



## East Bay Chapter Newsletter October 2023

**Our October Meeting will be on October 14. It will be a Zoom meeting. Please register for this meeting [here](#).**

**TOPIC: All About Hearing Assistive Technology.** Kay Tyberg is a very active member of HLAA who has experienced lifelong hearing loss. She is President and co-founder of her home Blair County Pennsylvania chapter in Altoona, and previously led and founded at least two other HLAA chapters in Pennsylvania. She has volunteered in many capacities serving Deaf and hard of hearing people in and outside of HLAA, including as Chairperson of the Telecommunications Relay Service of the Pennsylvania Public Utilities Commission. Kay was the recipient of the HLAA National Outstanding Award in 2001, and a since 2013 has been a National Consumer Hearing Assistive Technology Trainer (N-CHATT), HLAA's technology education program.

For this month's program Kay Tyberg will present about the broad landscape of hearing assistive technology (HAT) – in the home, in public and beyond. She will discuss useful tools, devices and apps, where to find them and how to advocate for HATs to meet your needs, whether for the theater, traveling, church, emergency situations or other needs.

**Presented Via Zoom, Greetings 9:30 a.m.; presentation 10:00 a.m.**

**Register for this FREE event [HERE](#).** Or use this link if you are getting a hard copy of the newsletter: <https://us02web.zoom.us/meeting/register/tZlqcOurpjstG9wdjhCVnrpj5xVNDqoiEWnQ>. After you register, you'll be sent the link to join the meeting. Consider staying after the meeting for AfterWords – a chance to ask more in-depth questions, as well as discuss anything you want with fellow members!

**HLAA-EB posts our newsletters to the California State Association webpage and a link on our website. VOLUNTEER! Contact us to let us know you are available! Check out our website at: <http://www.hearinglosseb.org/> Contact us at: [info@hearinglosseb.org](mailto:info@hearinglosseb.org)**

### **We need your help! Can you volunteer? Contact us at: [info@hearinglosseb.org](mailto:info@hearinglosseb.org)**

Here is a list of volunteer positions we are seeking to fill:

- **Volunteer Coordinator**: Contact people who said they could volunteer and tell them about volunteer needs. Recruit for those positions.
- **National Chapter Coordinator/Liaison**: Coordinate with the national organization (HLAA). Go to online meetings.
- **Outreach Coordinator**: Organize a table for our chapter at various street fairs and other venues. Set up the table. Recruit volunteers to help with the events. Reach out to people who participate in our meetings. Let people know about our chapter.

# Meeting Notes: *Hearing Loss, Hearing Devices & All That Jazz: Impact on Music Perception & Enjoyment*

At the Sept. 9, 2023 HLAA-EB meeting, our guest speaker was Isaac Alter, AB, who was making his 1<sup>st</sup> visit to our East Bay Chapter to speak about the effect that hearing loss and hearing devices may have on an individual's perception and enjoyment of various types of music.



## ***A Little Bit of Background***

Initially, Isaac introduced himself and offered us some background about himself and his evolving interest in music. He is a Bay Area native, born and raised in Los Altos, California. He attended and graduated with a AB from Harvard College. He is currently a 2<sup>nd</sup> year medical student in the Dept. of Otolaryngology (Head & Neck Surgery) at Columbia University.

Enthusiastically, Isaac acknowledged that music has always been an important part of his life -- as a hobby and eventually a career. As a young child, he would sing along with the radio, and his passion for music only grew in high school. He later served as a conductor for 2 years and is also a former professional Broadway musician.

## ***Research Overview & Disclaimers:***

Based on this lifelong passion for music and his special interest in the effects that music can have on people, Isaac is currently working closely with lead researchers Dr. Anil Laiwani and Dr. Alex Chern at Columbia University in conducting a research study that examines the effect of hearing loss on music enjoyment. In his presentation, Isaac described the current state of research on this topic and what researchers have found in the past. He also noted that their research team is currently recruiting individuals who use hearing aids or cochlear implants to participate in their research study.

