Supporting your deaf baby or toddler’s listening and speech development

The importance of early hearing aid or cochlear implant use

Introduction
This factsheet is for parents with a baby or toddler who wears hearing aids, and will also be relevant if your child has recently been fitted with cochlear implants.

Most families with deaf children use a combination of communication techniques and technologies. This factsheet contains guidance to help you support your baby or toddler to communicate through listening and speaking, if that is your goal.

Children who are born deaf or become deaf before they learn to speak are known as having 'pre-verbal' deafness. Pre-verbal deafness can stop speech and language development happening as normal. However, through the early and consistent use of hearing aids deaf children are more likely than ever to start school with similar speech and language levels to their hearing peers.

Hearing and listening development
The ear is fully formed before birth and hearing babies will have had exposure to sound even before they are born. However, the ear is just the first part of the hearing (auditory) pathway. The hearing pathways are made up of nerves that carry sound from the ears to the brain.

We know that most rapid changes in brain development happen in the first three-and-a-half years of life. When hearing pathways are not stimulated in response to sound early in life (also known as auditory deprivation) they do not develop as well as they could. Babies and young children therefore require early and consistent auditory stimulation so that they have the best opportunity to develop their hearing pathways.

Hearing babies will have thousands of hours of listening experience in their first year and hear words many hundreds of times before they start to make speech-like 'babbling' sounds. By the age of four, children have often heard as many as 45 million words.¹

Hearing aids and cochlear implants should be offered as early as possible so that babies and young children have the opportunity to access sound and develop hearing pathways. Hearing aids and cochlear implants are likely to give far less benefit to teenagers or adults who have not consistently used them early in life as their hearing pathways are less well developed.

The ear and hearing pathway is ‘switched on’ all the time so that we hear 24 hours a day. However we don’t listen all the time. Listening is an active process that involves paying attention to the things that are of interest to us, while ignoring things that are not of interest.

**Speech development**

Speech development depends on hearing both your own speech and the speech of others. Hearing, self-monitoring and correcting your own speech is known as the ‘auditory feedback loop’. Children must be able to hear their own speech clearly to make clear speech sounds. By hearing the speech of others children copy sounds and words, and learn how to differentiate between sounds.

For example, ‘f’ and ‘th’ are both quiet, high-frequency (high-pitch) speech sounds. If a child is not able to make out the difference between the two sounds they may say them incorrectly or substitute one for the other when speaking.

For examples of practical ways you can help your baby or toddler to develop communication and language skills, see our resource *Helping your Deaf Child to Develop Communication and Language: For parents with a 0–2-year-old.*

**Incidental learning**

Having many different life experiences greatly helps language development, so taking your child to events, on holidays and trips is important. Hearing children develop speech easily as they pick it up through incidental learning.

Incidental learning happens through overhearing – when children hear speech that is not directed at them. Overhearing helps children build vocabulary and gives them grammar and general knowledge. Very young children learn about 90% of their knowledge about their world incidentally. Therefore deaf children may miss a significant amount of information that they need in order to learn if they miss out on overhearing.

Children with hearing aids, or unaided mild or unilateral (one-sided) deafness may appear to hear conversation well, especially in one-to-one situations and when background noise levels are low. However, children need to be able to hear soft speech and to be able to overhear. If they can’t, then they won’t hear speech that comes from more than six feet away. They need to be able to hear conversation all around them, even though they aren’t paying attention to it, or when it may be about things that don’t seem important to them.

Hearing aids are programmed to closely match the individual child's hearing levels and take into account the different listening situations that they are in. For example, hearing

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aids will amplify (make louder) quiet speech sounds more than they amplify louder sounds. This means that the sound from the hearing aid is always comfortable for the child. Speak to your audiologist if you are concerned that your child is not hearing quieter sounds in their environment as well as face-to-face conversation.

How can I support my baby or toddler’s listening development?

By using their hearing aids and/or cochlear implants consistently:

- Make sure that the equipment is working properly by checking it regularly and reporting any problems to your audiologist.
- Also make sure that your child is using their hearing aids and/or cochlear implants for as much of their waking hours as possible. Remember that babies and young children learn from things going on around them even when they are not being directly spoken to.

The consistent use of hearing aids and/or cochlear implants will help deaf children overhear, allowing incidental learning to take place.

It is common for babies to take their hearing aids out themselves. Often this is just a developmental stage and soon other things will occupy their attention. You may need to take their hearing aids away for a short time before trying them again whilst they are distracted by something else.

Sometimes babies and young children will take out their hearing aids when they feel there is nothing of interest to listen to, or because they are bored. Occasionally the hearing aids or cochlear implant may be causing genuine discomfort, either from the mould or perhaps the sound. If your child taking out their hearing aids is an ongoing problem, read some tips from other parents at www.ndcs.org.uk/wearhearingaids or talk to your audiologist or Teacher of the Deaf.

By improving the listening environment as much as possible:

- Reduce background noise as much as possible, for example by turning off the TV or washing machine during family discussions.
- Use soft furnishings, such as carpets, rugs and curtains, to absorb unwanted sound and reduce the effects of reverberation (echo).
- Using a radio aid/personal FM system in some situations may be helpful. For example it can help a child in the back of a car to hear the driver speaking whilst also reducing the effects of engine noise.

