we shall see next.
Jaw Position for Sibilants and Vowels

Melville Bell (1849)
“The Principles of Elocution”

The jaw is always high on the consonants.
The jaw lowers for the vowels.

“Normal Range” of jaw movement in speech: From S to Ah

Jaw and Frontal Lisp

Old information that has been ignored: Approximately 99% of frontal lisps related to jaw lowering

“Of some 800 cases [with frontal lisps] who passed under our observation we found only three who used the opening formed by the abnormal teeth [i.e., the anterior open bite] for protruding the tongue. All other cases lowered the jaw to make room.”

Oral Stability vs. Oral Instability

Which child is stabilizing correctly?

Five signs of oral instability:
1. The jaw is too __________.
2. The tongue is too far ________________.
3. The lips are ____________________.
4. The cheeks are ________________.
5. Muscle tone is ________________.

Where is this child’s tongue stabilized?

Tongue Position in the Lateral Lisp

From Gibbon (1999): One subject who was making a lateral /s/. 

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Assessing Direction of Airflow

Use a straw to test the direction of air flow.

Hold the straw on the outside of the teeth as the client produces each individual sibilant.

Move the straw from left to right across the teeth to determine where air is escaping.

Airflow will amplify at the point where it is escaping.

Jaw Problems Also Cause Lisping

<table>
<thead>
<tr>
<th>Structural Problems</th>
<th>Functional Problems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maxilla small</td>
<td>Jaw shifting forward</td>
</tr>
<tr>
<td>Mandible large</td>
<td></td>
</tr>
</tbody>
</table>

This is a problem of bone structure. The tongue is situated correctly in relation to the mandible, but too far forward in relation to the maxilla.

The solution for this is to reduce the size of the mandible, and/or to increase the size of the maxilla; or to teach compensation for the structural deficit.

This is a problem of jaw movement (jaw instability). The tongue is carried forward as the jaw protrudes too far forward.

The solution for this is to stabilize the jaw in an appropriate position that is more posterior.
Jaw Lateralization Also Causes Lisping

The mandible shifts to one side or the other; or it shifts back-and-forth from one side to the other.

This is a problem of jaw movement.

The tongue is in the right position relative to the jaw.

The solution is to stabilize the jaw in its appropriate position at midline.

Assessing Jaw Position

A thin probe placed against the jaw in various positions helps us assess patterns of jaw movement during speech.

Place the item to help see or “read” jaw position.
Deeper Assessment of Jaw Position

How do we tell if the jaw is pushing forward or if the jaw is just too large for the maxilla?

1. Have the client bite on a probe with his molars on one side.
2. See if you can adjust the jaw gently back into place with your hand.
3. Touch the molar area and say, “Bite back here.”
4. Refer to dentist/orthodontist.

Review

- The tongue moves in three dimensions. It functions like a bowl that is anchored in the back and held up by the jaw.
- The frontal and lateral lisps are caused by problems in one or more of these areas: Bowling, anchoring, or being held up by the jaw. These are not phonological problems. They are phonetic problems that result from problems in mouth movement. These are problems in oral-motor skill.
- Therapy for the lisps is mechanical, not linguistic. These clients need to learn how to bowl the tongue, how to anchor the tongue in the back, and how to hold the tongue up with the jaw.
Techniques

Traditional books contain a random assortment of ideas for phonetic placement that are presented as simple laundry lists.

We are going to organize these ideas and put them together with our newest ideas.

1. Start with T, S, and Z.
2. Teach jaw position if necessary.
3. Teach tongue anchoring if necessary.
4. Use the anchors to teach Sh, Zh, Ch, J.
5. Create the groove: Traditional methods.
6. Create the groove: Modern methods.
7. Refining the groove for S and Z.
8. Dealing with hyper-nasality on the sibilants.

Start with T, S, and Z

Many clients can start right here.

Most therapists use T to teach S, and most artic books discuss it—

Procedure: Have the client say T and attend to the up-down tip movement. Then have him keep the tip down to make the S.

Association Method: Using one phoneme to teach another (Van Riper, 1939). This method only works if the client is producing T correctly in the first place.

Why does it work?
• Both T and S use the basic horseshoe shape.
• Both T and S require back-lateral tongue stability.
• Both T and S require a high stable jaw position.
• The only difference between T and S is in the tip.
Straw Method

Help the client establish a midline sound and help him learn to make the groove more narrow with straws.

“Blow air into a straw held just in front of the space between the upper two medial incisors” (Elizabeth Bosley, 1981, p. 66).

Organize your straws by diameter.

Use wide ones to get the air stream going down midline.

Use gradually smaller straws to narrow the channel.

Wide-to-narrow straws help narrow the channel

Milkshake Straw
McDonald’s Straw
Soda Straw
Coffee Stirrer Straw

Dental Floss Method


Tie 5-10 “sewer’s knots” on the end of a piece of dental floss. Place floss between the upper central incisors.

Draw the string out so the knot sits right behind the central incisors, at the alveolar ridge.

Use to teach small midline airflow.

Homework: Use tongue-tip to fiddle with knot during a 30-minute TV program (Popcorn Principle).
Dental Pick Method

**Dental pick:** Used just like dental floss, but much faster and easier to handle.

- Pick is placed between the upper central incisors.
- Pick sits between alveolus and tongue-tip.

The Bumblebee Sound

Use S to teach Z

<table>
<thead>
<tr>
<th>Word</th>
<th>Zoo: Dzzz--ooo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phrase</td>
<td>Mad zebra: Ma--dz--ebra</td>
</tr>
<tr>
<td>Sentence</td>
<td>I rode a mad zebra. I rode a ma--dz--ebra.</td>
</tr>
</tbody>
</table>

Everything we have said about T and S also applies to D and Z.

Or we can simply add voice to S.
Teach Jaw Position (If necessary)

Some clients cannot produce a correct sound, and some cannot carryover their skills out of the therapy room, because their jaw is perpetually slipping out of position. Stabilizing the jaw can be the key to success for them.

