

Focus on the Mouth: Articulation and Oral-Motor Solutions

Successful R Therapy by Pam Marshalla

presented for Speech Language and Learning Services, November 9, 2002

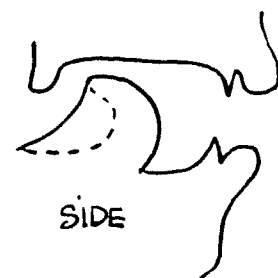
Page 2

Part 1. Correct and Incorrect Productions of R

A. Two Motor Positions

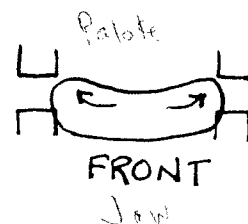
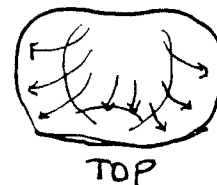
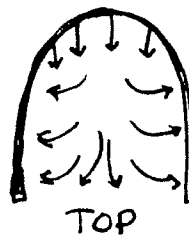
1. Tip R (a.k.a., Retroflex R, Tip-Up R, Immature R, Simple R)

- Tip: lifted up and curled back
- Sides: lifted up and curled back
- Midline: lower and relaxed throughout
- Lips: slightly retracted
- Exaggerated tongue-bowl position (cup shape configuration)
- 40% of population use as habitual R posture



2. Back R (a.k.a, Mature R, High-back R, Correct R, R)

- Back: elevated on sides
- Tip: uninvolved
- Sides: elevated up at backs
- Middle: lower than sides
- Lips: slightly protruded
- Butterfly position
- 60% of population use as habitual R posture



B. Three Phonetic Environments

1. Consonantal R

- Used to open a syllable ɪ - ɪ - e - ε - æ - u - ʊ - o - ɔ - a - ʌ
- >read, rid, raid, red, ram, rule, rook, row, raw, rock, rub
- Can be made with either Tip R or Back R position
- Made on the off-glide: voice initiates as tongue moves away from target position

2. Vocalic R

- Used to close a syllable
- >tear, tare, tour, tore, tar, tire, tower

Focus on the Mouth: Articulation and Oral-Motor Solutions Successful R Therapy by Pam Marshalla

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Page 3

↳ do make syllables out of it for sound

- Can be made with either Tip R or Back R position
- Made on the on-glide: voice initiates as tongue moves into target position

3. R in Blends: consonantal or vocalic depending upon maturity of speech

- Mature blend: consonantal R in blends
 - >Initial blend: *pro, brown, train, drop, Chris, green, frog, shread, spring, strong...*
 - >Medial blend: *I can run, See mom run, Sing real loud, Go call Ron...*
 - >Final blend: *amber, soccer, pepper, mailer, gunner, gamer, butter, badder...*
 - >Requires excellent co-articulation skill
 - >practically a simultaneous sound made with C+/r/
- Immature blend: vocalic R in blends
 - >a developmental pattern
 - >made vocalic by stretching cluster into a full syllable by adding a schwa
 - >example: *brown changes to buh-rown*

C. Three Misarticulations

1. Omission: leaving R out altogether

- e.g., *brown changes to bown*
- Very common in normal developmental (a developmental error)
- Also seen in clients with severe speech disorders
- Not common when R is the only error
- Treatment: learn R (nothing wrong yet; thus, fairly easy)
- Treatment: teach Tip R or Back R
- Treatment: teach either consonantal or vocalic R (depending upon client readiness)

2. Substitution: using another phoneme in place of R

- e.g., *brown changes to bwown*
- Very common in normal developmental (a developmental error)
- Seen in clients with severe speech disorders, especially severe phonological and apraxia
- Also common when R is the only error
- Treatment: learn R (nothing wrong yet; thus, should be fairly easy treatment)

Focus on the Mouth: Articulation and Oral-Motor Solutions Successful R Therapy by Pam Marshalla

presented for Speech Language and Learning Services, November 9, 2002

Page 4

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- Treatment: teach Tip R or Back R; should be fairly easy
 - Treatment: teach either consonantal or vocalic R (depending upon client readiness)

