

Well-Hearing is Well-Being

Cheri Hebeisen, Au.D., CCC-A

A Sonova brand

PHONAK
life is on

Learning Outcomes

PHONAK
life is on

- Participants will be able to summarize the connection between hearing loss and well-being
- Participants will be able to identify cognitive, social and physical risk factors associated with hearing loss
- Participants will be able to describe how well-being is connected to well-hearing

Presented in partnership with

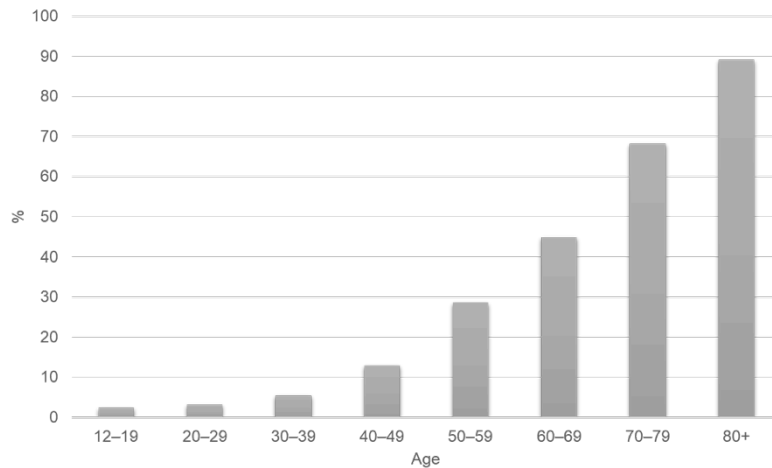
continued

Hearing loss a common part of aging

but should it be accepted as a benign inevitability of old age?

PHONAK
life is on

Prevalence of hearing loss

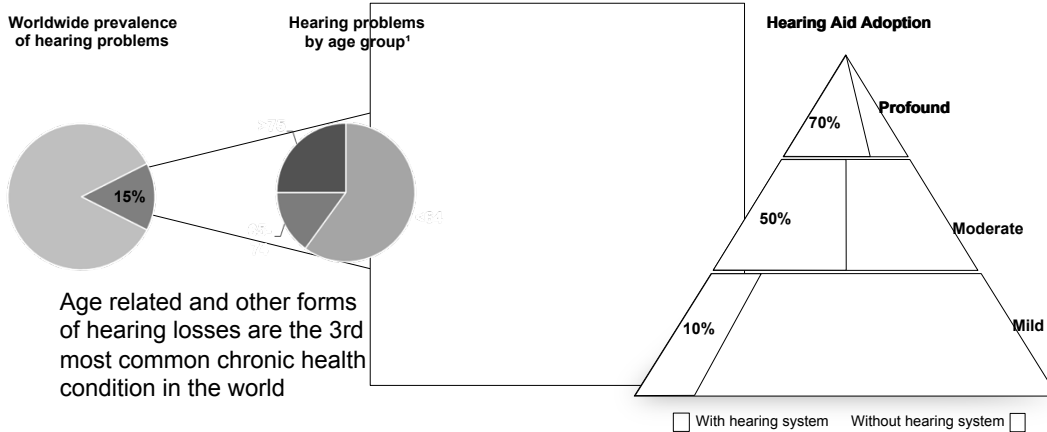


Lin, F. R., Niparko, J. K., & Ferrucci, L. (2011). Hearing loss prevalence in the United States. Archives of internal medicine, 171(20), 1851-1852. doi:10.1001/archinternmed.2011.506

Market

PHONAK
life is on

Around 15% of adults have some degree of hearing impairment



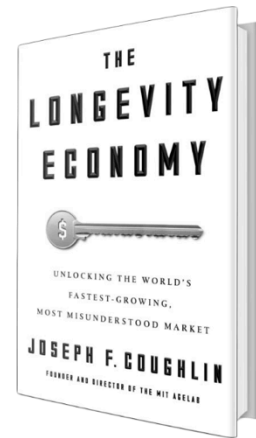
Source: ¹ Marketrak 9 (USA), industry statistics, Sonova estimates

► Low penetration rate – Around 25% in developed countries only

Presented in partnership with

CONTINUED

Joe Coughlin



Why do you buy, what you
buy?

