



# March 2023 Newsletter

East Bay Chapter

**On March 11 our topic will be:**

**CAPTIONS — TV, landline, smartphone, apps and live**

Ann Thomas will be presenting about accessing captions in different contexts, including on TV, landline phones, smartphones, and Communication Access Real-Time Transcribers (CART) vs Automatic Speech Recognition (ASR) via apps. She will discuss best practices for taking advantage of captioning, the features of different apps and her recommendations for which provide the best user experience.

**Time to Renew your membership in our local chapter for only \$15 a year! Ways to renew: pay at our website on the “Donate” button in the upper right-hand corner; mail your renewal with your name, address, phone number, and e-mail to: East Bay Chapter, HLAA, P.O. Box 12484, Oakland, CA 94604-2484. See the back page to sign up and support National HLAA.**

Ms. Thomas is an award-winning hearing loss advocate and has won numerous national and state awards for her work on behalf of people with hearing loss. She is the President of the Hearing Loss Association of America-Diablo Valley Chapter (HLAA-DV), the HLAA Brand Ambassador, and a member of the HLAA Get in the Hearing Loop Committee. She discovered she was losing her hearing in 1997 and currently has 2 cochlear implants. **Social time: 9:30 a.m. Meeting begins: 10 a.m.**

**Register for this FREE event [HERE](#).** Or use this link if you are getting a hard copy of the newsletter: <https://www.hearinglosseb.org/monthly-meetings-1>. 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)**



**2023**  
**CONVENTION**  
**New Orleans, LA**  
**June 29 - July 1, 2023**

HLAA2023 Convention will be in New Orleans, Louisiana!!! Meet other members from around the country and hear the latest info! Any interest in attending? More information at [hearingloss.org](http://hearingloss.org). Our chapter is accepting applications for a chance to subsidize your trip!

## MEETING NOTES: “*Ototoxic Medications That Can Cause Hearing Loss*”

At our Feb. 11, 2023, HLAA-EB Chapter meeting, our guest speaker was Dr. Margaret (Meg) Wallhagen, Ph.D. GNP-BC, AGSF, FGSA, FAAN, Professor in the Department of Physiological Nursing, University of California, San Francisco, California. Dr. Wallhagen has conducted several research projects in gerontology and chronic care management. Her research and related publications focus especially on how older individuals and their families manage chronic illnesses, as well as changes that occur with age. For the last several decades, she has focused specifically on hearing loss, and in particular, the impact that some ototoxic medications or drugs may have on hearing.



In addition, Dr. Wallhagen, a Geriatric Nurse Practitioner, has served for many years as the Director of the UCSF/John H. Hartford Center of Gerontological Nursing Excellence, and Senior Nurse Scholar of the VA Quality Scholars Program. In 2018, she was honored as she became the very first recipient of UCSF’s Hearing & Speech Center’s Annual Integrity Award. She has quite a strong track record of community service to both local and national nonprofits, including her leadership as past Chair of the Board of Trustees of the Hearing Loss Association of America (HLAA).

**Objectives of Her Presentation on Ototoxic Medications:** Dr. Wallhagen set forth the following objectives:

- Describe the concept of ototoxicity and how medications affect hearing.
- Discuss key medications that are most associated with ototoxicity.
- Review prescriptions and over the counter (OTC) medications that may be associated with ototoxicity.
- Discuss the importance of putting decision-making about medications in the context of “what matters”.

**Definition of Ototoxicity:** Initially, Dr. Wallhagen defined the word “ototoxicity” as “. . . the pharmacological adverse reaction affecting the inner ear or auditory nerve characterized by cochlear or vestibular dysfunction”. She then expanded on her definition: Oto = Ear; Toxic = Causes damage such as tinnitus, hearing loss, and/or impaired balance. While referring to a PowerPoint diagram, she then outlined the ototoxicity process as follows: Ototoxicity includes cochleotoxicity as defined by its classification systems and neurotoxicity, both of which can be caused by ototoxic agents, such as ionizing radiation, pharmaceuticals, solvents, asphyxiants, nitrates, heavy metals, & other chemicals & compounds, thereby resulting in anatomical & functional damage.

**Types of Ototoxic Medications:** The following categories are examples of medications that may be ototoxic:

- ✓ Antibiotics – especially when given IV or in high doses.
- ✓ Diuretics – especially when given IV but may go out quickly; many can be reversible.
- ✓ Medications used for cancer treatment.
- ✓ Pain relief/anti-inflammatory medications – especially in high doses.

