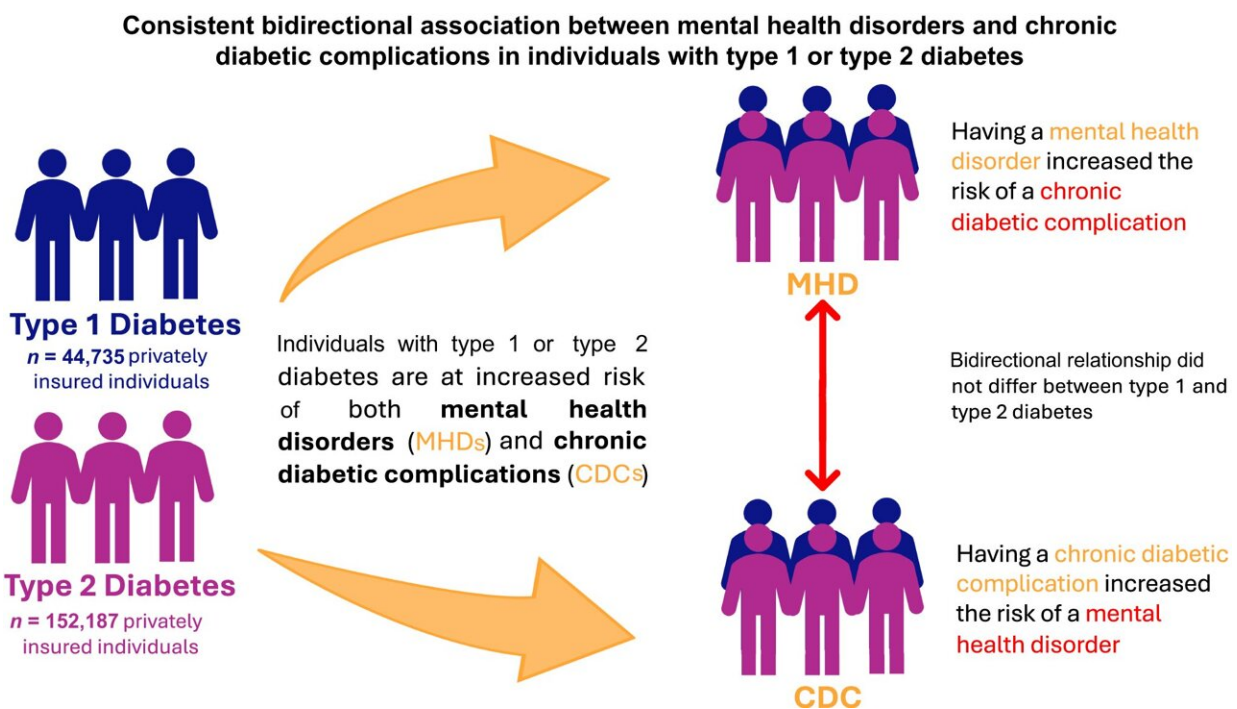


Mental health and chronic diabetes complications strongly linked both ways, study finds

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Graphical Abstract. Credit: *Diabetes Care* (2024). DOI: 10.2337/dc24-0818

Heart attack, stroke, nerve damage. These are just some of the complications for which millions of Americans with diabetes are at greater risk.

When a person has any of these chronic [diabetes complications](#), they are more likely to have a [mental health disorder](#), and vice versa, according to a University of Michigan-led study. That is, the relationship goes both ways: having a mental health condition also increases the risk of developing chronic complications of diabetes.

"We wanted to see if chronic diabetes complications led to mental health disorders or if mental health disorders led to those diabetes complications—but we found that both relationships are true," said Brian Callaghan, M.D., M.S., senior author and the Eva L. Feldman, M.D., Ph.D., Professor of Neurology at U-M Medical School.

"The findings highlight a need for clinicians to actively screen for mental health disorders in patients with diabetes in addition to screening for chronic complications, which is the recommended standard of care in diabetes."

Three-times greater risk

The research team, led by Michigan Medicine and the Department of Biostatistics at the U-M School of Public Health, examined insurance claims data from over 500,000 individuals with type 1 or type 2 diabetes and 350,000 people without diabetes.

Results [published](#) in *Diabetes Care* reveal that people with chronic diabetes complications had up to a three-times greater risk of having a mental health condition, such as anxiety or depression. This effect increased as adults got older.

Those with mental health disorders were up to 2.5 times more likely to experience sustained diabetes complications.

In adults younger than 60 years old, having type 1 diabetes was more

associated with chronic complications. People with the more common type 2 diabetes were more likely to experience mental health difficulties.

A possible reason for this bi-directional relationship, researchers say, may be that having a diabetes complication or mental health condition has direct effects on developing the other complication.

"For instance, a stroke causes detrimental effects on the brain, which may directly lead to depression," Callaghan said.

"And having a mental health condition and diabetes may affect a person's self-management of their condition—like poor glycemic control or not taking medications—which, in turn, may increase their risk of diabetes complications."

Common risk factors

The relationship may also be less direct. Diabetes complications and mental health conditions share common risk factors; obesity, issues with glycemic control and social determinants of health can all increase the likelihood of developing both comorbidities.

"Most likely, a combination of direct and indirect effects and shared risk factors drive the association we are seeing," said first author Maya Watanabe, M.S., a biostatistician at the Harvard T.H. Chan School of Public Health and former graduate student research assistant at U-M.

"Diabetes care providers may be able to simultaneously prevent the risk of multiple complications by providing interventions to treat these shared risk factors."

In any 18-month period, up to 50% of people with diabetes may have feelings of distress related to their condition, [according to the CDC](#).

Several national diabetes centers have implemented depression and distress screening for their patients, but there is no universal screening process for mental health in diabetes care.

The researchers note that additional resources will be needed to screen and manage mental health conditions, as many clinicians who manage [diabetes](#) lack specific training to adequately identify and treat them.

Mental health care

This echoes a statement from the U.S. Preventive Service Task Force, which said that if patients who screen positive for mental health conditions must be "appropriately diagnosed and treated with evidence based care or referred to a setting that can provide the necessary care."

"Primary care providers and endocrinologists are already overworked; therefore, systems of care need to be in place to help provide [mental health care](#) when needed," said co-author Eva Feldman, M.D., Ph.D., Director of the ALS Center of Excellence and James W. Albers Distinguished University Professor at U-M.

"These systems should include mental health screening, easily accessible insurance coverage for mental health services and both physician and patient education programs. Action is needed, and our new research provides further evidence that this action needs to occur now."

More information: Maya Watanabe et al, Bidirectional Associations Between Mental Health Disorders and Chronic Diabetic Complications in Individuals With Type 1 or Type 2 Diabetes, *Diabetes Care* (2024). [DOI: 10.2337/dc24-0818](https://doi.org/10.2337/dc24-0818)

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