Isaac set out a few disclaimers about his presentation:

- Opinions are his own.
- He is not a licensed medical provider.
- Study results are aggregates of a wide range of people.
- His intention is to provide an unbiased and non-offensive presentation.

## ***Poll of Audience***

Before proceeding further, Isaac polled the current online audience, but the in-person audience was unable to participate in this poll due to technical issues. He requested responses to 2 questions: and then presented a summary of the audience members' answers after each question.

**Q 1:** What type of hearing device (HD) do you use: hearing aids (HA's); not use any hearing devices; cochlear implants (CI's); combination of hearing devices? **A 1:** There was a critical mass of persons who did respond with a decent spread across users of hearing devices and in line with the research.

**Q 2:** How have hearing devices affected enjoyment of music? **A 2:** More + 42%; Unchanged = 15%; Less + 42%.

## **Review of How We Hear & Terms Used in the Research**

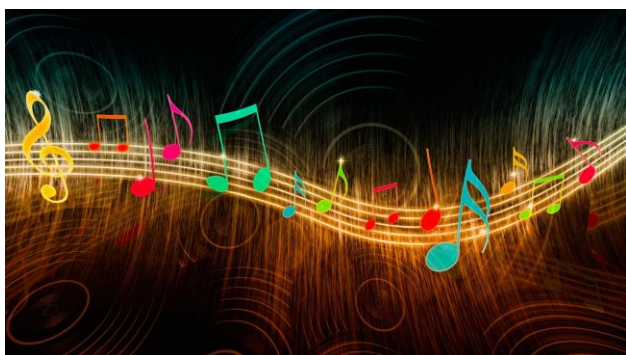
Prior to discussing the relationship between hearing loss and music enjoyment, Isaac provided a brief review of how we hear, types of hearing loss, assistive hearing devices such as hearing aids and cochlear implants, as well as some of the key music terms used in the research.

- **How We Hear:** Isaac described the hearing process, referring to detailed diagrams of the ear, its components, and the role of 3 types of energy that impact hearing: mechanical, energy, fluid energy, & electrical energy.
- **Hearing Loss:** There are 3 types of hearing loss which individuals may experience in one or both ears: conductive hearing loss; sensorineural hearing loss; or some combination of the other 2 types of hearing loss.
- **Assistive Hearing Devices:** Isaac compared the workings of assistive hearing devices such as hearing aids and cochlear implants which are often used by persons with more severe hearing loss.
- **Music Component Terms** Isaac defined some of the major music terms used in the research as follows:
  - **Pitch** – Frequency of sound.
  - **Rhythm** – How fast beats are repeated.
  - **Timbre** – How sounds associate with others.
  - **Harmony** – Sounds come together.
  - **Harmonics** – Contributes to harmony of sounds.

For research purposes, the terms “music perception” and “music enjoyment” are defined differently and typically measured separately. Music perception has been defined as how much can an individual perceive and often broken down by the above musical components, Music enjoyment is defined as how much an individual enjoys music and generally considered harder to measure than music perception.

### **Research on Hearing Aids & Music Perception & Enjoyment:**

Apparently, there is much less existing research available on the impact of hearing aids on users’ perception and enjoyment of music compared to research available on cochlear implant users’ music perception and enjoyment. There has not been one uniform way to measure and report research on hearing aid users’ enjoyment of music. Although research to date seems to indicate that HA’s may improve a user’s music enjoyment, but generally music enjoyment is reduced by hearing loss and is not returned to normal hearing, even with HA’s.



## **Research on Cochlear Implants & Music Perception & Enjoyment:**

Research on music perception for persons with cochlear implants is summarized below:

<b>PITCH</b>	<b>RHYTHM</b>	<b>TIMBER</b>
Place-pitch mismatch	Intact tempo	Poor instrument ID
Lacks bass frequencies	Preserved basic rhythmic patterns	Temporal envelope dependence
Less pitch clarity & range	Preserved rhythmic clocking	
Fused polyphonic tones		
Distorted harmonic intervals		
Distorted melodic contour intervals		

