



COCHLEAR IMPLANTS - A COMPARISON OF THREE COMPANIES



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Jessica and Rachel,
Cochlear Implant Users
Atlanta, GA

Internal Device Comparison



Cochlear/Nucleus Freedom



Advanced Bionics 90K
High Res

	Cochlear	MedEl	Advanced Bionics
Number of Electrodes	22	12 pairs	16
Casing	Titanium	Ceramic	Titanium
MRI Approved	Yes With magnet removal	Yes Without magnet removal	Yes With magnet removal
Magnet Removal	Yes	Yes	Yes
Size of the Implant	Compact	Compact	Compact



MedEl Pulsar +

EXTERNAL DEVICES BODYWORN AND BEHIND-THE-EAR (BTE)

Bodyworn Processors



Advanced Bionics
Platinum Speech
Processor (PSP)



Nucleus
Freedom Bodyworn



MedEl
Baby BTE

BTE Processors



Advanced Bionics
Harmony BTE



MedEl Tempo + BTE



Nucleus
Freedom BTE

External Device Comparisons

	Cochlear/Nucleus Corp.		MedEl Corp.		Advanced Bionics Corp.	
	Bodyworn	BTE	Body-worn	BTE	Bodyworn	BTE
Name	Freedom	Freedom	Tempo +	Tempo +	PSP	Harmony
Batteries	AA Batteries	Hearing Aid/ Rechargeable	Hearing Aid	Hearing Aid	Rechargeable	Rechargeable
Battery Life	24 hours	4-5 days	3 - 5 days	3 - 5 days	1 - 2 days	10 - 17 hours
Number Of Programs	4	4	3	3	3	3
Telecoil/ T-Mic	Telicoil	Telicoil	None	None	None	T-Mic and Telicoil
Parent Friendly Features	Notification light	Notification light	Light on BTE	Light on BTE	Notification Tone	Notification Light (Firefly)
User Friendly	yes	yes	yes	yes	yes	yes



PARENT COMMENTS

We took a leap of faith with Rachel when we got her her first CI in 1989. We wanted very much for her to have all the opportunities available to her that the entire world had to offer and not just the very small portion that is the deaf culture. Since she had no residual hearing whatsoever, we decided that, whatever hearing the implant gave her, it would give her more than she had. We had had the good fortune to meet Caitlin Parton at the League for the Hard of Hearing in NY, and we were bowled over by her speech and language. She was 4 years old at the time, and Rachel was 2. She inspired us and gave us hope that Rachel could one day do as well.

When Rachel received her CI, it was as part of the clinical trials on the Nucleus 22. Thus, we had no choice of brand. It was all that there was, and we were so very grateful that it was there for her. When Jessica received her CI, her surgeon agreed to implant her at age 15 months. At the time, the FDA guidelines still specified age 2. As this was our second time going through this, we knew how valuable every month additional with hearing was. The Clarion was still in clinical trials at the time, and so to have gone with the Clarion would have meant waiting until Jessica was 2. Because we valued those 9 months of hearing for Jessica far more than technology that wasn't even proven to be better and because Rachel had done so well with her Nucleus 22, we didn't give the choice of brand more than a second's thought.

Melissa, Rachel and Jessica's Mom



PARENT COMMENTS

Cochlear implants have allowed our family to overcome a great difficulty. When Elliot was born, we already had two boys, and we were obviously a hearing family. The difficulties of trying to communicate with a deaf infant were solved once he was turned on! Language increased by leaps and bounds, and before long he was age appropriate, expressively and receptively. When we realized that Elliot was deaf, we very quickly began researching the options of cochlear implants as well as communication choices. We attended conventions and spoke with engineers that worked on the various brands and listened to the speech of people with cochlear implants. My husband was an engineer, and finally decided that the "German engineering" (well, Austrian-- close!) was what he preferred. We have been very happy with the choice and have never had any serious problems in over five years. Oliver's hearing loss came as a great shock as well, though we knew it was possible. He received his first cochlear implant at 6 months, the youngest in Georgia. Elliot had received his at 9 months, and we felt that early implantation had afforded him great advantages. We were tipped off to the possibility of it and then pursued it when we realized that it would mean faster, easier speech. Now, as Elliot has learned to read and speaks without a trace of "accent" we are thrilled that our surgeons allowed us the surgery at an early age. Oliver's second surgery is scheduled this week, and we know that bilaterals will give him the best opportunity to hear well. Elliot only got his bilateral at age 5, about 6 months ago, and already has excellent hearing in noise. We have never regretted our decision to implant, and while we wish we didn't have to see the boys undergo surgery, we are so grateful for the technology... for those who invented it and those who can help us along the way. We have learned so much about hearing loss, and are eternally grateful for the opportunity it has afforded our kids.

