



## The ears: doorways to the brain



Information for parents/carers who want their children to use  
spoken language to communicate<sup>1</sup>.



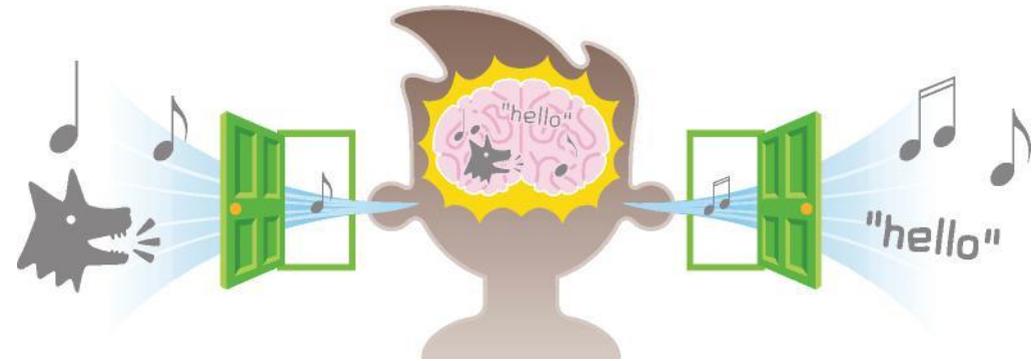
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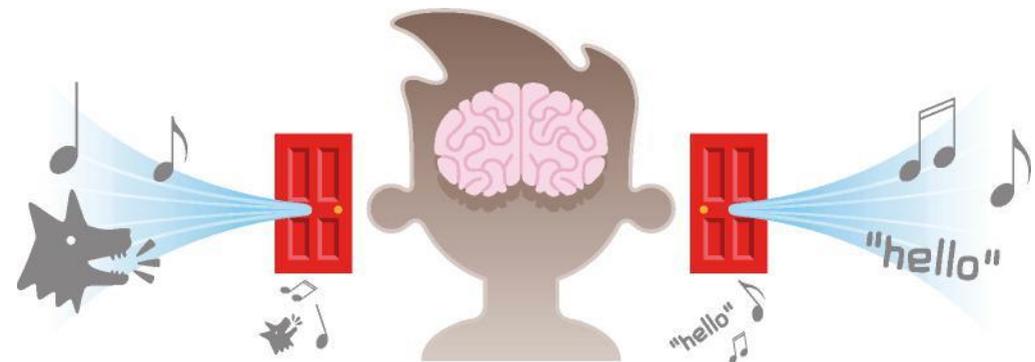
## The doorway to the brain

We tend to think that we hear with our ears and any hearing difficulties are only connected with this part of our body. But actually, we hear with the brain; our ears are only helping us to get sound information/knowledge to the brain.

We can compare ears to a doorway. Therefore we can represent hearing loss as a "doorway problem", because **the ears are the doorway to the brain for auditory information.**



The doorway can be obstructed a little or a lot, which means that sound information/ knowledge is not reaching the brain clearly.



1 A listening and spoken language outcome may be influenced by a child's medical history, additional needs and developmental progress.

2 These tips can be enjoyed with all of your children as they learn to talk and read.

Modern technology such as digital hearing aids, bone conduction hearing aids and other assistive listening devices are designed to break through this obstructed doorway to deliver information/knowledge to the brain.



It is important to remember:

- The ears are the doorway to the brain
- We listen and understand with the brain
- Sound = auditory information = knowledge

The brain uses information which is delivered via the ear doorway. Better quality information means stronger pathways are developed in the brain.

