



# The Communication Pyramid...

Communication is much more than just talking. Before children can use the complete range of adult speech sounds, they need to have developed good early communication skills - those from the lower levels of the 'Communication Pyramid'.

Speech sounds are usually one of the later areas to fully develop. Children need to develop an awareness of different speech sounds to help them learn phonics, decode and learn to read and write.



# What are speech sounds?

## Speech sounds vs letters

Speech sounds make up every word we hear, but they are different from letters. There are 26 letters in the alphabet, but 44 sounds (or phonemes) in standard spoken English.

Letters make up the words we read. For example, 'ball' is made up of the letters 'b – a – l – l'. When we talk about word spellings, we say the letter names, eg, 'be – ay – el – el'.

Sounds make up the words we hear, eg, 'ball' is made up of the sounds 'b – or – l'.

Some words have the same letters as sounds, for example: 'mum', 'fan'.

But lots of words sound very different to the way they are written, for example: 'yacht', 'shoe'.

## How speech sounds are made

We can tell the difference between speech sounds according to:

- The type of sound
- Where the sound is made in the mouth
- Whether it is a loud sound or a quiet sound

There are 4 main types of sounds:

- Stop sounds are short, explosive sounds where air builds up inside the mouth and is then released, eg, 'p', 't', 'k'
- Nasal sounds are long sounds where the air comes out of the nose and not out of the mouth, eg, 'n', 'm'
- Fricative sounds are long sounds where the air is pushed through a narrowing in the mouth, eg, 's', 'f', 'sh'

- Continuous sounds are long sounds where the air is passing through a larger opening in the mouth. They shouldn't sound hissy like a fricative, eg, 'l', 'w'

In English, there are seven places where sounds are made:

- Lips
- Bottom lip and top teeth
- Tongue between teeth
- Tongue tip behind top teeth
- Middle of tongue and roof of mouth
- Back of tongue and roof of mouth
- Vocal folds

Sounds can be quiet or loud:

- Quiet sounds don't involve the vocal folds - when you say these sounds and touch your voice box it shouldn't vibrate, eg, 't', 's', 'f', 'p', 'k'
- Loud sounds involve the vocal folds - when you say these sounds and touch your voice box it will vibrate, eg, 'd', 'z', 'v', 'b', 'g'

In English, children tend to master the use of speech sounds in the following order:

- Stop sounds to nasal sounds to fricative sounds to continuous sounds
- Lip sounds to tongue tip/back sounds to middle of tongue sounds

# How do speech sounds develop?

## Normal speech development

Children develop speech sounds at different rates, but, most children will broadly follow a similar pattern:

- 6-12 months: by 6 months, most babies will 'coo' using vowels, eg, 'ee – ah – oo'. By 12 months, they babble using some early consonants too, eg, 'baba' 'meema'
- By 2 years old, most toddlers will be using a range of early sounds: m, n, p, b, t, d, w, h... You may only notice the sounds at the beginnings of words, not the ends
- By 3 years old, most children can be understood by familiar adults, and start using: k, g, f, s, z, l, y...
- By 4 years old, most children will be using complex sounds and some consonant blends containing '-l' and '-r/w': v, z, sh, zh, ch, j, pl- bl- kl- gl- fl- pr- br- tr- dr- kr- gr- fr...
- By 5 years, most children use almost all speech sounds correctly: r, th, sp- sm- sn- sw- st- sk- sl- thr- spr- scr- str-



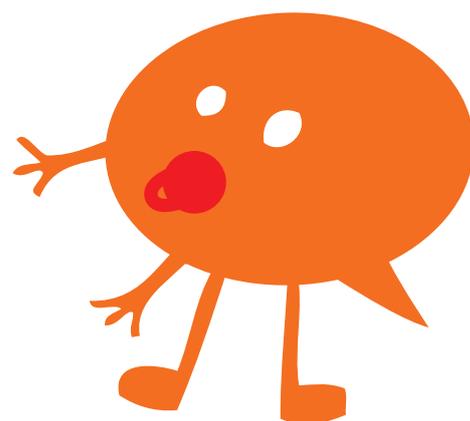
## Why do some children have difficulties?

