


**SAY IT RIGHT**

## Got /r/ Problems?

*A Phonetically Consistent Approach to /r/ Remediation™*



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## How do you feel about /r/?



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## Discussion

The lack of a comprehensive remediation strategy is rooted in a general misunderstanding of the /r/ phoneme, deficiencies in post-graduate education instruction, deficient remediation materials and most notably no generally accepted *effective* method for tackling core /r/ phoneme misarticulation.

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## Facts About /r/

- /r/ can be consonantal (e.g. *red*) or vowel-like (e.g. *star*).
- Consonantal /r/ and the 11 initial blends are easier to evaluate & treat.
- Vocalic /r/'s are more complex because they are comprised of 2 sounds: (the vowel + the /r/).

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## Facts About /r/

- Vocalic /r/ can be separated into 6 variations – [ar], [air], [ear], [ire], [or], and [er].
- One of the most frequently misproduced sounds.
- One of the last sounds to be mastered.

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## Facts About /r/

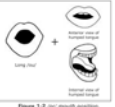
- Post-vocalic /r/ is influenced by vowel. (*i.e. floor, car, tower*)
- Regarded by SLPs as one of the most difficult disorders to correct.
- Manner and place of articulation is not easily described or categorized (*how and where its created*).

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## The Changing Nature of /r/

The phoneme /r/ in the word "CAR" (/ar/ final) is pronounced differently from the word "FOR" (/or/ final) or the word "BUTTER" (/er/ final).



Figures 1-3 /r/ mouth positions as in C&E

However, the final /r/ phoneme in the word "ANCHOR" is pronounced the same as the /r/ phoneme in the word "BUTTER". This is because they are both phonetically /er/ final words despite the spelling differences.

Figures 1-5 /r/ mouth positions as in C&E

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## Categories of /r/

- Prevoical, Initial, or Consonantal /r/  
*e.g. ring, run, race*
- Initial /r/ Blends  
*e.g. price, break, straight*
- Vocalic /r/ or r-controlled  
*e.g. door, star, skier*
- Medial/final /r/  
*e.g. girl, swirl, barrel*

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## /r/ blends

[pr] pride	[br] brought	[tr] tried
[dr] drain	[fr] frog	[kr] crash
[gr] great	[shr] shrug	[str] string
[spr] spring		[thr] thread

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**Vocalic Variations of /r/**

<b>[er]</b> Ernie Buttercup Feather	<b>[or]</b> Orville Corn Four	<b>[ar]</b> Archie barn star
<b>[air]</b> Erin Ferry Fair	<b>[ire]</b> Ireland Fire Fireman	<b>[ear]</b> Erie Cereal Deer

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**Traditional /r/ Therapy**

One of the major sources of frustration in the field of speech-language pathology is that /r/ has been evaluated and treated primarily for its consonantal qualities, while either ignoring the more complex vocalic /r/ or grouping it into a single category.

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**Traditional Consonantal Evaluation & Treatment**

Initial, Medial and Final word positions

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<b>[air]</b> Initial	<b>[air]</b> Medial	<b>[air]</b> Final	<b>Phonetic Approach</b>
Arizona	Dairy	Millionaire	
Erin	Ceremony	Square	
Heiress	Haircut	Scare	
Arrowhead	Barefoot	Tear	
Aerosol	Stairs	Pair	

vs.

<b>Initial</b>	<b>Medial</b>	<b>Final</b>	<b>Traditional Approach</b>
Ribbon	Barefoot	Car	
Run	Buttercup	Fear	
Rain	Thorn	Four	
Race	Wireless	Butter	
Ring	Barn	Software	

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**Does your method of /r/ treatment:**

- Evaluate all variations of /r/?
- Evaluate /r/ in all word positions?
- Have phonetically consistent probe lists for treatment?
- Focus heavily on [er] to exclusion of other phonemes?

