

# Open heart surgery for kidney disease patients

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One type of open heart surgery is likely safer than the other for chronic kidney disease (CKD) patients, according to a study appearing in an upcoming issue of the *Journal of the American Society of Nephrology* (*JASN*).

Open heart, or [coronary artery bypass](#), surgery can be done two ways: on-pump or off-pump, depending on whether the patient is put on a heart-lung machine. Off-pump surgery allows a surgeon to perform a bypass without stopping the heart. This may help cut down on kidney injuries that can arise after heart surgery, which can deprive the kidneys of normal blood flow.

While patients with CKD often have [heart problems](#), they're usually excluded from heart bypass clinical trials and are often undertreated for heart disease.

Lakhmir Chawla, MD (George Washington University) and his colleagues looked to see if off-pump bypass surgery helps protect the kidneys of CKD patients compared with on-pump surgery. The investigators studied 742,909 bypass surgery patients (158,561 or 21.4% of whom underwent off-pump surgery) from 2004 to 2009.

CKD patients with particularly poor [kidney function](#) were more than three times as likely to die or need dialysis during the study when they underwent on-pump surgery compared with off-pump surgery.

"Our data suggest that excluding CKD patients from clinical trials of off-pump surgery may have resulted in an underestimation of potential benefit for this patient subgroup," said Dr. Chawla. "If you need to have bypass surgery and you have CKD, an operative approach that does not involve the heart-lung machine may help avoid the need for dialysis," he added.

**More information:** The article, entitled "Off-Pump versus On-Pump CABG Outcomes Stratified by Pre-Operative Renal Function," will appear online on May 17, 2012, [doi: 10.1681/ASN.2012020122](https://doi.org/10.1681/ASN.2012020122)

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