

American Society for Deaf Children

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ASDC Snap Shots: Cochlear Implants

Background

Parents of children who are deaf are often presented with the option of obtaining a cochlear implant for their child. Before this choice is made, it is important for parents to gather as much information as possible regarding the technology and to develop realistic expectations associated with its use.

A cochlear implant is an electronic device with both external and internal components. The external components consist of a microphone, sound processor, transmitter, transmitting cable, and battery. The internal components consist of a receiver and an electrode array. These components are embedded into a child's head behind the ear during surgery. The cochlear implant mechanism operates by receiving sounds through the external components, digitally transforming them into electrical signals, and sending them into the implanted components and to the auditory nerve, which carries them to the brain. Surgery to implant the internal device is usually done on an outpatient basis, requires general anesthesia, and takes about two to three hours. The external components of the implant are fitted four to six weeks after surgery when healing is complete. The speech processor unit of the implant is computer programmed or "mapped" specifically for each individual with an implant. The cochlear implant destroys all residual hearing in the implanted ear.

In comparison to traditional hearing aids, cochlear implants provide improved sound awareness to children with severe to profound hearing loss. As is the case with hearing aids, intensive, appropriate follow up therapy and ongoing monitoring of the device is essential to helping children make sense of the many sounds in their environment that are detected through the implant. While a cochlear implant may provide sound detection at close to normal listening levels, the outcomes and rate of development a child may realize in relation to understanding and using spoken language will vary due to a number of factors. A cochlear implant does not give a child normal hearing and does not guarantee spoken language development similar to that of hearing children.

Parents who decide to have their child implanted may do so because they believe it will help the child in listening and speaking and that these skills will help their child fit in better with their family and with the "hearing world" in general. They also may do so to help the child develop a greater awareness of environmental sounds.

Parents who decide against a cochlear implant for their child may do so because of: concern about the medical risks; concern that the child will not be "successful" with the implant; satisfaction with how the child is progressing with hearing aids; satisfaction with the child's progress using sign language; and/or satisfaction with the child's membership in the deaf community.

While in the past, a family's choosing a cochlear implant for their child suggested that a family did not desire contact with the deaf community, this attitude is fading. Increasing numbers of families choose use of this technology for their child and continue to embrace use of sign language and participation in the deaf community.

Questions to Consider

You may be wondering if choosing the implant is the right decision for your child and family. Here are some questions parents facing this issue have asked themselves.

- ❖ Has my child had a meaningful trial with hearing aids? Proper fitting of hearing aids is an inexact science. Young children don't have the ability to describe the sounds they are hearing or to be aware of sounds they are not hearing. Therefore, it may be difficult to tell how much benefit a young child is receiving from hearing aids. Further, high technology hearing aids may not be available to a child because many insurance plans exclude coverage of hearing aids.
- ❖ How much time can I devote to therapy? The ability to interpret the sounds coming through an implant does not come automatically. It requires a significant time commitment to therapy with trained specialists in the therapy room as well as work at home by family members.
- ❖ What is my definition of "success" for the implant? What will I do if my version of success is not achieved?
- ❖ What is my perspective of the cochlear implant in relation to the overall needs of my child? The cochlear implant is a tool that can provide sound awareness to deaf individuals with the hope of having the child achieve spoken language use with years of training. What about the child's language development, ability to communicate, social emotional development, and academic progress during the time while spoken language skills are developing?
- ❖ How much do I know about the deaf community? Members of the deaf community are found in all levels of education and employment, and they experience the full range of personal reward and challenge – regardless of their use of technology. Many parents of newly identified children are not aware of the potential and the achievements of deaf children and adults.
- ❖ Is it possible for my child to use sign language and maintain his deaf identity and use the cochlear implant? While some medical professionals discourage families from using sign language with their implanted child, many families value the continued role of sign language for their children. In addition, more professionals are beginning to see the benefits of using sign language and participation in the deaf community for implanted children.
- ❖ How much of an influence do portrayals of implant "miracles" and pressure from medical practitioners and others have on me? Outcomes among implanted children vary widely, and the decision whether to implant a child is a serious and individual one. It should be made only after careful consideration of the facts.

ASDC's Views

ASDC sets out the following principles, which ASDC believes apply universally to deaf children, their families, and the professionals who serve them. These principles apply regardless of whether the family chooses a cochlear implant for their child, hearing aids, other hearing technology, or no hearing technology at all.

ASDC believes that parents of deaf children:

- ❖ Have the right to make informed decisions on behalf of their children.
- ❖ Benefit from meeting other parents of deaf children from a variety of backgrounds, experiences, and philosophies.
- ❖ Benefit from meeting successful deaf children and members of the deaf community from a variety of backgrounds, experiences, and philosophies.

ASDC believes that deaf children have the right to:

- ❖ Be valued and respected as whole children capable of high achievement, regardless of their degree of technology use.
- ❖ Meet and socialize and be educated with other deaf children.
- ❖ Achieve fluency reading and writing English, and to the extent of their ability, speaking English.

ASDC believes that medical, hearing health, and educational professionals serving deaf children and their families have a responsibility to:

- ❖ Be informed about the successes of deaf persons from all walks of life, including those who use American Sign Language as their primary language and those who do and do not use cochlear implants.
- ❖ Recognize the benefits of early language – including sign language - and work to ensure that deaf children's language development – whether signed, spoken, or both - progresses at a rate equivalent to that of their hearing peers.
- ❖ Refer parents to a wide range of information sources, including deaf individuals, families with deaf children, schools for the deaf and local, state and national parent and deaf adult organizations.