# Common diabetes drugs associated with increased risk of death

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Compared to another popular drug, three widely used diabetes medications are associated with a greater risk of death, a large new analysis finds. The results will be presented at The Endocrine Society's 94th Annual Meeting in Houston.

The drugs, glipizide, glyburide, and glimepiride, are known as sulfonylureas, which help decrease blood-sugar levels among type 2 diabetes patients by stimulating the pancreas to produce insulin. In the past, these medications were considered comparable to one another in terms of effectiveness and safety. Recently, however, research has shown some sulfonylureas may be safer than others. These findings led to this latest research, which compared them to another type of blood-sugar-reducing drug known as metformin. All four medications are available under low-cost, generic labels.

"We have clearly demonstrated that metformin is associated with a substantial reduction in mortality risk, and, thus, should be the preferred first-line agent, if one has a choice between metformin and a sulfonylurea," said study lead author Kevin M. Pantalone, D.O., an endocrinologist at Summa Western Reserve Hospital in Cuyahoga Falls, OH, who conducted this study in conjunction with a team of researchers from Cleveland Clinic in Cleveland, OH.

In the United States, nearly 26 million people, or 8 percent of the population, have diabetes, according to the Centers for Disease Control and Prevention. Many of these patients also have other underlying

medical conditions, including heart, or coronary artery, disease.

Investigators found that all three sulfonylureas studied were associated with a more than 50 percent greater risk of death compared to metformin. Additionally, among diabetes patients with heart disease, only glimepiride did not increase the risk of death compared to metformin. In contrast, glipizide was associated with a 41 percent, and glyburide with a 38 percent greater risk.

"Since many patients with type 2 diabetes also have coronary artery disease, our results could potentially impact the care of a large number of patients," Pantalone said. "In these patients, we now know that glimepiride appears to be safer than the other commonly prescribed sulfonylureas, glipizide and glyburide, available in the United States."

For this retrospective study, using the electronic health-record system at Cleveland Clinic, the investigators identified 23,915 patients with type 2 diabetes who previously had received treatment with one of the four medications. Overall, the study population's average age (years) was 62, and 50 percent were male. Among the subgroup with heart disease, the average age was 68, and 69 percent were male. Both groups comprised primarily Caucasian patients. The median follow-up was slightly more than two years.

According to Pantalone, this research serves as a reminder that adverse events can occur with any medication. "All drugs have risks, even those which are generic and relatively inexpensive," he said. "It is important to talk to with your doctors about which drugs may be better and safer options, which may vary depending on your other health conditions."

In addition to the data from the hospital electronic health-record system, investigators analyzed death statistics from the Social Security Death Index. The study was supported through a grant from Astra Zeneca.

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