

“Familial and birth cohort effects on the aging senses (I) & (II)”

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This proposal to study the offspring of the participants in the population-based, Epidemiology of Hearing Loss Study (EHLS; AG11099) will provide important new epidemiological information about the prevalence of age-related sensory impairments (hearing, vision, and olfactory) among the post-war, “baby-boom” generation and familial and environmental risk factors for these aging changes. The majority of these offspring were born after 1935. This grant builds on the findings of the population-based studies in Beaver Dam, Wisconsin, the EHLS and the Beaver Dam Eye Study (BDES; EY006594), which have shown that hearing, vision, and olfactory impairments are common among older individuals, occur in combination more frequently than expected, and are associated with functional disability and lower quality of life among today’s elders. There is growing evidence that genetic factors, environmental/lifestyle factors, and subclinical vascular disease contribute to the etiology of age-related hearing and vision disorders. With the dramatic temporal changes in lifestyle factors, socioeconomic conditions, and childhood and early adult exposures that have occurred in the United States during the last century, it is important to study the post-World War II (post-WWII) generation to determine their risk of sensory disorders compared to earlier generations, to identify genetic and modifiable risk factors, and to prepare to meet the growing demands on the health care system as the baby-boom cohort ages.

The five-year follow-up of participants (n=3285; mean age=49 yrs) in the Beaver Dam Offspring Study (BOSS), a cohort of the offspring of the participants in the EHLS and BDES will provide key data on the incidence of hearing, vision, and olfaction impairments and age-related macular degeneration (AMD) among the post-World War II “baby-boom” generation and risk factors for these changes.

The ten-year follow-up of participants (n=3285, mean age 49 years in 2005-2008) in the Beaver Dam Offspring Study (BOSS) will determine long-term trajectories of change in sensorineural and neurocognitive function, evaluate additional potential pathways for sensorineural damage, and provide key data on the 10-yr incidence of hearing, vision, and olfaction impairments among the post-World War II “baby-boom” generation to identify potential pathways for prevention and improve healthy aging for today’s middle-aged adults.