3. Distortion: "bending" the sound ~ /

- e.g., *brown* changes to *brɔwn* (same phoneme, different acoustic quality to it)
- Not an allophonic variation; outside the range of acceptability
- Unusual in normal developmental (not a developmental error)
- Seen in clients with severe speech disorders, especially dysarthria
- Very common when R is the "only" error
- Hint: R usually is not the only error
 - >Other errors: L, vowels, and other "later-developing" sounds *can be subtle errors*
 - >Other errors: voice, loudness, rate, intonation, pitch, resonance, rhythm
- Treatment: work on prosody, voice, rate, rhythm, resonance, oral-motor skills
 - >Speak up, speak out, over-articulate, over-pronounce, exaggerate speech
 - >Punch out syllables, be crisp on consonants
- Treatment: vowels! clean them up, differentiate them, lots of auditory work
- Treatment: teach Tip R
 - >because it's easier
 - >Back R will be far too difficult for these clients
 - >Exception: clients with predominant Backing problem
- Treatment: teach either consonantal or vocalic R (depending upon client readiness)

Head to
LX

teach it as
part of a package
for articulation
in consonants

Part 2: Facilitation of Tip R

A. Visual Model: show them what to do

- Wide open mouth
- Super model of position: a grand sweep up and back
- Without voice first: to focus on movement - *lots of different movements*
- With voice second: to use sound to make judgements about tongue position
- Big smile to aid in rearward movement of tongue (retracted lips)

Big movements

*↳ get lips out of the way.
Pull them back if need be*

Focus on the Mouth: Articulation and Oral-Motor Solutions

Successful R Therapy by Pam Marshalla

presented for Speech Language and Learning Services, November 9, 2002

Page 5

B. Verbal Description: tell them what to do

- Make sure they have the vocabulary: *tongue, tip, sides, middle, back, roof...*
- Focus of vocabulary: to get tip back toward velum
- Scientific vocabulary: *Elevate the tip of your tongue toward the velum...*
- Common vocabulary: *Put the tip of your tongue on your punching bag...*
- Visual Imagery: *Mr. Tongue is working out with his punching bag...*

C. Traditional Articulation Therapy Methods

- L-to-R Slide
 - >Position tip to alveolus and say /l/
 - >Continue voicing while sliding tip back along palate toward velum
- Z-to-R slide
 - >Position tip to alveolus and say /z/
 - >Continue voicing while sliding tip back along palate toward velum

- Wuh-Luh-Ruh sequence

- >Say *wuh*: big, bold, over-articulated
- >Say *luh*: big, bold, over-articulated
- >Say *ruh*: big, bold, over-articulated
- >Purpose: to get client to perform the same action in a different place

- Tapping back along palate from alveolar ridge to velum

- >Tap tip on alveolus and voice to say *luh*
- >Tap just behind alveolus and voice to say a distorted *luh*
- >Tap even further back to mid palate to say a sound that is neither *luh* nor *ruh*
- >Tap even further back to pre-velum to say a sound that is more like *ruh*
- >Tap even further back to touch velum to say a sound that is just about *ruh*
- >Tap even further back to touch velum to say a sound that is *ruh*

D. External Tactile Cues: to aid in position and tension

- Tap or press on head to direct tip in relation to oral cavity
 - >Directly behind, behind and above, on top, behind and low
 - >Point depends upon client: whatever he responds appropriately to
 - >Experiment with position

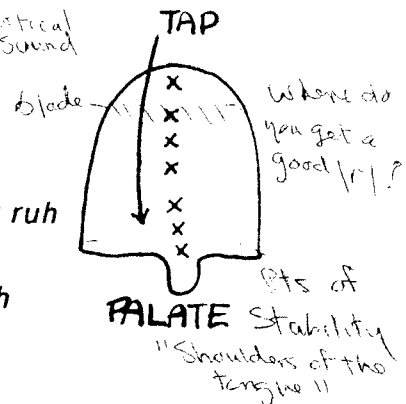
Understand why these methods work or not @ child

If can't get what is wrong @ the child's oral motor skills that it can't support these movements? Add an element @ this pt.

If we don't get it... it tells you all you need to know abt the kid's environment

Why see jaw problem - partly differentiated tongue/jaw use bike block to help stabilize jaw

can combine methods to get acoustical sound



Think abt on-glide + off-glide

Push your tongue here...