Well-Hearing is Well-Being™

Presented in partnership with

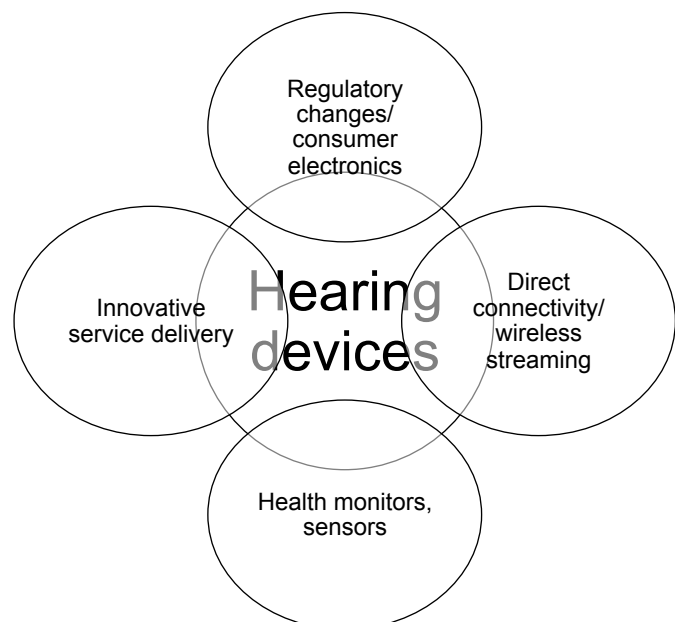
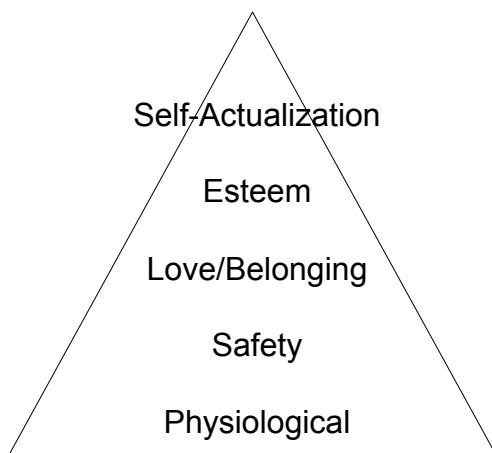
continued

How does that product make you feel?

Successes

PHONAK
life is on

• Maslow's Hierarchy of Needs



Presented in partnership with

continued

The “HEARING BONE’ S” Connected to the WHAT?

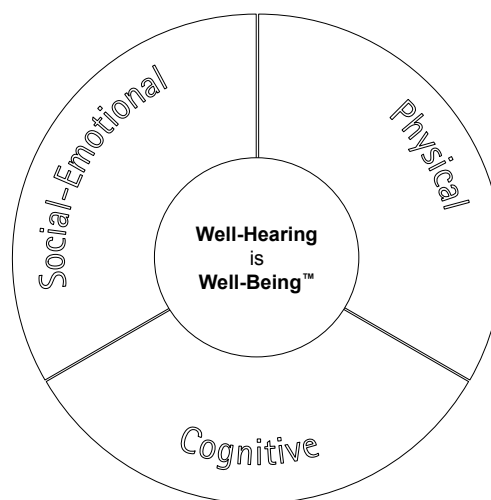
PHONAK
life is on

Hearing loss may signal other important health issues



Well-being drives our commitment to hearing

PHONAK
life is on



Presented in partnership with

continued

Physical Well-Being

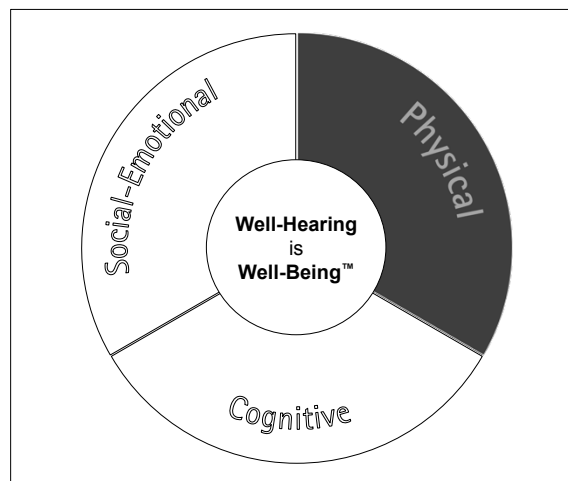
PHONAK
life is on



Auditory functioning extends beyond audibility and even beyond speech intelligibility

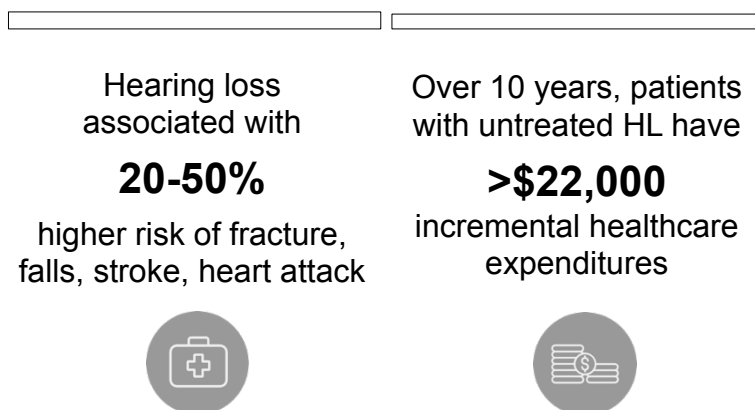
Three focus areas;

