

What is Apraxia of Speech?

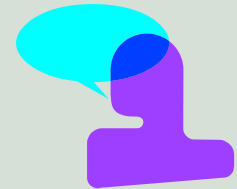
A GUIDE FOR PARENTS OF 3-5 YEAR OLDS

Definitions:

Apraxia of Speech is a disorder that affects a child's ability to say and sequence parts of words to produce syllables, words, and sentences. The problem lies with the inability to plan the movements of the mouth for the purposes of speech on command, thus it is often referred to as a "*motor planning disorder*." This means that the child has difficulty making speech movements when he/she is *consciously* aware of trying to do so or in instances when he/she is *requested to do* by others.

The term Apraxia of Speech *may be used to mean the same thing* as Developmental Apraxia of Speech (DAS), Developmental Verbal Dyspraxia (DVD) and Childhood Apraxia of Speech (CAS).

Apraxia of Speech *may also be confused with* other disorders such as articulation, dysarthria, oral apraxia and phonological disorders. Sometimes these disorders may coexist. The chart below describes the differences.



	Few, consistent errors in production of specific sounds	Muscle weakness	Numerous, consistent errors in voice, place, or manner of sound production	Slow, effortful speech	Difficulty performing non-speech movements*	Errors in child's understanding of the organization and rules of language	Inconsistent, multiple, or unusual sound errors	Poor intelligibility	Motor programming difficulties resulting in groping /silent postures*	Errors tend to increase as length and complexity of utterance increases	Inappropriate intonation, inflection and rhythm
Apraxia of Speech							X	X	X	X	X
Articulation Disorder	X										
Dysarthria		X		X				X			
Oral Apraxia					X				X		
Phonological Disorders			X			X		X			

*not attributable to muscle weakness

"Need to Know" Terms:



ARTICULATION- In speech, the ability to formulate the specific speech sounds of a given language.

FLUENCY- The effortless flow of speech. *Stuttering* is an example of lack of fluency.

IMITATION SKILLS- The ability to repeat isolated sounds, syllables, or words, given a model.

INTELLIGIBILITY- The degree of clarity with which the average listener understands what is being said. By age three, a child's intelligibility should be 80-100% to a familiar listener.

PROSODY- The intonation, inflection and rhythm of speech production.

SPONTANEOUS SPEECH- Speech that occurs without prompting or modeling.

“Red Flags” for Apraxia of Speech:



The following characteristics may indicate the need for further assessment:

- The child is difficult to understand, especially by unfamiliar listeners
- The child demonstrates inconsistent speech errors; the errors do not always follow a pattern or they follow an unusual, hard to identify pattern
- The child produces a limited number of vowels, many of which sound similar, or vowel production is distorted
- The child has inconsistent errors when producing consonants
- The child uses a limited number of consonant sounds
- The child's errors increase in more complex utterances, such as words with multiple syllables, phrases, and sentences
- The child has difficulty with intonation, stress, rate and rhythm (*prosody*)
- The child can produce a sound in one context or word, but not in another context or word
- The child might produce a word or phrase one time, and then be unable to produce it again
- The child has difficulty with imitating words
- The child has better intelligibility in automatic, over-learned words and phrases than in novel utterances
- The child may appear to struggle and demonstrate awkward movements (*with hands or mouth*) when trying to say words

Assessment:



Assessment for Apraxia of Speech in 3-5 year olds will be conducted by a qualified Speech-Language Pathologist. The assessment may include formal and informal diagnostic procedures, including input from parent(s).

Intervention and Treatment Approaches:



There are various therapy approaches that the clinician may use to treat Apraxia of Speech, but no single approach has been proven to be most effective. The approach should be evidence based, which means the clinician uses ongoing measurement of outcomes in deciding how to treat. Treatment should be flexible to meet the needs of the child, and should be used in collaboration with other interventions in the home and classroom. In addressing Apraxia of Speech, the emphasis should be on development of movement patterns which lead to clearer speech.

The following approaches may be used alone or in combination when treating a child with Apraxia of Speech:

- Motor Programming Approach- Motor learning principles are used to help the child acquire skills to accurately, consistently, and automatically make sounds and sequences of sounds
- Cuing techniques such as visual, gestural or tactile
- Language-based approaches

Factors Impacting Treatment Outcomes:



There are no definitive studies on outcomes for children with Apraxia of Speech, however, these factors may affect a child's prognosis:

SEVERITY OF APRAXIA- The more severe the Apraxia, the slower the progress may be.

OVERALL HEALTH- Children in good general health are more ready for learning than children who are in poorer health (middle ear infections, upper respiratory infections, etc.).

COGNITIVE SKILLS- Children who function in the average to above average range of cognition have a more favorable prognosis than children with cognitive impairment.

ATTENTION- Children who have difficulty focusing often require longer treatment periods than those with average and above average attention skills.

CHILD'S REACTION TO THEIR SPEECH DEFICIT- Children appearing unaware of or unbothered by other people's difficulty understanding them often require longer treatment.

ABILITY TO SELF-MONITOR- Children who hear their own mistakes and try to correct them tend to make progress more quickly than children who cannot or do not self-correct and rely on others to cue them.

AGE AT WHICH INTERVENTION BEGINS- The younger the child is when treatment begins, the more favorable the long-term prognosis.

FREQUENCY OF PRACTICE- The more opportunities the child has to practice speech goals, the more favorable the long term prognosis. Children should be encouraged to practice speech goals in many settings, including home, school and community, as recommended by the Speech-Language Pathologist.

DISORDERS THAT EXIST TOGETHER- The prognosis may be poorer when there is an accompanying disorder (*such as hearing loss, dysarthria, oral apraxia, etc.*).

MOTIVATION- A child with a positive approach to therapy activities has a better prognosis than a child who is ambivalent or resistant towards therapy.

PARENT INVOLVEMENT AND SUPPORT- Informed parents can facilitate their child's progress by responding and encouraging their child's communication attempts.

Augmentative Alternative Communication:



For children with severe Apraxia of Speech, the Speech-Language Pathologist strives to achieve the best intelligibility, or "*understandability*" possible, even though there still may be errors in speech, language, and prosody. However, for some children exhibiting severe Apraxia of Speech, oral communication may not be a reasonable goal. In this case, alternative means for the child to express him- or herself should be considered. In addition, for some children alternative means may be used as a temporary tool to augment communication, while more effective speech skills are being developed. These alternative means might include the learning and use of manual communication or "*signing*," the use of an assistive language notebook with drawn or written words he/she can show his or her communication partners, or the use of an electronic assistive communication device.

Resources:



- American Speech-Language Hearing Association, www.asha.org
- www.apraxia-kids.org

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