Part 1. Correct and Incorrect Productions of R

A. Two Motor Positions

   -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
   -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
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-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 bown
   - 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)
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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 brown (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
  > 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)

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
   - With voice second: to use sound to make judgements about tongue position
   - Big smile to aid in rearward movement of tongue (retracted lips)
     - get lips out of the way.
     - Pull them back if need be
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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
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"How can we get the tongue in shape?"

-After the first exercise done to get tongue in place 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
   -Rough stimuli: toothette, toothbrush...
   -Daily homework done with every toothbrushing
   -Gradual active tip elevation

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

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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 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

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

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
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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)

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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 - Reach 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

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

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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 to have
them describe why
it was wrong.
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,