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Adult Diabetics Benefit From Device, Study Says

By ROBERT TOMSHO

Adults with Type 1 diabetes can gain better control over their disease by using a cellphone-size device that continually monitors blood-sugar levels, according to a new study.

Introduced by various manufacturers in recent years, "continuous glucose monitoring," or CGM, systems provide a steady stream of data that allows patients to adjust their insulin injections as needed. Attached to a small sensor inserted just beneath the skin, they also sound an alarm if blood sugar rises or falls to dangerous levels.

With traditional monitoring, the patient pricks a finger, puts blood onto a small strip of paper and inserts it into a meter for a reading. Researchers say such tests, even done several times a day, can miss sudden and unsafe changes in blood sugar.

Typically striking children and young adults, Type 1 diabetes accounts for between 5% and 10% of the nearly 24 million diabetic Americans. With Type 1 diabetes, once called juvenile diabetes, the body's immune system attacks the pancreas's capacity to produce insulin to regulate blood sugar levels.

Uncontrolled, it can cause seizures and, over time, damage to the heart, kidneys and eyes.

Type 2 diabetes, also known as adult-onset diabetes, usually begins with insulin-resistance, where the body's cells don't use insulin properly.

The study, published online Monday by the New England Journal of Medicine, involved 322 adults and children at 10 different U.S. research centers. All participants had blood-glucose levels that had averaged above recommended levels. During the 26-week study, roughly half of the participants used CGM systems; the rest relied on traditional blood meters. Participants also were monitored by age.

The CGM's impact was most pronounced among patients 25 years of age and

older. While average blood-glucose levels for such adults using traditional meters rose slightly during the study, they fell by about 0.50% for those with CGMs. Researchers say every percentage-point drop in such levels reduces the risk of long-term health complications by about 40%.

The study found less of a benefit for children who were eight to 14 years of age and none for those between the ages of 15 and 24. Researchers say that may have been because, on average, they tended to wear the CGM devices less.

The study was funded by the Juvenile Diabetes Research Foundation, a New York-based nonprofit research group. Twelve of the 26 researchers involved disclosed they had received fees or other financial support from manufacturers of the monitoring devices.

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