

Popular diabetes drug may be safe for patients with kidney disease

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The most popular treatment for type 2 diabetes, metformin, may be safer for patients with mild to moderate kidney disease than guidelines suggest, according to a new, systematic review of the literature published by Yale investigators in the *Journal of the American Medical Association (JAMA)*.

For 20 years, metformin has been used in the United States to lower [blood sugar](#) in people with type 2 [diabetes](#). Most experts consider it the best first agent to treat blood sugar increases in this disease. Despite its strong safety profile, the FDA has long recommended that metformin not be prescribed to patients with mild to moderate kidney disease due to the risk of [lactic acidosis](#), a potentially serious condition. But those decades-old guidelines have recently been called into question.

Yale professor of medicine Silvio E. Inzucchi, M.D., and colleagues at Yale, the University of Texas Southwestern Medical Center, and Aston University in the U.K. conducted a [systematic review](#) of published research to assess the risk of lactic acidosis with metformin in diabetes patients with mild to moderate kidney disease. They found that the risk in these patients is extremely low - actually comparable to the risk in those who did not take metformin.

"What we found is that there is essentially zero evidence that this is risky," said Inzucchi, who is also medical director of the Yale Diabetes Center. "The drug could be used safely, so long as [kidney function](#) is stable and not severely impaired."

The finding is key because doctors often avoid or stop prescribing metformin to older patients with diabetes who need it. "They hit a certain age, their kidney function starts to decline, and the first thing most doctors do is to stop metformin," Inzucchi said. "What invariably happens next is their diabetes goes out of control. Other drugs may be

substituted, but they are usually not generic products like metformin, and so more expensive and may also have more side effects."

The *JAMA* review also noted that metformin is already being routinely prescribed to patients with type 2 diabetes and kidney disease despite the guidelines. "Many in the field know that metformin can be used cautiously in patients who have mild to moderate kidney problems," Inzucchi noted. "Most specialists do this all the time."

He cautions that the review findings do not apply to individuals with severe [kidney disease](#). Should the guidelines change, as many in the field have recommended, dosage of metformin would probably need to be reduced at a certain level of kidney function, and [patients](#) would need to be more closely monitored to make sure kidney function remains stable.

If the FDA guidelines for [metformin](#) use are updated, as Dr. Inzucchi and colleagues have recommended, the drug could be made available to more than 2.5 million Americans living with [type 2 diabetes](#). His group has assembled more than 100 signatures from diabetes experts throughout the country to petition the FDA to update its guidelines.

More information: The study is published online in the December 24/31 issue of *JAMA*.

Provided by Yale University

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