

Update on Treating Articulation Treatment in the Schools

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Disclosure

Dr. Harris receives no financial or non-financial benefit by discussing any products or programs during this workshop.

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Handouts

See **HANDOUT:**
• Title of Handout in Your Packet

1. Technique for Correction of /r/
2. Shaping Procedure for Lisp
3. Treating Glottal Replacement
4. Response (Data) Sheet

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Topics Covered

Articulation Treatment

- Correcting the /r/
- Shaping Approach to Correcting the Lisp
- Avoiding Pitfalls for /f/, /θ/ and Alveolars
- Correcting the Glottal Stop
- When to Move Forward in therapy
- Transitioning from Word to Phrase Level
- Managing Group Therapy

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Learner Outcomes

Objectives

1. Plan and implement treatment of /r/
2. Plan and implement treatment for the lisp.
3. Plan and implement treatment of glottal stops.

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Correcting the /r/

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Correcting the /r/

Stability Zones

The key to establishing the /r/ is teach the child to establish the **stability zones**.

This is where the posterior lateral margins of the tongue make contact with the upper molars.

If the stability zones are not maintained, the /r/ will never be produced correctly.

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Correcting the /r/

Stability Zones

To help the child understand the stability zones, use your **index fingers** to touch the child's cheeks where the upper molars are.

Tell the child to make sure the sides of the tongue touch his back teeth where you are touching.

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Correcting the /r/

Stability Zones

1. Close front teeth.
2. **Bite down on the posterior lateral margins AT THE SAME TIME.**
3. Relax. Repeat.
4. Now open the front teeth about ½".
5. Make sure upper molars are still pressing on the lateral margins.

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Correcting the /r/

Consonantal /r/

1. With the stability zones intact, slightly **lower the jaw** a small amount.
2. Have child **point the tongue tip behind him**, lifting it up and back so you can see under the tongue.
3. Practice this **without speech** until the child can create this movement repeatedly.

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Correcting the /r/

Consonantal /r/

4. Now add speech. Have child say "rah." Move from the stability zones to the /a/ by simply unrolling the tongue. Remind him not drop the tongue until **after** the /r/ is produced.
5. After /ra/ is consistent, continue with CV syllables and follow the normal progression to words & phrases.

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Correcting the /r/

Consonantal /r/

The child must do all three movements correctly before the /r/ can be produced correctly:

- ❖ **Bite lateral margins**
- ❖ **Open teeth slightly**
- ❖ **Curl tongue tip back**

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Correcting the /r/

Vocalic /r/

1. For the vocalic /r/, the tongue starts out on the floor of the mouth for the production of /a/.
2. Then lift the lateral margins up to the stability zones and lift the tongue tip up and back. Notice that this is the **reverse order** that was used for the consonantal /r/.

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Correcting the /r/

Vocalic /r/

3. When producing /ɑɜ/ (as in *car*), have the child say /ɑ/ and then glide into the /ɜ/. Stretch the /ɑ/ if necessary.

Show the child how you make the the sound.

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Correcting the /r/

Vocalic /r/

- You try it. Say /ɑ/ and then /ɜ/ and notice how the posterior tongue moves up and the lateral margins touch the molars. You can feel when the **stability zones are intact**.
- Now go from /ɜ/ to /ɑ/ and notice how the tongue falls and you **lose contact** with the stability zones.

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Correcting the /r/

Vocalic /r/

4. If child says /ɔ/ or /ɑ/ instead of /ɑɜ/, let him know that the back of the tongue fell down. → **Don't be tricked by rising inflection.**
5. Touch the cheeks again to remind him where the tongue dorsum should go.

See HANDOUT:
• Technique for Correction of /r/.

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Oral and Nasal Listener

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Super Duper Publications

Allows both child and SLP to monitor nasality at the same time.

