

## Childhood Apraxia of Speech

Childhood Apraxia of Speech (CAS) is a motor-speech programming disorder resulting in difficulty executing and/or coordinating (sequencing) the oral-motor movements necessary to produce and combine speech sounds (phonemes) to form syllables, words, phrases and sentences on voluntary (rather than only reflexive) control. Many children are able to hear words, and are able to understand what they mean, but they can't change what they hear into the fine-motor skill of combining consonants and vowels to form words. This difficulty combining consonants and vowels into words upon direct imitation is called *apraxia of speech*. Many children do have "pop-outs" which are real words and phrases they are able to say or have said in the past, but are either never heard again, or cannot be imitated when asked to do so. Here at the KCC, we provide a systematic program that helps children with apraxia to be able to combine simple to complex consonants and vowels into a functional vocabulary. Parents, family and teachers are trained to script best word approximations toward functional vocabulary and language development. This is done through drill, conversation, and play, with cues, prompts, and support. Oral-motor weakness or dysarthria may co-exist but must not be a primary concern.

Apraxia of speech is usually treatable with the appropriate techniques. The Kaufman Speech Praxis Treatment Approach for childhood apraxia of speech is a highly effective program with young children. Children must be seen one-on-one, at least in the early stages of treatment, even by age 2. *The Kaufman Speech Praxis Test for Children, The Kaufman Speech Praxis Treatment Kits, The Kaufman Speech Praxis Workout Book, and the K&K Sign & Say* are helpful tools in the evaluation of apraxia, determining treatment goals, and providing effective therapy. The Kaufman Speech Praxis Treatment approach has been so successful that it is currently being used all over the United States, in Canada, Great Britain, Ireland, and Australia. This approach is also now being accepted and implemented into Applied Verbal Behavior Programs for children on the autism spectrum.



## **EARLY SIGNS & SYMPTOMS OF CHILDHOOD APRAXIA OF SPEECH (CAS):**

- Limited or little babbling as an infant (void of many consonants). First words may not appear at all, pointing and “grunting” may be all that is heard
- The child is able to open and close mouth, lick lips, protrude, retract and lateralize tongue while eating, but may not be able to when directed to do so
- First word approximations occurring beyond the age of 18 months, without developing into understandable simple vocabulary words by age 2
- Continuous grunting and pointing beyond age 2
- Lack of a significant consonant repertoire: child may only use / b , m , p , t , d , h /
- All phonemes (consonants and vowels) may be imitated well in isolation, but any attempts to combine phonemes are unsuccessful
- Prosody is unusual, there is equal stress and sometimes a monotone quality
- Speech may change or disintegrate with many repetitions
- Words may be simplified by deleting consonants or vowels, and/or replacing difficult phonemes (consonants and vowels) with easier ones
- Single words may be articulated well, but attempts at further sentence length becomes unintelligible
- Receptive language (comprehension) appears to be better than attempts at expressive language (verbal output)
- One syllable or word is favored and used to convey all or many words beyond age 2
- The child speaks mostly in vowels
- Verbal perseveration: getting “stuck” on a previously uttered word, or bringing oral motor elements from a previous word into the next word uttered
- Oral groping may occur when attempting oral motor movements or consonant/vowel production
- Echolalic utterances (the automatic repetition of words, phrases, or sentences often without comprehension) might be perfectly articulated but novel attempts at words or combinations might be more effortful
- Struggle behavior may occur when attempting to imitate or to speak (without dysfluency or stuttering)
- Deletions/replacements of consonants, vowels, or syllables may occur at the word, phrase, or connected word levels.
- Vowel distortions or replacements occur which are not due to oral motor weakness
- The ability to blurt out clear whole words, phrases or sentences may occur though there is difficulty imitating these same words “on command” or upon imitation
- Difficulty maintaining clarity with extended word length or complexity
- Phonological processes are employed to simplify motor speech output
- Late talking with above characteristics or errors may be present
- Low muscle tone in general
- Lack of awareness of oral structures or functions may be present
- Other fine motor challenges may be present

***Please Note:*** A speech and language pathologist must be involved to rule out other possibilities as primary reasons for the above-mentioned signs and symptoms. Simple “late talkers” can have similar characteristics.

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