

THE CENTER FOR SPEECH EXCELLENCE

Motor Planning Problems

When a child has difficulty with moving the articulators (tongue, lips, soft palate, etc.) into place to form sounds for speech, it is often called Developmental Apraxia of Speech (DAS). We really don't understand the cause and there is no simple test to determine whether a motor planning problem exists. The diagnosis is made based on characteristics of your child's speech and on how the oral muscles can be used when not engaged in speech. If your child has many other characteristics discussed here, you may receive a diagnosis of Developmental Apraxia of Speech. Certain therapy methods are more effective for children with DAS than other methods.

Characteristics:

- Difficulty with movement usually appears in imitating sounds and speech, not in involuntary movements. In other words, your child may be able to lick his top lip when there is no residue, yet when asked to place his tongue tip on his top lip, he or she might not be able to do that.
- Low muscle tone and muscle weakness is not a symptom of this disorder. There may be lack of muscle tone in the same child who has DAS, but it is not a necessary component.
- Speech errors are inconsistent. Some days the word may be produced easily, while the next day it will be very difficult to pronounce the same word.
- Children with DAS have many articulation errors, not just difficulty with one or two sounds.
- Often children with DAS have the greatest difficulty with sound clusters (example: glass, play, drive, bread, followed by fricatives, affricates, stops, and nasals). Sounds which usually develop later are ones which cause the greatest difficulties.
- Oral apraxia and limb apraxia may occur in the same child.
- Children with developmental apraxia of speech are delayed in developing sounds and usually require therapy to achieve that.
- Sound and syllable additions (example: stun for sun) are often found in the speech of children with motor planning problems.
- Prolongations of sound
- Sound and syllable repetitions (example: hippopotpotpotamus).
- There often is a struggle noted in facial and oral muscles as the child attempts to produce sounds and words.
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- Difficulty increases as the length of the word increases (example: three syllable words are more difficult than one syllable words).
- Sequencing sounds is often difficult and often results in reversals or omissions. (Example: aminal for animal or hi for his.)
- Vowel sounds may be omitted or pronounced incorrectly. This is not typical of children with general articulation problems.
- Individual words may be understandable, yet when placed in the longer context such as a phrase or sentence, the same word may become difficult to understand. Connected speech is often unintelligible.
- The child may use a fast rate of speech or it may appear fast because sounds are skipped over and run together due to sequencing problems.
- Difficulty with rhythm, timing and stress patterns are found in speech.

Therapy:

Therapy methods vary, but methods that work with traditional articulation errors and may not work with DAS.

General Guidelines for Therapy:

- Teach consonant-vowel combinations first. Progress to one syllable words, then multisyllable, then phrases and sentences.
- Teach early developing consonants first.
- Teach most visible consonants and frequently occurring consonants next.
- Therapy progresses in small steps based on child's ability to progress.
- Daily practice is important.
- Memory for movements is important. Practicing the motor movements over and over helps.
- A multisensory approach involving the look, feel, sound, and name of the sound is helpful.
- Combine visual cues (such as hand movements) with the sound.
- Rhythm, intonation, and stress work are helpful.

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- Use movements such as beating a drum or tapping out the sounds on a pacing board or other monitoring system.
- Emphasize self-monitoring.

Be sure to follow through at home. This is a complex condition which cannot be "cured" in 30 minutes once or twice a week.

*Adapted from **Communicating Together** by Dr. Libby Kumin, CCC-SLP
Compiled by Susan E. Hance, MS, CCC-SLP*