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Oral and Nasal Listener

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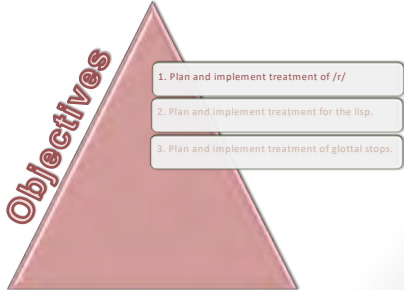


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Learner Outcomes



1. Plan and implement treatment of /r/
2. Plan and implement treatment for the lisp.
3. Plan and implement treatment of glottal stops.

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Shaping Approach to Correcting the Frontal or Lateral Lisp

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Treating the Lisp

- Tongue tip UP.
- Tongue tip DOWN.

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Treating the Lisp

- Tongue tip UP should be the first approach to consider.
- Shape the /s/ from the /t/.

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Treating the Lisp

- [t]
 - [tʰ]
 - [tʰh]
 - [tʰhh]
 - [tʰhhh]
 - [tʰhhhh]
 - [tʰhhhhh]
- Noisy T
- [tsssss]
 - [tsssss]
 - [tsssss]
 - [tssss]
 - [tsss]
 - [tss]
 - [ts]
 - [s]
- Squeaky T
- See **HANDOUT:**
• Shaping Procedure for the Lateral and Frontal Lisp

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Treating the Lisp

- Use this method of teaching tongue tip **UP** does not work.
- **Smile** to get lip spreading. The tongue will flatten naturally.
- Lips should have **NO tension**.
- Do **NOT** allow the tongue blade to elevate.

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Treating the Lisp

1. Instruct the child to say /t/ several times so he becomes familiar with the movement pattern. Use a **straw** to amplify the sound. McDonalds or Panera straw
2. Ask the child to “blow more air” through the /t/ in order to produce a long or “stretchy” (aspirated) /t/.

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Treating the Lisp

3. Rehearse the /t^h/ constantly.
4. Begin to shape the /t^h/ into /ts/.
5. **Do NOT** ask the child to produce /ts/.
6. A good /ts/ will result if the child focuses on the oral position for /t/.
7. If not successful, try switching to /tʃ/.

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Treating the Lisp

IMPORTANT RULE

The Stretchy /t/ will only work if the child can produce a /t/ correctly.

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Treating the Lisp

SUCCESS VS. FAILURE

1. The tongue should be positioned behind the anterior teeth at the **papilla**.
2. The airstream should be midline.

Both of these characteristics must be noted for the production to be considered correct.

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Treating the Lisp

Be aware that the Stretchy /t/ does not work for all kids. Use the **following guidelines** to make decisions about changing directions:

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Treating the Lisp

- If your child with either the frontal or lateral lisp **CAN** produce a /ts/ or /tʃ/ correctly by using the Stretchy /t/ approach, he is **ready to move on** to the Key Sound level.
- The Target Sound is the /ts/, followed by Words, Phrases, Sentences, etc.

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Treating the Lisp

- If he **CANNOT** produce the /ts/ or /tʃ/ correctly using the Stretchy /t/ without resorting to the frontal or lateral lisp, then you will need to change techniques.

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Treating the Lisp

- If he **CAN** produce a good /t/ or /tʃ/ production at any point, but **CANNOT** maintain the production, then he is **NOT** ready to move on to the establishment of /ts/ as the target sound.
- Just stay at the /t/ level until he achieves more success.

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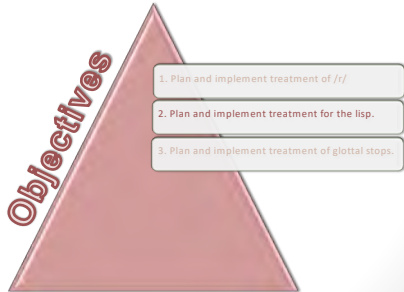
Treating the Lisp

- If he **PROTRUDES THE TONGUE** during production of /t/, and if he also does so on /d/, /n/, and /l/, then this is a clear indication of a more pervasive oral-motor delay.
- Jaw instability and low tone should be suspected.

