

## With diabetes, untreated depression can lead to serious eye disease

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Patients with diabetes who also suffer from depression are more likely to develop a serious complication known as diabetic retinopathy, a disease that damages the eye's retina, a five-year study finds.

Diabetic retinopathy occurs when [diabetes](#) is not properly managed and is now the leading cause of blindness in patients between 25 and 74 years old, according to the study appearing online in the journal *General Hospital Psychiatry*.

“Our study controlled for obesity, smoking, sedentary lifestyle and HbA1c levels, and still found that [depression](#) was associated with an increased risk of retinopathy,” said co-author Wayne Katon, M.D.

HbA1c is a blood test that measures a person's average blood sugar levels over several months.

Katon is the director of health services and psychiatric epidemiology at the University of Washington Medical School, in Seattle. He and his colleagues studied 2,359 patients with diabetes enrolled in the Pathways Epidemiologic Study and assessed their levels of depression using the Patient Health Questionnaire-9 (PHQ-9), a self-reported survey of depression symptoms.

Over the five-year follow-up period, 22.9 percent of the patients who had PHQ-9 scores that ranked as “major depression” developed [diabetic retinopathy](#), compared with 19.7 percent of the patients without depression. With a five-point increase on the PHQ-9 score, patients' risk of having diabetic retinopathy increased by up to 15 percent.

“Our findings suggested that psychobiologic changes associated with depression such as increased cortisol levels and activity of blood-clotting factors may be linked to the development of retinopathy,” Katon said.

“There is no question that the burden of depression among patients with diabetes is very high and that depression is a risk factor for worse outcomes in patients with diabetes, as was seen in this study,” said Todd Brown, M.D., an assistant professor of medicine at the division of endocrinology and metabolism at Johns Hopkins University.

He added that multiple explanations might account for these findings—some related to biological changes and some due to behavioral social issues, such as decreased physical activity and poorer utilization of health care.

“The big question with all of this is whether identifying and treating depression in patients with diabetes will change clinical outcomes,”

Brown said. “And currently, there are no universal recommendations for depression screening among patients with diabetes.”

**More information:** Sieu N, et al. Depression and incident diabetic retinopathy: a prospective cohort study. *Gen Hosp Psych* online, 2011. [www.cfah.org/hbns/archives/view.asp?articleID=1035](http://www.cfah.org/hbns/archives/view.asp?articleID=1035)

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