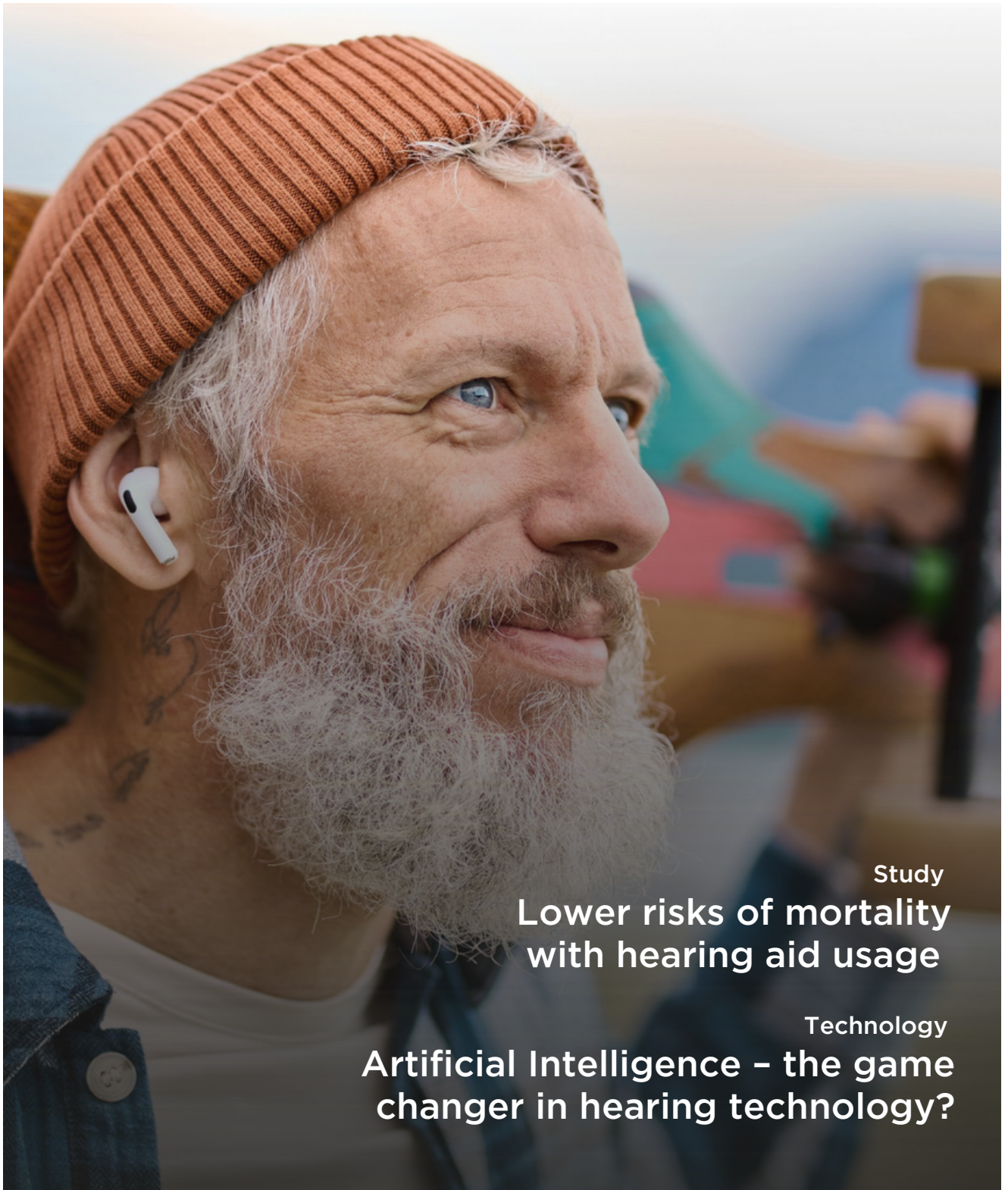


Hearing Loop

NEWSLETTER

MARCH — 2024

ISSUE No7



Study
**Lower risks of mortality
with hearing aid usage**

Technology
**Artificial Intelligence – the game
changer in hearing technology?**

Dear partner,

The year 2024 started off with new evidence on the health benefit of hearing intervention. A new large-scale analysis of population data in the US, recently published in The Lancet, revealed that adults with hearing loss who regularly used hearing aids had a lower risk of all-cause mortality than those who never wore them. Learn more about this research and other exciting topics.

Enjoy the read!

The Triton Hearing Team

FOCUS TOPIC



Lower risks of mortality with hearing aid usage

Hearing loss is recognized as an independent risk factor for negative health outcomes and mortality. However, it has long been unknown whether hearing rehabilitation can reduce the mortality risk for those with hearing loss. A cross-sectional study with more than 1,800 participants with hearing loss has now aimed to examine the associations of hearing loss, hearing aid use, and mortality in the USA.¹

Leading researcher Dr Janet Choi summarizes the exciting results as follows: "The group of patients who were using hearing aids regularly had a 24% lower risk of mortality compared to the group who never use hearing aids." Multiple mechanisms have been proposed by the research team to explain the association between hearing loss and mortality. The first possible mechanism involves common pathology that affects both

hearing and comorbidities leading to death, such as cardiovascular disease, diabetes, and dementia. The second possible mechanism is based on the effect of hearing loss on frailty, an age-related vulnerability to adverse health outcomes and a strong independent predictor of mortality.

