

Study suggests interventions against frailty

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Interventions aimed at reducing obesity and sedentary behavior, increasing intensity of physical activity, and improving success of smoking cessation tools have the potential to reduce the incidence of frailty, according to a study published October 30, 2019 in the open-access journal *PLOS ONE* by Nils Niederstrasser of de Montfort

University, UK, and colleagues.

Frailty is a common geriatric state which affects roughly 10% of over 65 year olds and occurs as a consequence of age-related physiological decline in multiple organ systems. Frailty leads to a greater risk of adverse health outcomes including reduced functional independence, increased disability, poor quality of life, dementia, institutionalization and mortality. Studies investigating both the progression and incidence of [frailty](#) in the same population have been scarce, which has made it difficult to pinpoint [modifiable risk factors](#) that might delay or reduce the progression of frailty.

In the new study, researchers used data from participants aged 50 and over from the English Longitudinal Study of Ageing (ELSA). They integrated the data into a 56-item multidimensional frailty index (FI) comprised of self-reported health condition, disabilities, cognitive function, hearing, eyesight, depressive symptoms and ability to carry out activities of daily living. Frailty development was studied in 7,420 study participants and frailty progression over 12-years follow up in another 8,780 study participants.

Age was the strongest predictor of frailty. However, other variables, including modifiable risk factors, were independently associated with frailty. Being in the lowest wealth quintile, lack of educational qualifications, obesity, a high waist-hip ratio, being a current or previous smoker, pain, [sedentary behavior](#), and lower body strength were all significant risk factors for frailty progression and incidence.

The strengths of the study included the use of a large representative sample of older adults, the use of the multidimensional frailty index, and the follow-up period of 12 years. However, the current frailty index did not contain deficits pertaining to social frailty, such as perceived [social isolation](#) or loneliness.

Niederstrasser adds: "By making lifestyle changes such as becoming more active, quitting smoking, and losing weight, a person may dramatically reduce their chance of becoming frail. For example, a person who does not smoke and is physically active has half the risk of becoming frail compared to a person who is physically inactive and smokes."

More information: Niederstrasser NG, Rogers NT, Bandelow S (2019) Determinants of frailty development and progression using a multidimensional frailty index: Evidence from the English Longitudinal Study of Ageing. *PLoS ONE* 14(10): e0223799.
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