

Kidney donation does not put donor at extra risk

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Western professor Amit Garg says those who donate a kidney are not at a higher risk for developing cardiovascular conditions such as heart attack and stroke. His latest research was published in BMJ (British Medical Journal). Credit: Paul Mayne, Western News

(Medical Xpress) -- While people with reduced kidney function are more likely to develop cardiovascular conditions, that doesn't necessarily ring true for those with reduced renal mass from donating a kidney, according to Western Epidemiology & Biostatistics professor Amit Garg.

“In the non-donor population, there is a clear association between reduced [kidney](#) function and [increased risk](#) for [heart attack](#) or stroke,” Garg said. “The question being asked is if you donate a kidney and have reduced [kidney function](#) for that reason (a 25-40 per cent reduction to

the donor), does that predispose you to heart attack and stroke?”

Garg, director of the London Kidney Clinical Research Unit at London Health Sciences Centre, tackled the question by scouring the medical records of nearly 2,000 Ontario residents who were living kidney donors between 1992-2009. He found no increased risk of heart attack or stroke for those who donated a kidney versus those who didn't.

Since most kidney donors are only followed up with for a year or two following their procedure – and usually just with their primary care doctor – Garg saw no solid evidence as to the long-term effects. While a few studies eyed overall mortality, they simply compared them to the general public.

“But is that really a fair comparison, because you're taking a group of people who are expected to be ultra-healthy, some of the healthiest people on the planet, and you're not comparing them to a group of people who are the healthiest people on the planet, but rather the general public,” Garg said. “When you look at those estimates they may not be valid.”

So rather, Garg felt it would be more appropriate to take a healthy group of people who have donated kidneys, and compare them to the healthiest segment of the general population.

Second, mortality was what the other studies looked at, while he was interested in the area cardiovascular disease.

Living donations have only taken off in the last few decades. With the average age of a kidney donor being around 40, those first donors would be in their 60s today.

The findings, so far, should reassure living [kidney donors](#), their

recipients and transplant teams that donors are not putting themselves at a higher risk of heart disease because of their selflessness.

“They are interim results, because ideally we’d like another 20 years to really know the life history, but it provides reassurance,” said Garg, whose study was reported in [BMJ](#) (*British Medical Journal*). “In terms of the benefits to the donor, they feel very good in having helped a loved one. Most people who donate kidneys, to be honest, are very altruistic. They don’t even think about themselves, they think about a loved one. So when you talk to recipients and their willingness to accept the gift, they want this kind of reassurance.

“They want to be assured that if they accept this gift they are not going to do any harm to their loved one.”

Along with the obvious reassurance toward the health of the donor, Garg added the findings demonstrate the medical profession is safeguarding the practice of transplants by following up with donors.

“Everyone who comes forward I still make the strong case you have to keep yourself in good health,” said Garg, who does all the evaluations for people who come forward for kidney donations in southwestern Ontario “No smoking, exercise, because if you get sick you’re going to physically feel awful and the recipient is going to feel real guilty.”

This latest research is one of more than 30 studies Garg has published in the last few years. Along with planning to follow up with this same group in approximately 10 years, he is looking at other outcomes surrounding kidney donations, including those in women who donate and then become pregnant; issues around potential increased risk if you battle a kidney stone with one kidney versus two; and frequency of fractures, with the relation between kidneys and bone health.

Provided by University of Western Ontario

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