

Childhood Apraxia of Speech Therapy Strategies That Make a Difference

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Disclosures

- I receive salary compensation for my role with Apraxia Kids.
- I am co-author of "The SLP's Guide to Treating CAS" by Hammer and Ebert, 2018 (published by Speech Corner)

What is CAS research telling us?

- Unfortunately not much, but it is getting better, thanks in part to treatment grants from Apraxia Kids.
- Sample sizes are small, however, so it's difficult to draw conclusions that guide therapy decisions.

What is CAS research telling us?

- ▶ High rate of “soft” neurological signs
- ▶ Children with apraxia perform more poorly on phonological awareness tasks.
- ▶ No significant difference in feedback frequency.
- ▶ Better improvement with more intensive therapy (but only compared 1x/wk to 2x/wk).
- ▶ A motor-based approach works best with best evidence for such programs as Dynamic Temporal and Tactile Cueing and ReST.

How does CAS therapy differ from phonological/artic tx?

- ▶ Foundation in Principles of Motor Learning.
- ▶ Pancake examples

Principles of Motor Learning

Motor Performance vs Motor Learning

- ▶ In CASANA webinar, Edwin Maas uses creative pancake flip example.
- ▶ Constant – same size pan (better for performance) Variable – S/M/L pan (better for motor learning)
- ▶ Blocked – 25 trials each with each pan size
Random – no set amount of trials per size
- ▶ Knowledge of Results vs Performance

How does CAS therapy differ from phonological/artic tx?

- “Developmental” guidelines don’t dictate sound choice most of the time.
- More attention is paid to movement sequences than to isolated sounds.
- Need to attend to **transition points**.
- Example – use of string and transition points
- [Video – Olavo, age 8-6)

How does CAS tx differ from phonological/articulation tx?

- Compensatory placements may need to be taught. [tongue-tip sound examples]
- More attention is paid to movement sequences than to isolated sounds. The syllable is the starting point for practice.
- [“sh” demonstration]

What does “multi-sensory” mean in my approach?

- Using any sensory and motor input available to enhance verbal skills. (could also be called multi-modality)
- [Video-Ben, age 3]

What does a “multi-sensory” approach include?

- ▶ Foundational aspects of Dynamic Temporal and Tactile Cueing (DTTC)
- ▶ Hierarchy of support includes:
(1) simultaneous production (2) immediate repetition (3) delayed imitation (4) question prompt
- ▶ Edy Strand starts at immediate repetition and moves down to simultaneous production only if needed.

What does a “multi-sensory” approach include?

- ▶ Touch cues, visual/verbal prompts, PROMPT, PECS, AAC devices, and sign language.
- ▶ Sign language can:
(1) be held to the face
(2) be paired with visual/touch cues
(3) be used later to prompt functions
- ▶ [Video – Jack, age 9-7, use of “am”]

Don’t abandon sign language...

- ▶ because the child’s fine motor planning and precision are impaired/weak.
- ▶ because the child does not like to sign.
- ▶ because it is hard to learn.
- ▶ because the child starts to talk.

What about AAC boards/devices?

- Low tech to high tech can be used.
- Excellent article on AAC in the February 2017 ASHA Leader by Lisa J. Lawrence (“Tapping Into the ‘Augmentative’ of AAC”)

How do we make the decision about when to introduce AAC?

- Key factors
 - Severity of CAS
 - Age of child
 - Presence of “underlying language” capability
 - Comfort level with technology
 - Fine motor planning skills

What does “multi-sensory” help facilitate?

- Helps child to experience sound sequences and suprasegmental features while engaged in motor activity.
- [Video - Connor, age 3]

Another transition point

- Slide serves to support transition point.
- Best with glides, fricatives and vowels.
- Add object at bottom with contact serving as the transition point.
- Move down the slide with starting point to bring to naturalness.

How do we help reduce frustration and provide support for residual issues?

- Distract child from the challenge of sound precision/sequencing
- [Video - Sean, age 6-9]

If children have minimal speech, how do we get started?

- Build on expressions, vehicle, animal and environmental sounds.
- Consider "Sounds in Motion" cues and "Phonics Songs" on YouTube for home practice, but **caution** on bouncing on sounds for true words.
- Diane Bahr's book on selected reference list "Nobody Told Me (or My Mother) That!"

If children have minimal speech, how do we get started?

- [Handout – “The Big Book of Exclamations” by Teri Peterson with new 2nd Edition called “Talk With Me”]
- Teaching “out” [audience participation]
- [Video - Shane, age 3-6 with Ned’s Head]

How do we facilitate accurate articulatory postures?

- Use “starter positions” such as “mm”, “oo”, “ee” and even “rr”!
- [Video – Dominique, age 5]

Does it help to use “catchy” names for sounds?

- Enhances fun with sounds, but try to incorporate placement/manner cues.
- [Handouts - Verbal/Visual Cues and Parent Fill-in for home usage]
- SLP’s creative addition with photos
- “Friendly Sounds” Demo
- [Video - Andon, age 4-3 part way through Friendly Sound concept introduction and then during play]

What should I consider in selecting speech targets?

