

Challenges: Listening with a Cochlear Implant



Wearing equipment consistently

All listening milestones depend on this. If a child is not using his or her equipment all the time s/he is awake, it is much harder for him/her to make sense of sound when it is on and progress will be slower.

However, achieving full time use can be a challenge for some children (and their parents!). Using the processor without sound at first, can help your child adjust to the feel of the equipment on his/her head. Then when sound is introduced, if your child rejects the processor, it is easier to know that it is not due to the feel of the equipment but the sound coming through it. Some children need the equipment to be separated into its component parts and for each part to be introduced one by one, to build up acceptance of the feel of the equipment without sound, for example spending some time with:

- 1) just the clip and processor on their collar
- 2) then the clip on their collar and the coil on their head
- 3) all the system connected but with no sound

Headrests on push chairs or car seats can rub the coil or processor off. This can make consistent sound input difficult to achieve. However, the processor does not have to be on the ear for your child to hear. There are longer coil cables which can be useful for clipping the processor to the car seat. There are a variety of ways of overcoming the problem of a processor not staying on an ear in the traditional position, for example it could be tucked in a hair scrunchie on the top of the head:



The important thing to note is that the microphone ports on the processor are facing forward as shown and are not covered by clothing etc:

Some practical solutions other parents have found can be found at:

<https://successforkidswithhearingloss.com/wp-content/uploads/2013/07/Hearing-Aid-Retention-Accessories-Chart-KA-5.pdf>



All children have different sensory preferences

Considering all of your child's sensory preferences and needs can be important for increasing the chance of your child accepting wearing the equipment before introducing sound through it.

Some children do not like light touch and would therefore dislike having a bodyworn cable touching their neck or the feel of the processor on their ear. They might prefer deep pressure activities such as firm massage or firm hair brushing before they use their devices. If you have concerns about this area, speak to your key contact at USAIS.

For many children physical exercise which works their muscles and integrates their senses, particularly their proprioceptive sense (which comes from the feedback they get from their muscles, tendons and joints that provides a sense of their body's position) can help significantly in preparing them for the onset of sound. Consider if some of the following activities might help your child accept the processor and encourage them to be alert to listen:

- Pushing, pulling and stretching (e.g. row row row your boat)
- Stamping rhythms
- Jumping
- Kicking a ball
- Rough and tumble play
- Firm head massage

ROW, ROW, ROW
YOUR BOAT



ROCK BACK AND FORTH
WITH A PARTNER

Foundational listening skills

When a child has not heard well before, there are many foundational skills that s/he will need to develop once s/he has accepted her/his implants. These include:

- Knowing that sounds exist
- Detecting and attending to sounds
- Linking sounds to their sources: knowing that things and people make sounds
- Appreciating the significance of sounds and that they carry information
- Learning which sounds to attend to and which to ignore
- Becoming aware that sounds are interesting, enriching and useful

How can children in the early stages of CI use be helped to learn to listen?

Exploring sound:

Your child will benefit from using all his/her senses to understand about sound. When children are actively involved themselves in sound making they appreciate that sounds have causes and effects. For example if a child is banging an upturned saucepan with a wooden spoon s/he learns that :

- S/he can link the sound with the arm action and seeing and feeling his/her arm move
- S/he starts to understand that s/he is making that sound

- S/he can cause the sound to start and to stop, learning that sounds have a beginning and an end.
- By causing sound to start and stop, s/he begins to learn it is something that can be controlled.
- By watching others' reaction to the sound, s/he begins to learn of the affects sounds have on other people
- By observing others' responses to the sound s/he is making, your child is learning to engage with others using sound and will derive pleasure from this.



Free playing

Children naturally learn about sound through their free play, as they will be making noises with things all day long as they move about and manipulate toys.

You do not need to spend money on expensive instruments or noise making toys. Every household has a wealth of noise making common objects which can be used, for example

- wooden spoon on a saucepan lid
- two saucepan lids together
- toy bricks in an empty tin
- 2 saucepan lids to use as cymbals by clashing them together
- see-through jars or tubs filled with pasta, beans, buttons, marbles, water etc which make a noise when you shake them
- scrunching up paper and plastic bags
- shaking keys/rattles
- blowing - into an empty bottle

These everyday objects can teach your child that sounds have different properties, intensities and durations.

Encourage your child to play with his/her voice!

