## December 2017 Hearing Loss Hearing Loss Association of America

North Shore of Long Island Chapter

### Meeting Location

Long Island Jewish Hearing & Speech Center is located on the grounds of the Long Island Jewish Medical Center. Enter the grounds from LAKEVILLE ROAD and it is the first building on your left. Free parking is available behind the hearing and speech building: first entrance to parking lot after building. DO NOT go into the main parking building. Go to the Conference room on the Lower Level 270-05 76th Avenue New Hyde Park, NY 11040.

If you are in doubt as to whether there is a meeting, or if you'd like further information, please call Sal: 516-331-0231.

# Meeting News Wednesday, January 17, 2018

*Note:* There is no HLAA meeting in December. We wish all of you happy holidays, and look forward to seeing you at our next meeting on January 17th!

### Refreshments and Social Time begins 6:30pm. Meeting begins 7:00pm.

### *Topic:* Taking Next Steps To Better Hearing *Speaker:* Jane Ledingham

**Jane Ledingham** joined the Advanced Bionics Family in her role as a Cochlear Implant Consumer Specialist in September of 2016. She supports candidates, recipients and their families in the Northeast Region.



Jane received her undergraduate degree from Douglass College and two Master's Degrees from Montclair State University and Smith College. She has extensive experience as a Teacher of the Deaf/Hard of Hearing, Listening & Spoken Language Specialist – Certified Auditory Verbal Therapist, as well as a Speech/Language Pathologist. Before joining Advanced Bionics, Jane worked for many years in education, teaching students with hearing loss, training professionals, and providing Auditory Verbal Therapy for children and adults. She has presented at numerous professional venues including the AG Bell Convention on topics related to hearing loss. She has been a dedicated professional and is now using her expertise at Advanced Bionics.

On a personal note, Jane lives in Bergen County New Jersey. She has two beautiful daughters. Her oldest graduated from Penn State University and is currently

Continued on Page 5



North Shore of Long Island Chapter

### Chapter Planning Committee

HLAA North Shore Chapter of L.I.

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HLAA of North Shore Long Island does not necessarily endorse the opinions of our speakers, goods & services.

### Want to Listen Better? Lend a Right Ear

https://www.sciencedaily.com/releases/2017/12/171206090611.htm

Listening is a complicated task. It requires sensitive hearing and the ability to process information into cohesive meaning. Add everyday background noise and constant interruptions by other people, and the ability to comprehend what is heard becomes that much more difficult.

Audiology researchers at Auburn University in Alabama have found that in such demanding environments, both children and adults depend more on their right ear for processing and retaining what they hear. Danielle Sacchinelli will present this research with her colleagues at the 174th Meeting of the Acoustical Society of America, which will be held in New Orleans, Louisiana, Dec. 4-8.

"The more we know about listening in demanding environments, and listening effort in general, the better diagnostic tools, auditory management (including hearing aids) and auditory training will become," Sacchinelli said.

The research team's work is based on dichotic listening tests, used to diagnose, among other conditions, auditory processing disorders in which the brain has difficulty processing what is heard.

In a standard dichotic test, listeners receive different auditory inputs delivered to each ear simultaneously. The items are usually sentences (e.g., "She wore the red dress"), words or digits. Listeners either pay attention to the items delivered in one ear while dismissing the words in the other (i.e., separation), or are required to repeat all words heard (i.e., integration).

According to the researchers, children understand and remember what is being said much better when they listen with their right ear. Sounds entering the right ear are processed by the left side of the brain, which controls speech,

Continued on Page 5

## Ringing in Ears Keeps Brain More at Attention, Less at Rest, Study Finds

### By Science Daily: http://bit.ly/2gZV1hX

Tinnitus, a chronic ringing or buzzing in the ears, has eluded medical treatment and scientific understanding. A new study by University of Illinois researchers found that chronic tinnitus is associated with changes in certain networks in the brain, and furthermore, those changes cause the brain to stay more at attention and less at rest. The finding provides patients with validation of their experiences and hope for future treatment options.

