

Blood pressure medications reduce stroke and heart attack in peritoneal dialysis patients

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Two classes of blood pressure medications, angiotensin-converting enzyme inhibitors (ACEIs) and angiotensin II receptor blockers (ARBs), are associated with a 16% lower risk of strokes, heart attacks and death in patients with end-stage renal disease who are undergoing peritoneal dialysis, a new study in the journal, *Nephrology Dialysis Transplantation*, reports.

Researchers examined the medical records of 4,879 [patients](#) in the U.S. who began [peritoneal dialysis](#) between 2007 and 2011, and found 42% of them filled prescriptions for one of the two blood pressure medications, ACEIs or ARBs. The researchers then reviewed the outcomes and discovered the reduced risk of heart attacks, strokes and death among the group that had filled prescriptions for the blood pressure medications.

"While randomized clinical trials are needed to test whether this is a causal relationship, these findings indicate doctors should consider using or re-starting ACEIs and ARBs as first-line [blood pressure](#) medications for patients undergoing peritoneal dialysis," said Jenny I. Shen, MD, an LA BioMed researcher and corresponding author of the study. "These medications are often stopped when patients are in the late, but pre-dialysis, stages of kidney disease because of the risk of dangerously high potassium levels. The risk of higher potassium levels is minimized after patients have transitioned to peritoneal dialysis, but doctors often don't

resume the medication even though it can usually be re-started safely."

The researchers reported that patients with end-stage renal disease face a greater risk of cardiovascular disease than healthy patients. Mortality exceeds 20% in the first year after the initiation of dialysis, and 42% of these deaths are attributed to cardiovascular causes.

In patients with chronic kidney disease who are not on dialysis, ACEIs and ARBs slow the progression of diabetic nephropathy and reduce cardiovascular risk. Previous studies of their effectiveness in patients with end-stage [renal disease](#) produced mixed results, leading researchers to conduct the review of records of all U.S. patients who had initiated peritoneal dialysis from 2007 to 2011.

The researchers noted that while the use of ACEI and ARB was common among dialysis patients, it was "not as high as it could be, judging by the prevalence of hypertension and the use of other anti-hypertensives in nonusers."

Provided by Los Angeles Biomedical Research Institute at Harbor

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