

Known risk factors largely explain links between loneliness and first time heart disease / stroke

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Human heart. Credit: copyright American Heart Association

Conventional risk factors largely explain the links observed between loneliness/social isolation and first time heart disease/stroke, finds the largest study of its kind published online in the journal *Heart*.

But having few social contacts still remains an [independent risk factor](#) for death among those with pre-existing cardiovascular [disease](#), the findings show.

Recent research has increasingly highlighted links between loneliness and social isolation and cardiovascular disease and death. But most of these studies have not considered a wide range of other potentially influential factors, say the authors.

In a bid to clarify what role these other factors might have, they drew on data from nearly 480,000 people aged between 40 and 69, who were all part of the UK Biobank study between 2007 and 2010.

Participants provided detailed information on their ethnic background, educational attainment, household income, lifestyle (smoking, drinking, exercise) and depressive symptoms.

They were also asked a series of questions to gauge their levels of social isolation and loneliness. Height, weight, and grip strength were measured, and blood samples taken.

Their health was then tracked for an average of 7 years.

Nearly one in 10 (9%) respondents were deemed to be socially isolated, 6 percent lonely, and 1 percent both.

Those who were socially isolated and/or lonely were more likely to have other underlying long term conditions and to be smokers, while those who were lonely reported more [depressive symptoms](#).

During the 7 year monitoring period, 12,478 people died. And 5731 people had a first time heart attack while 3471 had a first time stroke.

Social isolation was associated with a 43 percent higher risk of first time heart attack, when age, sex, and ethnicity were factored in.

But when behavioural, psychological, health, and socioeconomic factors were added into the mix, these factors accounted for most (84%) of the increased risk, and the initial association was no longer significant.

Similarly, social isolation was initially associated with a 39 percent heightened risk of a first time stroke, but the other conventional risk factors accounted for 83 percent of this risk.

Similar results were observed for loneliness and risk of first time heart attack or [stroke](#).

But this was not the case for those with pre-existing cardiovascular disease among whom social isolation was initially associated with a 50 percent heightened risk of death. Although this halved when all the other known factors were considered, it was still 25 percent higher.

Similarly, social [isolation](#) was associated with a 32 percent heightened risk of death even after all the other conventional factors had been accounted for.

This is an observational study so no firm conclusions can be drawn about cause and effect, but the findings echo those of other research in the field, say the study authors.

And the size and representative nature of the study prompt the authors to conclude that their findings "indicate that [social isolation](#), similarly to other risk factors such as depression, can be regarded as a risk factor for poor prognosis of individuals with [cardiovascular disease](#)."

This is important, they emphasise, as around a quarter of all strokes are

recurrent, and targeting treatment of conventional [risk](#) factors among the lonely and isolated might help stave off further [heart](#) attacks and strokes, they suggest.

More information: Social isolation and loneliness as risk factors for myocardial infarction, stroke, and mortality: UK Biobank cohort study of 479 054 men and women, *Heart* (2018). [DOI: 10.1136/heartjnl-2017-312663](#)

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