

Metformin beats other type 2 diabetes drugs for first treatment: study

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Researchers find this commonly used medication controls blood sugar for many.

(HealthDay)—People newly diagnosed with type 2 diabetes who are initially given the drug metformin are less likely to eventually need other drugs to control their blood sugar, a new study suggests.

The study found that, of those started on metformin, only about one-quarter needed another drug to control their blood sugar. However, people who were started on type 2 [diabetes](#) drugs other than metformin often needed a second drug or insulin to control their [blood sugar levels](#), the researchers said.

"This study supports the predominant practice, which is that most people are started on metformin," said lead researcher Dr. Niteesh Choudhry, an associate professor of medicine at Harvard Medical School in Boston. "Metformin might be more effective than others in controlling blood sugar," he noted.

"Metformin, which is one of the oldest drugs we have and which the guidelines recommend as being the first drug to use, is associated with a lower risk of needing to add a second drug or insulin compared to any of three other commonly used classes of drugs," Choudhry said.

The report was published in the Oct. 27 online edition of *JAMA Internal Medicine*.

A hallmark of type 2 diabetes is insulin resistance, according to the American Diabetes Association (ADA). That means the body doesn't effectively use the hormone insulin. Insulin is produced by the pancreas and helps usher sugar from foods into the body's cells to be used as energy. When people have [insulin resistance](#), too much sugar is left in the blood instead of being used. Over the long-term, [high blood sugar](#) levels can lead to serious complications, such as heart and kidney disease, according to the ADA.

There are eight classes of oral type 2 diabetes medications, according to the ADA. Each class works a bit differently. For example, metformin makes the body's cells more sensitive to insulin. It also decreases the amount of sugar naturally produced in the liver, the ADA reports. Sulfonylureas, on the other hand, encourage the pancreas to produce more insulin, according the ADA.

For the current study, Choudhry's team collected data on more than 15,000 people starting treatment for type 2 diabetes from July 2009 through June 2013. The average follow-up time was slightly longer than one year.

Of those patients, almost 60 percent were initially treated with metformin, and about one-quarter began treatment with a sulfonylurea, such as Glucotrol, according to the study. Just 6 percent were started with a thiazolidinedione, such as Actos, and 13 percent with a DPP-4

inhibitor, such as Januvia, the report indicated.

The researchers found that around 40 percent of people taking a sulfonylurea, a thiazolidinedione, or a dipeptidyl peptidase 4 inhibitor (DPP-4 inhibitor) added a second drug to their diabetes treatment regimen during the study. Just 25 percent of those on metformin added an additional oral drug during the study period.

In addition, 5 percent of those started on metformin later added insulin to their treatment, according to the study. About 9 percent of those who started on a sulfonylurea, 6 percent started on a DPP-4 inhibitor and 6 percent started on thiazolidinediones, also took [insulin](#), the investigators found.

Choudhry said that many patients are being started on other drugs, but this study indicates that treatment should start with metformin.

"These findings emphasize the use of metformin as the first-line drug for type 2 diabetes," he said.

Dr. Jodi Segal, co-director of the Center for Drug Safety and Effectiveness at Johns Hopkins Bloomberg School of Public Health and co-author of an accompanying journal editorial, said, "It is already well established that metformin is the preferred first-line option for patients who can tolerate it."

But, she added that doctors should pay more attention to their patients' worries about needing to intensify therapy when choosing medications.

"Doctors might want to help their patients understand that intensifying therapy does not mean that the patient has failed," Segal said.

Dr. Joel Zonszein, director of the Clinical Diabetes Center at Montefiore

Medical Center in New York City, doesn't think that [metformin](#) alone is sufficient to treat [type 2 diabetes](#). He believes that treatment needs to aggressively lower [blood sugar](#).

"We don't start treatment with a single drug," Zonszein said. "We use a combination from the get-go."

Zonszein said even this study shows that treatment with a single [drug](#) doesn't work. "So why do we wait to intensify [treatment](#) rather than treating more aggressively?"

More information: For more information on type 2 diabetes, visit the <http://www.diabetes.org/diabetes-basics/type-2/> [American Diabetes Association](#).

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