Many children's speech sound difficulties have no obvious cause. Some children's difficulties will have a single cause and others might be the result of a combination of factors such as:

- **Delayed communication skills:** children's sound development is dependent on the development of the rest of their communication skills. If they have a delay with any of the other stages of the communication pyramid, their sounds may be delayed
- **Dummies:** some children use a dummy for too long or talk with a dummy in their mouth. This is not recommended. The teat sits at the front of the mouth and restricts tongue movement. These children may overuse back sounds and their fricative sounds may become 'slushy'
- **Muscle coordination difficulties:** some children find it difficult to control the muscles in their mouth in order to make particular sounds. For example, children with Down syndrome, cerebral palsy or dyspraxia of speech
- **Hearing difficulties:** children with impaired hearing (including those with glue ear) find it difficult to hear certain sounds or hear the difference between sounds, so find it hard to learn new sounds in the same way as other children
- **Structural difficulties:** children with cleft lip or palate have a different facial and palatal structure which can affect how well they can make sounds

### Dummies

Dummies can be useful to help soothe babies, but they are not needed over 12 months. They can affect the position of teeth as they grow, and with a dummy in, it is impossible to say certain speech sounds normally (have a go at saying 'teddies' with your thumb in your mouth, you'll see what we mean!). The longer children have dummies in whilst they are talking, the greater the risk that they will learn to say sounds incorrectly and make these errors consistently when they are speaking.



## Speech sound difficulties...

Learning to use the right sounds in the right places is difficult! It is normal for children to replace some of the more difficult sounds with sounds which are easier to say. These errors often follow a regular pattern, and are nothing to worry about if they are appropriate to the age of the child.

### Normal, delayed or disordered speech?

As children use easier sounds even when their speech is developing normally, it can be tricky to work out if a child's speech is developing as it should be, is delayed, or following a disordered pattern of development, with errors which we wouldn't normally expect.

### Speech sound delay

There are many reasons why a child's speech might be delayed. Generally, if a child's overall language development is delayed, their speech development will also be delayed. In this case, their speech sounds are unlikely to be a particular concern. Children who have had glue ear may also have delayed speech as they may not have accurately heard all the different speech sounds.

It's useful to look at the sounds a child is using and the errors they are making, together. Take a look over the page to see what errors are normal as children are developing speech, and the ages at which they should grow out of these difficulties.



## What are normal speech sound errors?

The following errors are all part of normal development. If they continue much beyond the ages given, then the child is said to have a speech sound delay. Some children might make only 1 or 2 of these errors, whilst others may make lots.

Process	Description	Example	Expected until
Final consonant deletion	Misses sounds at end of words	'be' for bed 'boa' for boat 'so' for sock	3 yrs 3 mths
Voicing	Replaces quiet sounds with loud sounds	'big' for pig 'dop' for top 'ledder' for letter	3 yrs
Stopping	Replaces fricative sounds with stop sounds	'beet' for feet 'riber' for river 'beed' for bees	3 yrs for 'f' 's' 4 yrs for 'v' 'z' 4 yrs 6 mths for 'sh'
Fronting	Replaces back sounds 'k' and 'g' with front sounds 't' and 'd'	'tat' for cat 'ledo' for lego 'dod' for dog	3 yrs 6 mths
Deaffrication	Simplifies later developing sounds like 'ch' and 'j'	'tear' for chair 'dump' for jump	5 yrs
Cluster reduction	Simplifies 2 consonants to 1 consonant	'poon' for spoon 'fog' for frog 'boo' for blue	5 yrs
Gliding	Difficulty with sounds 'l' 'y'	'yeg' for leg 'lellow' for yellow	5 yrs

## Speech sound disorder...

Some children's speech development doesn't follow the normal pattern. These are not normal speech sound errors:

- **Backing:** this is the opposite of fronting, replacing front sounds with back sounds, eg, 'cak' for 'cat'. Sometimes backing occurs when children still use a dummy
- **'Slushy' sounds:** some children's 'fricative' sounds can sound 'slushy' or 'spitty'. This can also be caused by prolonged use of a dummy
- **Initial consonant deletion:** this is when children miss off the first sound in a word, eg, 'onkey' for 'donkey'
- **Preference for a certain sound:** this is when a child substitutes a favoured sound for others, eg, 'dadud' for 'cactus'

If you notice a child has disordered speech sounds, contact your speech and language therapist.

### Articulation difficulties

Many children have minor speech sound difficulties which do not affect how well we understand them, such as, a lisp ('thauthage' for 'sausage') or replacing 'r' with 'w' ('wed' for 'red'). These are generally not a cause for concern and not a reason to refer to your speech and language therapist.