- Margaret “Dee” Fish in “Here’s How to Treat Childhood Apraxia of Speech” - not just nouns, but verbs and expressions
- Teach CONTROL/POWER words beyond “no”. [audience participation]
- “No help” not just “Help me” and “I do it” for fostering independence and control

What should I consider in selecting speech targets?

- Target final **voiceless** consonants.
- Use child and therapy goal-determined strategies like fun frustration phrases [“Oh milkshake!”].
- Individualize “I” phrase word choice based on sound repertoire and co-articulation (e.g. “I pick, I need, I see, I choose” in place of “I want”).

What is a core vocabulary book?

- A “Grandma’s Brag Book” - contains photos for functional communication and therapy targets.
- Enables the child to sense early success.
- Allows parents to feel part of the “team”.
- Has word printed at the top. [Handout]
- [Video - Luke, age 3 and his mother]

What should I consider in moving to word combinations?

- ▶ The use of 3 bins/boxes/buckets to help decide “at the moment” 2 targeted words
- ▶ First bin - “well-rehearsed” words
- ▶ Second bin - words child can say with cueing
- ▶ Third bin -- future functional words
- ▶ Start with bin #1 only - then #1 and 2...

What about vowel modification?

- ▶ Tendency to move quickly through vowels – hold posture for proprioceptive feedback
- ▶ Turtle vowels from “Easy Does It for Apraxia”
- ▶ Pam Marshalla “Place Cues” on YouTube
- ▶ Prolong in DTTC and “Time to Sing”
- ▶ [Video – Sam, age 3-11 prolonging vowels in two-syllable word enhancement – “staccato”]

How do we address multi-syllable word breakdowns?

- ▶ Use backward chaining / build-ups
- ▶ ReST (Rapid Syllable Transition) program for 4-12-year-olds, Tricia McCabe, University of Sydney, Australia [Read description] <http://sydney.edu.au/health-sciences/rest/>

How do we incorporate the use of pictures into therapy?

- 4-D pictures from octagonstudio.com/4d
- [Video Demonstration]
- Use strategies to sequence pictures for building an airport runway, a road, or a path to the princess castle!
- [Video - Jonah, age 4]

How do we address the suprasegmental features?

- First of all, address throughout therapy.
- Facilitate enhanced auditory feedback.
- Talk into upside down drums, curved tubes, echo microphones, etc.
- Use music ["Time to Sing" and others]
- Use Mo Williams "Elephant and Piggy" series of books
- "Bee-bim Bop" book by Linda Sue Park has a Korean recipe for this dish!

What are the most common parent suggestions I give?

- Adopt a "Rule of 3" especially for students with attentional weaknesses or low cognitive ability.
- Use "Start with..." as a supportive cue.
- Read to your child daily – one book for pleasure and one with speech goals.

What are the most common parent suggestions I give?

- ▶ Repeat back unclear utterances, then provide supportive alternative.
- ▶ Use a hierarchy of response. [Handout]
- ▶ Acknowledge frustration but maintain high expectations.

STRATEGIES FOR KEEPING SCORE

- ▶ KNOCK DOWN activity with 5 pictures/objects
- ▶ Is a prediction activity so child decides what he will try to knock down
- ▶ 5 points if knocks over what is predicted
- ▶ 3 points if knocks over something else
- ▶ Goal is to achieve ___ points

STRATEGIES FOR KEEPING SCORE

- ▶ BB SHOOT/ BALL TOSS with 15 pictures
- ▶ 3 semi-circle rows
- ▶ Child picks up picture – practices X times – shoots from where picked up picture (can stand on picture and practice “on...”)
- ▶ [Favorite hoop picture]

STRATEGIES FOR KEEPING SCORE

- ▶ RED ROLL/GREEN ROLL (or other colors)
- ▶ [Picture slide showing "Bingo" layout]

STRATEGIES FOR KEEPING SCORE

- ▶ RED ROLL/GREEN ROLL
- ▶ 10 checkers – goal to get rid of all 10 first
- ▶ Roll colored dice and practice X times
- ▶ "King side" down unless 2nd landing on space
- ▶ Can "rob" or "steal" space unless king side up

PICTURE DROP

- ▶ Enhances verbal response on demand and facilitates focus.
- ▶ [Video – Sean, age 6]

Ideas I picked up from parents, therapists and students

- Squirt laminated pictures at bath time.
- Paint a fingernail after so many reps.
- Pop bubble wrap under table for /k/ (student idea)
- Use wipes container for mouth to feed cards. (make “monster” face)
- “Earn” cotton balls for snowball fight.
- Toss confetti into the air!

How do we incorporate new technology?

- Apps (e.g. V-Lingo, Voice Changer Plus)
- Voice Changer Plus – Also rate of speech app
- Erik Raj Creative Use of Apps [Handout]

THANK YOU!!

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