

Applicant

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Project Title

Behavioural and genetic risk factors associated with the risk of progression from prediabetes to diabetes in older adults: A longitudinal analysis of data from the CLSA

Project Summary

Prediabetes is characterized by higher-than-normal blood glucose, 2-hour oral glucose tolerance test, and HbA1c levels but below the threshold for diagnosis of type II diabetes. As with diabetes, individuals with prediabetes have a higher risk of developing health complications and premature mortality. Studies conducted in younger individuals reported about 70% of prediabetes cases progress to develop diabetes during their lifetime. However, research examining the risk of progression of prediabetes to diabetes in older adults is limited. Evidence suggests that lifestyle and behaviours such as physical activity, diet, shift work, and sleep quality and timing may be risk factors of progression from prediabetes to diabetes. The purpose of this study is to examine the risk of progression to diabetes among older adults with prediabetes and assess the impact of socioeconomic, lifestyle and behaviours on this association and to study the (epi)genetic and metabolomic basis of this association.

Keywords

Prediabetes, Type II diabetes, Lifestyle, Behavioural risk factors, Genetics, Metabolomics, Survival analysis, Mendelian randomization