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Project Title

Investigation into the genetic basis of human intrinsic capacity

Project Summary

The WHO reframed the definition of healthy aging as the process of developing and maintaining the functional ability that enables well-being in older age. This functional ability is the result of intrinsic capacity, the environment, and their interactions. Intrinsic capacity (IC), a new WHO approach for healthy aging, is a composite of all the physical and mental capacities an individual can draw on at any point in time. To date, the genetic basis of IC has not been documented. This project aims to investigate the genetic basis of human IC. To that end, we have already developed the intrinsic capacity index score in the UK Biobank and assessed its predictive validity, a genome-wide association study being underway. This study will use data from the Canadian Longitudinal Study on Aging (CLSA) to replicate our findings on IC and its genetic basis; estimation of heritability, GWAS, post-GWAS functional analyses, GxE interaction study, & building biological model for IC.

Keywords

intrinsic capacity, healthy aging, genetics, intrinsic capacity domains