



# Studies Update

## **THANK YOU BOSS PARTICIPANTS!**

The 10-year follow-up examination phase for the BOSS wrapped up in September. We would like to say “Thank you from the bottom of our hearts” to the 2466 BOSS participants who completed the 10-year study examination or completed the study questionnaire. Nearly 76% of the BOSS participants participated in this study phase. This high participation rate is what helps the BOSS and EHLS stand out in the field of sensory and aging research. The researchers will spend the next year and a half analyzing the data that were collected, publishing the findings and preparing new grant applications.

*The EHLS  
turned 25 in  
March!*

*The first  
study  
examinations  
were  
conducted on  
March 19,  
1993.*

## **Generational Differences in Age-related Macular Degeneration**

Combined data from the Beaver Dam Eye Study and the BOSS garnered a lot of attention recently when an article published in the journal JAMA Ophthalmology reported that the Baby Boom generation had less risk of developing age-related macular degeneration (AMD) than the previous generation. Dr. Karen J. Cruickshanks, Principal Investigator of the EHLS and BOSS and lead author of the article, stated that, “The reduced risk amongst the Baby Boomers is exciting news. Along with new treatments for AMD these findings suggest that people will have better vision as they age than their parents and grandparents experienced.” The story was picked up by many news outlets including Science Daily, United Press International and National Public Radio.



*The image above shows the retina of an eye. The yellowish spots in the center are a sign of early macular degeneration.*

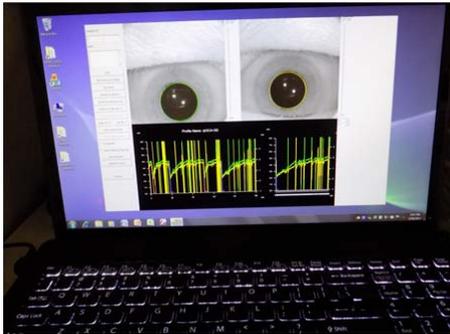
## **EHLS Olfactometry Results**

In the last examination period of the EHLS, we included a measure of odor detection threshold called olfactometry. The Olfactometer used a butanol solution (a type of alcohol) in decreasing concentrations to find the weakest concentration that an individual could detect by smell. An interesting finding from the analyses was that people who exercised regularly had better odor detection thresholds compared to more sedentary folks. This finding adds to the evidence that decline in olfactory function with age may be partly preventable. The test also found that there was, on average, no difference between men and women with regard to odor detection thresholds, but that older participants tended to have worse thresholds than younger participants.



# Beaver Dam Offspring Study & Epidemiology of Hearing Loss Study

## Pupillometry Sub-study



The pupillometer display screen in the photo above shows the pupils of a test subject being measured.

In addition to being responsible for vision, the eye also plays an important role in setting the body's sleep/wake cycle. Specialized photosensitive cells in the retina act as light meters and help to regulate our "internal clock." One of the BOSS co-investigators, Dr. Judy Chen, is interested in learning how age-related changes in these cells impact sleep patterns and cognitive function. To help answer these questions Pupillometry, a measure of the eye's response to light stimulus, was added to the BOSS examination last March. As the measure was added so late in the study period, we needed to ask some participants to return for a short appointment to do the pupillometry test and answer a brief questionnaire about sleep habits. In addition, 20 participants agreed to wear an Acitwatch (similar to a Fitbit) for a one week period to help validate information regarding periods of sleep/rest vs activity. We would like to give a special "Thank you" to the 403 BOSS participants who participated in the pupillometry sub-study and especially thank the 222 who returned for an extra study visit to do so.

*Did you know you can read about some of our findings on our website? Visit <https://boss.>*

## Study Examination Space at Beaver Dam Community Hospital Released

The EHLS and BOSS have been a consistent presence at the BDCH since the EHLS began in 1993: starting out on the 4<sup>th</sup> floor of the "Old Hospital" and moving to the newer clinical space at 130 Warren Street in 2006 when the new hospital was built. Our lease with the BDCH expired at the end of 2017 and because there will not be any study examinations conducted until 2020 we decided it was fiscally responsible to not renew our lease at this time. The space served us very well and we are grateful to have had such a comfortable and convenient environment for our study examinations. We also greatly appreciated all the services that being associated with the hospital provided us, including having access to laboratory personnel when needed. Although we will not be actively collecting new study data for the next two years, the studies are not coming to an end! In the short term, we are very busy analyzing all the data we have accumulated from multiple examination phases and some newly conducted laboratory tests on saved blood samples. As science and technology move forward, we also are investigating more convenient ways for study participants to contribute valuable data in future phases of the study. We will keep you informed of our plans.

### For more information:



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Although we do not currently have space at the Beaver Dam Community Hospital, the phone numbers listed in the box to the left will ring to our offices at the University of Wisconsin, Madison. Please use these numbers to contact us with any questions you may have or to update your phone and address information. EHLS and BOSS participants may also contact us via email at [boss@episense.wisc.edu](mailto:boss@episense.wisc.edu)

We love hearing from you!