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**Does your method of /r/ treatment:**

- Provide measurable progress?
- Provide a specific starting point for remediation?
- Allow for targeting treatment on just the specific misproduced /r/'s?

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**21 Types of /r/**

/air/ Initial	/air/ Medial	/air/ Final
/ar/ Initial	/ar/ Medial	/ar/ Final
/or/ Initial	/or/ Medial	/or/ Final
/ear/ Initial	/ear/ Medial	/ear/ Final
/ire/ Initial	/ire/ Medial	/ire/ Final
/er/ Initial	/er/ Medial	/er/ Final
Prevocalic /r/	/er/ Medial Unstressed	/r/ Medial & Final

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**Why Evaluate All Different Types of /r/?**

- To find a starting point for treatment; research shows that *almost all students can produce at least 1 type of /r/* (Curtis & Hardy, 1959).
- Simplify treatment by determining a successful point of production.
- Help strategize treatment: Determine intervention target based on the facilitating context.

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**Why Evaluate All Different Types of /r/?**

- To properly diagnose the problem (i.e. Can they say some word positions, but not others?).
- Evidence-based treatment:
  - Justify what you are doing.
  - Add accountability.
  - No Child Left Behind Act.

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Student Name: \_\_\_\_\_  
 Screening Date: \_\_\_\_\_  
 The Entire World of It Screening Form

1. Can you hear the /r/ in the word?	2. Can you hear the /r/ in the word?	3. Can you hear the /r/ in the word?	4. Can you hear the /r/ in the word?
5. Can you hear the /r/ in the word?	6. Can you hear the /r/ in the word?	7. Can you hear the /r/ in the word?	8. Can you hear the /r/ in the word?
9. Can you hear the /r/ in the word?	10. Can you hear the /r/ in the word?	11. Can you hear the /r/ in the word?	12. Can you hear the /r/ in the word?
13. Can you hear the /r/ in the word?	14. Can you hear the /r/ in the word?	15. Can you hear the /r/ in the word?	16. Can you hear the /r/ in the word?
17. Can you hear the /r/ in the word?	18. Can you hear the /r/ in the word?	19. Can you hear the /r/ in the word?	20. Can you hear the /r/ in the word?
21. Can you hear the /r/ in the word?	22. Can you hear the /r/ in the word?	23. Can you hear the /r/ in the word?	24. Can you hear the /r/ in the word?
25. Can you hear the /r/ in the word?	26. Can you hear the /r/ in the word?	27. Can you hear the /r/ in the word?	28. Can you hear the /r/ in the word?
29. Can you hear the /r/ in the word?	30. Can you hear the /r/ in the word?	31. Can you hear the /r/ in the word?	32. Can you hear the /r/ in the word?

### Simple Example

- **Case Study:** Erin Blair, an 8 yr old, is frustrated because she can't correctly pronounce her name. Her classroom teacher is concerned with her spelling and reading of various /r/ words.
- A comprehensive evaluation of /r/ shows that the student misarticulates initial and final [air] words.

Student Name: Erin Blair  
 Screening Date: 5-12-06  
 The Entire World of It Screening Form

### Erin Blair's Screening Result


1. Can you hear the /r/ in the word?	2. Can you hear the /r/ in the word?	3. Can you hear the /r/ in the word?	4. Can you hear the /r/ in the word?
5. Can you hear the /r/ in the word?	6. Can you hear the /r/ in the word?	7. Can you hear the /r/ in the word?	8. Can you hear the /r/ in the word?
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21. Can you hear the /r/ in the word?	22. Can you hear the /r/ in the word?	23. Can you hear the /r/ in the word?	24. Can you hear the /r/ in the word?
25. Can you hear the /r/ in the word?	26. Can you hear the /r/ in the word?	27. Can you hear the /r/ in the word?	28. Can you hear the /r/ in the word?
29. Can you hear the /r/ in the word?	30. Can you hear the /r/ in the word?	31. Can you hear the /r/ in the word?	32. Can you hear the /r/ in the word?