- ✓ Sensing Environment
- ✓ Activity Level
- ✓ Health Promotion



Claims data pertaining to unmanaged hearing loss

PHONAK
life is on



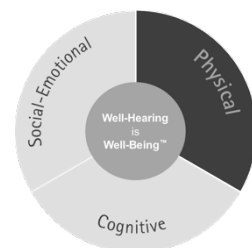
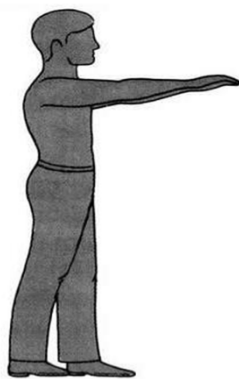
Reed, N. S., Altan, A., Deal, J. A., Yeh, C., Kravetz, A. D., Wallhagen, M., & Lin, F. R. (2019). Trends in health care costs and utilization associated with untreated hearing loss over 10 years. *JAMA Otolaryngology–Head & Neck Surgery*, 145(1), 27-34.

Deal, J. A., Reed, N. S., Kravetz, A. D., Weinreich, H., Yeh, C., Lin, F. R., & Altan, A. (2019). Incident hearing loss and comorbidity: a longitudinal administrative claims study. *JAMA Otolaryngology–Head & Neck Surgery*, 145(1), 36-43.

Presented in partnership with

CONTINUED

The Romberg Test



Falls are the leading cause of accidental deaths in adults over 65

PHONAK
life is on



- Mild hearing loss associated with 3x greater risk of falls in the previous year
- close**
- The odds of falling increases 2-3 times in a elderly group with mild hearing loss
- The odds of falling increases by 1.5 per 10 dB increase in hearing loss

Do auditory inputs act as spatially orienting landmarks, as visual markers improve stability through sight?

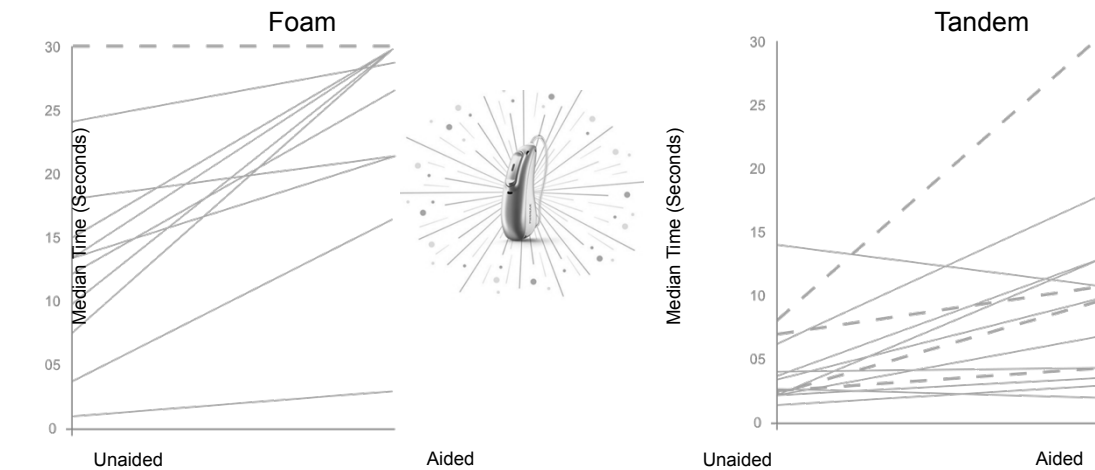
Lin, F. R., & Ferrucci, L. (2012). Hearing loss and falls among older adults in the United States. *Archives of Internal Medicine*, 172(4), 369-371.

Presented in partnership with

CONTINUED

HAs may significantly improve balance and decrease risk of falling in older adults with HL

PHONAK
life is on



Rumalla, K., Karim, A. M., & Hullar, T. E. (2015). The effect of hearing aids on postural stability. The Laryngoscope, 125(3), 720-723.

