# **Understanding Childhood Apraxia of Speech**



Childhood apraxia of speech is a type of speech disorder. It is present from birth. A child with this condition has trouble making sounds correctly and consistently. Apraxia is a problem with how the brain sends signals to the muscles used for speech. Childhood apraxia of speech can range from mild to severe. It's not a common condition. It occurs more often in boys than in girls.

## How speech works

The speech centers of the brain help coordinate what a child would like to say. These parts of the brain send complex signals to the speech muscles of the face, tongue, lips, and soft palate. When the signaling works normally, a child can make all the sounds they need.

With childhood apraxia of speech, something in this process goes wrong. The speech muscles work correctly, and the child knows what they want to say. But the brain has trouble working with the muscles to make the movements needed for clear speech.

This condition is not the same as developmental delay of speech. Delay is when a child follows a normal path of speech development at a slower rate.

### What causes childhood apraxia of speech?

Researchers don't yet know what causes this condition. It may be related to a child's overall language development. Or it may be a problem with the brain's signals to the muscles needed for speech. Childhood apraxia of speech may be a part of a larger disorder, such as:

- Cerebral palsy
- Autism
- Epilepsy
- Galactosemia
- Certain mitochondrial disorders
- · Neuromuscular disorders
- Other intellectual disabilities

The condition may run in families. Many children with the disorder have a family member with a speech disorder or a learning disability.

#### Symptoms of childhood apraxia of speech

Not all children with this disorder have the same symptoms. And not all speech experts agree on the core symptoms of the condition. Some possible symptoms include:

- Trouble putting sounds and syllables together in the correct order
- · Inconsistent errors in consonants and vowels when repeating sounds
- Long pauses between sounds
- Problems with prosody. This is the varying rhythms and tones that help express meaning (emotional content) of speech.

Understanding language much better than expressing it

Some children have additional symptoms, such as:

- Delays in the full use of muscles in hands and feet (fine motor delays)
- Overall delayed language development
- · Problems with reading, writing, spelling, or math
- Chewing and swallowing problems

Symptoms may vary with a child's age. They also may be mild to severe. A child with mild apraxia may only have trouble with a few speech sounds. A child with very severe apraxia may not be able to speak well at all.

#### Diagnosing childhood apraxia of speech

Childhood apraxia is a very complex disorder. It can be hard to diagnose. Because of this, a speech-language pathologist (SLP) may need to diagnose the condition. An SLP has a lot of experience with speech problems. This helps them to tell the difference between childhood apraxia and other kinds of speech conditions.

The SLP will ask about your child's health and developmental histories. They will ask you about what signs of speech problems you note. And when you first noticed them. The SLP may also need to rule out other possible causes. These may include muscle weakness, comprehension problems, or hearing problems.

You as a parent and the SLP may need to watch your child's speech over a long period of time. Your child may also need language testing. The SLP may ask your child to repeat a word several times. Or your child might need to repeat a list of words of increasing length. No medical test can be used to diagnose this condition.

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