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Assessing the Reproductive Life History of Women Through Alzheimer's Related Inflammation

Alzheimer's disease (AD) is a devastating neurodegenerative disorder that primarily afflicts older adults. Approaching the disorder from an evolutionary perspective raises many unanswered questions, such as why the condition persists despite its negative effects on survival and fitness. A possible theory to explain AD's continuing presence in human populations is evolutionary mismatch, or the creation of new or heightened disease risks due to changes in technology and lifestyle far outpacing evolutionary changes in human physiology. Such changes are very prominent in women's health and reproductive patterns. Today more than ever before, women are having children later in life, and having fewer of them. We designed our current study to analyze how these changes, as well as other lifestyle factors such as diet and exercise, may affect a woman's immune system and therefore AD risk. To do so, we designed a survey to collect women's life histories, and will take blood, urine, and saliva samples to look for inflammatory markers. We will begin data collection soon, and we hope to achieve a more in-depth understanding of the correlation between women's life histories and the risk of developing Alzheimer's disease to better inform the development of detection and intervention methods. This presentation focuses on the background, methods, and design of our study.