

# Transplantation issues: Kidney donors and children in need of transplants

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Three studies presented during the American Society of Nephrology's Annual Kidney Week provide new information related to kidney transplantation—specifically, the post-transplant health of kidney donors and the racial disparities faced by children in need of transplants.

Recent studies suggest that hypertension and [diabetes](#) are more prevalent in black versus white donors, but no comparisons have been made to healthy non-donors, so the risk attributable to donation remains unknown. To investigate, Dorry Segev, MD (Johns Hopkins) and his colleagues surveyed more than 1,000 donors and more than 1,000 matched non-donors. Nineteen percent (26% black, 18% non-black) of donors developed hypertension. Compared with healthy non-black individuals who were not donors, non-black donors had a 44% increased risk of post-donation hypertension; however, black donors did not have an increased risk of hypertension compared with black non-donors.

"Interestingly, an increased risk was not seen in African American donors, despite the fact that this is the subgroup of donors where we particularly worry about this issue, because African American donors have higher rates of post-donation hypertension than non-African Americans," said Segev. "This suggests that African American donors have higher rates of post-donation hypertension than their Caucasian counterparts because African Americans have higher rates of [hypertension](#) in general when compared with [Caucasians](#), rather than that donating a kidney is more detrimental for African Americans than to Caucasians." The researchers also found that similar rates of donors and non-donors developed diabetes.

In another study, Sindhu Chandran, MD (University of California, San Francisco) and her colleagues looked to see if people with prediabetes might be suitable [kidney donors](#). Currently, these individuals

are often not allowed to donate a kidney because it's thought that their risk of developing diabetes and [kidney failure](#) would be greater if they had only one kidney. Dr. Chandran's team identified 35 individuals with prediabetes who donated a kidney between 1996 and 2005. Only a minority (11.4%) of the donors developed diabetes within 10 years. Kidney function remained well-preserved in all donors.

"One in three US adults is prediabetic, and this is often a barrier to kidney donation. Our findings hold the potential to help us safely expand living kidney donation," said Dr. Chandran.

A third study examined [racial disparities](#) in the choice of renal replacement therapy—which includes dialysis or transplantation—in children with advanced kidney disease. Roshan George, MD (Emory University and Children's Healthcare of Atlanta) and her colleagues found that among 5,623 patients (43.3% whites, 30.3% blacks, and 26.4% Hispanics) initiating such therapy, blacks and Hispanics were less likely than whites to receive peritoneal dialysis or to undergo a transplant before needing dialysis. Socioeconomic status, access to care, and demographic factors explain this racial disparity among Hispanics, but not blacks.

"Pre-emptive transplantation or a home based peritoneal dialysis modality improves outcome in several clinical areas, when compared to hemodialysis; however, according to our study, more black and Hispanic patients are on hemodialysis," said Dr. George. "While many unmeasured factors may be responsible for these disparities, there may be modifiable factors such as enhancing access to primary care, early referral, and improving education regarding therapeutic options. Such measures may potentially attenuate disparities, hence improving long-term outcomes in minority populations," she added.

**More information:** Study co-authors for "Hypertension and Diabetes after Living Kidney Donation: Racial Differences and Comparison to Healthy Matched Controls" (abstract 5994) include Mara Mcadams, Allan Massie, PhD, Kyle Van arendonk, MD, M. Grams, MD, Po-han Chen, and Dorry Segev, MD, PhD.

Study co-authors for "Ten-Year Safety of Prediabetic Living Kidney Donors" (abstract 2127) include Umesh Masharani, MBBS, Allison Webber, MD, and David Wojciechowski, DO.

Study co-authors for "Racial Disparities in Renal Replacement Therapy in the Pediatric End Stage Renal Disease Population" (abstract 1159) include Laurence Greenbaum, MD, PhD, Allan Kirk, Nancy Kutner, PhD, and Rachel Patzer.

Provided by American Society of Nephrology

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