

Produced in association with  
**CALIFORNIA EAR  
INSTITUTE**  
*Hear For Your  
Future!*



LET THEM HEAR FOUNDATION

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# WE'RE ALL EARS!

## LET THEM HEAR FOUNDATION EDITION



MEDICAL/SURGICAL SERVICES



AUDIOLOGY



HEARING DEVICE CENTER



CALIFORNIA EAR INSTITUTE

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## HEARING

Whether you have a hearing loss yourself or know a friend or loved one who does, you know that it can have a profound affect on ones life. Even though not life threatening, clinical studies show that untreated hearing loss can negatively impact your job performance, your social life, your relationships with friends and family, and ultimately your physical well-being. For children it can have major affects on speech and language development and education. Check to see how much you know! Did you know...

- Hearing loss is the most common birth defect in the United States: 3/1000 will have a mild to severe loss and 1-2/1000 will be deaf.

- The inner ear (cochlea) is adult size at birth.

- 33 babies are born with a significant hearing loss each day in the United States. Thanks to State Newborn Hearing Screening programs, more children are being identified with a hearing loss at birth and are being fit with amplification earlier. Unfortunately statistics show that less than

20% of the children born in the U.S. are born in hospitals that offer hearing screening programs.

- Children can be fit with hearing aids as young as one month of age.



- The average age of initial hearing loss diagnosis in the U.S. occurs in children 12-25 months old—almost half the age of children entering into preschool.

- The stapes, one of the middle ear bones that helps transmit sound, is the smallest bone in the body.

- Hearing loss in one ear can affect your localization ability.

- Within the next 10 years there will be 1.9 billion births on the earth. Of those, 76 million will have a hearing

loss. Imagine if this entire group held hands, they would stretch 2.5 times around the earth.

53% percent of severe to profoundly hearing impaired individuals in the U.S. have income below \$25,000 as compared to 35% of normal hearing individuals.

- If a deaf individual receives no auditory stimulation, after 10 years of age, reduced learning ability in the brain occurs for the auditory pathways.

Every year approximately 3000 cochlear implant surgeries are performed in the U.S. The average cost of each surgery exceeds \$75,000. Children with a hearing loss in one ear are 10 times as likely to be held back one grade in school as compared to children with normal hearing. The biggest fact of all is that if you know someone with a loss or suspect that you have one yourself, please do not ignore it. With the advancements in hearing aid and cochlear implant technology today life can be full of amazing sounds!

-The Let Them Hear Foundation Team

## EDUCATION

It's no surprise that technology in the hearing industry changes rapidly, and in doing so changes lives! One of our patients that could tell you about her first hand experience is Joni Hayes-Lamprey.

Joni was diagnosed with a severe-to-profound sensorineural hearing loss in both ears at age five and was promptly fitted with behind-the-ear hearing aids. Educationally, she was placed in her home school district beginning with kindergarten and was given intensive speech therapy over a period of several years. She notes that she can remember her mom spending endless hours working on high frequency sounds like "s" and "th" which were difficult to hear. All with the goal of making her speech more intelligible, which we must say truly paid off!

Joni had been a patient of the Let Them Hear Foundation for several years when she decided to proceed forward with receiving a cochlear implant. She reports for some time she'd known that she was a good candidate for the device but, like so many others, "was postponing surgery for as long as possible to give technology time to advance".

Ideally, she reports she, "was hoping to be able to hold out for the totally implantable device", which someday will be a reality.

Unfortunately, the hearing in her right

ear finally gave out in the Spring of 2002 and in September, she received her first Clarion CII implant made by Advanced Bionics Corporation. Joni reports remembering that after her implant was activated that she absolutely LOVED hearing the improved differences between her new implant and her old hearing aid. She comments, "It was astounding!"



In the months following this first surgery, she continued to wear her new implant on her right side and a hearing aid in the left ear. To be totally honest she says, "I didn't like it. The hearing in my implanted ear was so exceptional that it emphasized how poorly I was hearing with the hearing-aid ear." So, in September 2003, during a follow-up visit with surgeon Dr. Joseph Roberson and audiologist Lisa Tonokawa, she expressed a desire to have the left ear implanted.

On December 1, 2003, she received her second implant, a Clarion Hi-

Resolution 90k. This new implant in comparison to her first has an updated external casing, which not only allowed for the removal of a magnet and increased MRI compatibility, but was also thinner in structure so the device could be seated surgically in the bone behind her ear more easily.

If you ask Joni how she likes having one device vs. two she'll tell you that, "it makes all the difference in the world". She reports that her hearing is more balanced and that sounds including her own voice are more normal. Additional important benefits to Joni are that she can tell where sounds are coming from and that she has improved understanding of conversations in background noise. She does note that while the background noise is still there, for her, having two implants helps to put sounds into better perspective. With only one implant, she notes that listening was often overwhelming and disorienting and that with two processing and management of various sounds is better. Overall she reports that she's been extremely happy with her implants and if given the opportunity would make the same decisions all over again.

\*LTHF will be starting a study in December 2004 with Advanced Bionics and Food and Drug Administration to implant cochlear implant candidates with a Clarion Hi Resolution 90K device simultaneously in each ear.

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If you would like to make a donation to help positively impact the life of a child please send in this coupon or visit [www.letthemhear.org](http://www.letthemhear.org). Thank you for your support!

Name: .....

Address: .....