Cognitive Well-Being

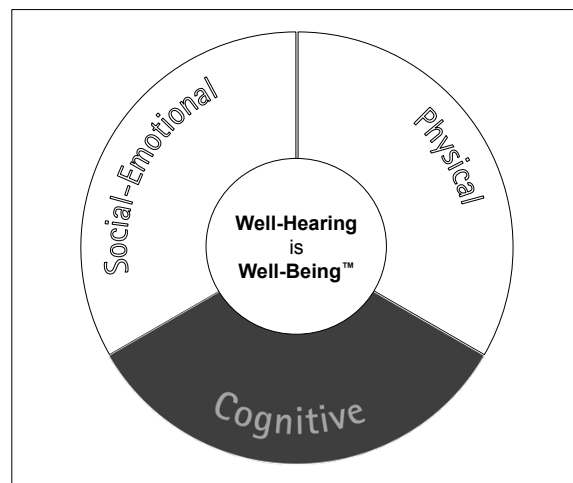
PHONAK
life is on



It is well-established that the brain plays a crucial role in listening and speech understanding

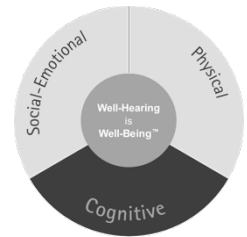
Three focus areas;