### Erin Blair Evaluation

- Based on the screening evaluation, only initial and final [air] words should be targeted in the remediation process.
- Sample Word List:

<u>fair</u> Initial	<u>air</u> Final
Arizona	Millionaire
Erin	Square
Helress	Scare
Arrowhead	Tear
Aerosol	Pair

### Evaluating Jacob



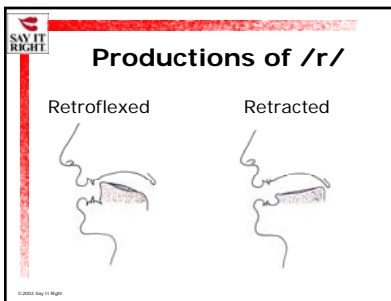
Student Name: Jacob  
 Screening Date: 5-12-06  
 The Entire World of It Screening Form

### Jacob's Screening Result

1. Can you hear the /r/ in the word?	2. Can you hear the /r/ in the word?	3. Can you hear the /r/ in the word?	4. Can you hear the /r/ in the word?
5. Can you hear the /r/ in the word?	6. Can you hear the /r/ in the word?	7. Can you hear the /r/ in the word?	8. Can you hear the /r/ in the word?
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### Jacob Results

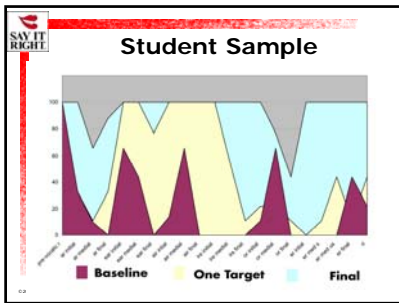
- Even though his production sounds flat and severe, he does have productions that are correct and that he is stimuable for.
- Use those productions to determine his natural production of /r/ (*retroflexed vs. retracted*).



### Why Establish Natural Production?

- To know what cueing strategy to use (for verbal cues, hand signals, etc.) as your starting point.
- Use what student does naturally.





**Results**

- Generalization occurred for 100% of students.
- 58% ended with 3 or fewer errors, 7 dismissed.
- 4 out of 5 students corrected 5 or more /r/ errors.

**Study Findings**

- Therapist's surprised how well their student's did & the positive response to treatment.
- Screening proved to be an excellent aid in choosing a target and determining present level of performance.

**Solution**

- Evaluate and treat /r/ phonetically based on word position and sound class.
- Clients may be able to produce an /r/ controlled vowel in one word position, but not another.

**What does this mean to me?**

**I just want to treat /r/.**

**Where do I start?**

**Start with a Comprehensive Evaluation**

- Evaluate **ALL** /r/'s in **ALL** positions to attain a comprehensive understanding of student's current ability.
- Anything less will leave you with a less than satisfactory picture.

**Choosing a Target**

- Choose sound most likely to correct → highest correct percentage below 80%.
- Correct productions within sound class (i.e., [AR] initial is correct, but [AR] final is not).
- Cognate pairs (i.e. great/crate).

**Remediation**

- Based on target selected.
- Consistently focus only on target until corrected.
- Use appropriate elicitation strategies based on target selection.
- Use phonetically consistent probe lists.

**Remediation**

Intervention begins with production training/ sound establishment:

- Isolation
- Single Words
- Phrases
- Sentences
- Structured Conversation
- Spontaneous Conversation
- Maintenance



**Example of Generalization**

Student Name: C.C. Target: /r/

Baseline/Maintenance Screening Results

Screening	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
Baseline Screening #1																															
Maintenance Screening #1																															
Baseline Screening #2																															
Maintenance Screening #2																															
Baseline Screening #3																															
Maintenance Screening #3																															
Baseline Screening #4																															
Maintenance Screening #4																															

