

Loneliness predicts development of type 2 diabetes

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Published in the journal *Diabetologia* (the journal of the European Association for the Study of Diabetes [EASD]), the study shows that it is the absence of quality connections with people and not the lack of contact that predicts the onset of type 2 diabetes, suggesting that helping people form and experience positive relationships could be a useful tool in prevention strategies for type 2 diabetes.

The results have implications in light of recent findings that people with [diabetes](#) are at greater risk of dying from COVID-19. The study indicates that prolonged loneliness may influence the development of diabetes, suggesting the experience of lockdown could potentially compound people's vulnerability in this pandemic if the loneliness continues for some time.

Loneliness occurs when an individual perceives that their [social needs](#) are not being met and reflects an imbalance between desired and actual social relationships. A fifth of adults in the UK and a third of adults in the USA report feeling lonely sometimes.

There is a growing interest in the role of loneliness in health and previous research has associated loneliness with increased risk of death and heart disease. This is the first study to investigate the experience of loneliness with later onset of type 2 diabetes.

The study analyzed data from the English Longitudinal Study Ageing on 4112 adults aged 50 years and over which was collected at several times from 2002 to 2017. At the start of data collection all participants were free of diabetes and had normal levels of blood glucose.

The study showed that over a period of 12 years 264 people developed type 2 diabetes. and the level of loneliness measured at the start of data collection was a significant predictor of the onset of type 2 diabetes later on in life. This relationship remained intact when accounting for smoking, alcohol, weight, level of blood glucose, high blood pressure and cardiovascular disease. The association was also independent of depression, living alone and social isolation.

Lead author Dr. Ruth Hackett from the Institute of Psychiatry, Psychology & Neuroscience (IoPPN) King's College London said: "The study shows a strong relationship between loneliness and the later onset of type 2 diabetes. What is particularly striking is that this [relationship](#) is robust even when factors that are important in diabetes development are taken into account such as smoking, alcohol intake and blood glucose as well as mental health factors such as depression. The study also demonstrates a clear distinction between loneliness and social isolation in that isolation or living alone does not predict type 2 diabetes whereas loneliness, which is defined by a person's quality of relationships, does.

She continued: "I came up with the idea for the research during UK lockdown for the COVID-19 pandemic as I became increasingly aware and

interested in how loneliness may affect our health, especially as it is likely that many more people were experiencing this difficult emotion during this period."

According to the study a possible biological reason behind the association between loneliness and type 2 diabetes could be the impact of constant loneliness on the biological system responsible for stress, which, over time affects the body and increases the risk for diabetes.

"If the feeling of loneliness becomes chronic," explained Dr. Hackett. "Then everyday you're stimulating the stress system and over time that leads to wear and tear on your body and those negative changes in stress-related biology may be linked to type 2 diabetes development."

Another explanation for the findings could be biases in our thinking that may perpetuate the association between [loneliness](#) and diabetes as when people feel lonely, they expect people will react to them negatively which makes it more difficult to form good relationships.

More information: Ruth A. Hackett et al, Loneliness and type 2 diabetes incidence: findings from the English Longitudinal Study of Ageing, *Diabetologia* (2020). [DOI: 10.1007/s00125-020-05258-6](#)

Provided by King's College London

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