Amy, Elliot and Oliver's mom



Information for Parents, Teachers and Caregivers

Tips for seating and a quieter classroom:

- Allow the student to sit in the front during all activities.
- Seat the students in a horseshoe shape during small group activities.
- Have the student with a cochlear implant sit away from the doors or windows.
- Keep the doors and windows closed when it is noisy.
- Rooms should be carpeted when at all possible – this cuts down in the noise.
- Put tennis balls on the legs of chairs.

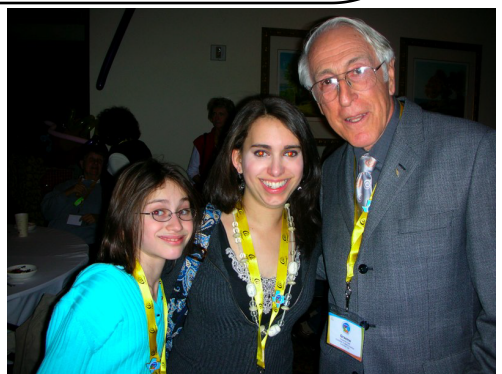
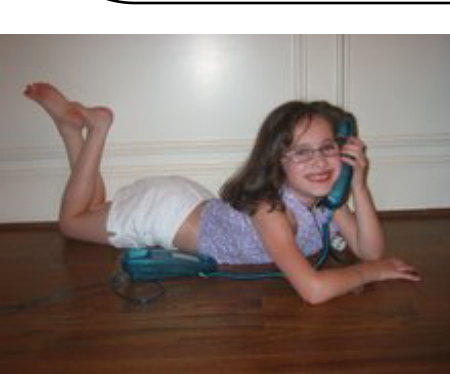
Tips for communicating with a child who uses a cochlear implant:

- Use visual cues.
- Get the child's attention before you start speaking.

When the child does not understand, rephrase what you said do not only just repeat

Other Tips:

- Use a “buddy system” to make sure that the student has heard everything.
- Let the student know that it is alright that they did not understand.
- Be sensitive to how hard the student has to work to be able to hear.
- Keep spare coils, cables, microphones, and batteries in the classroom in case trouble shooting needs to occur.



Information for Teachers

Dos and Don'ts for Teachers:

You do not need to:

Over enunciate your words.

Yell at the student.

You do need to:

Speak clearly and slowly.

Allow the student to sit in the front of the classroom.

Stand on the side of the student that is closest to their cochlear implant or hearing aid.

Information taken from helpkidshear.org

Care of cochlear implants

Keep the external processor away from water and static electricity.

Do not allow young children to play on plastic slides.

Things to have in the classroom

Extra batteries (disposable and rechargeable)

Extra cords, cables, headpiece, and backup processor if available.

Testing speakers and/or sensor.

FM System

Soundfield System – The teacher wears a microphone that transmits sound directly to the speaker that the student places on their desk.

Personal FM System – the teacher wears this microphone and sound is transmitted directly to the receiver that the student wears attached to their hearing aid or cochlear implant.

Online resources For Parents and Teachers

www.cochlear.com

Nucleus/Cochlear Corporation website

www.bionicear.com

Advanced Bionics Corporation Website

www.medel.com

MedEl Corporation Website

www.cochlearimplant.net

A families story of raising two children with MedEl cochlear implants.

www.cochlearimplantonline.com

A families story of raising two daughters who were born with a profound hearing loss and received cochlear implants at a young age. The website was created by the oldest daughter who is a cochlear implant user.

www.hearingcompanions.com

MedEl's own database of cochlear implant users.

References

Information Provided from the following:

Advanced Bionics (www.bionicear.com)

Nucleus/Cochlear Corporation (www.cochlear.com)

Med El Corporation (www.medel.com)



Thank you to everyone who helped put this packet together. To all of the families who shared personal stories and allowed me to use pictures of them and their children.

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