

# In-car device monitors blood sugar for diabetic drivers

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People with diabetes and their caregivers know that careful and constant monitoring of their blood sugar levels is critical to managing the disease. But even while driving?

In an unusual marriage of medical technology, consumer electronics and automotive engineering, Fridley, Minn.-based Medtronic Inc. and Ford Motor Co. on Wednesday unveiled a [prototype device](#) that uses the automaker's in-car communications system to help drivers track their [blood glucose](#) activity while on the go.

"It's a real high-tech approach to the old saying, 'I've fallen and I can't get up!' " said Phil Nalbene, an analyst with Wedbush Securities. "This makes good use of widely available communications technology to safeguard patients and improve quality of care."

Using Bluetooth connectivity, the system links the automaker's popular in-car infotainment system, called Sync, to a Medtronic continuous glucose monitor. If a driver's [glucose levels](#) are too low, an alert sounds or a signal appears on a dashboard screen.

[Low blood sugar](#), in particular, can cause light-headedness, blurry vision and other potentially dangerous symptoms that could cause a traffic accident. The [American Diabetes Association](#) estimates nearly 26 million adults and children in the United States have diabetes, but of that amount, only a portion use glucose monitors and insulin pumps.

The Ford-Medtronic prototype is still being researched, so it's unclear when - and if - the technology will ever be marketed. "Today it's all about possibilities," said Medtronic senior vice president James Dallas, who attended an unveiling at Ford headquarters in Dearborn, Mich., on Wednesday. "There's nothing formal yet, but the technology has reached a point where possibilities can become probabilities."

The idea has won some preliminary fans in the diabetes community. "I know when I'm driving, if the 'check engine' light comes on, I'm going to pay attention," said Dr. Richard Bergenstal, executive director of Park Nicollet's International Diabetes Center. "It's kind of the same principle."

For Medtronic, the partnership signals a growing movement toward managing health remotely through smartphones, tablets, laptops and, possibly, cars. Dallas said the company is in talks with other tech leaders, such as IBM, Cisco, Apple, Verizon and Qualcomm, for other partnerships. "It helps us extend our reach in new ways," Dallas said.

Medtronic's \$1.2 billion diabetes business has led the way in continuous glucose monitoring, which records [blood sugar levels](#) throughout the day and night. The readings permit patients to make adjustments to insulin levels, often using a Medtronic insulin pump, or by ingesting sugar to coax levels back into normal territory.

"Ideally, we will get to a place where the sensor and pump communicate and when you get a reading, the pump automatically adjusts," Medtronic spokesman Brian Henry said.

Pairing the Medtronic technology with automotive engineering may seem far-fetched at first blush, but Ford maintains that 78 percent of U.S. consumers are deeply interested in "mobile health solutions." According to a study by MobileStorm cited by the company, medical

and health care applications are the third-fastest growing category of smartphone apps.

Ford also announced a project on Wednesday to provide drivers with allergy alerts and pollen levels on the Sync device for those suffering from asthma and severe allergies.

"Ford's approach to health and wellness in the vehicle is not about trying to take on the role of a health care or medical provider," said Gary Strumolo, the company's global manager of interiors, infotainment, and health and wellness research. "We're a car company."

By partnering with "experts," Strumolo said, the Sync system can be used as a kind of "secondary alert system and alternate outlet for real-time patient coaching services."

Ford released Sync in 2008 to mostly positive reviews. Developed with Microsoft, the system enables voice control of phones and audio systems and is available in most models of Ford vehicles. (It's an extra \$395 when optional.)

However, as safety concerns mount over potentially distracted drivers using cell phones for texting, talking and other activities, U.S. Transportation Secretary Ray LaHood expressed concern last fall about systems like Sync and General Motors' OnStar, even if they are "hands free."

There are also questions about whether there's significant money to be made. "It remains to be seen how Medtronic will monetize this and whether it will contribute to a meaningful revenue stream," Nalbhone said. "But it's an intriguing idea."

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