

Loneliness seen as risk factor for Parkinson's disease within 15 years | Large study links risk with poorer mental health

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Loneliness raises a person's risk of developing Parkinson's disease within 15 years, a long-term study of nearly half a million U.K. residents found, supporting calls into the therapeutic benefits of personally significant social bonds.

This work adds to evidence "that loneliness is a substantial psychosocial determinant of health," the researchers wrote in the study "Loneliness and Risk of Parkinson Disease," published in *JAMA Neurology*.

Loneliness occurs when a person feels a lack of meaningful social relationships or a sense of belonging. Such feelings can push someone into being more emotionally sensitive, alert, and focused on negative thoughts.

"In addition to its emotional toll, individuals who feel lonely tend to engage in unhealthy lifestyles and have worse clinical profiles," the researchers wrote. Indeed, loneliness has been linked to an increased risk of neurodegenerative diseases like Alzheimer's and related dementias.

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Loneliness spotted as a risk factor for Parkinson's disease

Parkinson's is thought to be caused by a number of genetic and environmental factors working in combination. While patients who feel lonely are more likely to have more severe Parkinson's symptoms, it is unclear if loneliness can increase a risk of developing the disease.

Researchers in the U.S. and France studied data covering 491,603 adults without a diagnosis of Parkinson's at entry, taking part in the UK Biobank, a large health registry of U.K. residents.

Participants ranged in age from 38 to 73, and just over half (54.4%) were female.

Individuals, first assessed from 2006 to 2010 and followed until 2021, were asked, "Do you often feel lonely?" and prompted to answer either "yes" or "no." A total of 91,186 (18.5%) people responded positively to feelings of loneliness.

Compared with the 400,417 (81.5%) people who did not report such feelings, those who did were younger, more likely to be female and to have fewer resources, and less likely to have a college degree.

They also were more likely to be a current smoker, physically inactive, and to have worse physical and mental health. For example, they were more likely to have depression or to have seen a psychiatrist for anxiety or depression.

Over the course of 15.58 years, 2,822 people went on to develop Parkinson's: 2,273 who did not report loneliness and 549 who did. Overall, those who reported being lonely were 1.37 times more likely to develop Parkinson's.

Adults diagnosed with Parkinson's were older and with comorbidities

People diagnosed with Parkinson's were older and more likely to be male, to be former smokers, to have a higher body mass index (a measure of body fat), and to have been diagnosed with diabetes, high blood pressure, heart attack, or stroke.

They also were more likely to have seen a psychiatrist for anxiety or depression and to have a higher polygenetic risk score for Parkinson's, an estimate of a person's chances of developing the disease based on their genetic makeup.

After accounting for these variables, the link between loneliness and Parkinson's remained, with people who reported feeling lonely being at a 25% higher risk of developing the disease.

"Loneliness was significantly associated with an increased risk of incident Parkinson disease independent of demographic and socioeconomic factors, social isolation, genetic risk, and physical and mental health," the researchers wrote.

It can take years before typical Parkinson's motor symptoms, such as tremor, stiffness, and slowed movements, manifest. But some early symptoms may occur in the time leading to a diagnosis, called the prodromal phase of the disease.

Contrary to expectations for a prodromal syndrome, loneliness was not linked to an increased risk of Parkinson's during the first five years, but it was during the next 10 years.

"The most probable ... interpretation is that loneliness is a risk factor for [Parkinson's] through various pathways," the researchers wrote. These pathways may include inflammation and the interactions between the body's nervous system and endocrine system, which regulates metabolism, growth, stress responses, and the overall balance of hormones in the body.

"This study adds evidence on the detrimental health impact of loneliness and supports recent calls for the protective and healing effects of personally meaningful social connection," the scientists concluded, noting more research is needed to explain the link between loneliness and Parkinson's.