Van Riper: “Tooth props of various sizes will help the student to assume a proper dental opening” (1947, P. 186).

- Bite down on thin tool with molars.
- Tug slightly on tool to build awareness of the “Up Position.”
- Practice sound with tool in place.
- Carryover: Fade use of the tool over time by training the ear to monitor productions.

Adjust \( R_x \) for Dental Problems

Anterior Dental Barrier
The anterior teeth create a barrier against which the midline air stream strikes. Integrity of barrier is needed for accurate frication.
Making Rx Plans

Only general recommendations can be made. Each case must be evaluated on its own merit. It helps to have two SLP’s looking at the client to make a decision.

<table>
<thead>
<tr>
<th>Situation</th>
<th>Plan of Action</th>
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<tbody>
<tr>
<td>Normally missing teeth</td>
<td>Start therapy after teeth come in. Then re-screen and treat if necessary.</td>
</tr>
<tr>
<td>Overbite, under bite, cross bite, anterior open bite</td>
<td>OPTIONS 1. Start therapy after braces are gone or after surgery is complete 2. Or start therapy and teach compensation. 3. Or dismiss the client from therapy. 4. Or combine all three options in a reasonable sequence</td>
</tr>
<tr>
<td>Missing teeth, crooked teeth, diastema, etc.</td>
<td></td>
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<tr>
<td>Clefts, Fistulas, Tumors, etc.</td>
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</tr>
<tr>
<td>Palatal expanders, rakes, cribs, etc.</td>
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Examples to consider

<table>
<thead>
<tr>
<th>Case</th>
<th>SLP recommendation</th>
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<tbody>
<tr>
<td>Male 15 years. Frontal lisp. No developmental problems. Very high arched palate, narrow maxilla. Tongue cannot fit against palate well. Has been to orthodontist. Parents aren’t sure if braces are necessary.</td>
<td>Sibilants are as good as they can get given dental/palatal structure. Refer for orthodontic treatment now. Postpone therapy until after palate widens and palatal expander removed.</td>
</tr>
<tr>
<td>Male 9 years. Muscular dystrophy. Low cognitive skills. Severe malocclusion, missing and twisted teeth, severe diastema. Lateral sibilants emerging. Child will not receive orthodontia.</td>
<td>Teach a gross Sh for all sibilants if stimulable from E. Over-emphasize Long E to stabilize tongue at back lateral margins and work on jaw stability.</td>
</tr>
<tr>
<td>Female 12 years. Frontal lisp, anterior open bite, thumbsucking habit, reverse swallow. Very intelligent. No medical problems.</td>
<td>Begin therapy to eliminate thumb sucking habit, establish correct oral rest and swallow. Teach compensated S. Refer to orthodontia.</td>
</tr>
</tbody>
</table>
3 Anchor the Tongue (If necessary)

Get the tongue to stay inside the mouth by anchoring it at the back-lateral margins.

Long E pulls and keeps the tongue inside the mouth. It puts the tongue in a wide stable position in the back, with the sides high.

“Smile on the inside of the mouth.”

Sample activities
Say E. Maintain E position while counting to 10, practicing words, reading aloud, conversing…
Practice diminutives: Doggie, Kitty, Mommy, Daddy, Baby, Birdie, Horsie, Piggie, Mousie…

Increase Awareness of the Sides of the Tongue

Basic Motor Principle
Tactile stimulation increases body part awareness.

Bite down on both sides simultaneously

Brush the sides of the tongue

Toothbrush  Toothette  Nuk
4 Use the anchors to teach Sh, Zh, Ch, J

Use E to teach Sh

We don’t have to start with S

“Ask the child to round his lips, and raise the tongue, and shut the teeth, as he whispers a prolonged ee”

Van Riper (1947) Speech Correction, p191.

Organizing Van Riper’s Steps

We can organize Van Riper like this:

• Bite on a coffee stirrer with molars.
• Make a wide smile and say E.
• Pant through this position.
• Round the lips while continuing to pant.
• Fine tune the sound (adjust the jaw).

Key to success: The client has to be able to hold firm to each position while he adds the next change in position. This has been called Successive Approximations.
Smile Wide for a Better Tongue Spread

“In case of the lateral s-lisp have the child retract the lips sharply…”


Basic Motor Principle: Movements overflow from one body part to another.

Therefore, exaggerate E when using it to establish stability and the groove.

Baby Steps

Take your time from the initial sound to syllables and words.

E → Pant while holding E → Round the lips while holding E and panting → O → Show

E → Pant while holding E → Round the lips while holding E and panting → E → She

E → Pant while holding E → Round the lips while holding E and panting → I → Shy

E → Pant while holding E → Round the lips while holding E and panting → Ah → Shop

Take these into sentences: “I E-Pant-Round-op at the mall.”
Use Sh to teach Zh

Use Sh to Teach Ch

STEPS
1. Shhhh-----Prolong Sh and lift the tip to stop the air.
2. Shhh-----Lift tip-----Shhh.
3. Shhh-----Lift tip---Shhh---Lift tip---Shhh…Lift tip…
4. Go faster and faster. “Keep the air going.”

Key: Don’t release the T. Just “shut the door.” Spell it out.

Use Ch to teach J

STEPS
Make Ch and add voice

Jumping Sound
Review

- Most therapists start by using T to teach S. Then they use S to teach Z. This will work if the tongue and jaw are appropriately stabilized in the back.
- Some clients need to learn how to stabilize the jaw.
- Some clients need to learn how to stabilize the tongue at its shoulders in order to keep it inside the mouth.
- E position is the basic position of tongue stability.
- E position also can be shaped into Sh, Zh, Ch, and J through the process of successive approximations.
- Working in “Baby Steps” is the best way to assure that the client will learn self-control over time.

Create the Basic Groove: Traditional Methods

Many ideas to create the central groove for the sibilants have been devised by many therapists throughout the centuries. These methods are represented widely in old textbooks.

Most therapists create methods like these on their own. None of them have been researched in formal ways.