<b>SOUND QUALITY</b>	<b>DYNAMICS</b>	<b>EMOTIONS</b>
Distorted sound quality	Compressed range	Reduced enjoyment
Poor stream segregation	Decreased pitch clarity with increased volume	Limited appraisal
		Tempo-based musical emotion
		Consonance & dissonance are indistinguishable

As shown in the table above, the existing research on the impact of using cochlear implants on the perception of music is more readily available and in more detail for each of the music components. It seems that there is little or no correlation between music perception and music enjoyment for individuals with CI's. Music enjoyment does seem to be decreased for about 50% of those with CI's compared to persons with normal hearing. However, research has found that music enjoyment is better for those persons with CI's in two ears compared to only one ear. Some research has suggested that music enjoyment is increased for CI users with increased bass and rhythm, along with reduced harmonics (perhaps because of the reduction in extra noise coming in).

### **Hot Off the Presses – BAHA's & Music:**

Recent research on music perception in bone-anchored hearing implant users has demonstrated that BAHA users may perform as well as their contralateral better ear on music perception.

### **Challenges in Conducting Music Enjoyment Research:**

In addition to the issues of measuring music enjoyment discussed above, there are several other challenges in conducting music enjoyment research, as follows:

- ✓ Soundproof booth vs. "natural" listening
- ✓ Recruitment and diversity of research participants: age, ethnicity, & income level of participants
- ✓ Wide individual variability in terms of types & severity of hearing loss
- ✓ Variability of music genre (type of music); live vs. recorded; familiar vs. novel music

## ***Music Rehabilitation in the Literature:***

Research on music rehabilitation in the literature has suggested the following:

- ❖ Music rehabilitation improves music and speech perception.
- ❖ Music rehabilitation seems to benefit bilateral & bimodal CI users, but there is little existing data on the benefits of music rehabilitation for HA users.
- ❖ Longer music rehabilitation training and practice increase the benefits to participants, especially when starting with tiny, simple steps and gradually moving forward.
- ❖ The age at implantation, prior musical background, and post implantation listening correlate with music outcomes.
- ❖ Many individuals do not rely on rehab for music enjoyment, perhaps because a clear standard of care and outcomes are lacking on this issue.

## ***What Individuals Can Do to Improve Their Music Enjoyment:***

There are a number of things that individuals can do to improve their music enjoyment. For example:

- ✚ Talk to your audiologist about re-programming and making adjustments in your hearing devices.
- ✚ Rely on trial & error with your audio set-up and your hearing devices.
- ✚ Try listening to music using your own audio system & speakers at home, in your car & other settings.
- ✚ Build your own music rehab program, starting with simple, familiar music, gradually moving forward.
- ✚ Incorporate other senses, e.g., lighting, tactile, vibrations, etc.
- ✚ Play an instrument and sing individually or in groups.
- ✚ Try out one of the online music rehab programs available.
- ✚ Contact the representatives for the manufacturers of your hearing devices for music rehab ideas.
- ✚ Check out some of the over-the-counter equipment for improving your music enjoyment.
- ✚ Participate in research being conducted on hearing loss, hearing devices and music rehabilitation.

## ***Wrap-Up:***

In wrapping up his presentation, Isaac stated the overall goal of their current research project: Understanding the effects of hearing loss and hearing devices on music enjoyment. He then summarized the major conclusions that they have been able to draw based on data collected from their on-going research study, as follows:

- ✚ Hearing is an extremely complex mechanism involving environmental stimuli, anatomical components, and the brain.
- ✚ Hearing aids (HA's) improve music enjoyment, though not to the levels of normal hearing.
- ✚ Cochlear implants (CI's) decrease music perception and enjoyment, although results vary widely.
- ✚ There are several possible avenues to improving music perception and music enjoyment.
- ✚ Research and technology development are ongoing.

Finally, Isaac reminded us that they are actively recruiting: a) individuals with bilateral hearing aids (a hearing aid in each ear) and b) individuals with at least one cochlear implant. Participants will be asked to complete a 20 to 30-minute online survey. The study involves listening to musical clips on your computer and answering questions about them. No headphones or other special equipment are required. If you are interested in participating in their research study, you may contact Isaac Alter at his email stated below.

