CLINICAL REVIEWS

Clinical reviews

Our panel of GPs review recent research papers in their specialist areas that may influence the way you practise

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Diabetes

Loneliness associated with increased risk of type 2 diabetes

A study based on the English Longitudinal Study of Ageing (ELSA) suggests that loneliness is an independent risk factor for diabetes.

ELSA recruited the first wave of adults aged 50 years and over living in England in 2002-2003, with follow-up waves recruited biennially.

The investigators examined the association between loneliness measured at wave 2 (2004-2005) and incident diabetes from 2006 through to 2017.

Loneliness was assessed using the three-item revised University of California Los Angeles (UCLA) Loneliness Scale. Participants were asked questions such as: How often do you feel you lack companionship? Responses were categorised as hardly ever/never, some of the time, or often. Ratings were averaged to produce a score of 1 to 3 with higher values indicating greater loneliness.

Participants reported whether they lived alone and social isolation was based on the degree of contact with a social network, family and friends, and involvement in social organisations. Total scores ranged from 0 to 4 with higher scores indicating greater social isolation.

A total of 8,780 adults were originally recruited but once those with missing outcome data, loneliness data, covariant data and existing abnormal HbA_{1c} were removed, the study population eligible for analysis was reduced to 4,112.

At 12-year follow-up, 264 of the 4,112 participants (6.42%) had developed type 2 diabetes.

Loneliness was a significant predictor of developing diabetes: HR 1.46 (95% CI: 1.15-1.84, P = 0.02). This effect was independent of age, sex, ethnicity, socioeconomic status, smoking status, physical activity, alcohol consumption, BMI, HbA_{1c}, hypertension and cardiovascular disease.

Further analysis showed that loneliness remained a significant predictor of developing diabetes: HR 1.41 (95% CI: 1.04-1.90, P = 0.027) independent of depressive symptoms, living alone and social isolation.

Loneliness is defined as a 'negative emotion that occurs when an individual perceives that their social needs are not being met'. It reflects an imbalance between desired and actual social relationships.

Loneliness, as opposed to social isolation, has previously been shown to be associated with coronary heart disease.

The authors state: 'To our knowledge, this study is the first to examine the association of loneliness with later type 2 diabetes incidence. Our findings show that loneliness is a robust predictor of type 2 diabetes incidence over 12 years of follow-up, independent of a range of covariates, including sociodemographic factors, health behaviours and cardiometabolic comorbidities. This association was upheld when depressive symptoms were taken into account.

'We also assessed loneliness, social isolation and living alone simultaneously as predictors of type 2 diabetes incidence. In this analysis, loneliness remained an independent predictor of later type 2 diabetes. No significant associations for social isolation or living alone were observed.'

They acknowledge that this is an observational study and causality cannot be inferred and also that there is no fully understood mechanism for the link between loneliness and developing physical illness. However, the research does fit with previous observational studies.

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Hacket RA, Hudson JL, Chilcot J.
Loneliness and type 2 diabetes
incidence: findings from the English
Longitudinal Study of Ageing.
Diabetologia 2020;63:2329-38

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