The following slides demonstrate a variety of approaches. (5a–5h)
5a. Draw the Groove

Traditional therapists often helped clients develop a concept of the midline channel simply by drawing a line down the midline of the tongue.

*Example:* “Use a tongue depressor and trace a line through the center of his tongue to give the client the idea of a trough”  

Have you tried this? Does it work? Does it work all the time?

5b. Engage in “Tongue Exercises”

Traditional therapists also recommended generic “tongue gymnastics” or “tongue exercises” to stimulate the groove. Unfortunately, they didn’t really say how to do this.

*Example:* “Have the child go through some brisk tongue exercises with special stress paid to the grooving of the tongue”  
Van Riper (1947) *Speech Correction*, p190

Do you think that engaging a client in non-speech oral-motor exercises (NS-OME) like this will facilitate production of your target phoneme?
5c. Use a Stick

Traditional therapists often laid a “stick” down the center of the tongue, and they taught their clients to curl the sides of the tongue up around it.

Example: “Groove the tongue along the median raphe with a slender orange stick, and ask the child to curl his tongue around the stick” Berry and Eisenson, 1956, p148

An orange stick is a manicuring tool made of wood. They are made of plastic now. What else could be used?

5d. Use a Spoon

Van Riper used a spoon to teach the tongue to groove.

Example: “With mouth open wide and tongue relaxed, place bowl of spoon on front third of tongue. Ask child to first squeeze the sides of the spoon without lifting, then to squeeze and lift. After this is successful, pretend that you are using an imaginary spoon and repeat. Repeat this but with teeth together” Van Riper (1947) Speech Correction, p. 172

Can you follow what Van Riper is saying? Do you think all your client’s could follow it?
5e. Use Visual Imagery

Traditional therapists often used the imagery of “hills and valleys” to describe the high sides and low middle of the tongue’s trough.

This is an old idea that has been passed down from one generation of SLP’s to another throughout the centuries with no known original reference.

What other imagery could be used?

5f. Ask for Voluntary Cupping

Traditional therapists knew that the groove was a modification of simple tongue cupping, and they asked for voluntary control of this position.

• **Example:** “Protrude the tongue and try to cup the edges. Retract the tongue inside the mouth attempting to maintain some semblance of this shaping”


Do you think all your clients could do this? Why or why not?
5g. Use the Upper Side Teeth

Traditional therapists used the upper side teeth to teach voluntary lifting of the sides of the tongue.

Example: “[Ask] the child to raise the whole tongue and ‘paste’ the sides against the molar and premolar teeth, leaving only the tip of the tongue free”

Berry and Eisenson (1956) Speech Disorders, p148

Can you see any problems with this? What will the middle of the tongue do when the sides lift?

5h. Push Up the Sides of the Tongue

Young and Hawk were the developers of the moto-kinesthetic method (1955). This was first sensory-motor speech training system.

They recommended lifting the sides of the tongue with a tongue depressor. This is passive movement stimulation on the part of the client. (Pam calls this assisting movement.)

Have you ever tried this?
Can you see any problems with it?
6 Create the Basic Groove: Modern Concepts

Today we also know how weight encourages muscle contraction, we know how the skin can be stimulated to facilitate awareness and control of the muscles, and we know the role reflexes play in motor development.

Modern therapists can use these concepts to create even more methods for developing the basic central groove pattern.

a. Resistance  
b. Tactile Stimulation  
c. Reflexes

6a. Resistance

**Basic Motor Principle**
Pressure applied against the direction of movement causes muscles to work harder.


- This process requires full control on the part of the client.
- But if he can do it, it will create a big beautiful groove.
- Resistance is the most powerful and direct technique of all.
Therapists can supply the resistance

If the client cannot figure out how to push the sides up against his teeth, we may have to provide the resistance ourselves. Press down on the sides of the tongue as the client pushes up.

Dental Floss Handle

Apply pressure downward

Client presses sides of tongue upward

“If the elevation is difficult, have him work on lifting the sides of the tongue against resistance.” Hanson, 1983, Articulation, p 228

Clients can supply their own resistance

Client presses down on the sides of his own tongue with his own fingers. Then he pushes those parts of the tongue upward. This procedure allows him to feel the movement with both his tongue and his fingers.

Fingers push DOWN while sides of tongue push UP.
6b. Tactile Stimulation

**Basic Motor Principle**
Tactile stimulation arouses the muscles under the skin.

“Brushing activates light work muscles”
McDonald & Chance (1964) *Cerebral Palsy.*

Use an object while saying “Long E”

We also can use tactile stimulation to guide the sides of the tongue to their stable positions. Some traditional therapists did this by using tongue depressors and their own fingers. Today we can use many other appropriate objects.

- Toothettes
- Dental Floss Knots
- Fingertips
- Nuk brushes
- This one is free!
- Wads of gum

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6c. Reflex Stimulation

All the body’s appendages end in a grasping mechanism and each of their movement patterns starts out as a reflex.

<table>
<thead>
<tr>
<th>Arms/Hands</th>
<th>Head/Tongue</th>
<th>Legs/Feet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Palmer grasp</td>
<td>Lingual grasp</td>
<td>Plantar grasp</td>
</tr>
</tbody>
</table>

- Tongue bowl, Cup shape, Grasping pattern, Horseshoe shape, Hills and valley, Spoon-shape configuration, Trough, Central groove

Tongue Bowl Reflex

**Stimulus:** Stroke down tongue’s midline.

**Response:** Tongue flattens, widens, thins, and elevates its perimeter.

“Primitive reflexes...could provide a foundation for speech articulation motor patterns... The inborn patterns thus provide a substrata for developing and refining controlled movement patterns in mature body gestures”

Fletcher (1992) *Articulation: A Physiological Approach*, p10, 14, 15

“Touching or stroking a baby’s tongue elicits a spoon-shaped lingual configuration...a similar posture could be elicited in adulthood by repeatedly touching, lightly stroking, or directing a stream of air across the tongue.”

