Embargoed: 23:01 BST, Thursday, 4 June 2026 // 00:01 CEST, Friday, 5 June 2026

Common blood pressure medication associated with poorer kidney outcomes in type 2 diabetes, new study shows

(Glasgow, Scotland) New research presented at the 63rd ERA Congress suggests that a widely used class of blood pressure medications may be associated with poorer kidney outcomes in people with type 2 diabetes (T2D), even among patients already receiving modern kidney-protective treatments.[1]

Dihydropyridine calcium-channel blockers (DCCBs) are a commonly prescribed class of blood pressure medications that work by relaxing blood vessels and are frequently used as second-line therapies in people with diabetic kidney disease (DKD). Researchers found that patients taking DCCBs alongside standard therapies had a significantly higher risk of major adverse kidney events, compared with those receiving alternative blood pressure treatments.

DKD is one of the leading causes of kidney failure worldwide.[2] It develops when persistently high blood sugar damages the small blood vessels in the kidneys, gradually reducing their ability to filter waste from the blood. Controlling blood pressure is a cornerstone of treatment, as high blood pressure accelerates this damage.

In recent years, two classes of medication have transformed care for people with DKD: renin-angiotensin system (RAS) inhibitors, which lower blood pressure and reduce pressure within the kidney's filtering units, and sodium-glucose cotransporter-2 (SGLT2) inhibitors, originally developed as diabetes drugs but now recognised for their kidney-protective effects and ability to reduce the risk of kidney failure. Together, these therapies now form part of the standard of care for most patients with DKD.

The study analysed data from 31,031 adults with T2D between 2016 and 2021. All patients were receiving both RAS and SGLT2 inhibitors as part of their care. Among the participants, 12,172 (39.2%) were also taking DCCBs, while 18,859 (60%) were receiving other antihypertensive treatments. Patients were followed for a median of approximately 3.5 years.

After adjusting for differences in baseline clinical and demographic characteristics, researchers found that DCCB use was associated with a 33% higher risk of a major adverse kidney event (R 1.33, 95%, CI 1.03-1.73). These events were defined as either a substantial decline in kidney filtration capacity – a drop of 40% or more in estimated glomerular filtration rate (eGFR), the standard measure of kidney function – or progression to end-stage kidney disease requiring dialysis or transplantation.

"DCCBs are widely used as second-line blood pressure treatments in patients with DKD," said Dr Timna Agur, lead author of the study. "Our findings raise important questions about whether these medications are always the best option for patients already receiving modern kidney-protective therapies."

The researchers believe the findings may be explained by the way DCCBs affect blood flow within the kidney. In DKD, the kidneys are already exposed to increased pressure and hyperfiltration, a state in which the filtering units are working under excessive strain. Researchers suggest DCCBs may preferentially relax the blood vessels carrying blood into the kidney's filtering units without having the same effect on vessels carrying blood out, potentially increasing pressure within these structures and contributing to ongoing kidney damage.

"We initially thought the kidney-protective effects of SGLT2 inhibitors might counterbalance the potential harms associated with DCCBs," said Dr Agur. "However, the increased risk of kidney disease progression appeared to persist even in this group."

The researchers caution that the study was observational in nature and cannot establish direct causation. Nevertheless, they argue the results are clinically significant given how commonly DCCBs are prescribed in this patient population.

“Further prospective studies and randomised controlled trials are needed to confirm these observations and better define the safest blood pressure treatment strategies for patients with DKD”, concluded Dr Agur. “However, given how commonly these medications are prescribed, any increase in kidney risk could have important implications for large numbers of patients with DKD.”

ENDS

Notes to editors:

A reference to the ERA Congress must be included in all coverage and/or articles associated with this study. For more information or to arrange an expert interview, please contact press@era-online.org

About the lead study author:

Dr. Timna Agur is a senior nephrologist at Rabin Medical Center and Director of the Nephrology Outpatient Clinics at Hasharon Hospital. Her research focuses on immune mechanisms in kidney disease and improving long-term outcomes after kidney transplantation.

About the European Renal Association (ERA):

With more than 30,000 active members, ERA is the biggest nephrology association worldwide and one of the most important European medical associations. It organises annual congresses and several educational and scientific activities. The ERA also collects data and performs epidemiological studies through its Registry. The Society supports fellowships and educational/research projects through its committees and working groups. Its publications are *NDT*, *CKJ* (Open Access journal), and the *ERA Neph-Manual*, an e-book hosted on the ERA e-learning platform.

Website: www.era-online.org

The 63rd ERA Congress takes place between June 3-6, 2026, both virtually and live in Glasgow, Scotland.

References:

1. Agur T, Rozen Zvi B, Steinmetz T, et al. DCCB Therapy and Risk of CKD Progression in Type 2 Diabetes on RASi and SGLT2i. Presented at the 63rd ERA Congress, Glasgow, Scotland, 2026.
2. Li, J., Guo, K., Qiu, J. et al. (2025). Epidemiological status, development trends, and risk factors of disability-adjusted life years due to diabetic kidney disease: A systematic analysis of Global Burden of Disease Study 2021. *Chinese Medical Journal*, 138(5), 568–578.