- ✓ Cognitive change
- ✓ Ease of Listening
- ✓ Learning Ability

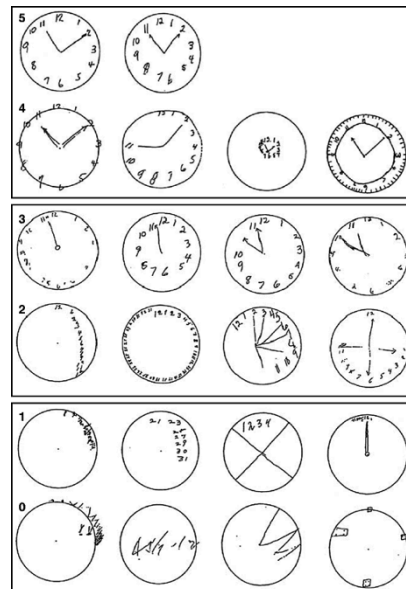


Presented in partnership with

CONTINUED



Draw a clock with the time of
ten past eleven



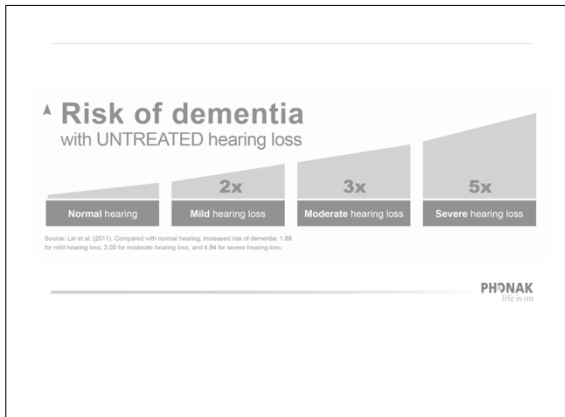
PHONAK
life is on

Presented in partnership with

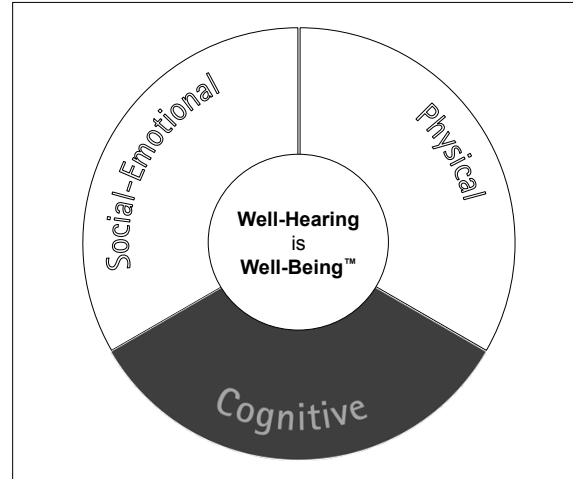
CONTINUED

Cognitive Well-Being

PHONAK
life is on

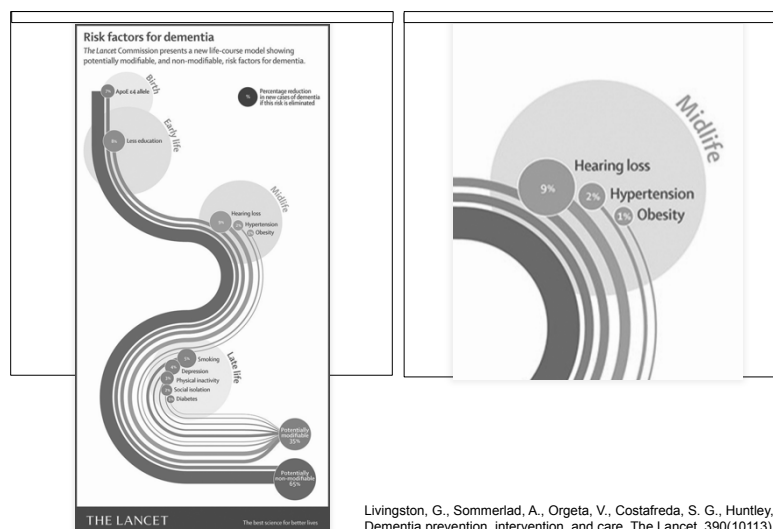


Lin, F. R., Metter, E. J., O'Brien, R. J., Resnick, S. M., Zonderman, A. B., & Ferrucci, L. (2011). Hearing loss and incident dementia. Archives of neurology, 68(2), 214-220.



Hearing Loss – precursor & potential risk factor for cognitive decline

PHONAK
life is on



Livingston, G., Sommerlad, A., Orgeta, V., Costafreda, S. G., Huntley, J., Ames, D., ... & Cooper, C. (2017). Dementia prevention, intervention, and care. The Lancet, 390(10113), 2673-2734.

Presented in partnership with

CONTINUED

Does hearing aid use alter cognitive trajectories?

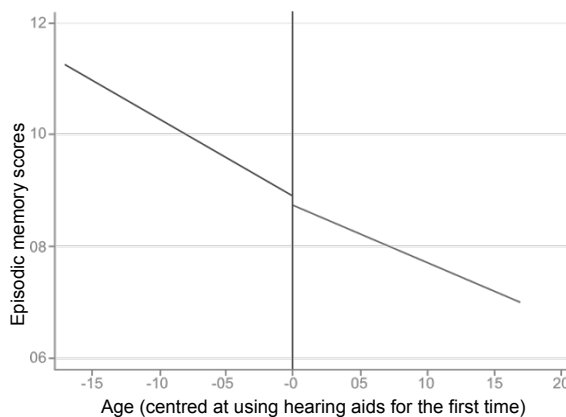
PHONAK
life is on



“

Providing hearing aids or other rehabilitative services for hearing impairment much earlier in the course of hearing impairment may stem the worldwide rise of dementia

”



Maharani, A., Dawes, P., Nazroo, J., Tampubolon, G., Pendleton, N., SENSE-Cog WP1 group, ... & Constantinidou, F. (2018). Longitudinal relationship between hearing aid use and cognitive function in older Americans. *Journal of the American Geriatrics Society*, 66(6), 1130-1136.

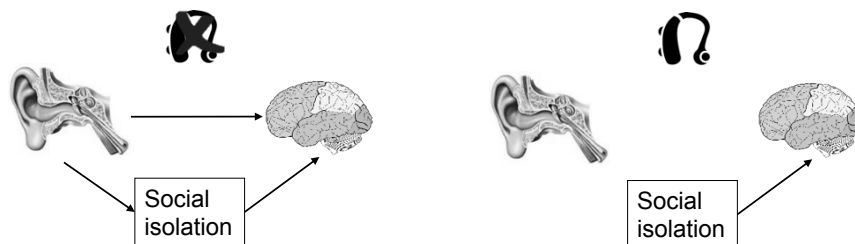
Untreated Hearing Loss Drives the Association

PHONAK
life is on

“Cognitive decline associated with ARHL is probably preventable by early rehabilitation and increased opportunistic screening for the elderly”

Ray et al. *JAMA Otolaryngol Head Neck Surg.* 2018;144(10):876-882.

- English longitudinal study of aging
- Sample: N = 7385; 50+ years; no dementia, Alzheimer, Parkinsons, ear infections, CI
- Cross-sectional analyses