Fletcher, p10-11
NS-OME

- One does not assume that simply because the client now can push the sides of the tongue up that he can make a sibilant phoneme.
- That is the concept of the “non-speech oral-motor exercise” (NS-OME) or “non-speech oral-motor treatment” (NS-OMT).
- The NS-OME assumes that you engage the client in an oral-motor “exercise” and Poof! Phonemes correct themselves as if by magic.

The Real Process

An excellent therapist realizes that once any of these methods is used to help the client learn to lift the sides of the tongue, that’s all you have. Now the client has to learn how to use that movement to make a phoneme.

This occurs in baby steps—

1. Teach the client to elevate the sides by using resistance, tactile stimulation, or a reflex.
2. Then transfer that skill to the teeth.
3. Learn to hit and hold this Butterfly Position.
4. Exhale through the position. What do you have?
5. Now this has to be turned into a phoneme. Which phoneme is the closest to this large channel?
   
   S  Z  Sh  Zh  Ch  J

6. What has to change to make it that phoneme?
**Homework**

For “clumsy tongued individuals”

Van Riper (1947) *Speech Correction* p132

**Daily Tooth Brushing Routine**

- Brush the teeth, spit, and rinse.
- Brush tongue up-down midline 3 times to activate the tongue bowl reflex.
- Brush tongue up-down sides 3 times to increase awareness and tone on sides.
- Smile broadly for a 10-count to encourage tongue-widening.
- Butterfly for a 10-count to practice it.
- Perform the Hee-Haw exercise 3 times. (To be discussed in the afternoon)

---

**Van Riper on “Clumsy tongued individuals”**

“Articulation cases are occasionally seen who could truly be called the slow of tongue… In modern speech correction, the emphasis on tongue exercises has almost disappeared. Yet for certain of the clumsy tongued individuals with whom we work, modern forms of these exercises are very valuable.”

Van Riper (1947) *Speech Correction*, p. 132

“Many speech defectives…need these exercises. Their tongues do not move with the speed and precision demanded by good speech. They can assume only the simplest tongue positions. Therefore, they raise the front or middle of the tongue instead of the back, and protrude it rather than lift it. It is difficult for them to curl the tip or groove the tongue. Tongue exercises are useful and necessary for these cases.”

p169
Review

- Therapists have developed dozens of ways to create the midline groove. Most of these old-time methods require voluntary control on the part of the client.
- The groove has been created with “every available device”—tongue depressors, spoons, dental floss, dental picks, the teeth, visual imagery, and so forth.
- Modern methods to develop the groove are based on new information about movement. They include weight training (resistance), tactile input to stimulate muscles, and the use of reflexes to stimulate the tongue bowl movement pattern.
- Techniques are used to teach new movements, then these movements are used to teach the phoneme.

The “Long T Method”

Given all the methods we already have described, what if the client still cannot produce a correct sibilant?

Abandon the acoustics of any of the sibilants and work on T.
Go for a more gross motor pattern: T + Air (aspiration)

PROCEDURE—
- Produce T several times.
- Use tight and broad smiling.
- Check the air stream with straw.
- Instruction: “Blow more air” or “Make it longer.”

CRITERIA—
- The jaw is high and midline.
- The tongue is behind the teeth.
- The tongue-tip touches the alveolus on T.
- The tongue grooves at midline.

This doesn't sound like S. It sounds like an aspirated T.
The “Cornerstone Method”

- Use the Long T and build gradually more complex movement patterns around it.
- Work the Long T into the final position because it sounds like Ts.
- Use the straw outside the teeth to monitor.

<table>
<thead>
<tr>
<th>Syllables</th>
<th>Eeeee---ts</th>
<th>Ooooo---ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Words</td>
<td>Ea--ts</td>
<td>Boo--ts</td>
</tr>
<tr>
<td>Phrases</td>
<td>Ea--ts well</td>
<td>My boo--ts</td>
</tr>
<tr>
<td>Sentences</td>
<td>He ea-ts well.</td>
<td>I got new boo-ts.</td>
</tr>
</tbody>
</table>

Block the Motor Memory

Don’t try to “fix” the old sound. Create a gross new sound from scratch. Block access to the old memory. Create new motor pattern to remember.

“Don’t try to say S”  “Just make a Long T”

Sometimes I start my therapy at this step and forget everything we discussed earlier.
Motor Patterning in Paragraphs

If we control the phonetic environment, we can go right into paragraphs.

Paragraphs should contain only Long T’s with specific vowels to be the most phonetically strict.

Make the Long T its own syllable by pausing before it.

Accept any Long T’s as long as they meet criteria.


This paragraph has 2 target words and 3 opportunities to say each one.

Rule: No other sibilants

Learn to Control the Phonetic Environment

List words that have your vowel and that end in /ts/.

Write a 2-4 sentence paragraph with your words. Include no other sibilants.

Choose a vowel

__________

__________

__________

__________

__________

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Why control the phonetic environment so tightly?

- Eliminates distracting elements
- Affords a high degree of success right away
- Produces a perfect paragraph right away
- Starts out slow. Then speed can be added gradually so that it eventually replicates the speed of conversation
- Is easily memorized
- Is easy

Work Within or Across Words

<table>
<thead>
<tr>
<th>Within a word</th>
<th>Across words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target:</strong> “He eats food.”</td>
<td><strong>Target:</strong> “He hit seven”</td>
</tr>
<tr>
<td>Ts</td>
<td>Ts</td>
</tr>
<tr>
<td>ea Ts</td>
<td>hi Ts even <em>(Embed)</em></td>
</tr>
<tr>
<td>He ea Ts</td>
<td>He hi Tssss even <em>(Prolong)</em></td>
</tr>
<tr>
<td>He ea Ts food</td>
<td>He hi Tsshhheven <em>(Connect with /h/)</em></td>
</tr>
<tr>
<td>He hi Tseven <em>(Take /h/ away)</em></td>
<td></td>
</tr>
</tbody>
</table>
Initial position

We eventually have to work on the initial position. Use the Long T to help the client maintain correct patterning. Use a straw.

Make the Long T for initial S

Work on rote sequences to encourage repetitious patterning and to add speed.

