Medical Xpress

With a little help from my friends: Ending social isolation could lower diabetes risk

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In a study involving 2861 participants, socially isolated individuals were found to be diagnosed with type 2 diabetes more often than individuals with larger social networks. The findings are published in the open

access journal *BMC Public Health*. Promoting social integration and participation may be a promising target in prevention strategies for type 2 diabetes, researchers at Maastricht University Medical Centre, The Netherlands suggest.

Dr. Miranda Schram, corresponding author said: "High risk groups for type 2 diabetes should broaden their network and should be encouraged to make new friends, as well as become members of a club, such as a volunteer organization, sports club or discussion group. As men living alone seem to be at a higher risk for the development of type 2 diabetes, they should become recognized as a high risk group in health care. In addition, social network size and participation in social activities may eventually be used as indicators of diabetes risk."

Stephanie Brinkhues, lead author of the study said: "We are the first to determine the association of a broad range of social network characteristics - such as social support, network size or type of relationships - with different stages of type 2 diabetes. Our findings support the idea that resolving social isolation may help prevent the development of type 2 diabetes."

Social participation in clubs and groups was found to be beneficial. A lack of participation in clubs or other social groups was associated with 60% higher odds of pre-diabetes and 112% higher odds of type 2 diabetes in women compared to those with normal glucose metabolism. In men, lack of social participation was associated with 42% higher odds of type 2 diabetes.

When looking at participants' social networks, the study found that each drop in one network member was associated with 5 to 12% higher odds of newly diagnosed or previously diagnosed type 2 diabetes, compared to those with normal glucose metabolism. Each 10% drop in network members (one member based on an average network size of 10 network

members) living within walking distance was associated with 9 to 21% higher odds of newly diagnosed or previously diagnosed type 2 diabetes in women. Higher percentages of household members in a social network were associated with higher odds of newly diagnosed diabetes in women and men. The researchers also found that in men, living alone was associated with 94% higher odds of type 2 diabetes.

The authors used data on 2861 participants in The Maastricht Study, an observational cohort study of men and women aged 40 to 75 years from the southern part of the Netherlands. Out of the total number of participants, 1623 (56.7%) had a normal glucose metabolism, 430 (15.0%) had pre-diabetes, 111 (3.9%) had newly diagnosed type 2 diabetes and 697 (24.4%) had existing type 2 diabetes at study entry.

The authors caution that early changes in glucose metabolism may cause non-specific complaints such as tiredness and feeling unwell, which may explain why individuals limit their social participation. The study's cross-sectional observational design does not allow for this kind of reverse causality to be ruled out, or for conclusions about cause and effect.

More information: Stephanie Brinkhues et al, Socially isolated individuals are more prone to have newly diagnosed and prevalent type 2 diabetes mellitus - the Maastricht study –, *BMC Public Health* (2017). DOI: 10.1186/s12889-017-4948-6

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