Focus on these problems

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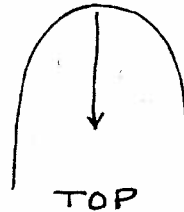
Page 6

These exercises get the tongue "in shape"

often the 1st exercise given to pts ~ 5-10 sec is all it takes

E. Tactile Stimulation: to facilitate position and increased tension

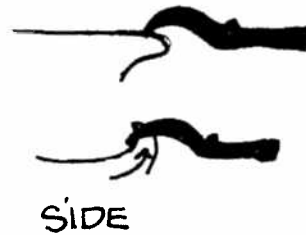
- Stimulate tongue bowl
- Tactile stimulation down the midline of the tongue
- Anterior-to-posterior direction - reflexive bowl reaction
- Rough stimuli: toothette, toothbrush...
- Daily homework done with every toothbrushing
- Gradual active tip elevation



tongue extended out to brush
superior longitudinal muscle

F. Proprioceptive Assistance: to physically assist the tongue in its movement

- Dental floss holder with floss
 - >Place floss on tongue at blade
 - >Curl tongue tip up to "grab" floss
 - >Continue to curl tongue tip up and back toward velum
 - >Floss holder will be pulled back into mouth
- Dental floss, string or thread
 - >Place over tongue across blade
 - >Pull down as tip curls up and back
- Drill or exercise this movement
 - >consistent, strong, regular, conscious



tongue tends to push against stimuli

Cues reminders of where to move.

Stimulation - actually teaching/affecting the brain.

Part 3. Facilitation of Back R

A. Visual Model: show them what to do

- Wide open mouth: almost impossible to see
- Super model of position: a grand sweep up and back
- Without voice first: to focus on movement
- With voice second: to use sound to make judgements about tongue position
- Almost no client will get it with visual model alone

B. Verbal Description: tell them what to do

- Make sure they have the vocabulary: tongue, tip, sides, middle, back, roof...

Focus on the Mouth: Articulation and Oral-Motor Solutions

Successful R Therapy by Pam Marshalla

presented for Speech Language and Learning Services, November 9, 2002

Page 7

- Focus of vocabulary: to get back lateral margins up toward palate
- Scientific vocabulary: *Elevate the lateral margins of your tongue toward the palate...*
- Common vocabulary: *Bring the sides up way in the back...*
- Visual Imagery: *Create mountains on the sides and a valley in the middle...*

C. Traditional Articulation Therapy Methods

- Verbal primarily
 - >Lift up the back of your tongue...
 - >Problem: the whole back up will make an R distortion
 - >This incorrect data on R production causes the most failure in long-term R therapy
- Blends: using adjacent consonants to encourage back elevation
 - >Gr, Kr
 - >Right place, wrong movement
 - +Elevation of middle for K and G with stability at lateral margins
 - +Elevation of lateral margins for R
 - >Still need a way to generate tension
 - >Can work for some clients
- Other consonants or vowels
 - >Produce *yuh*, then press up harder
 - >Produce *ee* and press up harder

← traditional methods
just don't work!

D. External Tactile Cues: to aid in position and tension

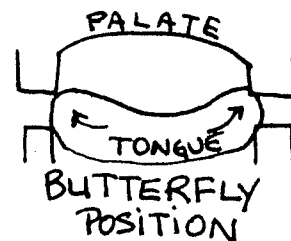
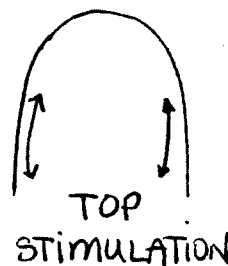
- Tap or press on face and jaw to direct sides in relation to oral cavity
 - >Directly to side of tongue back
 - >Point depends upon client: whatever he responds appropriately to
 - >Experiment with position

on sides of face/head

bite sides of
tongue + push up
on molars

E. Tactile Stimulation: to facilitate position and increased tension

- Stimulate butterfly position
- Tactile stimulation back-and-forth along sides
- Rough stimuli: toothette, toothbrush...
- Daily homework done with every toothbrushing
- Gradual active lateral elevation



Focus on the Mouth: Articulation and Oral-Motor Solutions

Successful R Therapy by Pam Marshalla

presented for Speech Language and Learning Services, November 9, 2002

Page 8

Press handles in opposite direction from where you want it to go.

E. Proprioceptive Assistance: to physically assist the tongue in its movement

- Dental floss holder without floss
 - >Place ends on lateral margins on both sides simultaneously
 - >Direction: press sides up against holder
- Drill or exercise this movement
 - >consistent, strong, regular, conscious



F. Combine with Tip R work

- Alternate between Back R and Tip R work to determine which will work
- The combined work exercises the entire tongue
- Together, the tip and back work make R emerge
- Sometimes we hold the back position and then lift the tip into position
- Creates correct position (Back R) and tension (Tip R)

get that ring & build it into child's repertoire

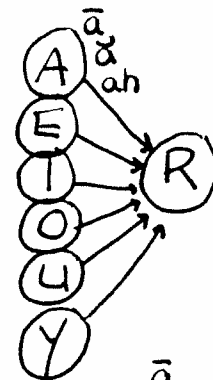
Part 4. From Isolated Phoneme to Conversational Speech