Example: Counting 70-80: T's---eventy-one, T's---eventy-two, T's---eventy-three, T's---eventy-four, T's---eventy-five…

Help Clients Hear the Difference Between Ts and S

We are always helping clients fine tune the ear so they can hear the auditory changes that result from changes in oral movement. ALWAYS.

<table>
<thead>
<tr>
<th>Goal</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get rid of T</td>
<td>• Produce Long T</td>
</tr>
<tr>
<td>in Ts</td>
<td>• Then pant in and out through the low tip position</td>
</tr>
<tr>
<td></td>
<td>• Now you have gross S</td>
</tr>
</tbody>
</table>

Minimal Triads
Refining tip control for T, Ts, and S

- But–Buts–Bus
- Mitt–Mitts–Miss
- Hit–Hits–Hiss
- Pete–Pete’s–Peace
- Light–Lights–Lice
- Mate–Mates–Mace

We are always working on auditory discrimination
**8** Special Sibilant Problems

Some clients inhale, snort, or produce nasalized sibilants.

Focus on auditory training and use a tube to help the client listen more carefully to the sound as it travels mouth-to-ear and nose-to-ear.

Be very specific about what he is doing—“You are making the sound go through your nose. Make it go through your mouth.”

---

**Review**

- If a sibilant cannot be produced at all, focus on T. Add aspiration to T to make a “Long T.” Use the Long T at the ends of words: *Boats, lights, hats*.... Tell the client, “Don’t make an S. Just make a Long T.”
- Take this skill into phrases, sentences, and paragraphs.
- Move the Long T from word-final position to word initial position. Also work across words.
- Teach the client to listen to what YOU are saying and to what HE is saying all the way through the entire program. This is the most essential element of carryover.
- Use a tube in ear training when a client produces nasalized, inhaled, or snorted sibilants.
R Therapy

2 Basic Tongue Positions
- Back R: Tongue-back elevates
- Tip R: Tip curls up and back

2 Phonological Patterns
- Consonantal R: The R that opens a syllable
- Vocalic R: The R that closes a syllable

2 Types of Clients
- The client with absolutely no R
- The client who can produce some R words correctly
The Tip R

Other Names
Retroflex R
Curled R
Immature R
Incorrect R

• The tip elevates and curls back toward velum.
• The tongue creates cup-shape or bowl-shape.
• The tongue base stays wide.
• The cup/bowl faces back toward oropharynx.

What goes wrong with the Tip R?

• **Uses Lips Instead of Tongue; w/r**
  – Normal developmental error
• **Partial Performance**
  – Tip curls part but not all the way back
• **Lack of Tension**
  – Curl is adequate but not tense enough
• **Incorrect Performance**
  – Lifts the middle as well as, or instead of, the tip
  – Tongue base narrows as tip curls up and back
Incorrect Movement on the Tip R

The middle humps up as the tip curls back. We usually hear a G-like sound as the back humps up. Posterior elevation is a more primitive movement pattern.

Second tongue position

The Back R

- The back lateral margins elevate up and back.
- The tongue-tip retracts into the body of the tongue.
- The middle-back is tense and somewhat high.

Other Names
- R
- Correct R
- Mature R
- Bunched R

A more difficult position that is usually preferred
What goes wrong with the Back R?

- **Uses Lips Instead of Tongue; w/r**
  - Normal developmental error
- **Partial Performance**
  - Lifts sides part way but not all the way up
- **Lack of Tension**
  - Position correct but not tense enough
- **Incorrect Performance**
  - Lifts middle back instead of the side
  - Lifts middle back as well as the sides
  - Tongue base narrows during lifting

Incorrect Movement On the Back R

Correct

Distortion

Midline elevation is a more primitive movement pattern
First Therapy Decision

Which R motor pattern will you choose to begin the training?

Tip R  Back R

ADVICE—

New clients: Start with the Back R and see how it goes. If it works, stay with it. If it doesn’t, move on to Tip R.

Long term clients who have had much failure: Start with Tip R and see how it goes. If it works, stay with it. If it doesn’t, switch back to Back R. May need to work both.

Teaching the Tip R

• Some argue that we should never teach a Tip R.
• It takes the tongue out of its neutral position.
• It slows speech down.
• It makes clusters difficult, especially Tr- and Dr-
• These things are all true.
Tip R Method #1
Slide into Position

L-to-R Slide | Z-to-R Slide | N-to-R Slide
---|---|---
Produce L, Z, or N and then slide the tip back along the midline toward the velum until R is heard.

From Slides to Words
Use the slides within words that require essentially the same motor pattern. It won’t sound perfect, but it’s a start. We are teaching movement patterns, not phonemes.

<table>
<thead>
<tr>
<th>Slide</th>
<th>Words to Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-to-R</td>
<td>Color (co—lerrr)</td>
</tr>
<tr>
<td></td>
<td>Dollar (dah—lerrr)</td>
</tr>
<tr>
<td></td>
<td>Bowler (bow—lerrr)</td>
</tr>
<tr>
<td>N-to-R</td>
<td>Winner (wi—nerrr)</td>
</tr>
<tr>
<td></td>
<td>Goner (gaw—nerrr)</td>
</tr>
<tr>
<td></td>
<td>Diner (di—nerrr)</td>
</tr>
</tbody>
</table>

Ultimately teach the client to slide back without touching the palate. Many kids figure this out on their own.
Tip R Method #2
Tap into Position

Say “Ah” with the mouth wide open. Tap tongue-tip at each point one-at-a-time. This will sound like “AhL” and “AhR” or like “Lah” and “Rah” depending on the stress.

One of the three posterior positions should sound like R.

Tip R Method #2 Tap into Position

From VC-Taps to Sentences

If the client has learned to tap from “AhL” to “AhR,” move immediately to words, phrases, sentences, and even paragraphs by controlling the phonetic environment.