By talking, reading and singing with your child as much as possible:

- Play with and talk about things that interest your child. When a child is very young, exposure to sound is enough to develop the hearing pathways and auditory centres of the brain.
- Speak naturally, with lots of melody (sing-song) in the voice.
- Use lots of singing such as nursery rhymes and action songs. Rhythm, melody and repetition are good for learning.
- Don't simplify sentences because you think your child doesn't understand the language. By using full sentences you are helping your child to learn new words. If they don't understand a word, try using a different one.
• Pause between sentences and check your child has understood you. Encourage them to stop you if they don’t understand what you are saying.
• Focus your child on listening. Bring their attention to sounds in the environment by pointing to your ear and using listening words such as, “You heard that!” or “You were listening!”
• Use language continuously – name objects in the environment as you see them. Talk about and describe how things sound, look, and feel. Talk about where objects are located by using prepositions, e.g. in, on, under.

Don’t feel that you need to allocate particular times for these activities – they can be woven into everyday life and do require patience. Teachers of the Deaf and speech and language therapists can also give you learning techniques that can help you develop your child’s speech and language.

British Sign Language (BSL) and spoken language development
A common concern about sign language is that it delays or prevents speech development. There is no evidence that shows this is the case provided a rich spoken language environment is available for the child. Using sign language early may in fact help language and speech development. Hand-eye coordination develops earlier than speech and babies are able to use simple signs such as milk, eat, sleep, nappy and teddy, before they are able to say these words. Children will communicate in the way that is easiest for them at the time and it is therefore natural for children to drop using signs as they begin to talk.

Using sign language may remain an important way to reinforce learning of new language for some families, for communication at times when hearing equipment is faulty or can't be used, and for mixing with deaf friends and the Deaf community.

If you are considering using sign and spoken language with your child there are some things to consider:

• BSL is a complete language in its own right with its own grammar and linguistic rules. Because its grammar is very different from English, it is not used simultaneously with spoken language. This means that the child and family are learning and using two languages (bilingual). In just the same way as learning a spoken language, children need wide and varied access to sign language to develop their skills.
• Some families prefer to use BSL signs as a visual support to spoken English language development. Sign Supported English (SSE) uses BSL signs and fingerspelling, used in the word order of English to supplement what is being spoken.
• Other families use cued speech to support spoken language. Cued speech is a system of eight hand movements used near the mouth to give a visual representation of spoken language.

For more information on language development and different approaches to communication, see our resource Communicating with your Deaf Child.
Waiting for a cochlear implant

If your child is having a cochlear implant assessment or they are waiting for surgery you may feel as though it is not worth them wearing hearing aids. In fact there are very few children who receive no hearing at all from hearing aids. Although your child may not be hearing speech clearly with their hearing aids it is likely that they are hearing some sounds. There are therefore going to be benefits of wearing hearing aids during this period:

- Access to sound develops the hearing pathways and the brain.
- Your child may be able to hear certain frequencies (pitch) and may be able to make out the duration of sounds (i.e. short versus long sounds) which will help them to develop understanding of speech patterns.
- Your child may begin to make associations between environmental sounds and objects (for example dogs barking).
- It may make it easier for your child to accept wearing cochlear implant equipment during all waking hours if they are used to wearing their hearing aids consistently.

Useful National Deaf Children’s Society resources

Publications
Cochlear Implants: A guide for families.
Communicating with your Deaf Child.
Deaf Children and Speech and Language Therapy: A guide for parents.
Hearing Aids: Information for families.
Helping your Deaf Child to Develop Communication and Language: For parents with a 0–2 year old.
Helping your Deaf Child to Develop Language, Listen, Read and Write: For parents with a 3–4 year old.
Radio Aids: An introductory guide.
Understanding your Child's Hearing Tests.

Available at www.ndcs.org.uk/publications.

Web sections
www.ndcs.org.uk/communication
www.ndcs.org.uk/audiology
www.ndcs.org.uk/technology
www.familysignlanguage.org.uk

Videos
My deaf daughter and her hearing aids – Parents Abbie and Martin tell us how they are helping their two year-old daughter feel confident about her deafness
Playlist: Videos featuring children with a hearing loss: 0–5-years-old

Available at www.youtube.com/user/ndcswebteam.
About the National Deaf Children’s Society

The National Deaf Children’s Society is the leading charity dedicated to creating a world without barriers for deaf children and young people across the UK.

We use the term ‘deaf’ to refer to all types of hearing loss or impairment from mild to profound. This includes deafness in one ear or temporary deafness such as glue ear.

We use the word ‘parent’ to refer to all parents and carers of children.

For more information take a look at our website: www.ndcs.org.uk.

For information and practical support on issues related to your child’s deafness, contact the National Deaf Children’s Society Freephone Helpline on 0808 800 8880, email us at helpline@ndcs.org.uk or contact us via Live Chat at www.ndcs.org.uk/livechat.

If you prefer to speak a language other than English, tell us the language of your choice and your phone number (in English). We will call you back with an interpreter within a few minutes.

This information can be requested in large print, in Braille and on audio CD.

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