

# Blood phosphorus levels can help predict kidney failure risk in African-Americans

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An increase in serum phosphorus levels in African Americans with chronic kidney disease (CKD) is associated with faster progression to kidney failure, known as end-stage renal disease (ESRD), according to new research presented at ASN Kidney Week 2015 November 3-8 in San Diego, CA. Previously confirmed in primarily Caucasian populations, the Indiana University School of Medicine study confirms serum phosphorus is linked to ESRD risk in African Americans.

African Americans are more than 3 times as likely to progress to [kidney failure](#) as Caucasians and account for 32% of individuals with ESRD. Because of this, Indiana University School of Medicine researchers led by Jonathan Bazeley, MD, wanted to determine if serum phosphorus, which in previous studies of mainly Caucasian populations was associated with adverse outcomes in CKD patients, was an effective predictor in African Americans as well. African Americans and Caucasians differ in how they maintain balance of vitamin D and parathyroid hormone, which is why it was unknown if serum phosphorus levels would be an effective predictor in this population.

Investigators performed a retrospective analysis of 754 predominantly African American patients from an urban CKD clinic who were followed over a period of 2 to 5 years. Serum phosphorus was a significant predictor of progression to the study end point of dialysis initiation (HR 1.44, 95% CI 1.07-1.93), even after controlling for age, sex, race, smoking status, diabetic status, BMI, and other biomarkers.

"The results suggest phosphorus may have independent negative consequences on CKD progression," the authors concluded. "Testing this would require trials that evaluate lowering serum phosphorus on progression to dialysis."

**More information:** Study: "Serum Phosphorus Independently Predicts Risk of ESRD in an Urban CKD Clinic" (Abstract TH-PO560).

Provided by American Society of Nephrology

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