

## The Primary Care Provider and the Kidney Donor

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### ISSUE

Kidney donors are healthy people with only one kidney who sometimes have a low eGFR. As many past donors are cared for by primary care providers, it is important to have an understanding of what the health implications are from donating a kidney.

### DATA

**GFR:** About a third of healthy donors will have an eGFR below 60 ml/min/1.73m<sup>2</sup> (1) and this may prompt one to label them as having CKD3 and seek expert consultation and order imaging studies. However, unlike people with established renal disease, donor GFR does not usually decrease with time beyond that which occurs with natural aging. This is seen in short term studies and in long term follow up (2). Still, having two kidneys is somewhat better than one as seen in a recent US study that predicted lifetime donor ESRD of 0.9 % vs 0.14 % for healthy non-donors (general population 3.2%) (3). This showed a high relative risk for ESRD but an acceptable absolute risk of below 1%. When a donor's eGFR is below 60 ml/min/1.73m<sup>2</sup>, adjustments in medications may have to be made and limiting nonsteroidal use might be prudent (4).

**Hypertension and Proteinuria:** Donors have a rise in systolic BP of 0-6 mm/hg and a small rise in proteinuria to 154 mg/day (5-7). This usually does not require treatment or consultation. If a donor develops hypertension by standard criteria, it may be reasonable to choose a renin-angiotensin blocker due to the theoretical concern about hyperfiltration in the remaining kidney.

**Pregnancy:** Pregnancy in donors is associated with an increase in maternal hypertension but normal fetal outcomes. Three studies have shown that donors have a 3-11 % incidence of hypertension or preeclampsia compared to non-donors' 0.5 to 5 % (8-10). Referral to high risk OB/GYN might be prudent for pregnant females with one kidney.

### CONCLUSION:

1. Kidney donors do not have CKD although their eGFR may fall below 60 ml/min/1.73m<sup>2</sup>. They have excellent long-term outcomes. Nephrologic consultation might be prudent if eGFR falls precipitously over time beyond normal aging, or if it is below 45 ml/min/1.73m<sup>2</sup>.
2. Hypertension and proteinuria might be slightly elevated in donors but this is usually not of clinical significance. Annual check of blood pressure, eGFR, and urinary albumin are reasonable measurements to follow up.
3. Female donors of child-bearing age should be aware that hypertension and preeclampsia are higher in donor pregnancies. Fetal outcomes are the same as non-donors.

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