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Learner Outcomes



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Avoiding Pitfalls When Treating /f/, /θ/, and Alveolars

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Avoiding Pitfalls

Correcting production of /f/

- In normal conversational speech, the lower teeth just touch the inside surface of the lower lip. The upper teeth do not **bite** lower lip.
- Encourage the child to just touch the lower lip to the upper teeth.

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Avoiding Pitfalls

Correcting production of /θ/

- The /θ/ is just a **tongue sound**. A child who has been producing the f/θ error is likely to use the lower lip with the tongue.
- Be careful not to allow **lower lip assist**. It is not a normal production and it will slow the diadochokinetic rates during connected speech.

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Avoiding Pitfalls

Correcting production of alveolars

- As we just discussed with the frontal lisp, the child should never be told to put the tongue right behind the teeth. The tongue should be at the **papilla**, or “the spot.”
- This reduces the chances of the child developing a **therapy-induced intradental lisp**.

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Avoiding Pitfalls

Working with closed teeth

- When teaching sounds that require mandibular closure, don't just instruct the child to **close your teeth**, tell him to **close your front teeth**.
- This will reduce the chance that the child will clench his teeth.
- Look/feel for contraction of the **masseter** muscle.

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Correcting the Glottal Stop

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Correcting the Glottal Stop

- This nondevelopmental process should be treated early because it will not likely correct spontaneously.
- Unlike ICD and BK, *Glottal Replacement* is insertion of a **non-standard English sound**, making its impact on intelligibility significant.

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Example:
Glottal Replacement occurs
on /k/

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Correcting the Glottal Stop - /k/

Fully Whispered /a/

[hhhhh aaaaa]

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Correcting the Glottal Stop - /k/

Fully Whispered /a/ with overlaid velar

[hhhhh aak hhhh aaaaa]

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Correcting the Glottal Stop - /k/

Voicing introduced *after* vowel onset.

[hhhhh aak hhhh aaaaa]

45

45

Correcting the Glottal Stop - /k/

Voicing introduced *at*
vowel onset.

[^{hhhhh}aaak^{hhhhh}aaaaaa]

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Correcting the Glottal Stop - /k/

Aspiration decreased following
/k/

[^{hhhhh}aaak^{hhh}aaaaaa]

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Correcting the Glottal Stop - /k/

Normal duration of /k/ release
for medial position

[^{hhhhh}aaak^haaaaaa]

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48

Correcting the Glottal Stop - /k/

Normal duration of /k/ release
for medial position

[hhhhh^haaak^ha]

(blue = normal syllable)

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Correcting the Glottal Stop - /k/

Decreased duration of
carrier aspiration

[^hhaak^ha]

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Correcting the Glottal Stop - /k/

Normal /k/ production in the
initial position

[k^ha]

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Example:
Glottal Replacement occurs
on /s/

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Correcting the Glottal Stop - /s/

Fully Whispered /a/

[hhhhhh aaaaaa]

53

53

Correcting the Glottal Stop - /s/

Fully Whispered /a/ with
overlaid velar

[hhhhhh aaas hhhhhh aaaaaa]

Unlike correcting the /k/, which needs aspiration since it is a plosive, the /s/ is already a continuant, so we are simply forcing breathiness. This is not considered aspiration since the target sound is already strident.

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Correcting the Glottal Stop - /s/

Voicing introduced *after*
vowel onset.

[hhhhhh aas hhhhhh aaaaaa]

55

55

Correcting the Glottal Stop - /s/

Voicing introduced *at*
vowel onset.

[hhhhhh aas hhhhhh aaaaaa]

56

56

Correcting the Glottal Stop - /s/

Aspiration decreased following
/s/

[hhhhhh aas hhh aaaaaa]

57

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Correcting the Glottal Stop - /s/

Normal duration of /s/ release
for medial position

[hhhhh^{aa}saaaaa]

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58

Correcting the Glottal Stop - /s/

Normal duration of /s/ release
for medial position

[hhhhh^{aa}sa]

(purple= normal syllable)

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Correcting the Glottal Stop - /s/

Decreased duration of
carrier aspiration

[hh^{asa}]

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Correcting the Glottal Stop - /s/

Normal /s/ production in the initial position

[sa]

See **HANDOUT:**
• Treating Glottal Replacement

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Learner Outcomes

Objectives

1. Plan and implement treatment of /r/
2. Plan and implement treatment for the lisp.
3. Plan and implement treatment of glottal stops.