"Tinnitus is invisible. It cannot be measured by any device we have, the way we can measure diabetes or hypertension," said study leader Fatima Husain, a professor of speech and hearing science at the University of Illinois. "So you can have this constant sound in your head, but nobody else can hear it and they may not believe you. They may think it's all in your imagination. Medically, we can only manage some symptoms, not cure it, because we don't understand what's causing it."

One factor that has complicated tinnitus research is the variability in the patient population. There are a lot of variables—for example, duration, cause, severity, concurrent hearing loss, age, type of sound, which ear and more—which have led to inconsistent study results.

"We have been so swamped by variability that finding anything that is consistent, that gives us one objective metric for tinnitus, is very exciting," said Husain, who also is affiliated with the neuroscience program and the Beckman Institute for Advanced Science and Technology at Illinois.

Using functional MRI to look for patterns across brain function and structure, the new study found that tinnitus is, in fact, in the hearers' heads—in a region of the brain called the precuneus, to be precise.

The precuneus is connected to two inversely related networks in the brain: the dorsal attention network, which is active when something holds a person's attention; and the default mode network, which are the "background" functions of the brain when the person is at rest and not thinking of anything in particular.

"When the default mode network is on, the dorsal attention network is off, and vice versa. We found that the precuneus in tinnitus patients seems to be playing a role in that relationship," said Sara Schmidt, a graduate student in the neuroscience program and the first author of the paper.

The researchers found that, in patients with chronic tinnitus, the precuneus is more connected to the dorsal attention network and less connected to the default mode network. Additionally, as severity of the tinnitus increased, so did the observed effects on the neural networks. The results were published in the journal *NeuroImage: Clinical*.

"For patients, this is validating. Here is something related to tinnitus which is objective and invariant," Husain said. "It also implies that tinnitus patients are not truly at rest, even when resting. This could explain why many report being tired more often. Additionally, their attention may be engaged more with their tinnitus than necessary, and that may lessen their attention to other things. If you have bothersome tinnitus, this may be why you have concentration issues."

## If You're New, This is for You!

More than 48 million people in the US have a hearing loss, which can hinder daily communication. By age 65, one in three Americans has a hearing loss. This invisible condition affects the quality of life of the individuals with hear loss, as well as family, friends, coworkers and everyone with whom they interact. HLAA believes people with hearing loss can participate successfully in today's world.

Founded in 1979, the mission of HLAA is to open the world of communication to people with hearing loss through information, education, support and advocacy.

HLAA is the nation's foremost membership and advocacy organization for people with hearing loss. HLAA publishes the bimonthly *Hearing Loss Magazine*, holds annual conventions, a Walk4Hearing, and more. Check out: www.HearingLoss.org



The North Shore Chapter is a dynamic group of individuals working together as a team. To join, please fill out the Membership Form in this newsletter. Welcome!



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#### Want to Listen Better? Lend a Right Ear, Continued from Page 2

language development, and portions of memory. Each ear hears separate pieces of information, which is then combined during processing throughout the auditory system. However, young children's auditory systems cannot sort and separate the simultaneous information from both ears. As a result, they rely heavily on their right ear to capture sounds and language because the pathway is more efficient.

What is less understood is whether this right-ear dominance is maintained through adulthood. To find out, Sacchinelli's research team asked 41 participants ages 19-28 to complete both dichotic separation and integration listening tasks. With each subsequent test, the researchers increased the number of items by one. They found no significant differences between left and right ear performance at or below an individual's simple memory capacity. However, when the item lists went above an individual's memory span, participants' performance improved an average of 8 percent (some individuals' up to 40 percent) when they focused on their right ear.

"Conventional research shows that right-ear advantage diminishes around age 13, but our results indicate this is related to the demand of the task. Traditional tests include four-to-six pieces of information," said Aurora Weaver, assistant professor at Auburn University and member of the research team. "As we age, we have better control of our attention for processing information as a result of maturation and our experience."

In essence, ear differences in processing abilities are lost on tests using four items because our auditory system can handle more information.

"Cognitive skills, of course, are subject to decline with advance aging, disease, or trauma," Weaver said. "Therefore, we need to better understand the impact of cognitive demands on listening."