<table>
<thead>
<tr>
<th>Client can say</th>
<th>One-syllable word</th>
<th>Cluster</th>
<th>More Syllables</th>
<th>Phrases and Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ahhrrr</td>
<td>Cahhr</td>
<td>Cahhr--t</td>
<td>Cahr--toon</td>
<td>A funny cahr--toon.</td>
</tr>
<tr>
<td></td>
<td>Stahhr</td>
<td>Stahhr--t</td>
<td>Stahr--ted</td>
<td>My book stahr--ted to fall.</td>
</tr>
</tbody>
</table>
Create More Practice Words

Build more movement sequences.
Take what they can do and add to it.
Example: Ahrrrr—ake
Example: Ahrrrr—ed
Example: Ahrrrr—ip
Example: Ahrrrr—ote
Also make sentences
Example: Ahrrrr—U
“Are you going outside?”
Great work for apraxia.

From CV-Taps to Sentences

If the client has learned to tap from “Lah” to “Rah,” move immediately to words, phrases, sentences, and even paragraphs by controlling the phonetic environment.

<table>
<thead>
<tr>
<th>Client can say</th>
<th>One-syllable word</th>
<th>Two-syllable word</th>
<th>Phrases / Sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rah</td>
<td>Ro-b</td>
<td>Ro-bin</td>
<td>A ro-bin</td>
</tr>
<tr>
<td></td>
<td>Ro-ck</td>
<td>Ro-cking</td>
<td>A ro-cking machine</td>
</tr>
<tr>
<td></td>
<td>Ro-n</td>
<td>Ro-ny</td>
<td>Ro-ny fell down.</td>
</tr>
<tr>
<td></td>
<td>Ro-t</td>
<td>Ro-ten</td>
<td>It was a ro-ten apple.</td>
</tr>
</tbody>
</table>
Van Riper’s Tip R Methods
From: *Speech Correction* (1947) p. 192

“Ask child to say L. Then with the depressor gently push the tip of the tongue back until you can insert the depressor between the tip and teeth ridge or until R sound results.”

“Ask him to make Z and continue it while the jaw is dropped until the teeth are separated about one inch or until R results.”

“Have the child imitate you as you trill the tongue-tip. Then use this trill to precede the vowel E.”

“Spread the sides of the child’s mouth with your fingers; ask him to produce a prolonged N sound, then to curl the end of his tongue backward as he continues making the sound.”

Van Riper’s Exercise for Tip Curling

“Facing a mirror, hold a sterilized probe or match horizontally about half an inch from the mouth. Reach out with the tongue and, by curling the [tip], pull it back to the teeth. The strength of this action may be increased by holding the match more firmly.”

Van Riper (1947) *Speech Correction*, p171

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Modern Methods of Tip Curling

Today’s tongue cleaners allow us to guide the tongue back.

The client can vocalize while doing this and achieve R as the tip curls all the way back.

Pull back to add resistance so clients pulls back harder.

More Help for Tip Curling

Speech Buddies: Articulate Technologies, Inc.

Most expensive method

R-Buddy
Tip R Success

A slide or a tap should always work if the following criteria are met–

1. The tongue-tip can reach up to the \( A \) \( R \)
   This means the frenulum has to be long enough.
2. The tongue-tip can sweep back toward the \( V \)
   down the midline. Again, requires a long enough frenulum.
3. The tongue forms into a \( B \) shape as the tip curls back. This means that the sides stay \( W \).
4. The tongue \( T \) enough.

Insufficient Curling

If the client cannot curl the tongue-tip back far enough because of a restricting lingual frenulum or lack of motor control–

1. Have the client curl back as far as he can while vocalizing.
2. Then have him round the lips forward while holding tongue in position and vocalizing.
3. Experiment with lip position until it sounds like R.

The lips carry the acoustic chamber forward and can make sound snap into place.
How young?

How young can we teach the Tip R? Motor patterns for phonemes are learned in infancy.

“Lerring”: Babies do an L-to-R slide in a pattern that sounds like L in the front and R in the back.

“Rah-ing”: Babies make R while babbling in a pattern I call “Jaw Babbling.”

Teaching the Back R

It’s all about the butterfly

1. Make a Butterfly.
2. Make the Butterfly Sound.
3. Hold it for a five count.
4. Mark the Target of skin up behind the upper back molars.
5. Butterfly again and hold it firm.
6. Slide the sides of the tongue back along the under side of the upper molars while making the Butterfly Sound.
7. Tuck the back lateral margins up behind the very back upper molars (where you have marked) while making the Butterfly Sound.
Lip/Face Tension
Tightness in the facial muscles can interfere with the sound quality of R.

Eliminate the Lip/Face Problem
Massage the face to reduce tension
Or inhibit lip movement with a lip retractor or with the fingers
Widen the Tongue

If the client cannot achieve R because the tongue narrows.

Use resistance to develop lateral spreading of the tongue body.

Have the client use his own fingers to squeeze his tongue toward midline.

Ask the client to push the sides of his tongue outward his fingers.

Have him say “Hee” when the tongue is pushing wide, and “Haw” when the tongue is relaxing.

Homework

“clumsy tongued individuals”
Van Riper (1947) *Speech Correction* p132

**Daily Tooth Brushing Routine**

- Brush the teeth, spit, and rinse.
- Brush tongue up-down midline 3 times to activate the tongue bowl reflex.
- Brush tongue up-down sides 3 times to increase awareness and tone on sides.
- Smile broadly for a 10-count to encourage tongue-widening.
- Butterfly for a 10-count to practice it.
- Perform the Hee-Haw exercise 3 times.
Word Position

Word position is a critical aspect of R therapy.

This is because—

• Some clients can do R at the beginning of words, but not the ends.
• Some clients can do R at the end of words, but not at the beginnings.
• Some clients can do R only in a cluster or two.
• Some clients can do R only in a few specific words.