Very often the first evidence that a child is listening through his/her implant, is a change in his/her vocalisations. This can be either:

- An increase in the **quantity** of a child's sounds
- An increase in the **variety** of the sounds a child makes

Copy your child's vocalisations

By copying your child's vocalisations, in time s/he will learn that:

- S/he can use her/his voice to make noise and gain another's attention
- S/he will be learning the important skill of taking turns using voice, which is a fundamental conversational skill. The timing of when s/he vocalises and when s/he listens takes lots of practice, to learn not to clash vocally
- S/he will learn that you are interested in her/his vocal attempts which is highly motivating for a child. Your child will then be likely to try something different such as a variation of the sound s/he was making or a new sound

Always use spoken language with your child to talk about what your child is doing

Sometimes people drop their voice and speak too softly for a person with an implant to hear. This can especially be the case if sign or symbols are being used as a child's primary means of communication. Ensure everybody who interacts with your child uses their voice at an audible level.

Everyday routines are language learning opportunities for your child. It is important that adults caring for your child tell your child what is about to happen during routine everyday tasks. As these happen regularly, your child will predict the sequence of events and the common regular phrases you are likely to use, for example

Washing hands:

Let's push your sleeves up
You turn the tap on!
Let's put our hands under the tap
Rub some soap in
Let's rinse the soap off
Time to turn the tap off now.
There's the towel
My hands are nice and dry
Mmm your hands smell nice and soapy!



See how much language can be added in one simple regular routine! If your child washes his/her hands only twice a day, s/he could hear these phrases more than 700 times a year if adults use these opportunities as language teaching opportunities.

Use of symbolic sounds

Words may not yet carry meaning for your child. Symbolic sounds stand out from words and can help to catch their attention.

Examples include:

- Shhhhh!
- Pop, pop, pop!
- Whoosh!
- Bang!
- Knock knock! (before entering a room)
- Ah oh! (when something drops or goes wrong)
- Brrrrm (car noise)

Reducing background noise

In order for your child to make sense of sound, it needs to be well contrasted with silence. Bombarding a child with lots of sound is not helpful and causes children to stop paying attention to any sound.

Stand back and critically evaluate how much background noise there is. Try to reduce background noises as much as possible for example:

- Turning off the TV if no one is pro-actively watching it.
- Plan the use of machines such as washing machines, dishwashers etc around times when the child is not present.
- Shut internal doors to prevent noise from other rooms distracting the child
- Shut windows if traffic is particularly noisy outside

Helping a child to attend to sound

At this stage of listening we would expect a new implant user to attend to sound in an intermittent way.

- Children will often ignore sounds because there are so many going on and they are not meaningful. A child may begin to search for the source of a sound by eye glancing or head turning, stopping his/ her activity, becoming quiet, startling and /or vocalising or not stopping vocalising.
- When your child has plenty of experience in listening to sounds he/she might start to routinely look for sounds and locate them (if the particular sound is interesting!).
- Children often need time to process the sound in their mind and then respond. Give about 10 seconds for a child to process a sound before repeating it.
- A child may search for sound by looking for it or s/he may look to their carer for help understanding what it was they heard. Some responses may be more subtle and difficult to spot such as tensing of muscles.

Use of Music

Use of songs and rhymes can help develop listening skills.

Choose rhymes that have a good rhythm and lots of bounce to them –

- Swaying with your child to the music will give him/her a multisensory stimulation – hearing, feeling and seeing the results of the music playing. Then when you stop singing/playing music, stop moving so the silence/sound contrast is made very to your child.
- make pauses dramatic - this helps prediction also.
- alter your speed of singing and dancing or moving
- using actions with songs will make it easier for your child to pick out the words and the meaning of songs

Structured listening activities!

Practice listening for changes in sounds and then do something, or stop doing something, or change what you're doing, as the sound stops/changes.

- Musical statues

- Musical chairs
- Pass the parcel
- Whose knocking? Someone is outside knocking on the door. Calling at the door 'hello', 'Come in.'

Some pointers:

- Model discrimination activities carefully to ensure that the child knows what to do. Other children can be used as role models for the child to copy.
- Initially these tasks are carried out with the child able to see the noisemakers/instruments etc. Then gradually withdraw visual clues so your child is encouraged to use listening alone
- Keep a good balance between keeping him/her confident with the game by playing them often and introducing an element of surprise or freshness now and then to keep him/her interested.

Some pointers:

- Choose some games/activities that you know the child likes and play them more often as it is important that he/she is motivated and the repetition will be very helpful.
- Seize every opportunity in your daily routine to take advantage of increasing your child's ability to identify sounds, words and common phrases.

The most important thing for your child to learn about listening is that sounds enrich their lives and that listening is enjoyable.

Remember the key to any listening activity is to have **FUN! If either your child or you are not enjoying the task stop and try something different.**

Keep a diary of your child's listening progress. Great to look back on!