

# ***Epidemiology of Hearing Loss Study & Beaver Dam Offspring Study***

Summer 2013



## **Studies Update**



EHLS and  
BOSS results  
will be  
presented at  
the  
25<sup>th</sup> Annual  
Institute on  
Aging  
Colloquium  
  
September  
17<sup>th</sup> at  
Monona  
Terrace

### **More than 20 Years of Hearing Research**

- 1987** Census identifying the Beaver Dam Studies population conducted.
- 1988** The Beaver Dam Eye Study first examination phase begins.
- 1993** **The Epidemiology of Hearing Loss Study (EHLS) is funded to study hearing in the Eye Study participants.**
- 1998** Initial findings report that nearly 46% of study participants have a hearing loss and that cigarette smoking is correlated with hearing loss.
- 1998** EHLS 5-year follow-up examinations begin; smell testing and carotid artery ultrasound scans are added to the study.
- 2003** Data from the EHLS 5-year follow-up indicate that 21% of those who had normal hearing at the first examination developed a hearing loss.
- 2005** Beaver Dam Offspring Study (BOSS) established to study hearing, vision, smell and taste and to investigate generational differences in sensory change.
- 2006** EHLS and BOSS studies move to Warren St. location in Beaver Dam.
- 2008** Dr. Karen Cruickshanks granted MERIT Award by National Institute on Aging to continue the EHLS.
- 2008** Association between hearing impairment and inflammation observed.
- 2010** Findings reveal that hearing impairment development in the Baby Boom (BOSS) generation is 31% lower than in the prior generation.
- 2011** BOSS findings suggest that changes in memory function may begin in midlife and are associated with atherosclerosis.

### **25<sup>th</sup> Annual Colloquium on Aging**

The UW-Madison Institute on Aging will host the annual Colloquium on Aging Tuesday, September 17, 2013 at Monona Terrace in Madison. This FREE event showcases research and resources on positive aging with speakers, a poster session and a health and resource fair. Dr. Karen Cruickshanks will be one of the keynote speakers. Her presentation, *Hearing Loss & Aging: Over-looked & Under-treated*, will highlight findings from the EHLS and the BOSS. Other presentations include: *Physical Activity to Prevent Disability and Frailty in Older Adults* by Dr. Marco Pahor, from the University of Florida and *The Earliest Signs of Alzheimer's Disease* by Dr. Sterling C. Johnson. Registration is required at [aging.wisc.edu](http://aging.wisc.edu) or by calling 608-262-1818.

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## **By the Numbers**

We are often asked what is being done with all of the data collected from our studies. Every piece of data collected gives researchers an opportunity to better understand the keys to healthy aging. Connecting these pieces of data to find evidence of a correlation can take years. In order to improve the odds, researchers share their findings by publishing in journals, and through presentations at scientific conferences. Researchers working with data collected from the EHLS & BOSS have published 206 articles in scientific journals, presented at more than 80 conferences all over the world, and have written 2 book chapters. The standards of care that health providers rely upon to treat and prevent common problems associated with aging have changed significantly over the last 21 years. Each improvement began with research.

## **Hearing the News about Smoking**

Data from the Epidemiology of Hearing Loss study show that hearing impairment is another health risk associated with smoking. Among the 1,925 people identified at the start of the study in 1993, new cases of hearing impairment were reported at 5, 10 and 15 year follow up. Data collected in 2009-2010 showed that the incidence of hearing impairment was 36% higher among smokers than among those who never smoked, and that those who had smoked in the past and then quit showed a 13% higher likelihood of hearing impairment than those who had never smoked. These findings were presented at the American Auditory Society conference.



## **Weight Gain and Sense of Taste**

A recent analysis using data from the BOSS suggests that distinct patterns exist in the way people perceive the base tastes of salt, sweet, sour and bitter. Some patterns are more likely than others to be associated with weight gain, says BOSS researcher, Dr. Mary Fischer.

Over a 5 year period, participants who perceived the tastes presented at the first BOSS examination more intensely had a larger increase in both Body Mass Index (a measure of body fat) and waist circumference. The results also showed that the same above average tasters had a greater increase in one measure of blood sugar levels than participants who perceived the tastes less intensely. According to Dr. Fischer, who presented these findings at the Association for Chemoreception Sciences Meeting earlier this year, further analysis is needed to better understand the relationship between taste perception and disease outcomes.



**For more information:**

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## **Offspring Study: The Boomers & Generation X**

More than 2,700 people participated in the BOSS 5-year follow-up examination. Thank you goes out to all participants, some of whom spent time with us while visiting in Beaver Dam. Extending our sensory research into the Baby Boom and Generation X populations allows researchers to further explore the hereditary and environmental factors that influence sensory health as we navigate the challenges of an aging population.