



# 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
<b>Backing</b>	When alveolar sounds, like /t/ and /d/, are substituted with velar sounds like /k/ and /g/	"gog" for "dog"	Usually seen in more severe phonological delays.
<b>Fronting</b>	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.
<b>Gliding</b>	When /r/ becomes a /w/, and /l/ becomes a /w/ or y sound	"wabbit" for "rabbit" or "yeyo" for "yello"	6 yrs.
<b>Stopping</b>	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
<b>Vowelization</b>	When the /l/ or er sounds are replaced with a vowel	"appo" for "apple" or "papuh" for "paper"	—
<b>Affrication</b>	When a nonaffricate is replaced with an affricate (ch or j)	"joor" for "door"	3 yrs.
<b>Deaffrication</b>	When an affricate, like ch or j, is replaced with a fricative or stop like sh or /d/	"ships" for "chips"	4 yrs.
<b>Alveolarization</b>	When a nonalveolar sound is substituted with an alveolar sound	"tu" for "shoe"	5 yrs.
<b>Depalatalization</b>	When a palatal sound is substituted with a nonpalatal sound	"fit" for "fish"	5 yrs.
<b>Labialization</b>	When a nonlabial sound is replaced with a labial sound	"pie" for "tie"	6 yrs.

ASSIMILATION	Definition	Example	Approx. age of elimination
<b>Assimilation</b>	When a consonant sound starts to sound like another sound in the word	"bub" for "bus"	3 yrs.
<b>Denasalization</b>	When a nasal consonant like /m/ or /n/ changes to a nonnasal consonant like /b/ or /d/	"doze" for "nose"	2.5 yrs.
<b>Final Consonant Devoicing</b>	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.
<b>Prevocalic Voicing</b>	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.
<b>Coalescence</b>	When two phonemes are substituted with a different phoneme that still has similar features	"foon" for "spoon"	—
<b>Reduplication</b>	When a complete or incomplete syllable is repeated	"baba" for "bottle"	3 yrs.

SYLLABLE STRUCTURE	Definition	Example	Approx. age of elimination
<b>Cluster Reduction</b>	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/
<b>Final Consonant Deletion</b>	When the final consonant in a word is left off	"toe" for "toad"	3 yrs.
<b>Initial Consonant Deletion</b>	When the initial consonant in a word is left off	"unny" for "bunny"	Usually seen in more severe phonological delays.
<b>Weak Syllable Deletion</b>	When the weak syllable in a word is deleted	"nana" for "banana"	4 yrs.
<b>Epenthesis</b>	When a sound is added between two consonants, typically the uh sound	"bu-lue" for "blue"	8 yrs.

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