

Race impacts declining kidney function

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African Americans-along with some groups of Hispanics-have faster rates of decline in kidney function compared to white Americans, according to a study presented at the American Society of Nephrology's 43rd Annual Meeting and Scientific Exposition.

"Racial/ethnic differences are present early, before chronic kidney disease (CKD) has been established," comments Carmen A. Peralta, MD (University of California, San Francisco).

Based on a large nationwide study of heart disease risk factors (the Multi-Ethnic Study of Atherosclerosis), the researchers analyzed data on nearly 5,200 U.S. adults, all with initially normal [kidney function](#). Two different "generalized estimating equations" were used to assess changes in kidney function, based on five-year follow-up data. The study compared white, black, Hispanic, and Chinese Americans to look for possible racial/ethnic differences in the aging-related rate of kidney function decline.

African Americans demonstrated a faster annual rate of decline. By one equation, decline was about 60 percent faster for African American versus white participants. Peralta adds, "The observed differences were not fully explained by traditional risk factors," such as cholesterol levels, body weight, smoking, diabetes, or high blood pressure.

Kidney function also declined faster in Hispanic participants, but the effect varied by country of origin. Dominicans had the fastest rate of decline, followed by Puerto Ricans. All other Hispanic subgroups, as well as Chinese Americans, demonstrated a rate of decline in kidney function similar to that of whites.

End-stage renal disease (ESRD) disproportionately affects African-Americans and Hispanics. "Studies have suggested that this is more likely due to faster rates of progression from established CKD," Peralta explains. "Whether or not these differences in kidney function decline are present at earlier

stages of kidney dysfunction is not well known."

The new results suggest that people of certain racial and ethnic groups may be at risk for faster declines in kidney function, even if they are free from CKD. "This reflects a new opportunity to study how to best identify persons at high risk and to investigate prevention strategies for CKD," Peralta concludes.

The study had some important limitations, especially the fact that kidney function was assessed using estimating equations, rather than measured directly.

Provided by American Society of Nephrology

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