## How you can help...

These strategies are useful to use with ALL children, whether their speech is developing normally, is delayed or is disordered.

### **React to what the child says, not how clearly they speak**

Children often don't realise that they mispronounce words so correcting them can be confusing. For example, if a child says 'bis' (fish) and an adult says "Did you say 'bis'?" the child is quite likely to reply "No, I said 'bis' not 'BIS'!"

### **Repeat what the child says but as an adult would say it**

Telling a child that they are not saying a word properly and making them repeat it draws unnecessary attention to their speech and can reduce their confidence. Instead, repeat back what they have said the way an adult would say it, emphasising the sound(s) the child mispronounced, For example, "I like weeding dorwies." "Yes, reading stories is fun!"

### **Build confidence**

Sometimes children's speech is so unclear that you can't understand what they are saying. It's important to still encourage them to talk and value what they say. Repeat back any words you do understand and encourage them to tell you more.

A home - school/nursery contact book might be useful to help you anticipate what a child with speech difficulties might talk about.

### **Don't pretend to understand**

To save embarrassment when we don't understand, our natural reaction is to say something non-committal like 'that's nice' or 'good girl'. Children are very perceptive about this. It's much better to be honest and admit when you don't understand.

Be reassuring and try to find a way to solve the problem, eg, "My ears aren't working very well" or "Can you show me?"



## How you can help...

### Phonological awareness

Working directly on specific speech sounds is not usually recommended, unless a child in your setting has diagnosed speech sound difficulties and you are working to targets set by your speech and language therapist. However, all children benefit from learning phonological awareness skills with the following activities once they are around 3 and a half years old. Before that age, using story books with lots of rhyme, and playing with words together is a good place to start.

Phonological awareness is about knowing that words are made up of sounds, learning how we can put sounds together to make words, and how we can break them up again.

Phonological awareness can be broken into three main areas:

- Syllable segmentation: understanding that words are made up of parts, eg, bis-cuit, com-pu-ter, ca-ter-pil-lar
- Rhyme: recognising when the ends of some words sound the same, eg, c-at, h-at, b-at, m-at, r-at
- Phoneme segmentation: knowing that words are made up of sounds, eg, c-a-ke, l-igh-t, m-ou-se, ph-o-ne

To develop phonological awareness skills, children need to have a strong understanding of concepts such as same/different, beginning/end, long/short, quiet/loud and they need to be able to match what they can hear to what they can see.

Phonological awareness skills are a necessary foundation for learning to read. They help children learn to link sounds (phonemes) to letters (graphemes) and to segment words and blend sounds together. A child's early phonological awareness skills are a strong predictor of later literacy skills.

### Syllable clapping

Words are made of syllables. We can break words into parts/syllables, eg, ba-na-na. This game helps children to recognise and identify these different parts.

1. Collect 5-10 small toys and real objects with 1, 2 and 3 syllable names or use pictures, eg:
  - 1 syllable - cup, horse, cat
  - 2 syllable - tractor, apple, baby
  - 3 syllable - telephone, crocodile, butterfly
2. Make a lucky dip bag/box for the child to take out an item/picture.
3. Explain to your child that words can be broken into parts by clapping. You say the word slowly and clearly yourself with emphasis, clapping the syllables as you say the word, eg, but-ter-fly. Exaggerate the syllables in the words as you say them.
4. Encourage the child to copy you and ask them "How many parts/claps?"
 

You can clap, tap, stamp, jump syllables.
5. Use something visual for your child to see as you count, eg, bricks (use one brick for each syllable/clap).
6. Give your child lots of praise - "Good clapping!" and give them lots of examples.

## Resources...

[www.phonologicalawareness.org](http://www.phonologicalawareness.org)

[www.afasic.org.uk](http://www.afasic.org.uk)

[www.ican.org.uk](http://www.ican.org.uk)

[www.speech-therapy-information-and-resources.com/phonological-disorder.html](http://www.speech-therapy-information-and-resources.com/phonological-disorder.html)



### For further information or advice

For further information, such as how to refer a child to our Speech and Language Therapy Service, contact your local office on 01603 508959.

You can receive help with queries about NHS services from NCH&C Patient Advice and Liaison Service (PALS)

**Tel:** 0800 088 4449

**Email:** [pals@nchc.nhs.uk](mailto:pals@nchc.nhs.uk)

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