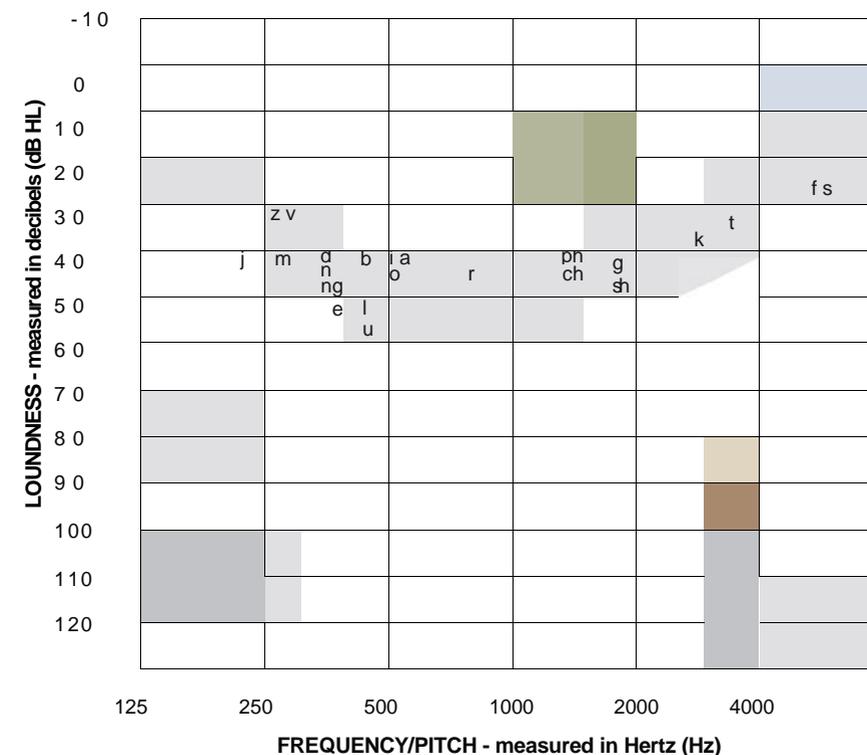
Studies show that for the best possible listening and spoken language outcome for a child, the ear doorway problem needs to be diagnosed and assisted by technology as soon as possible.

**There is no time to waste!**

## The Audiogram

The audiogram is a way of measuring the doorway problem to help determine which technology, if any, will be best for your child. Your child's doorway problem may change over time and this may mean that different management is recommended as your child grows.

The audiogram is a visual representation used to record the results of hearing assessments. It is a visual representation of a baby or child's hearing. The grey shaded area on the audiogram is often referred to in audiology as a "speech banana". Speech information spreads throughout the "speech banana". We want children to be able to hear speech sounds above the speech banana in order to hear all of the sounds in words.



## Eyes open, technology on!

Wearing technology creates the brain's foundation for listening and spoken language, which goes on to support literacy. To give your child the best chance of learning to listen and develop spoken language, technology should be used as much as possible, ideally for 10 to 12 hours a day.



### Night Owl

If your baby is a night owl, put their technology on in those waking moments so they can listen to your voice. If your baby has short naps in the day, leave their technology on ([www.hearingfirst.org](http://www.hearingfirst.org))

## Tips for parents

### How to stimulate your baby/child's brain for spoken language

It is important to talk with your child as much as possible! The amount of conversation you and your child have will impact their speech and language development. Your child's brain needs to be activated, stimulated, and developed with as much spoken language as possible.

#### When talking with your baby/child

Tip	Example
Start 'turn-taking' conversations with your child from an early age and encourage your child to use their voice.	When your child makes a sound e.g. 'baba', respond to them by making the same sound, remember to be face to face with your child.
Adults speak faster than children can process.	Use clear speech and <b>talk slower</b> .
Use full sentences and a sing-song voice when you speak with your baby.	Read baby picture books. Use lots of repetition 'is it a cat?, ah look at the cats, cats go 'meow'.
As your child gets older, introduce more complex vocabulary and build your child's understanding.	Read story books every day. Introduce new words and explain what they mean. Use a large variety of words – expose your child to as many words as possible. Discuss what you are going to do during the day, and why. Don't be afraid of repetition.
Encourage your child to start putting words together.	If your child says 'car', respond by saying something like, "yes, that's a red car."
Ask open questions to encourage conversation.	Use 'Why, What, Where, How, When? questions'.
Talk to your baby/child about activities as you are doing them.	Discuss what you have done during the day, For example, when dressing your child, you talk as you put on socks and shoes, "look, now you have your warm sock on".
Use words that compare and contrast and explain them.	Use 'up' and 'down' or 'fast' and 'slow'.

