Medical Xpress

When is it safe to drive with type 1 diabetes?

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(HealthDay)—Having type 1 diabetes can raise your chances of crashing while driving, but new research offers a checklist that helps determine whether it is safe for you to get behind the wheel.

The wrong amounts of insulin and other blood sugar-lowering medications can trigger dangerously low blood sugar levels, which can cause people to pass out or have seizures, the researchers explained.

"People with diabetes need to recognize that they're part of a huge mass of people who have potentially impaired driving, like people with heart disease or narcolepsy. They shouldn't think of themselves as isolated. It's just an issue to deal with," said the author of a new study on diabetes and driving, Daniel Cox. He's a professor in psychiatry, internal medicine and ophthalmology at the University of Virginia Health System in Charlottesville.

"By no means are we saying that people with type 1 diabetes shouldn't drive. But, just like pilots go through a pre-flight checklist, drivers with type 1 diabetes need to go through a pre-drive checklist," he suggested.

Cox explained that some people with diabetes have a higher-than-average risk of driving troubles. This includes people who've already had a serious low blood sugar event (hypoglycemia) while driving, people who mismanage hypoglycemia, people who drive a lot, and people with diabetes who've lost feeling in their feet or legs (diabetic neuropathy), because they can't feel the pedals.

But doctors don't have a standardized assessment to determine who's at high risk for a diabetes-related accident and who's not.

So, Cox and his colleagues developed an 11-question test called the Risk Assessment of Diabetic Drivers (RADD). The researchers administered the test to more than 500 drivers with type 1 diabetes from Boston, central Virginia and Minneapolis.

The investigators asked the study participants about their driving "mishaps." A driving mishap—as defined by this study—was a

dangerous driving situation that resulted in an accident or could have resulted in an accident.

The assessment accurately identified 61 percent of those who were at high risk for having driving issues, and 75 percent of those who were at low risk of having driving problems.

The second part of the study included almost 500 drivers with type 1 diabetes from across the country who took the RADD test online. The study found that 372 were identified as high-risk and 118 were considered low-risk.

Half of these people were then given routine care, and the rest were asked to participate in an online intervention.

The intervention aimed to anticipate, prevent, detect and treat hypoglycemia. All of the intervention participants were given a toolkit for their car. It contained a blood sugar meter, a pre-drive checklist, a key chain with a stoplight symbol to remind drivers to stop and treat their low blood sugar if their reading was below 70 milligrams per deciliter (mg/dL), or to be cautious and eat some foods containing carbohydrates before driving if it was between 70 and 90. (Below 70 is considered hypoglycemia.) Over 90 mg/dL is considered a green light, Cox said.

The kits also contained a fast-acting glucose product, such as glucose tablets or gel.

"Many people with type 1 diabetes didn't know how to properly treat hypoglycemia. They eat something with a lot of fat or protein, and that doesn't make blood glucose rise quickly. If you want a fast rise in blood glucose, glucose tablets will do it," Cox explained.

He said people with type 1 diabetes should always have fast-acting carbohydrates in their car.

The study found that the intervention tool helped drivers avoid hypoglycemia while driving.

Dr. Joel Zonszein is director of the Clinical Diabetes Center at Montefiore Medical Center in New York City.

Zonszein said he was glad to see the study bringing attention to the issue. "It reminds us that people with diabetes should be assessed individually, taking into account each individual's medical history as well as the potential related risks associated with driving, as recommended by the American Diabetes Association," he said.

But, he added that "the patients at risk are few, and they are mainly limited to older individuals, and those with advanced complications and type 1 diabetes."

Zonszein said he'd rather that people and their driving abilities were assessed by their physician or a certified diabetes educator instead of an online program.

Dr. Minisha Sood, an endocrinologist from Lenox Hill Hospital in New York City, agreed that it's important to have a doctor or diabetes educator involved in the process.

"The anonymity [of an internet screening] may be a draw for patients who might feel embarrassed or anxious about their potential risk. It would be important for a care provider to have access to the assessment results, however, in order to keep a patient out of harm's way," she said.

Sood also agreed that anyone with "diabetes should always keep a fast-

acting carbohydrate or source of glucose in the car for emergencies."

The study was published online recently in the journal *Diabetes Care*.

More information: Daniel Cox, Ph.D., A.H.P.P., professor, departments of psychiatry, internal medicine, and ophthalmology, and director, Center for Behavioral Medicine Research and Virginia Driving Safety Laboratories, University of Virginia Health System, Charlottesville, Va.; Minisha Sood, M.D., endocrinologist, Lenox Hill Hospital, New York City; Joel Zonszein, M.D., director, Clinical Diabetes Center, Montefiore Medical Center, New York City; April 13, 2017, *Diabetes Care*, online

To read more about diabetes and driving, visit the American Diabetes Association.