



Inquiring about Implants



When a child is identified with a hearing loss, family members might wonder about a cochlear implant (CI). Specific information on implants, centers and candidacy can be found through websites and from audiologists. This paper addresses some questions families often ask in the beginning about the implant process.

- Can my child receive an implant?
- What happens after my child receives his implant?
- How do I help my child learn to listen?

1. Can my infant or preschooler be implanted?

Candidacy varies in different countries, and between implant centers. Depending on circumstances, a child as young as six to twelve months of age might receive an implant after using hearing aids for weeks or months. Many implant centers consider degree of hearing loss in terms of ability to hear and understand speech, rather than responses at specific decibel levels.

You can ask your audiologist what the criteria are and if your child qualifies. If your child is not responding to voices or environmental sounds with hearing aids, an implant center can be contacted to discuss your child's listening needs.

2. Should I wait until newer technology is available?

Professionals recommend that a child should receive an implant as soon as candidacy is determined and parents should not wait for technology to change. Children who received their implant in the 1990s seem to do as well as children who receive their implants today. Waiting for new technology for the internal part of the device is not necessary.

You can be sure your child starts with hearing aids and help from a pediatric audiologist. If your child gets an implant, you can keep in touch with the CI center to get any needed external technology improvements as they become available.

3. Will a child benefit if he has auditory neuropathy and how can I assess my child's progress?

If a child only has auditory neuropathy, he should do as well as any other child who is an appropriate candidate for a cochlear implant. If a child has other needs, careful consideration must be given to all factors to determine what will be most beneficial.

As you consider an implant, observe your child's responses to sounds and report to professionals frequently. How does he respond to loud sounds? When does he respond to speech? What sounds does he consistently hear? Discuss what you see in his development of listening abilities.

4. Who will be involved before the implant?

The implant process includes evaluation, surgery, therapy and an educational program. A surgeon determines if the inner ear structures can accommodate electrodes. An audiologist may evaluate hearing levels both with and without hearing aids. A speech therapist assesses whether spoken language can be enhanced by an implant. Insurance workers may discuss financial aspects. A counselor may consider your child's ability to use the implant and your expectations.

In the beginning you will need information from multiple professionals to determine if an implant would be beneficial. An implant center is then contacted for evaluations. You will participate in these evaluations because you are part of the decision making.

5. Are two implants better than one?

Bilateral implants (two implants) may provide awareness of sound on both sides and better understanding of speech in situations with background noise. The quality of speech of a cochlear implant user may improve from listening with two implants but results are very individual and not guaranteed.

Receiving bilateral implants at the same time is referred to as simultaneous implantation.

Sequential implantation refers to receiving the second implant after the first.

You can talk to other parents whose children have bilateral implants (simultaneous or sequential) and meet with adults who use implants. Discuss the information you receive with your cochlear implant team to determine if two implants seem right for your child.

6. How do I know if my child needs to use an implant in one ear and a hearing aid in the other?

If a child is able to hear some speech with a hearing aid, the combination of an implant and hearing aid can be helpful. There is no consensus about using both an aid and implant, and this benefit is not documented by research. However, many children and adults report that their hearing aid provides low frequency sound which carries more depth and

quality of voice, while their implant gives better high frequency hearing and provides more clarity. The result appears to be a richer sound.

You can talk with your audiologist about the speech sounds your child can hear with a hearing aid. You might discuss possible benefits of having your child use an implant on one side and a hearing aid on the other and when it might be best to introduce that arrangement.

7. What is expected when the implant is activated?

Implantation is a process and not an immediate fix resulting from simply purchasing a device. Families often have high hopes for clear and quick speech but usually the process starts with sound awareness, listening, understanding words and then beginning to talk.

You can begin by encouraging your child to listen to everyday sounds. Then introduce new sounds. Be enthusiastic! Listening can be fun.

8. How soon do children respond to sounds with a cochlear implant?

If a child has heard no sounds before implantation, he will need to learn to listen. This can take a few months, since sounds from the initial stimulation are often soft and then increased as the child becomes comfortable. If a child has developed listening skills before getting an implant, he might respond to sounds soon after activation.

You can find ongoing new and meaningful experiences for your child to hear so that listening is a process of discovery. You can document what he is responding to and discuss this with your CI team.

9. Does speech sound the same to my child with an implant as it does to me?

Speech heard through an implant is not the same as speech perceived by a person with typical hearing. There are recordings which attempt to demonstrate sounds as heard through an implant, but your child might hear differently. A child's brain will learn to interpret sounds from an implant, but how you and your child hear sounds will not be the same. The

brain makes sense of sounds and those sounds become natural hearing to the child.

You will not know exactly how your child perceives sounds but you can observe what he hears. You can begin using the Ling Six Sound Test with your child after his implant is activated to document what he hears at what distances.

10. How soon do children talk?

There are many factors involved in the development of speech with an implant. If a child has awareness of voice and some language, the process of understanding and speaking may be faster than for a child who did not have these skills. A child who receives an implant at one year of age may develop spoken language at a different rate than a six year old.

You can discuss your child's listening skills with your service providers to recognize his current abilities. Then learn about the stages of listening, language and speech development and determine what your child needs to progress.

11. Will my child need speech therapy?

After an implant is activated, a child's brain may not immediately understand many new sounds. A speech therapist can help him learn to respond to sounds and assist you in developing his listening skills. Parents often feel that more therapy sessions will quickly improve their child's listening. However speech therapy is an isolated practice and follow-through at home is necessary.

You can provide your child with constant conversation at home. You can also specifically create opportunities that build on the focus of therapy sessions. Then your child has much experience with listening in a meaningful way during typical routines.

12. How do I find the right speech therapist?

Your child can benefit from a speech therapist trained to work with children who have a cochlear implant. If that is not available, look for a person interested in hearing loss, experienced with children, willing to obtain guidance from other

professionals and expecting to work with parents.

Ask your implant team for help locating a therapist. Decide if you will look for a Speech Language Pathologist (SLP) or an Auditory Verbal Therapist (AVT)/ Listening Spoken Language Specialist (LSLS). Request services from your local school. Ask other parents who they have worked with in a satisfying manner.

13. Will my child need special services after receiving the implant?

Your child may have appointments with his audiologist, speech therapist, early childhood teacher or early intervention specialist and pediatrician, as well as any other service providers suggested for his individual needs. Professionals can share reports and strategies with each other and with families.

You can apply information from service providers to your child's everyday life and combine their advice into your natural routines. You can aim to coordinate the services so that your child's overall development is addressed and not just some of his individual skills.

14. What is most important?

Trust the technology, the professionals and the process. Learn about the implant and your child's ability to hear sounds. Select teachers and therapists who can monitor your child's listening and spoken language process. Seek to partner with professionals who will work with you and other professionals.

Trust that the process will take time, that you will develop the skills to help your child and that your child will embrace new ways to learn. Trust in your family's decision making. Trust that your hopes for your child are what is most important.