Consonantal R
The R that opens a syllable

<table>
<thead>
<tr>
<th>Rack</th>
<th>Carry</th>
<th>Proud</th>
<th>Car</th>
<th>Carts</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rap</td>
<td>Carrot</td>
<td>Brain</td>
<td>Star</td>
<td>Parks</td>
<td>Tuber</td>
</tr>
<tr>
<td>Read</td>
<td>Teary</td>
<td>Truck</td>
<td>Beer</td>
<td>Fears</td>
<td>Butter</td>
</tr>
<tr>
<td>Reach</td>
<td>Berry</td>
<td>Drum</td>
<td>Deer</td>
<td>Clerks</td>
<td>Udder</td>
</tr>
<tr>
<td>Rich</td>
<td>Barrett</td>
<td>Crayon</td>
<td>Fir</td>
<td>First</td>
<td>Packer</td>
</tr>
<tr>
<td>Ripe</td>
<td>Mary</td>
<td>Green</td>
<td>Burr</td>
<td>Turns</td>
<td>Bagger</td>
</tr>
<tr>
<td>Road</td>
<td>Merry</td>
<td>Frown</td>
<td>Door</td>
<td>Perms</td>
<td>Hummer</td>
</tr>
<tr>
<td>Room</td>
<td>Borrow</td>
<td>Vroom!</td>
<td>Galore</td>
<td>Harsh</td>
<td>Gunner</td>
</tr>
<tr>
<td>Rule</td>
<td>Bury</td>
<td>Street</td>
<td>Tour</td>
<td>Burst</td>
<td>Singer</td>
</tr>
<tr>
<td>Rust</td>
<td>Furry</td>
<td>Scratch</td>
<td>Sure</td>
<td>Harp</td>
<td>Caller</td>
</tr>
</tbody>
</table>

Vocalic R
The R that closes a syllable

All these Rs are the same in Standard North American English. That is not the case in the South or on the East Coast.
Deep Testing R

Identify the words that have correct Rs, and note the patterns.

<table>
<thead>
<tr>
<th>Initial Singleton</th>
<th>Initial Cluster</th>
<th>Final Position</th>
<th>æ</th>
<th>C æ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read</td>
<td>Proud Brown</td>
<td>Tear</td>
<td>Early Burn</td>
<td>Upper Rubber</td>
</tr>
<tr>
<td>Rick</td>
<td>Train Drain</td>
<td>Tar</td>
<td>Cur</td>
<td>Utter</td>
</tr>
<tr>
<td>Rake</td>
<td>Crab Grab</td>
<td>Tore</td>
<td>Fur</td>
<td>Udder</td>
</tr>
<tr>
<td>Wreck</td>
<td>Free Three</td>
<td>Tour</td>
<td>Girl</td>
<td>Backer</td>
</tr>
<tr>
<td>Rack</td>
<td>Shrek Spring</td>
<td></td>
<td>Her</td>
<td>Bagger</td>
</tr>
<tr>
<td>Rule</td>
<td>String String</td>
<td></td>
<td>Pearl</td>
<td>Hummer</td>
</tr>
<tr>
<td>Rook</td>
<td>Scratch</td>
<td></td>
<td>Purple</td>
<td>Gunner</td>
</tr>
<tr>
<td>Rope</td>
<td></td>
<td></td>
<td>Turn</td>
<td>Hanger</td>
</tr>
<tr>
<td>Raw</td>
<td></td>
<td></td>
<td>World</td>
<td>Hauler</td>
</tr>
<tr>
<td>Rock</td>
<td></td>
<td></td>
<td>Furniture</td>
<td>Player</td>
</tr>
<tr>
<td>Rub</td>
<td></td>
<td></td>
<td></td>
<td>Terror</td>
</tr>
</tbody>
</table>

Clients who have Initial R but no Final R

Use initial R to teach final R by using sound blending

1. Take R off the bad word
2. Sequence together with a pause
3. Blend together without a pause
4. Take off the T
5. Change to schwa
6. Omit the schwa

| Car | Cah | Rat | Caarat | Caaara | Caaaruh | Caaar |

These clients don’t need to learn R. They need to learn to transition to the R they already have from a vowel.
Clients who have Final R but no Initial R

Use final R to teach initial R by using sound blending

1. Take R off bad word
2. Sequence together with a pause
3. Blend together without a pause
4. Take off The D
5. Change to schwa
6. Add a pause

| Rabbit -abbit | Door--abbit | Doorabbit | oorabbit | Uhrabbit | Uh-Rabbit A rabbit |

These clients don’t need to learn R. They need to learn to transition from the R they already have to a vowel.

Sound Blending: Ear Training

R-to-Consonant

Ruh → nnn

R-to-Vowel

Ruh → ace

Work on the transition ( → ) from R to the vowel.

This is auditory work. Slow down to exaggerate the transition between Ruh and the vowel. Help him hear each sound. Teach him to take out the sound that doesn’t belong.
Cluster Problems

If the client can say R but he cannot say clusters

- Take the word they can say: *Rat*
- Produce a schwa before it: *Uh Rat*.
- Practice phrases: A rat, a robot, a radio
- Now add other consonants before the schwa:
  - Buh rat  • Duh robot  • Thuh radio  • Buh rain
- Now produce words but keep the schwa:
  - Buh-rain (*Brain*)  • Tuh-rain (*Train*)  • Duh-rain (*DRAIN*)
  - Kuh-rain (*Crane*)  • Guh-rain (*Grain*)  • Stuh-rain (*Strain*)

Perfect Clusters: Treat R like a vowel

- Syllables are made by shaping the mouth into a vowel position, and then by adding consonant movements to it
  Stetson, R. H. (1927) *Motor Phonetics*
- Example– Where are your lips on the Moo vs. Mee?
- To perfect R clusters, prolong R as if it were a vowel, then add a consonant to the prolongation. Start with B, P, M, W–
  - Rrrrrrr-B-rrrrr-B-rrrrr…  • Rrrrrrr-M-rrrrr-M-rrrrr…
  - Rrrrrrr-P-rrrrr-P-rrrrr…  • Rrrrrrr-W-rrrrr-W-rrrrr…
- Then go to Gr, Kr, Skr–
  - Rrrrrrr-G-rrrrr-G-rrrrr…  • Rrrrrrr-K-rrrrr-K-rrrrr…
- Then go to Dr, Tr, Str–
  - Rrrrrrr-D-rrrrr-D-rrrrr…  • Rrrrrrr-T-rrrrr-T-rrrrr…
  - Rrrrrrr-ST-rrrrr-ST-rrrrr…
Clients with only one correct word

Procedure
1. Find the word.
2. Abstract the syllable out of the word.
3. Use the syllable in other words.

