Speech Problems that Affect How Your Child's Speech Sounds

Apraxia

Apraxia of speech is a motor planning disorder which may result in difficulty planning, programming, and implementing the movements needed to produce sounds for speech. It is also called *developmental apraxia of speech* or *developmental verbal apraxia.*

In this disorder, you frequently see frustration when speech attempts are not successful. Errors may be inconsistent so that words may be produced differently from one attempt to another, such as saying "baby" correctly one time and then saying "gagy" on another attempt. Vowels may also be incorrectly produced. For children with apraxia of speech, therapy may include repetitive activities to focus on improving the ability to sequence particular sounds of speech. Therapy may also include gestures in which body movements are associated with sounds to facilitate productions. Because of the frustration a child may have over the difficulty of being understood, children with apraxia of speech are frequently given systems such as sign language and/or pictures to improve their ability to communicate. These systems are intended to be temporary to minimize frustration and to maximize communication rather than to permanently replace verbal speech.

Articulation Disorder

Articulation refers to sound production skills. In an articulation disorder, the errors are generally in the consonant sounds that your child says. When listening to these sounds, please note that the sounds do not necessarily correspond to the letters that are used to spell a word. The four types of articulation errors are:

Substitution—This is when your child says one sound in place of another. For example, if you hear your child say "tup" for "cup," he/she is substituting a *t* for a *k* sound.

Omission—This is when your child leaves out a sound in a word. For example, if you hear your child say "no" for "nose," he/she is deleting the final z sound.

Distortion—This is when a sound is produced in an imprecise manner. For example, your child makes an *s* sound with his tongue between his/her teeth.

Addition—An addition is when your child adds a sound to a word that is not normally pronounced. For example, your child says "balue" for "blue."

Though your child may have several of the errors described above, it is possible that your child's speech may be within normal limits for his or her age. There is a range of ages for typical development for each sound in English. Many errors that you may hear are developmentally appropriate until your child reaches an older age. In general, a child's speech should be 50% intelligible to unfamiliar listeners at two years of age. At three years of age this percentage should be 70%; and by four years of age, your child's speech should be about 90% intelligible to an unfamiliar listener.

Phonological Disorder

Phonology refers to the rules that are used for producing speech. These rules govern how sounds are combined in English. When a phonological disorder exists, your child's speech is probably very unintelligible and has errors in various rules. Fortunately, children with phonological disorders are following another set of rules and this makes it easier to remediate

than if the child were randomly choosing ways to pronounce the words. Therapy for this type of speech disorder is generally completed in a cycle. A pattern is targeted in therapy for a designated number of sessions. Then a new pattern is targeted for a set number of sessions. Once all patterns have been addressed, the cycle is repeated. Your child's speech is not expected to be 100% intelligible, but by age three, the following error processes should not be seen.

Prevocalic Consonant Deletion—This is when the consonant sound immediately preceding a vowel is deleted. For example, your child might say "og" for "dog" or "jump ope" for "jump rope." Prevocalic consonant deletion should disappear by 24 months of age.

Postvocalic Consonant Deletion—Postvocalic consonant deletion is omitting a consonant sound that follows a vowel. Examples include saying "ha" for "hat" and "mokey" for "monkey." Postvocalic consonant deletion should disappear by 28 months of age.

Syllable Reduction—This is when your child says fewer syllables than the word has. For example, your child might say "bay" for "baby," "tephone" for "telephone," or "el" for "elephant." Deleting syllables from words is a process that typically disappears between 29 and 36 months of age.

Additionally, there may be other patterns that are targeted to stimulate your child's speech. Two such error processes are *stridency deletion* and *velars*.

Stridency Deletion—Stridents are sounds that are produced with an intense noise. There are eight strident sounds in English: *s, z, f, v, sh, ch, j,* and *zh* (as in "beige"). Stridency deletion is when these sounds are not produced in your child's speech. Your child may substitute another sound for the target sound or omit it completely. Of the strident sounds, only *f* and *s* are expected to develop prior to age three. Seventy-five percent of children are able to say *f* at the beginning and at the end of words by 28 months of age. The majority of children are able to say *s* at the end of words or syllables between 27 and 30 months and are able to say *s* at the beginning of words or syllables between 33 and 36 months of age. By 44 months of age, children should be producing *sh* and *ch*. The sounds *v, z, zh,* and *j* may not be correctly produced until 48 months or later.

Velars—Velar sounds are *k* and *g*. Typical sound substitutions include *t* and *d*. These substitutions should disappear sometime between 30 and 36 months of age.

Fluency Disorder/Stuttering

Disfluent speech is when your child repeats whole words (e.g., *My . . . my turn.* or *Bailey is . . . is sleeping*), parts of words (e.g., *do-dog*), and/or phrases (e.g., *I want . . . I want to go*). To a degree, all speakers are disfluent at times. People may repeat words, revise what they are saying, and use interjections, such as *uh, um,* and *er*. All of these are considered disfluencies. Other types of disfluencies include prolongations of sound (e.g., *My name is Saaaaaaally.*) and tense pauses (e.g., *Rerun is a* . . . [tongue pushed up to top of mouth but no sound being made] . . . *dog*).

When children are acquiring language, particularly when they have rapid growth in their use of language, they may experience periods when they are more disfluent. The degree of disfluency may fluctuate with more fluent days and less fluent days. While language development may influence the degree of fluency, other factors that may impact fluency include motor learning, other developmental growth, and environmental influences (e.g., others' speaking rates and

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frequency of being interrupted). Normal disfluency or developmental stuttering is frequently seen in children ranging in age from 18 months to 6 years. Table 13-1 differentiates types of disfluencies/stuttering.

Characteristic	Normal Disfluency	Borderline Stuttering	Beginning Stuttering
Typical Age Range	• 1½ to 6 years, though some normal disfluency continues in mature speech	• 1½ to 6 years	• 2 to 8 years
Number of Disfluencies	• 10 or less disfluencies per 100 words	• 11 or more disfluencies per 100 words	• More important than the number of disfluencies is the type of disfluencies.
Types of Disfluencies	• Interjections (e.g., "uh," "um"), revisions, and word repetitions. After children turn three, a decrease is generally seen in the number of part-word repetitions.	• More repetitions and prolongations. Fewer revisions or incomplete phrases. Typically relaxed when disfluent.	• Rapid and irregular repetitions. Child may have muscle tension, rise in pitch, fixed mouth postures, and escape behaviors (e.g., eye blinks, head nods, ums). Frequently child inserts a schwa vowel ("uh") at the end of repeated syllable (e.g., "puh-puh-play").
Number of Repetitions	• Typically one, sometimes two	• Frequently more than two repetitions	• Varied, may see prolongations, filler such as "uh" or "um," and escape behaviors (e.g., blink eyes, nod head)
Awareness of Stuttering	• Generally child has no reactions to disfluencies	• Child rarely reacts to disfluencies though may occasionally show surprise or mild frustration	• Child aware of disfluencies and may express frustration

Table 13-1 Information compiled from Guitar, B. (1998). *Stuttering: An integrated approach to its nature and treatment* (2nd ed.). Baltimore: Lippincott, Williams & Wilkins.

At times when your child's speech is more disfluent, it may be beneficial to change the way that you speak to him or her. Using slow, easy speech is a way to model unhurried speech for your child. This may be beneficial because it is possible that your child feels that he or she can never achieve the rate at which you speak. The rate of slow, easy speech is saying about two words per second.