State/Zip: .....Phone: .....

Amount: \$10 \$25 \$50 \$100 \$500 Other

Please make checks payable to "Let Them Hear Foundation"

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LET THEM HEAR FOUNDATION

## ACCESS

Inspired to make a difference in the lives of children and adults, the Foundation has begun its travels across the globe to bring hearing technology to those who currently do not have access. Within this past year, Let Them Hear has sent both medical and audiological teams to Costa Rica and Peru to help educate and establish cochlear implant programs in combination with local professionals. With two successful trips and new growing international programs behind us, our search began for other professional and patient groups needing assistance.

Not having to look very far, we were approached by friend and patient Sally Edwards early in 2004. Having traveled with Project Grace on a separate mission, Sally came to LTHF with details of a school in Kunming China where there were many severely hearing impaired children who did not have hearing aid devices. Because of a lack of equipment, audiologic services, and funding for amplification, documentation of each child's loss had never been performed and the option of having new hearing aids did not exist. After further investigation into China and learning of its limited audiologic resources the Foundation determined that an initial mission to Kunming should be made. The goal of the trip was to fit amplification devices on the children to assess benefit and make professional contacts to begin the process of building both medical and audiologic support. With the help of several organizations the

trip to Kunming became a reality! Menlo Park Presbyterian Church was instrumental in raising funds to purchase hearing aids for the children at the Hua Xia school. Lisound, a local Chinese hearing aid manufacturer, was able to provide hearing aids at a significantly reduced cost, as well as five representatives to help take earmold impressions and fit the hearing aids.



On May 16, 2004, four individuals representing the Foundation flew over 16 hours from San Francisco to Kunming ready to meet the children and assess their hearing situation. With the help of several translators, endless hours of testing, counseling and fitting of hearing devices ensued. Many thanks go out to each of the Lisound workers who returned to their labs at the end of each long day to spend their evenings making all of the children's custom earmolds to fit with listening devices the next day. At the end of the trip, a total of 78 children had been

tested and 48 had been fit with either Lisound or donated hearing instruments! All of the children were deeply appreciative of their new hearing aids even those that received very minimal benefit as the gift of some hearing was far better than none. Knowing that this population group with such a profound loss was in desperate need of the advanced technology of cochlear implantation to provide improved benefit, the Kunming team came home with a new mission to help improve hearing healthcare.

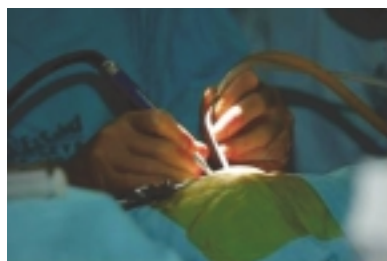
After much research and communication with professionals in China the LTHF team is very excited to return to Kunming in December 2004 for one week to identify five candidates for cochlear implant surgery. In February 2005 those candidates selected will not only receive a cochlear implant device via operation in the beginning of the week, but will also have their device turned on via programming at the end of the week, two processes in the United States that usually are separated by three weeks! This incredible one-week journey will also allow for the training of local surgeons to perform this operation as well as the training of support professionals to program the device accurately for the patients to hear. The Foundation is extremely pleased to build a working relationship with our new friends in China and we can hardly wait to update you about this mission's ongoing success!



## RESEARCH

The Let Them Hear Foundation is excited to share with you the variety of research projects currently underway! For patients who are currently using a cochlear implant or who may be a candidate you might be interested to know that we are actively involved in several studies. Currently we are participating in a study with Cochlear Corporation assessing the benefit of children who have been using their implant for several years and then recently received a second device with either the same or updated technology. The Hybrid cochlear implant, a second study with Cochlear Corporation, is about to be completed for adults who have much hearing in the low frequencies and little in the high frequencies. This device is actually the first of its kind and combines the use of an acoustic hearing aid to provide low frequency benefit, while the cochlear implant pro-

vides information for the high frequencies. In addition to these projects, check out our new studies that we're about to begin: implanting children with a device in each ear simultaneously with MedEl Corporation as well as a similar study for adults with Advanced Bionics Corporation. We will also



evaluate Cochlear Corporation's, System 4, their latest technology being brought to patient care.

Have you taken a tour and checked out the Foundation's Middle Ear Mechanics Laboratory? This center is currently investigating new prostheses to be used in reconstructive ear surgery

to improve certain types of hearing losses. Next to this lab we also have a fully equipped Temporal Bone Laboratory for doing anatomical studies. You may know already that in our bodies the temporal bone houses our hearing and vestibular apparatus. These bones are also used in the



Middle Ear Mechanics Laboratory for testing prostheses for hearing reconstruction in the actual environment of the middle ear.

We've recently been hard at work designing databases, which now currently contain collected data on surgical outcomes for different ear disorders. Analysis of this data

helps us understand and predict hearing outcomes and long term function after certain procedures. We are excited at the potential of this information from these databases to further refine and improve our practices!

Other interesting projects that we are excited about beginning include a collaborative effort to study the ability to localize sound in bilateral cochlear implant recipients and bone anchored hearing aid (BAHA) users. We also have plans to use our new posturography machine (an apparatus used to test dizziness) with a separate device that will help us diagnose certain types and causes of dizziness. We are extremely enthusiastic, and hope you are too, about all of our research endeavors and hope they will continue to augment the care and expertise we offer!