



Understanding Phonological Processes in Early Speech Development

Phonological processes are systematic patterns of sound errors that young children use when learning to speak. They simplify adult speech but typically disappear as speech develops. If they persist beyond a certain age, they may indicate a speech sound disorder.

- Phonological processes are normal developmental patterns in early speech.
- They help children simplify complex sounds.
- Monitoring them is important because persistence may affect intelligibility and communication.

Common Phonological Processes

1. Velar Assimilation

A sound becomes similar to another sound in the word, specifically influenced by velar sounds (/k/, /g/).

Examples:

dog → gog

take → kake

The non-velar sound changes to match a velar sound nearby.

2. Nasal Assimilation

A sound changes to match a nearby nasal sound (/m/, /n/, /ŋ/).

Examples:

bed → men

sun → nun

Often influenced by ease of airflow through the nose.

3. Final Consonant Deletion

The child omits the last consonant in a word.

Examples:

cat → ca

dog → do

This makes words shorter and simpler.

4. Stopping

A fricative or affricate (long airflow sound) is replaced with a stop consonant.

Examples:

sun → tun

fish → pish

zoo → doo

Airflow is "stopped" instead of continuous.

5. Fronting

Sounds made at the back of the mouth (velars) are replaced by sounds made at the front (alveolars).

Examples:

car → tar

go → do

/k/ → /t/, /g/ → /d/

6. Weak Syllable Deletion

An unstressed syllable is dropped.

Examples:

banana → nana

elephant → efant

Common because stressed syllables are easier to hear and produce.

7. Deaffrication

An affricate sound (/ch/, /j/) becomes a simpler sound (fricative or stop).

Examples:

chair → share or tare

jump → dump or zump

The complex combination sound is simplified.

8. Cluster Reduction

A consonant cluster (2+ consonants together) is reduced to one.

Examples:

spoon → poon

frog → fog

One consonant is deleted to simplify articulation.

9. Gliding

Liquids (/l/, /r/) are replaced with glides (/w/, /j/).

Examples:

rabbit → wabbit

love → wove

Very common in early speech development.

Intelligibility Norms (by age)

Intelligibility refers to how much of a child's speech is understood by unfamiliar listeners.

General guideline:

Age	% Intelligible	Notes
2 years	~50%	Familiar listeners understand more
3 years	~75%	Speech clearer but errors still common
4 years	~90 to 100%	Mostly intelligible, minor errors may remain

A widely used rule of thumb:

Age ÷ 4 = % intelligibility

- 2 yrs → $2/4 = 50\%$
- 3 yrs → $3/4 = 75\%$

When should processes disappear?

Approximate suppression ages:

- Final consonant deletion: ~3 years
- Fronting: ~3.5 years
- Stopping: varies, up to ~4 to 5 years (depending on sound)
- Weak syllable deletion: ~4 years
- Cluster reduction: ~4 to 5 years
- Gliding: up to ~5 to 6 years

If these persist past expected ages, assessment by a speech-language therapist (SLT) is recommended.

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