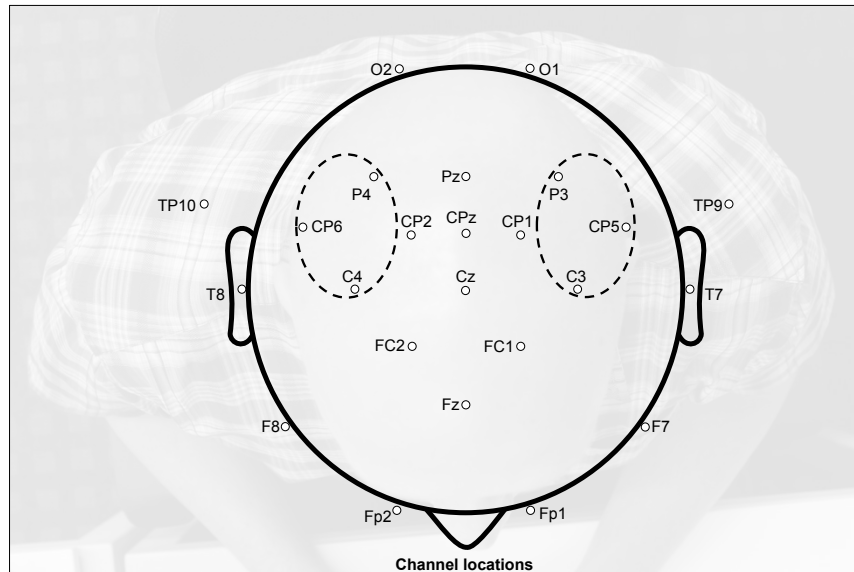
Presented in partnership with

continued

Comprehensive Performance Measures

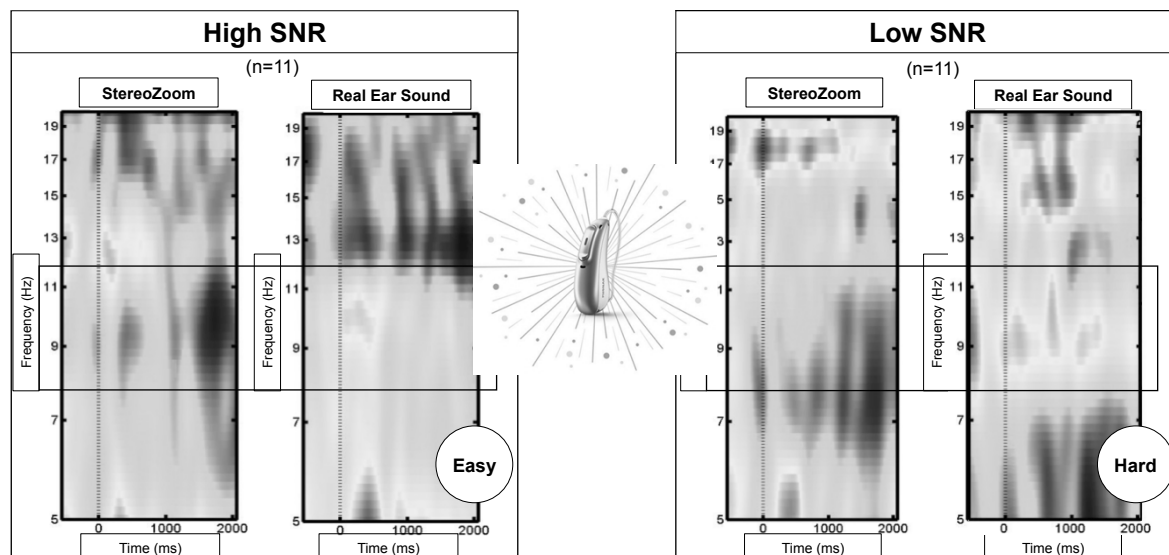
PHONAK
life is on

Brain activity was recorded from a custom-made elastic EEG cap while participants were listening to the OLSA sentences



Winneke, A., Latzel, M., & Appleton-Huber, J. (2018). Less listening- and memory effort in noisy situations with StereoZoom. *Phonak Field Study News*, retrieved from www.phonakpro.com/evidence, accessed October 16th, 2018.

PHONAK
life is on



Presented in partnership with

CONTINUED

Social-Emotional Well-Being

PHONAK
life is on

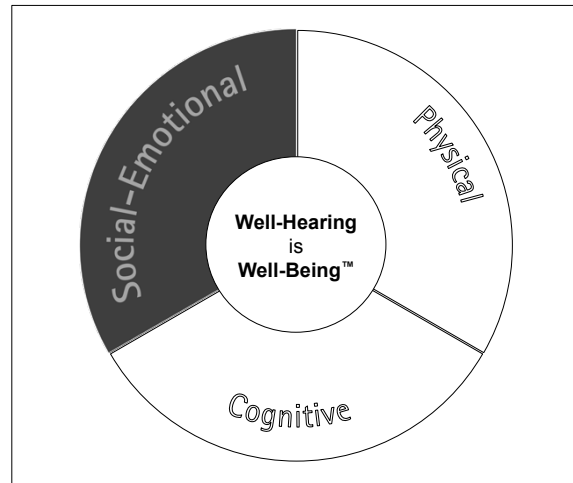


Social engagement has become an area of increased interest in health care

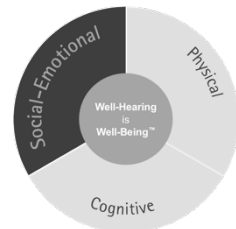
Emotion have an important function in communication

Three focus areas;