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Knowing When to Move Forward in Therapy

Collecting Data

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When to Move Forward

Collecting Data

- Data collected on every response.
- Determine when to move to next step.
 - 80% accuracy
 - 20 consecutive correct responses
- Use circles and diagonals to mark data.
- Let child see data sheet.

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Child: _____ Phoneme/Goal: _____

Key: X = Correct with social and token reinforcement; / = Correct with social reinforcement only; O = Incomplete
 Recommended Artic Reinforcement Schedule: Isolation & Syllables - 100% social & 100% token; Words, Phrases, Sentences: 100% social & 50% token reinforcement; Conversation: 50% social & 10% token.

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

See HANDBOUT:
• Response (Data) Sheet

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Child: Johnny Example One Phoneme/Goal: _____

Key: X = Correct with social and token reinforcement; / = Correct with social reinforcement only; O = Incomplete
 Recommended Artic Reinforcement Schedule: Isolation & Syllables - 100% social & 100% token; Words, Phrases, Sentences: 100% social & 50% token reinforcement; Conversation: 50% social & 10% token.

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Word	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Phrase	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O	O
Sentence																				
Conversation																				

- Johnny met criterion in isolation and in the initial and final positions of syllables. [Note: Isolation = 81%; Initial syllables = 79%].
- In the medial position of syllables, Johnny achieved three consecutive correct responses at his best.

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Child: Sally Example Two Phoneme/Goal:

Key: X = Correct with social and/or token reinforcement; / = Correct with social reinforcement only; O = Incorrect

Recommended Artic Reinforcement Schedule: Isolation & Syllables – 100% social & 100% token; Words, Phrases, Sentences: 100% social & 50% token reinforcement; Conversation: 50% social & 10% token.

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

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

- Sally met criterion in final position of single words in a picture naming task. [Note that percentage of accuracy = 73%].
- In the medial position of single words, Sally achieved 12 consecutive responses at her best (see bottom row).

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Transitioning From the Word Level to the Phrase Level

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Transition to the Phrase Level

Don't allow a pause


- If a child produces a target word after a **pause**, the result is production at the word level, not the phrase level.
- The pause typically occurs because the child is concentrating so hard on the target sound that he ends up pausing, so continuous speech is needed.

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Transition to the Phrase Level

Don't allow a pause

- **Example:** Billy is working on initial /k/ in phrases. He says, *Paul*  *can run*.
- This response should not be counted as correct because Billy produced /k/ correctly, but it wasn't in a phrase. It was simply a production of a single word.

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Managing Group Therapy

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Managing Group Therapy

- Most SLPs use **games** to occupy a child's attention in a group setting or reward the kids for doing well.
- The result is very few responses.

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Managing Group Therapy

- CHALLENGE: **Work in random order.**
- Get no more than 3 responses from one child before moving to the next.
- **Kids** stay alert and motivated.
- **SLPs** stay alert and motivated.

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Managing Group Therapy

- If the session is getting stale or kids are getting bored, **change activities.**
- Replace games with strong social reinforcement.
- Great reinforcers include *Chipper Chat*, *Token Towers*, stickers, and stamps.

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Managing Group Therapy



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Managing Group Therapy



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Transitioning from the Word to Phrase Level

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Transitioning to the Phrase Level

- If a child produces a target word after a **pause**, the result is production at the word level, not the phrase level.
- The pause typically occurs because the child is concentrating so hard on the target sound that he ends up pausing, so continuous speech is needed.

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Transitioning to the Phrase Level

- **Example:** Billy is working on initial /k/ in phrases. He says, *Paul*  *can run*.
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The End

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