### Ringing in Ears Keeps Brain More at Attention, Less at Rest, Study Finds, Continued from Page 3

However, patients with recent-onset tinnitus did not show the differences in precuneus connectivity. Their scans looked more like the control groups, which begs the question of when and how changes in brain connectivity begin and whether they can be prevented or lessened.

"We don't know what's going to happen to the recent-onset patients later, so the next step is to do a longitudinal study to follow people after developing tinnitus and see if we can spot when these types of changes with the precuneus start to happen," Schmidt said.

The researchers hope their findings generate new paths for future research, providing one invariant metric to look for and guidelines for patient groupings. "Knowing that duration and severity are factors is important, and can help guide future study design. We can look at subgroups and see differences," Schmidt said. Husain's group currently is conducting a study to look at tinnitus across military and civilian populations.

#### Meeting News, Continued from Page 1

living in New York City. Her youngest daughter attends the Schreyer Honors College at Penn State University as a Chemical Engineering student. Jane, her husband Rick, and the girls enjoy visiting New England on vacations and attending Penn State football games!



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HLAA opens the world of communication to people with hearing loss through information, education, support, and advocacy. HLAA is a 501(c)(3) organization.

### **MEMBERSHIP FORM**

I'd like to: 🗆 Become a member of HLAA 🖾 Renew my membership 🖾 Give a gift membership

#### My Membership/Renewal

Name:			
Address:			
City:		State:	Zip: Country:
Email:			Phone:
Chapter I belong to:			
How did you learn ab	out HLAA?		
Gift Membership			
Name:			
City:		State:	Zip: Country:
Email:			Phone:
Individual	Annual USA Membership Fees \$35 (1 year) \$95 (3 years)	Annual Non-USA Membership Fees	My membership fee is \$
	□ \$140 (5 years)		Plus I'm adding a tax
Couple/Family Professional	□ \$45 (1 year) □ \$60 (1 year)	□ \$55 (1 year) □ \$75 (1 year)	deductible donation of \$
Library/Nonprofit	🗆 \$50 (1 year)	□ \$75 (1 year)	My total is \$
Student	🗌 🗆 💲 \$20 (1 year)	N/A	,

#### 3 Ways to Join, Renew or Give a Gift Membership

1. Return this form to your chapter with your check made payable to HLAA.

□ \$300 (1 year)

2. Mail or fax this form to the HLAA office at the address above with your credit card information.

□ \$325 (1 year)

3. Visit www.hearingloss.org/content/join and use your credit card online. (this is a secure website

Credit Card Payment Information:American ExpressDiscoverMasterCardVISA					
Card Number:	Expiration Date	_ Security Code			
Name:	(as it appears on card)				
Signature:	(Include your billing address if different than membership address above.)				

Corporate





### By Michelle Gross

If you have used hearing aids to donate, please address the package to:

John McNamara, Au.D., Ontario Hearing 2210 Monroe Ave., Rochester, NY 14618 **Put on the lower left corner of the package:** "Finger Lakes Region Lions Club"

(Cleaning tools, cases, most accessories, etc. have virtually no value and are discarded.) Aids that are usable are cleaned and checked and made ready for sending to the Lions Club for qualified recipients.

You can obtain a receipt for your donation (for tax purposes) but **you must request it**. And, thanks for considering donating your used aids.

Trudie Katz Walker

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7



North Shore of Long Island Chapter http://hearingloss-longisland.org

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## Looking Back... Deaf Stuntwoman Kitty O'Neil

On December 6, 1976 that professional stuntwoman Kitty O'Neil set a record for land speed by a female driver in Oregon's Alvord Desert: 512 miles per hour. Born deaf, she became a champion diver at a young age. Her work later as a Hollywood stuntwoman was featured in TV shows like *Quincy, Baretta* and *The Bionic Woman* along with movies like *Smokey and the Bandit, The Blues Brothers* and *Airport '77*. She set a record for the highest stunt fall by a woman (105 feet). She has held as many as 22 speed records on land and water. A movie was made about her life in 1979 titled *Silent Victory: The Kitty O'Neil Story.* 



8