A. Building the vocalic sequence

- From every vowel to R
- Slow or fast, depends upon client: slow usually best
- Model the transition: the on-glide is the critical aspect
- Break the transition - *teach the transition by making the transition silent.*
- Make sure vowels are crystal clear: watch for bad coarticulatory habits
- Add w or y where appropriate to make transition

Cornerstone sound - the bit acoustically correct it

Practice this over & over



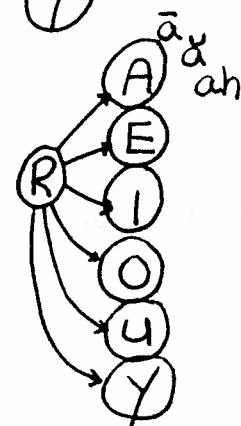
*make distinct
let the vowels*

*best cut if they can transition to other vowels
u → w
o → w
a*

early developing vowels

B. Building the consonantal sequence

- From R to every vowel
- Slow or fast, depends upon client: slow usually best
- Model the transition: the on-glide is the critical aspect
- Break the transition
- Make sure vowels are crystal clear: watch for bad coarticulatory habits
- Watch for w and y transition sounds: keep them there

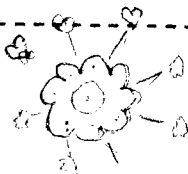


Focus on the Mouth: Articulation and Oral-Motor Solutions

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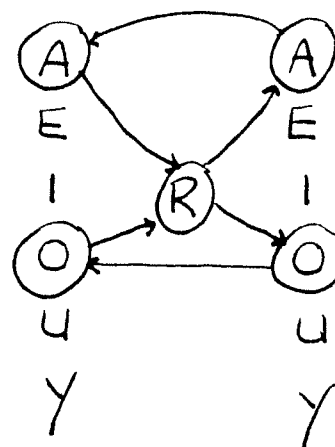
presented for Speech Language and Learning Services, November 9, 2002

Page 9



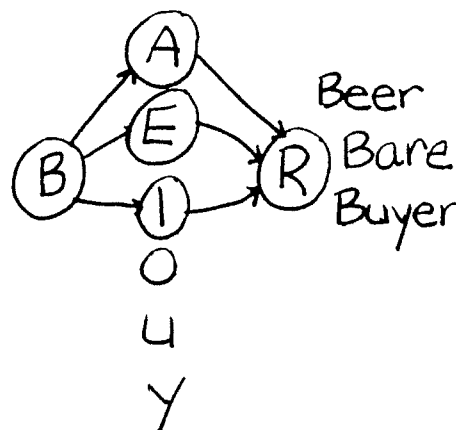
C. Expanding the sequences

- Sequence two or more together
- Very slow at first
- Reward only perfect productions
- Begin with same syllables: gradually sequence different syllables
 - >ar...ar...ar...ar...
 - >ar...or...ar...or...ar...or...
 - >ar...or...eer...oor...



D. Adding speed with accuracy before adding consonants

- Start slow (in most cases)
- Add speed gradually
- Never sacrifice accuracy for speed
- Slow conversation throughout session
- Talk about this aspect: compare and contrast
- Explain deficit: *You can't...*
- Help them hear their productions all along the way

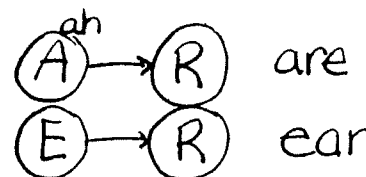


E. Adding other consonants

- Gradually add consonants into the sequence
- bar, far, jar, car...
- This is exercise: the realization that these are "words" comes out of the practice

F. Making real words at all points along the way

- Make any and all sequences real words
- ar is "are", eer is "ear" ...



G. Moving into conversation at all points along the way

- As soon as a sequence turns into a word, use it in a conversational way
- E.g., "are" guessing game to guess age, vacation plans, etc. *Are you...?*
- Ignore all other R sounds except that necessary for the target word

you can try to say it wrong & have them describe why it was wrong.

Focus on the Mouth: Articulation and Oral-Motor Solutions
Successful R Therapy by Pam Marshalla

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Page 10

H. Listing "The hardest words in the world"

- List words they have identified as "problem" words: names, places, ages
- List words which will take a long time to achieve: *world, squirrel*

References

- Oral-Motor Techniques in Articulation and Phonological Therapy* (2002) Pam Marshalla, MSL, 11417 - 124th Ave. NE, Suite 202, Kirkland, WA 98033, 425-828-4361.