

Living kidney donors more likely to be diagnosed with high BP or preeclampsia once pregnant

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Nearly 30,000 people become living kidney donors worldwide each year, and many are young women. Researchers at the Institute for Clinical Evaluative Sciences (ICES), Lawson Health Research Institute and Western University set out to determine if being a living donor has any effect on future pregnancies.

The study, published in the *New England Journal of Medicine*, found living [kidney donors](#) were more likely to be diagnosed with gestational hypertension (high blood pressure) or preeclampsia than non-donors.

Preeclampsia is a pregnancy complication characterized by [high blood pressure](#) and signs of damage to another organ system, often the kidneys. Left untreated, preeclampsia can lead to serious—even fatal—complications for both mother and baby.

The researchers stress that while living kidney donors were more likely to be diagnosed with gestational hypertension or preeclampsia than non-donors, there were no other differences between the two groups including important maternal and fetal outcomes. No donor experienced a maternal death, stillbirth or neonatal death, and most women had uncomplicated pregnancies after donation.

"Living [kidney donation](#) is an important treatment option for [kidney failure](#) that clearly benefits many families and society. We are reassured

that most women we studied had uncomplicated pregnancies after kidney donation, and most did not experience gestational hypertension or preeclampsia in their pregnancies. These findings can be shared with potential donors and recipients as part of the [informed consent process](#) to proceed with transplantation. This information can also be used to guide the care of pregnant donors," said author Dr. Amit Garg, Director of Living Kidney Donation and a kidney specialist at the London Health Sciences Centre (LHSC), a researcher at Lawson and ICES, and a Professor of Medicine and Epidemiology & Biostatistics at Western University.

The retrospective cohort study looked at living kidney donors who became pregnant and matched them with pregnant non-donors screened for similar baseline good health. Eighty-five living donors were matched to 510 non-donors. Donations happened between 1992 and 2009 at five transplant centres in Ontario, Canada with follow-up until March 2013. The study found that donors have approximately a one in 10 chance of developing gestational hypertension or preeclampsia in a pregnancy after donation as compared to the expected chance in non-donors of one in 20.

"In the United States, 60 per cent of the approximately 6,000 living persons who donate a kidney each year are women. Our findings are highly relevant to clinical practices guidelines and informed consent policies, which to date have not addressed potential impacts of kidney donation on subsequent pregnancies," said Dr. Krista Lentine, co-author on the study, Vice Chair of the Organ Procurement and Transplantation Network (OPTN)/United Network for Organ Sharing (UNOS) Living Donor Committee, Director Living Kidney Donation and Professor of Medicine at Saint Louis University Center for Outcomes Research & Department of Internal Medicine.

"My main concern before donating a kidney was whether donating

would have any effect on my future pregnancies," said Betty Clarke, who donated a kidney to a relative at the London Health Sciences Centre and then went on to have two healthy children with uneventful pregnancies. "I am happy to know that most women, like me, won't have any problems during their pregnancy and will have healthy babies."

The ethical practice of living kidney donation requires that transplant professionals provide donors with current, accurate information about potential risks (including pregnancy risks), and acknowledge the limitations of what is known.

"Gestational hypertension and [preeclampsia](#) in living kidney donors," appears in the *New England Journal of Medicine*.

Provided by Saint Louis University

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