**For More Information or Questions;** Contact Isaac Alter directly at his email: [ila2111@cumc.columbia.edu](mailto:ila2111@cumc.columbia.edu)

~ *Kathy Fairbanks*

## **Ferdinand Berthier, a Deaf and Hard of Hearing advocate pioneer turned 220 years old as of September 30.**



A recent Google Doodle celebrated Deaf French educator and intellectual Ferdinand Berthier. He was one of the first advocates for Deaf culture in a time when those who had hearing differences were outcast by society.

Berthier was born in Saône-et-Loire, France on September 30 in 1803. As an eight-year old Deaf child, he started attending the National Institute for the Deaf in Paris. His parents hoped he would learn basic vocational and literacy skills to prepare him for a job as a tradesman. However, Berthier thrived in school and drew inspiration from his teachers (such as Laurent Clerc) to pursue a career in education. After further schooling, he returned to teach at the National Institute for the Deaf. By age 27, he became one of the school's most senior professors.

In 1834, Berthier organized the first silent banquet for Deaf Frenchmen. In the following years, women, journalists, and government officials began to attend the annual event. Berthier also successfully petitioned the French government to create an organization that represented the Deaf community's interests. The Société Centrale des Sourds-muets was born. The first formalized group of its kind, it helped organize adult education classes and mutual aid efforts for people with Deafness.

After becoming a public figure through those initiatives, Berthier used his newfound fame to spotlight other inspiring Deaf people and teachings. He wrote books about the history of sign language and biographies about those who fought for Deaf rights, often referencing sign-language poets as authors in his work. Meanwhile, he pushed Société Centrale des Sourds-muets to become a global organization. In 1849, Berthier received the Chevalier de la Légion d'honneur—the first Deaf person to be awarded France's highest honor. Berthier remains one of the key activists for Deaf rights, and his efforts advanced education and perception of the deaf and hard-of-hearing community across Europe and America. Today, silent banquets are still held around the world.

Berthier's work also helped to raise awareness of the importance of sign language and Deaf culture, and to promote the use of sign language in Deaf education. As a result of the hard work and advocacy of Berthier, Deaf and hard of hearing people are now able to enjoy more of their human rights than ever before including access to medical care, and the right to drive vehicles. **Thank you Monsieur Berthier for your contributions to deaf and hard of hearing society!**

**Get your FREE Police Communication Placards and window stickers!**

**Anyone who has paid their membership dues for this year can receive these items at the meetings in person.** The Police Communication Placards and window stickers will notify any officer, if you get stopped by the police, that you have some hearing loss and will allow the police to treat your disability with respect. They should make it easier to communicate with the police officer.

## ***Happy October!***



### ***East Bay Leadership Team***

The chapter is run by a Steering Committee, Leader: Len Bridges (Acting Leader)  
Outreach, National Chapter Coordinator/Liaison: Linda Gee, [linda.gee4@gmail.com](mailto:linda.gee4@gmail.com)  
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Technical/Audio Loop: Peter G. Townsend, [peterg.townsend@gmail.com](mailto:peterg.townsend@gmail.com)

### ***JOIN HEARING LOSS ASSOCIATION OF AMERICA (HLAA) – THEY ADVOCATE FOR YOU!***

Go to this URL to join: <https://www.hearingloss.org/make-an-impact/become-a-memberrenew/>  
**OR**, if you prefer to pay by check or card thru the mail, Nancy Asmundson has membership forms to send to you, or contact HLAA at 301-657-2248 or e-mail [membership@hearingloss.org](mailto:membership@hearingloss.org). Your membership form & payment go to HLAA, 6116 Executive Blvd., Suite 320, Rockville, MD 20852.  
**COSTS:** Regular Membership/year (will receive *Hearing Life* magazine in print and digital format): Individual - \$45; Couple/Family - \$55; Professional - \$80; Nonprofit - \$80;  
Veteran Membership: Complimentary 1-Year Regular Membership & Lifetime Online Membership.