- ✓ Emotional experience
- ✓ Social engagement
- ✓ Work/school empowerment



Emotional Recognition



Presented in partnership with

CONTINUED

Effects of HL and Rehab on social emotional well-being



• Impact of Hearing Loss

- Less involvement in **social activities** (QI, Qn, L)
- Greater **loneliness** (QI, Qn, L)
- Less engaged **social participation** (QI; E)
- Smaller **social networks** (Qn)
- Less availability of **social support** (L, Qn)
- Less intimate **spousal relationships** (QI, L)
- Greater **unemployment** and less **income** (Qn)
- Miscommunication during **medical care** (Q, Qn)

Effect of Hearing Rehabilitation

- More involvement in **social activities** (QI, Qn)
- Less **loneliness** (QI; L)
- More engaged **social participation** (E)
- Improved **spousal relationships** (QI; Qn)
- Improved **peer relationships** (QI; Qn)

► QI = Qualitative; Qn = Quantitative; E = Experimental; L = Longitudinal evidence

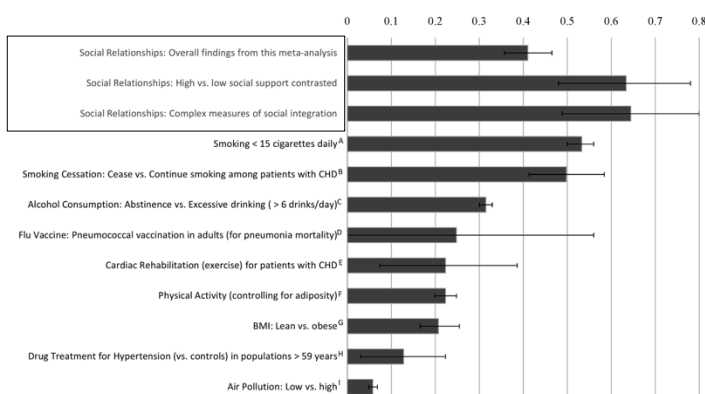
Social-emotional



Social Relationships and Mortality Risk: A Meta-analytic Review

Julianne Holt-Lunstad Timothy B. Smith , J. Bradley Layton

Published: July 27, 2010 • DOI: 10.1371/journal.pmed.1000316



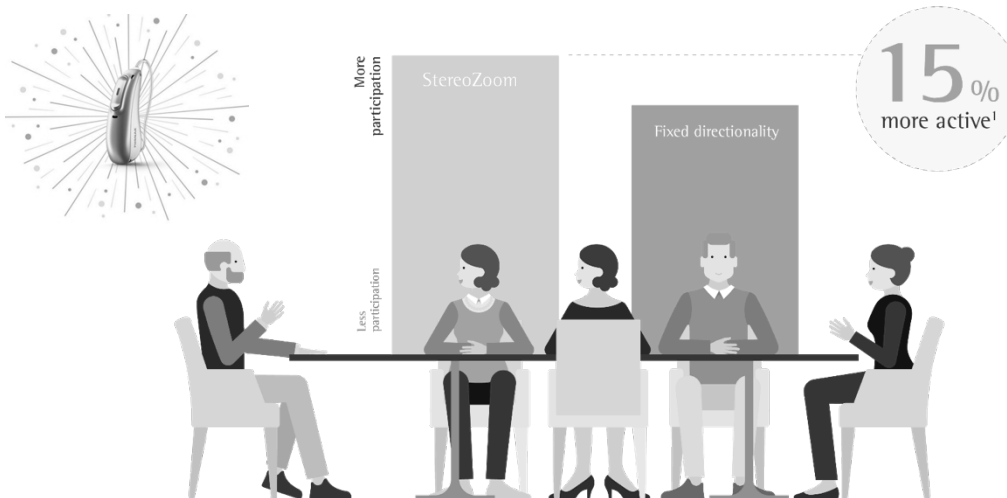
Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: a meta-analytic review. PLoS medicine, 7(7), e1000316.

Presented in partnership with



Effective noise management supports best outcomes

PHONAK
life is on



Schulte, M., Meis, M., Krüger, M., Latzel, M., & Appleton-Huber, J. (2018). Significant increase in the amount of social interaction when using StereoZoom. *Phonak Field Study News*, retrieved from www.phonakpro.com/evidence, accessed October 3rd, 2018.

Family Matters

PHONAK
life is on



Reasons to bring someone along

- **4 ears are better than 2**

During a hearing appointment there is a lot of information to digest. Having a family member present can help with remembering more of what was said and assists any discussions that might occur at home.

- **Make sure everyone is on the same page**

Sometimes perspectives can differ between family members and exploring these can help to achieve better understanding and outcomes for everyone.

- **Shared decision making**

Choosing the right intervention option is best made together.

