

**Applicant**

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**Project Title**

The association between glycosylated hemoglobin and incident hearing loss in the Canadian Longitudinal Study on Aging

**Project Summary**

Diabetes and hearing loss are very common. Hearing loss may be caused by poor glycemic control (i.e., high blood sugar levels) because of damage to blood vessels in the inner ear. At the population level, the degree to which hearing loss complicates poor glycemic control is unknown. Our study will determine if higher average blood sugar levels (i.e., hemoglobin A1c levels) are associated with developing hearing loss over a 3-year period among 30,000 generally healthy older adults participating in the Canadian Longitudinal Study on Aging. Our statistical models will adjust for factors (e.g., age, socioeconomic status, cardiovascular disease) that might otherwise explain correlations between blood sugar levels and hearing loss. Males and females will be assessed separately. We will determine if other factors affect the associations. The results will inform clinical decision making for and by patients with diabetes and hearing loss, public health efforts around, and future research.

**Keywords**

Hearing loss, Sensory loss, Diabetes, Glycosylated hemoglobin, Hemoglobin A1c