Future research will be needed to follow up on the study's findings, verify the proposed mechanism and further investigate the potential protective effect of hearing aid use against mortality for adults with hearing loss.

Read the full study.



RESEARCH

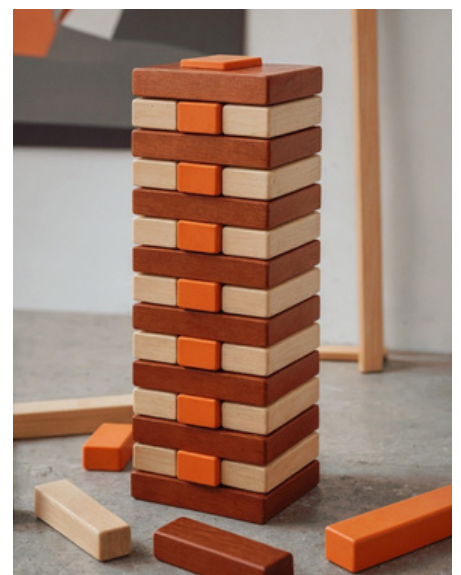
New insights on the correlation between hearing loss and dementia

Following up on the growing number of studies, a recent research project in Denmark has provided further evidence on the positive impact of hearing aids on cognitive health.²

In a population-based cohort study, featuring the data of more than 500,000 persons aged 50+, researchers from the University of Southern Denmark have found that people with hearing loss had a higher risk of developing dementia compared to those with normal hearing. Additionally, the analysis revealed that people with hearing loss that were using hearing aids had a lower risk of dementia compared with those with untreated hearing loss.

"We found that the risk of developing dementia was 20% higher for people who didn't wear hearing aids compared to people with normal hearing. People who used hearing aids had a 6% increased risk of developing dementia. This suggests that wearing a hearing aid can prevent or delay the development of dementia", says Manuella Lech Cantuaria, principal investigator of the study.

Read more.



What's your hearing number?

Many of us know our height, weight, vision, and perhaps blood pressure. But what about our hearing? While hearing health is foundational to healthy ageing, and hearing loss is strongly linked to adverse health outcomes, there is no consistent metric to understand and talk about our hearing health status.

The Johns Hopkins Cochlear Center for Hearing and Public Health has now launched the "Know Your Hearing Number" campaign to introduce a common metric for hearing. The Hearing Number is the four-frequency pure tone average, or PTA4, which is the measurement of the decibel level where a tone is just audible to the listener for frequencies 500, 1k, 2k and 4k Hertz. It reflects how loud speech typically must be for someone to hear it.

Ranging from about 0 to 100 dB, the Hearing Number can be directly applied to the established levels of hearing loss:

- Mild: 20 to 34
- Moderate: 35 to 49
- Moderately severe: 50 to 64
- Severe: 65 to 79

The individual's Hearing Number is determined by a diagnostic audiometric examination conducted by a hearing care professional.

Learn more.



TECHNOLOGY

Artificial Intelligence – the game changer in hearing technology?

Artificial Intelligence (AI) is becoming increasingly common in our daily lives. While the benefits and threats, the possibilities and limits of AI are still being discussed, there is no doubt that AI is here to stay.

As in many industries, researchers in the hearing industry are exploring various ways how to leverage AI for better outcomes for hearing aid users. While machine-based learning has been in use in many recent hearing aid models, a hearing solution with generative AI is still to be introduced into the market.

Various research projects, including one at the University of Lucerne, have focused on solving the Cocktail Party effect, one of the largest challenges in hearing technology to date. The cocktail party effect is when the brain focuses on one

auditory stimulus, like a conversation in a noisy room, while excluding others from awareness. This ability, called "selective attention" or "selective hearing", allows us to prioritize important sounds while ignoring the rest.

First results of these research projects are raising hopes that through AI we might be able to tackle the most common difficulties faced by individuals with hearing loss and hearing aids: the ability to converse with another person despite competing speakers and background noise.

More info.



EDUCATION



6th Virtual Physician Symposium on Cognition 2.0

The brain and ears are equal partners

In our EMEA and Americas symposia on March 21 and March 26 respectively, renowned experts discussed how hearing loss is linked to cognitive health. Topics ranged from short-term benefits of hearing intervention on cognition to latest research findings and hearing intervention for well-being.

If you missed the symposium, you can now listen to the recordings.

Access the recordings here.





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¹Choi, J. S., Adams, M. E., Crimmins, E. M., Lin, F. R., & Ailshire, J. A. (2024). Association between hearing aid use and mortality in adults with hearing loss in the USA: a mortality follow-up study of a cross-sectional cohort. *The Lancet Healthy Longevity*, 5(1), e66-e75. ²Cantuaria, M. L., Pedersen, E. R., Waldorff, F. B., Wermuth, L., Pedersen, K. M., Poulsen, A. H., ... & Schmidt, J. H. (2024). Hearing Loss, Hearing Aid Use, and Risk of Dementia in Older Adults. *JAMA Otolaryngology-Head & Neck Surgery*