

# Loneliness linked with elevated risk of cardiovascular disease in patients with diabetes

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Loneliness is a bigger risk factor for heart disease in patients with diabetes than diet, exercise, smoking and depression, according to

research published June 29 in the *European Heart Journal*,.

"The quality of social contact appears to be more important for [heart health](#) in people with [diabetes](#) than the number of engagements," said study author Professor Lu Qi of Tulane University School of Public Health and Tropical Medicine, New Orleans. "We should not downplay the important of [loneliness](#) on physical and emotional health. I would encourage patients with diabetes who feel lonely to join a group or class and try to make friends with people who have shared interests."

"Loneliness and [social isolation](#) are common in today's societies and have become a research focus during the last years, especially driven by the COVID-19 pandemic and the continuous digitalization of society," state Kahl and colleagues in an accompanying editorial. Loneliness refers to the quality of social contacts, while isolation refers to the quantity.

They add, "The [human species](#) is inherently social by nature. Humans not only require the presence of others, but rely on meaningful social relationship[s] to develop into healthy adulthood. As individuals, we strive to belong to a family, a peer group, a community. These social interactions with family, friends, neighbors or colleagues are paramount for our physical and mental well-being."

Patients with diabetes are at greater risk of cardiovascular disease and are more likely to be lonely than their healthy peers. Previous studies in the [general population](#) have found that loneliness and social isolation are both related to a higher likelihood of cardiovascular disease. This study in patients with diabetes examined whether patients who were lonely or socially isolated were more likely to develop cardiovascular disease than those who were not.

The study included 18,509 adults aged 37 to 73 years in the UK Biobank with diabetes but no cardiovascular disease at baseline. Loneliness and

isolation were assessed with questionnaires, with high-risk features allocated one point each. High-risk loneliness features were feeling lonely and never or almost never being able to confide in someone, for a total score of 0 to 2. High-risk social isolation factors were living alone, having friends and family visit less than once a month, and not participating in [social activity](#) at least once per week, for a total score of 0 to 3.

Some 61.1%, 29.6% and 9.3% participants had loneliness scores of 0, 1 or 2, respectively, while 44.9%, 41.9% and 13.2% had isolation scores of 0, 1 or >2, respectively. The researchers analyzed the association between loneliness, isolation and incident cardiovascular disease after adjusting for factors that could influence the relationships including sex, age, deprivation, body mass index (BMI), medications, [physical activity](#), diet, alcohol, smoking and control of blood sugar, blood pressure and cholesterol.

During an average follow-up of 10.7 years, 3,247 participants developed cardiovascular disease, of which 2,771 was coronary [heart disease](#) and 701 was stroke (some patients had both). Compared to participants with the lowest loneliness score, the risk of cardiovascular disease was 11% and 26% higher in those with scores of 1 or 2, respectively. Similar results were observed for [coronary heart disease](#) but the association with stroke was not significant. Social isolation scores were not significantly related to any of the cardiovascular outcomes.

The researchers also assessed the relative importance of loneliness, compared with other risk factors, on the incidence of cardiovascular disease. Loneliness showed a weaker influence than kidney function, cholesterol and BMI, but a stronger influence than depression, smoking, physical activity and diet.

Professor Qi said, "Loneliness ranked higher as a predisposing factor for

cardiovascular disease than several lifestyle habits. We also found that for patients with diabetes, the consequence of physical risk factors (i.e. poorly controlled blood sugar, high [blood pressure](#), high cholesterol, smoking and poor [kidney function](#)) was greater in those who were lonely compared to those who were not."

He concluded, "The findings suggest that asking patients with diabetes about loneliness should become part of standard assessment, with referral of those affected to mental health services."

**More information:** Lu Qi et al, Loneliness, traditional Risk Factors, and cardiovascular disease in diabetes, *European Heart Journal* (2023). [DOI: 10.1093/eurheartj/ehad306](https://doi.org/10.1093/eurheartj/ehad306)

Kai Kahl, A lonely heart is a broken heart: it is time for a biopsychosocial cardiovascular disease model, *European Heart Journal* (2023). [DOI: 10.1093/eurheartj/ehad310](https://doi.org/10.1093/eurheartj/ehad310)

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