Hearing Fitness
Workouts to Keep Your Ears Young and Fit
HLAA 2013, Portland
Keri Reynolds
Most Dreaded Health Diagnoses

- Cancer
- Diabetes
- Heart disease
• The “D” Word . . .

Dementia

Cognitive Loss Diagnoses
**Agenda**

- Hearing Statistics – the Facts
- The Research
  - Baltimore Longitudinal Study of Aging
  - 2013 Study – Health ABC Study
  - SMART Study
- Results and Findings
- Responding With an Ownership Mindset
- Rehabilitation Opportunities
• 48 Million people in the US: Mild to Profound hearing loss
  • That’s 1 out of every 5 people - 20% of the US population

Hearing loss defined as an inability to hear sounds at 25 dbS. or less in the frequencies used for speaking.

• 38 Million or 13% have hearing loss in both ears
• Nearly 2/3 of the population ages 70+ has a hearing loss
• Hearing loss goes untreated in 85% of those affected

Statistics – Did You Know . . .
• Studies have shown that there is a strong association between dementia and even a mild hearing loss.
• For each 10 db loss of hearing, the risk of dementia increases 20%.
• Recent study indicated that seniors with hearing loss were 24% more likely to develop mental decline.

Hearing loss – the Nation’s most damaging and costly sensory handicap!!

More Statistics . . .
• Dr. Frank Lin, M.D., PH.D
  • Johns Hopkins University School of Medicine
  • http://www.linresearch.org/index.html

Hearing Loss and Dementia
• Baltimore Longitudinal Study of Aging (2011)
• Health ABC Study (2013)
• SMART Study (Ongoing)
• 639 subjects
• Ages 36 – 90 (most between ages of 60 – 80)
• Followed for 18 years
• None had cognitive impairment at beginning of study
• Some had hearing loss
• Findings:

  Compared to those with normal hearing, individuals with mild, moderate or severe loss had a 2, 3 and 5 times increased risk of developing dementia over the course of the study. The risk increased with the severity of loss.
• 1,984 older adults studied/1,162 had hearing loss
• Mean age was 77
• No prevalent cognitive impairment at beginning of study
• Studied over 11 year period
• Findings:

Results from previous study were reinforced. Also, learned that those with hearing loss had a 30-40% faster rate of loss of thinking and memory abilities compared to those with normal hearing.
• Hearing aid use was not significantly associated with lowering the risk. BUT . . . .
• Hearing aid use was self-reported in both studies so unreliable relative to the findings
• Current Study
• Investigating whether hearing aid or cochlear implant use can improve
  • Memory and learning abilities
  • Relationships with family and friends
  • Overall quality of life.
• Focus – aid use, aid fitting, continued contact with audiologist, use of ALDs
• Results from this study will impact
  • Strategies for hearing aid and cochlear implant delivery
  • Future clinical trials of hearing loss interventions.

http://www.hopkinsmedicine.org/otolaryngology/research/clinical_trial/index.html

SMART Study
Hearing Loss and Dementia – WHY??

- Research to date indicates connection is associative, not causal.
- 3 hearing loss impacts
  - Isolation
  - Cognitive Load
  - Potential underlying pathology
• Risk factor regardless of whether normal hearing or hearing impaired
• Hearing loss can trigger downward spiral
  • Can’t hear
    → Don’t pay attention
    → Shut yourself off
    → Lack of stimulation
    → Dulls memory and thinking
• Trying so hard to hear that it makes it hard to actually absorb what is being said.
• Constant expending of mental energy decoding what is heard.
• “The brain is so preoccupied with translating the sounds into words that it seems to have no processing power left to search through the storerooms of memory for a response.” Dr. Lin
Pathological Factors?

• Underlying pathological mechanism that influences both hearing loss and dementia
• Could be environmental or genetic
  • Researchers don’t know
• Does it mean you WILL develop dementia if hearing is impaired?  
  **ABSOLUTELY NOT!!!!**
• But, is your risk increased? 
  **YES, IT IS!**
• Can we do anything about it? 
  **At this point, more research is needed.**

**What Do We Do?**
• Acknowledge hearing loss
• Use aids
  • Practice in different environments
  • Don’t give up; push through discomfort
• Visit your audiologist for follow-up checks
• Use Assistive Listening Devices
• If loss is progressive upgrade aids as needed

“Hearing aids by themselves aren’t enough. It has to be part of an all-encompassing hearing rehabilitation program.”
Dr. Frank Lin

What Do We Do?
• Websites
  • Sense Synergy
  • MED-EL Soundscape
    • Sentence Matrix
  • Brain HQ
  • Lumosity

• IPhone/IPad Apps
  • Magic Piano
  • Brain HQ
  • Crazy Brain
  • Brain Lab
  • Lumosity – IPhone

Suggested Rehabilitation
Improved Communication with ReadMyQuips

Perhaps the most common complaint among people with hearing loss is that speech is difficult to understand in a noisy environment. Often, because of this difficulty, people isolate themselves (and their significant others) from many social situations that they previously enjoyed. ReadMyQuips is an innovative training program specially designed to help you face these challenges in a fun and creative way. Studies indicate that with dedicated practice using ReadMyQuips, many people can significantly improve their speech perception capabilities, thus gaining the confidence they need to tackle everyday, difficult listening situations.
SoundScape

Interactive Listening Activities
Brain HQ More Effective Than Crosswords

A new study shows that BrainHQ is significantly more effective than crossword puzzles at improving cognitive function— including processing speed and attention.

Train your brain, effectively

Subscribe Now
Great work! You just completed your third training session.

You control your training. The fully customizable training program adapts to your unique goals, whether you want to remember more or focus better. Subscribe now to customize your training—your brain's amazing potential is within reach.

Come back tomorrow to boost your BPI even more.
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Magic Piano
Other Brain Fitness Apps

Crazy Brain

Train your brain power everyday!

Brain Lab
• Be an advocate – for yourself and others
• Keep in touch with the Professionals
• Practice the tough stuff
• Explore technology options
• Stay informed and up to date

Say NO to Dementia!!
Questions?
Thank you!