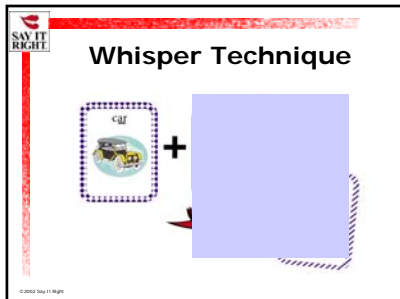
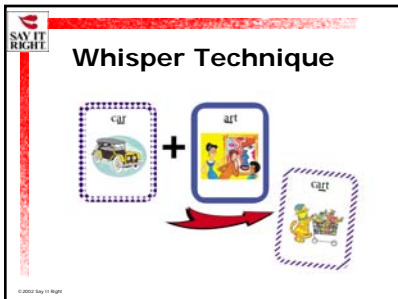
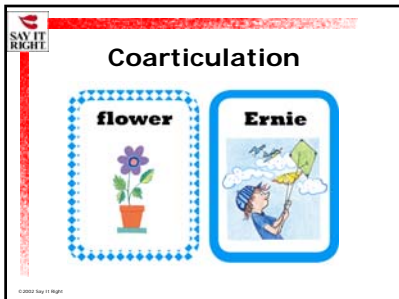
- Elicitation Techniques**
- Write target /r/ controlled vowel on board to increase students awareness that there are two or more sounds they need to produce.
  - Model target sound for student.
  - Use as many modalities as possible; visual, auditory and tactile cues.

- Elicitation Techniques**
- Have student use a mirror so that she can see her own mouth. This is important to eliminate any lip rounding and to ensure that the student is producing both the /r/ plus the vowel.
  - Use phonetically consistent probe list for production practice.


- Elicitation Techniques**
- Use student's success in one word position to help shape the other misarticulated word positions (coarticulation).
  - Elongate the /r/ controlled vowel (e.g. /ar/) to ensure that both the vowel plus the /r/ are being pronounced (2-3 seconds).

- Shaping an /r/ From a Word Position That Student Can Say**
- Educate the student about the /r/ variations that she can say (show them her screening results).
  - Instruct her to say one of the /r/ words that she can say to gain awareness what her tongue is doing.
  - Use the whisper technique.
  - Use coarticulation.

- Elicitation Techniques**
- A successfully produced prevocalic /r/ can be used to shape other /r/ variations.
- Example:*  
ear red, slowly fade out red.



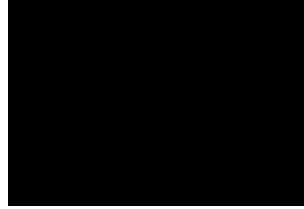
**Remediating Jacob**



**When to Move onto the Next Sound and/or Word Position?**

- Once a word position for target /r/ is mastered (80% for 5 consecutive sessions at sentence level) re-administer screening to aid in choosing the next target.
- Re-administer advanced screening to choose next intervention target.

**Remediating Rebecca**



**Reasons for using a phonetically consistent approach for /r/ remediation**

- Better understand the complex nature of /r/.
- Students will make measurable progress.
- Caseload size will decrease.
- Justify your treatment to yourself, parents, and school staff.

**Age Appropriate Time to Begin Treatment**

- Developmental at 7-8 years old.
- Normative Sequence- when muscles are matured and /r/ controlled vowels are taught in 2<sup>nd</sup> grade curriculum.
- Complexity Approach. Begin with later developing sounds to achieve generalization in early developing sounds—Morrisette, et al 1996.

**Phonetically Consistent Approach**

1. Evaluate all variations of /r/.
2. Interpret the evaluation results.
3. Determine specific variation and word position in need: **target**.
4. Write targeted goals and objectives.
5. Treat only one target until mastered (80% at sentence level).

**Phonetically Consistent Approach**

6. Re-evaluate.
7. Select new target and treat.
8. Continue until all sounds correct.
9. Review and reinforce.

**Handout**

[www.sayitright.org/resources](http://www.sayitright.org/resources)