## Using games to develop your baby/child's spoken language

Build a tower of coloured blocks talking about each colour as you stack the block. Use full sentences instead of single words

Play with a 'shape sorter' talking about each shape and repeating its name

Count out loud as you touch fingers and toes

Play word games like 'I spy, with my little eye, something beginning with...'

## How to use singing to stimulate your baby/child's brain

- Your baby/child will love your voice no matter how it sounds.
- Singing with your child throughout the day is a workout for their entire brain.
- Singing stimulates both halves of your baby/child's brain, rhythm activates the right and words stimulate the left. What a great brain workout!
- Singing to your child teaches them how to hear and understand different sounds.
- Rhythm forms a critical foundation for reading; the cornerstones of reading are rhythm, rhyme and repetition.

## Tips for singing to your child



Sing nursery rhymes such as 'Twinkle Twinkle Little Star'.

Use lots of different rhythms and pitches of your voice.

Sing lots of different songs to expose your child to different vocabulary and melodies.

As your child grows, you can start adding actions, pictures, or objects that your child can associate with the song.

Play with basic musical instruments and highlight the difference between loud and quiet, fast and slow, and high and low pitches.

## How to stimulate your baby/child's brain by reading

- More parent-child conversations occur during reading aloud than during any other activity.
  - Children who are read to regularly show gains of more than twice as many new words.
  - Reading aloud to children before age 6 effects language, literacy and reading development.
- 
- Read, Read, Read aloud every day. Try for 10 books per day.
  - Continue to read aloud after your child learns to read alone; it's best to read to your child slightly above their own reading level.
  - Start with picture books, build to storybooks and novels.
  - Read chapter books to your child by age 4.
  - Have a conversation about the book, talk about the pictures and covers.
  - Establish a regular reading routine.
  - Have your child tell the story back to you.
  - Try choosing a story, poem, or news story to grab your child's interest.
  - Link the story to life and to other books.
  - Go on an outing to your local library where you can borrow books.
  - Look out for reading groups at your local library.
  - Think about reading aloud as a conversation, not as a task to be completed.
  - You can read the same book many times. Your child will still enjoy the pictures and stories.

## Bilingual language development

Exposing your child to the language spoken at home, as well as English straight away will help with their bilingual language development.

- Don't forget to use your home language(s). It is really important for you to teach your child your family language(s) because you are your child's first teacher.
- If possible, attend baby groups and other classes where your child will also be exposed to English.
- Sing songs and read books in both languages. Encourage siblings to help, especially if they are already at school.
- If your child's first language is not English, you can help your child to develop English by singing in English as well as in your home language.

## Hearing/Auditory brain development: the foundation for a listening and spoken language outcome



Above all else, play and have fun with your child.

## Acknowledgments

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## Further resources for parents/carers

[www.ndcs.org.uk/family\\_support/education\\_for\\_deaf\\_children/education\\_in\\_the\\_early\\_years/helping\\_your\\_deaf.html](http://www.ndcs.org.uk/family_support/education_for_deaf_children/education_in_the_early_years/helping_your_deaf.html)

[www.ndcs.org.uk/document.rm?id=10921](http://www.ndcs.org.uk/document.rm?id=10921)

[www.avuk.org/engaging-children-through-books](http://www.avuk.org/engaging-children-through-books)

[www.youtube.com/watch?v=V-u3m1PIo4](http://www.youtube.com/watch?v=V-u3m1PIo4)

[www.youtube.com/watch?v=MtRf0PTnTyM](http://www.youtube.com/watch?v=MtRf0PTnTyM)

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**Patient advice and liaison service (PALS)**

If you have a compliment, complaint or concern please contact our PALS team on 020 7288 5551 or [whh-tr.whitthealthPALS@nhs.net](mailto:whh-tr.whitthealthPALS@nhs.net)

If you need a large print, audio or translated copy of this leaflet please contact us on 020 7288 3182. We will try our best to meet your needs.

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