Example
- If client can say Rebecca, have her say Rebec.
- If client can say Rebec, have her say Re (Ruh).
- If client can say Ruh, have her say other words with it.
- For example, have her practice Run.
- But remember, all she can say is Ruh. So practice the words with a pause: Ruh—nnn.

How Many Words?
How many different one- and two-syllable words could this client practice the very first day of therapy after she learns to isolate the syllable (Ruh)?

<table>
<thead>
<tr>
<th>Word</th>
<th>R</th>
<th>R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rub</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Rubbing</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Ruckus</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>Ruddy</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
<tr>
<td>R</td>
<td>R</td>
<td>R</td>
</tr>
</tbody>
</table>

B C D F G H J K L M N P Q R S T V W X Y Z
Teach Generalization of the Syllable

<table>
<thead>
<tr>
<th>Client can say–</th>
<th>What’s the simple syllable?</th>
<th>What other words can be practiced today?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green</td>
<td>Gree-</td>
<td>Greek, Greece, Greed, Grief, Agree, Agreeable, Grebe…</td>
</tr>
<tr>
<td>Shrek</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrot*</td>
<td>Rih</td>
<td>Rib, Rick, Rich, Rid, Rif, Rig, Ridge, Rim, Rip, Risky…</td>
</tr>
<tr>
<td>Barometer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Train</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Depends on how client says it

Marching Forward

Move forward despite limitations
Control the phonetic environment so well that you can advance immediately from words, to phrases, to sentences, and even to paragraphs.

<table>
<thead>
<tr>
<th>Syllable</th>
<th>Word</th>
<th>Phrase</th>
<th>Sentence</th>
<th>Paragraph</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ruh</td>
<td>nnn</td>
<td>nnn home</td>
<td>I always</td>
<td>I love to ruh-nnn. I always ruh-nnn home. I ruh-nnn fast. I want to ruh-nnn in high school. That would be cool.</td>
</tr>
<tr>
<td>Ruh</td>
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</tr>
</tbody>
</table>

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Words with R and L

Words with R and L can be especially problematic. Words with W, R, and L especially so.

Use the client’s “starter vowel” and the schwa whenever and wherever the client needs it.

Ex:  
Client can say Ahrrr  
Target: Girl  
Practice: Guuuh----Ahrrr—UuuhLLL

Ex:  
Client can say Ahrrr  
Target: Pearl  
Practice: Puuuh----Ahrrr----UhLLL

Teach him to hear himself do it, and then to get rid of the sounds that don’t need to be there. Spell it out to help.

3-Ring Speech Binder

Some of our oldest ideas are our best ideas. Make a page every day of therapy. This is a great way to record progress over time, to help the client understand what's going on, and to share with family.

April 11, 2008

Don’t try to say R

L

R

Barrr
Carrrr
Farrrr
Starrrr
Tarrrr

April 17, 2008

Say these after you brush your teeth

1. Rob
2. Rob fell.
3. Oh no, Rob fell.

Look at Rob. He fell down. Too bad, Rob. Get up, Rob. Let’s go.

June 24, 2008

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Mark Progress Over Time

Old time therapists often created ways for their clients to mark their progress over time.

I can say my sound in paragraphs
I can say my sound in sentences
I can say my sound in the middle of words
I can say my sound at the ends of words
I can say my sound at the beginning of words
I can say my sound all by itself

Best Old-time Artic Textbooks

Great Modern Artic/Phonology Texts


Excellent Modern “How-to” Artic Manuals

- Marshalla, P. (2007) *Successful R Therapy*. Mill Creek, WA: Marshalla Speech and Language. (Great detail on R therapy)
**Additional References**


**Palatography:** McLeod, S. & Singh, S. (2009) *Speech sounds: A pictoral guide to typical and atypical speech.* San Diego: Plural. [Complete electropalatometry images for all C’s and V’s]


**Feeding:** Morris, S.E., & Klein, M. D. (2000, 1983) *Pre-Feeding Skills.* Austin/Pro-Ed.

**Cerebral Palsy:** McDonald, E. T., & Chance, B. (1964) *Cerebral palsy.* Englewood Cliffs: Prentice-Hall.

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**Assessment**


**MOST**

**Purpose:** To identify the presence or absence of oral sensorimotor problems.

**Goal:** To design a tool that could quantify and qualify the skills represented in the typical assessment of oral movement and sensation.
Pam Marshalla
MA, CCC-SLP

Website: www.pammarshalla.com
Email: pam@pammarshalla.com
Also see: www.oralmotorinstitute.org

CEU’s on-line
Pam is now teaching classes on-line for CEU’s. See the links on her website. Click on “Speaking Schedule.”

Disclaimer
ASHA requires that all teachers of continuing education reveal the financial and non-financial relationships they have to other entities. Pam’s complete resume can be downloaded at www.pammarshalla.com.

Pam Marshalla is the owner of Marshalla Speech and Language (MSL) through which she writes and publishes her own books, music CDs, and recorded lectures. Through MSL she teaches continuing education seminars and occasionally consults on clients. Pam receives a regular monthly salary for this work.

An honorarium and compensation for travel expenses are paid for the teaching of the present seminar by the sponsoring organization. This money goes directly into MSL to cover the expenses of this seminar, to pay Pam’s salary, and to support MSL’s ongoing endeavors.

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Pam is co-founder and co-chair of the Oral Motor Institute (OMI), an online interest group that publishes articles related to the topics of sensory and motor skills in children with speech and feeding problems. Pam receives no compensation for this work. MSL donates the web space and supportive services necessary for the maintenance of the OMI website.

Pam has been a member in good standing of ASHA since 1976.