In fact, there are more than 200 medications, including both prescriptions and over the counter (OTC), that are noted to potentially cause ototoxicity, some of which may be reversible when stopped.

**Why Some Medications Are Ototoxic:** There are several reasons that some medications are ototoxic:

- Medications often have systemic effects, whereas very few can be precisely targeted.
- Understanding the actions of a drug and how it interacts with our bodies helps us understand the possible positive and negative side effects.
- Pharmacokinetics is the way that the drug travels in our body, how it is absorbed, distributed around the body, metabolized, or broken down, and how it is eliminated from our body. Factors that may influence drug travel in our body include:
  - Drug given orally or IV or IM.
  - Kidney function or liver function.
  - How much body water or adipose/fat tissue is in a person’s body.

- Drug characteristics, such as whether it dissolves well in water or fat.
- Ear cochlear characteristics, which are hard to study since they are not too accessible. Blood-brain & blood-labyrinth “barriers” may help keep drugs out, but these are not true barriers because how well they keep drugs out depends on characteristics of the drug.
- Pharmacodynamics is what the drug does in our body, meaning what the drug does to our body or how it affects or acts in our body. Many factors influence our body’s response to any drug or the specific effects of any drug on our body, including:
  - Co-morbidities or other health conditions.
  - Age – Our body water & fat change, as well as kidney & liver function change with age.
  - Concurrent use of other medications, which also may be ototoxic at higher doses.
  - “Therapeutic window” (time to affect) is the difference between the level of drug needed to have an effect vs. the level that will have an unidentified effect. For example, medications to treat cancer have a narrow “therapeutic window”.

**How Drugs Cause Ototoxicity:** There are many ways that drugs and other substances can affect the ear and cochlea. One common cause of damage is through “oxidative stress” created by “free radicals”. Free radicals occur when an atom or molecule has one or more impaired electrons in its outer orbit which makes it highly unstable and reactive wanting to become stable. At least 22 diseases are caused by the damage created by free radicals. The formation of free radicals causing DNA damage may be the result of UV light, inflammation of white blood cells, metabolism, smoking, ionizing radiation, and/or air pollution. As graphically illustrated by Dr. Wallhagen, antioxidants can help to “stabilize” free radicals by giving it an electron.

**The “What Matters” Decision Framework:** Dr. Wallhagen proceeded in describing a framework that may assist us in making decisions about “what matters” when taking medications that may put an individual at risk for hearing loss or other harm. As presented below, the framework provides 4 categories of questions that a person might ask oneself.

✚ **What Matters to You:**

- What do I value most that I don’t want to stop doing?
- What outcomes do I want or expect from the treatment?
- How soon will the treatment or exam have a positive impact?

✚ **Medication:**

- Does this medication affect my hearing or cause tinnitus?
- How will this medication affect doing what I want to do or like to do?
- What might be an alternative if an ototoxic medication is needed?
- What is the lowest effective dose? Can side effects be minimized?
- Can another drug be prescribed? Do I need all the medications I’m taking?

✚ **Mentation:**

- Does or will the medication affect my thinking?
- What strategies can I use to minimize cognitive changes (diet, exercise, games, social connections)?

✚ **Mobility:**

- Does the treatment or medication affect my mobility that helps in keeping me healthy, and how?

**Wrap-Up:** Dr. Meg Wallhagen wrapped up her excellent presentation by summarizing a few key points that she had earlier expressed, and then opened a Q & A session where she allowed audience members to share personal scenarios pertaining to how various medications have impacted their hearing and also ask questions regarding their use of certain types of drugs which might affect their hearing. Finally, Dr. Wallhagen suggested that anyone who needed further information or had questions about some of the topics discussed today to feel free to contact her at her email or phone number stated below.

**For More Information & Questions:** Email: [meg.wallhagen@ucsf.edu](mailto:meg.wallhagen@ucsf.edu) Phone: (415) 476-4965

~ **Kathy Fairbanks**

Happy St. Patrick's Day!

## JOKE CORNER



## East Bay Leadership Team

The chapter is run by a Steering Committee, Leader Dale Davis, [ddavis94605@gmail.com](mailto:ddavis94605@gmail.com)

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## 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.