PHONOLOGICAL PROCESSES

Phonological processes are patterns of sound errors that typically developing children use to simplify speech as they are learning to talk. A **phonological disorder** occurs when phonological processes persist beyond the age when most typically developing children have stopped using them or when the processes used are much different than what would be expected.

SUBSTITUTION	Definition	Example	Approx. age of elimination
Backing	When alvoelar sounds, like /t/ and /d/, are substituted with velar sounds like /k/ and /g/	*"gog" for "dog"*	Usually seen in more severe phonological delays.
Fronting	When velar or palatal sounds, like /k/, /g/, and sh, are substituted with alveolar sounds like /t/, /d/, and /s/	*"tootie" for "cookie"*	**3.5** yrs.
Gliding	When /r/ becomes a /w/, and /l/ becomes a /w/ or y sound	*"wabbit" for "rabbit" or "yeyo" for "yello"*	**6** yrs.
Stopping	When a fricative (like /f/ or /s/) or affricate (ch,j) is substituted with a stop consonant like /p/ or /d/	*"pan" for "fan" or "dump" for "jump"*	/f/, /s/ by 3; /v/, /z/ by 3 1/2; sh, ch, j by 4 1/2; th gone by 5
Vowelization	When the /l/ or er sounds are replaced with a vowel	*"appo" for "apple" or "papuh" for "paper"*	—
Affrication	When a nonaffricate is replaced with an affricate (ch or j)	*"joor" for "door"*	**3** yrs.
Deaffrication	When an affricate, like ch or j ,is replaced with a fricative or stop like sh or /d/	*"ships" for "chips"*	**4** yrs.
Alveolarization	When a nonalveolar sound is substituted with an alveolar sound	*"tu" for "shoe"*	**5** yrs.
Depalatalization	When a palatal sound is substituted with a nonpalatal sound	*"fit" for "fish"*	**5** yrs.
Labialization	When a nonlabial sound is replaced with a labial sound	*"pie" for "tie"*	**6** yrs.

ASSIMILATION	Definition	Example	Approx. age of elimination
Assimilation	When a consonant sound starts to sound like another sound in the word	*"bub" for "bus"*	**3** yrs.
Denasalization	When a nasal consonant like /m/ or /n/ changes to a nonnasal consonant like /b/ or /d/	*"doze" for "nose"*	**2.5** yrs.
Final Consonant Devoicing	When a voiced consonant at the end of a word like /b/ or /d/ is substituted with a voiceless consonant like /p/ or /t/	*"pick" for "pig"*	**3** yrs.
Prevocalic Voicing	When a voiceless consonant in the beginning of a word like /k/ or /f/ is substituted with a voiced consonant like /g/ or /v/	*"gomb" for "comb"*	**6** yrs.
Coalescence	When two phonemes are substituted with a different phoneme that still has similar features	*"foon" for "spoon"*	—
Reduplication	When a complete or incomplete syllable is repeated	*"baba" for "bottle"*	**3** yrs.

SYLLABLE STRUCTURE	Definition	Example	Approx. age of elimination
Cluster Reduction	When a consonant cluster is reduced to a single consonant	*"pane" for "plane"*	Gone by **4** yrs. without /s/, gone by **5** yrs. with /s
Final Consonant Deletion	When the final consonant in a word is left off	*"toe" for "toad"*	**3** yrs.
Initial Consonant Deletion	When the initial consonant in a word is left off	*"unny" for "bunny"*	Usually seen in more severe phonological delays.
Weak Syllable Deletion	When the weak syllable in a word is deleted	*"nana" for "banana"*	**4** yrs.
Epenthesis	When a sound is added between two consonants, typically the uh sound	*"bu-lue" for "blue"*	**8** yrs.

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