

Gestational diabetes is associated with declining cognitive function

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Women who develop diabetes during pregnancy, called gestational diabetes, perform worse on cognitive function tests than do women with a normal pregnancy, according to a new study from Turkey. The results were presented Sunday at the joint meeting of the International Society of Endocrinology and the Endocrine Society: ICE/ENDO 2014 in Chicago.

Type 2 diabetes has been linked to accelerated cognitive, or brain-related, decline and an increased risk of dementia in elderly individuals. However, exactly when the memory problems can begin during diabetes is unclear, said the study's lead investigator, Ela Keskin, MD, of Istanbul University Cerrahpasa Medical Faculty.

"This is the first study that has associated a decline in cognitive function with [gestational diabetes](#) mellitus, which is an early diabetic state that raises the risk of Type 2 diabetes later on," Keskin said. "Based on our results, cognitive dysfunction in diabetes may begin early in the disease."

"Maybe with early interventions and therapies, the cognitive impairment in diabetes can be delayed," she said. "People at risk of Type 2 diabetes, especially women who had gestational diabetes, should be closely monitored by their doctor, and they need to control their weight and other risk factors for diabetes."

Keskin and her co-workers compared 44 women with gestational diabetes and 56 women with a healthy pregnancy who were similar in

age, geographic location and educational level. According to Keskin, none of the subjects took medications other than insulin, including cholesterol-lowering statins, which have led to reports of confusion and forgetfulness in some users. Both groups reportedly had similar scores on a questionnaire regarding depression.

The women with gestational diabetes were slightly older than the other group, with an average age of 31 versus nearly 30 years, according to the abstract. At the start of pregnancy, they also had a higher body mass index (BMI), a measure of body fat based on height and weight. As expected, these women had much higher blood glucose, or sugar, levels.

Compared with the nondiabetic women, those who had gestational diabetes performed worse on several tests of cognitive function performed at the same week of pregnancy, the investigators reported. On a 30-point test that evaluates for mild [cognitive impairment](#), called the Montreal Cognitive Assessment, the diabetic women had an average score three points lower: 21 points versus 24 points in women with a healthy pregnancy.

Women with gestational diabetes also had worse speed of mental activity and attention, as measured by the Symbol Digit Modalities Test, a test that measures the time to pair abstract symbols with specific numbers in 90 seconds. Their average score was about five points lower, indicating worse performance. In addition, they scored worse on the Spatial Recall Test 10/36, a visual memory test. Subjects see a checkerboard with 10 dots for 10 seconds and must replicate the pattern on a blank checkerboard, both immediately and 25 minutes later. For delayed recall, [women](#) with gestational diabetes scored worse: 4.5, on average, versus 5.4 in the nondiabetic group.

The researchers found that the higher the BMI and blood sugar levels, the lower the cognitive function. "Our results show an association of

cognitive function with metabolic status," Keskin said.

Provided by The Endocrine Society

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