- **Shared goals**

Hearing loss affects those around the patient too, so developing common goals gets everyone working towards the same goal.

- **Support – let's learn together**

Like learning any new skill, learning to use hearing aids becomes easier when it's a team effort.

- **Better outcomes for everybody**

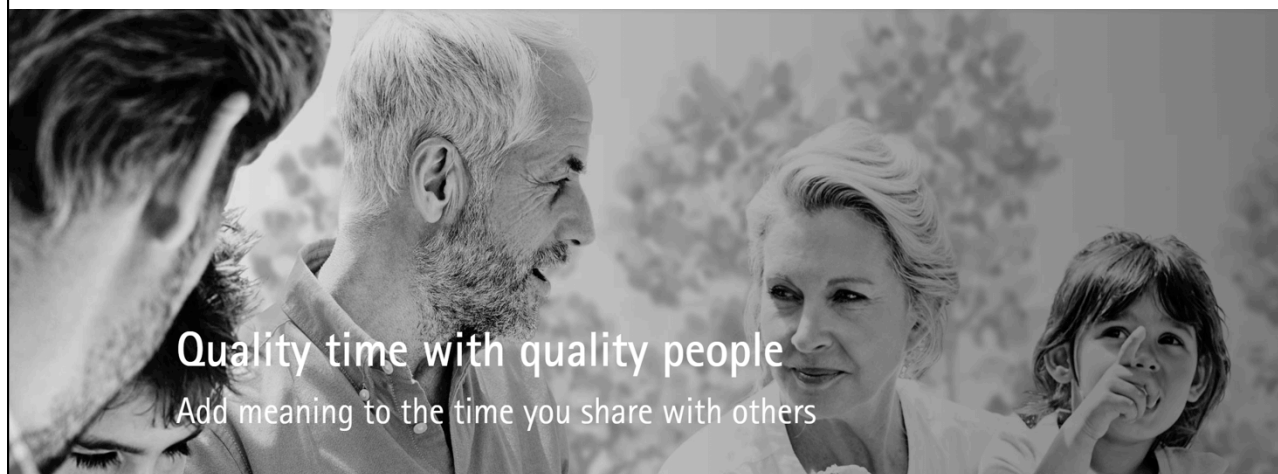
*Studies have shown that family involvement has a positive impact on outcomes for both patient and family compared to patients who attend on their own.**

Be sure to bring your family member along!

Presented in partnership with

CONTINUED

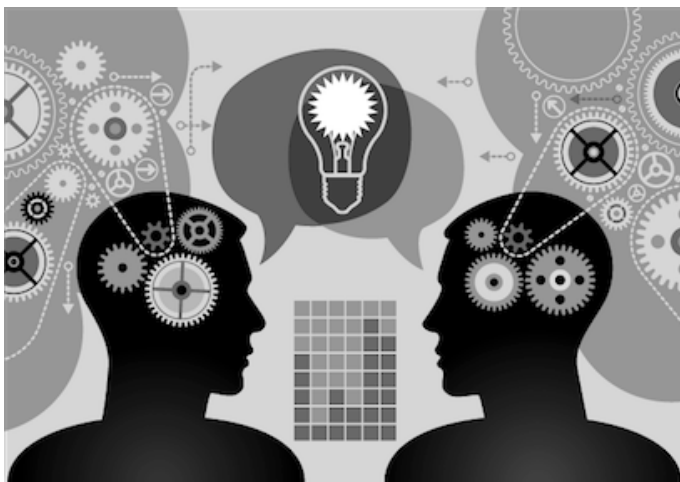
What is our Focus?



Quality time with quality people

Add meaning to the time you share with others

Family Centered Care



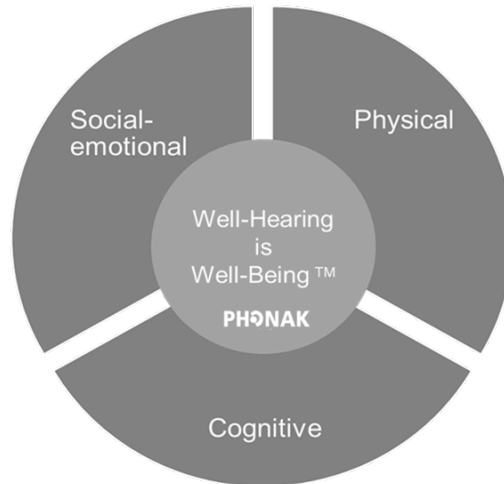
*FCC will help develop a **shared understanding** and **shared responsibilities** for treating the communications difficulties both parties have.*

Presented in partnership with



A broad perspective charts the future of hearing care

PHONAK
life is on



Together,
we change lives

Presented in partnership with

continued