



**Translational Centre  
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# Phonological disorder

## Fact Sheet – Speech Disorders

Phonology refers to the sound contrasts of our language, i.e., how sounds are put together in words to give meaning. Each language has its own phonology. Children with phonological disorders know what they want to say but have difficulty using sounds in the correct pattern.

It is common for young children to use some speech error patterns when they learn to talk. Children with phonological disorders use unusual error patterns or inconsistent error patterns, which means they are difficult to understand compared to most children their age.

### What are the signs of phonological disorder?

Children with phonological disorder can physically make sounds correctly but might use them in the wrong word (e.g., 'doe' for 'go'), or leave a sound out (e.g., 'tie' for 'time'). These are examples of speech error patterns called '**phonological processes**' (see table below). Some phonological processes are typical during speech development until a certain age. When a child uses a process beyond the usual age range this is called a '**phonological delay**'.



Children with **phonological disorders**, use speech error patterns that are not typically used by other children during speech development. Some examples of these error patterns include:

- sound preference (using a favoured sound in place of many other sounds e.g., 'dup' for 'cup', 'dife' for 'knife', 'doo' for 'shoe')
- backing (when a sound typically made at the front of the mouth is made towards the back of the mouth, e.g., 'guy-guy' for 'bye-bye')
- initial consonant deletion (leaving off the first sound of a word, e.g., 'at' for 'cat')

Children with phonological disorders often have speech that is difficult to understand. Many children with phonological disorders also have phonological delay (that is, they use some patterns that are disordered and some patterns that are delayed for their age). Phonological disorder may also occur alongside other speech disorders (such as articulation disorder or childhood apraxia of speech) or may occur on its own.



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### What are the types of phonological disorder?

**Consistent phonological disorder** is when children use error patterns that are the same/predictable across words (i.e., saying 'at' for 'cat' across 3 different tries). **Inconsistent phonological disorder** is when children use errors patterns that different/inconsistent across words (i.e., saying 'bat', then 'gat', then 'at' for 'cat' across 3 different tries).

### How are phonological disorders diagnosed?

Qualified speech pathologists (SPs) (also known as speech-language pathologists, SLPs or speech therapists) can assess children's speech to determine whether they have a phonological disorder, another type of speech disorder, or a combination. Assessments usually involve observing oral structures at rest and during movement and examining speech

by naming pictures which are designed to elicit all the sounds of the child's language.

### How are phonological disorders treated?

Treatment may include regular appointments and exercises for you to do with your child at home.

With appropriate speech therapy, many children with phonological disorders show improvement in their speech. Current best evidence indicates the following treatment approaches for phonological disorder:

- **Phonological contrast intervention** (for consistent phonological disorder)
- **Core vocabulary therapy** (for inconsistent phonological disorder)

*Phonological disorders have been linked to later language and literacy difficulties, so targeted speech therapy is important in the early years.*

Phonological process	Description	Examples	Pattern is typical until age:
Voicing	When voiced sounds (e.g., 'b', 'd', 'g') are replaced with unvoiced sounds (e.g., 'p', 't', 'k')	"pik" for "pig"	2 years, 11 months
Stopping	When long, continuous sounds (e.g., 's', 'f') are replaced with short, stopped sounds (e.g., 't', 'd')	"dun" for "sun"	3 years, 5 months
Weak syllable deletion	When weak/unstressed syllables in words are omitted	"ephant" for "elephant"	3 years, 11 months
Fronting	When sounds are moved to a more forward position in the mouth	"tar" for "car"	3 years, 11 months
Cluster reduction	Omitting a sound when two or three consonants occur together	"bed" for "bread" "pider" for "spider"	3 years, 11 months
Deaffrication	When affricate sounds 'ch' and 'dge' are reduced to 'sh' or 'ts', and 'zh' or 'dz'	"wash" for "watch" "wits" for "witch" "bridz" for "bridge"	4 years, 11 months
Gliding	When liquid sounds 'l' and 'r' and replaced with glide sounds 'w' and 'y'	"wabbit" for "rabbit" "yight" for "light"	5 years, 11 months

Table adapted from Dodd et al. (2003)



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