

## **Study finds 30 percent lower risk of dying for diabetics with bypass surgery vs. stent**

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A study by cardiac surgeon Dr. Subodh Verma of St. Michael's Hospital in Toronto, finds people with diabetes have a 30 percent less chance of dying if they undergo coronary artery bypass surgery rather than opening the artery through angioplasty and inserting a stent. Credit: St. Michael's Hospital

People with diabetes have a 30 per cent less chance of dying if they undergo coronary artery bypass surgery rather than opening the artery through angioplasty and inserting a stent, a new study has found.



The findings are significant and have public health implications because of the sheer size of the difference in outcomes, according to the researchers at St. Michael's Hospital. Heart disease is the No. 1 killer of people with diabetes, and diabetics represent one-quarter of all patients who undergo coronary artery procedures. The number of people with diabetes is rising steadily as the population ages and becomes more sedentary.

"Although bypass surgery is more invasive than stenting, it is imperative that physicians and patients realize that long term <u>mortality reduction</u> is best achieved with bypass surgery," said Dr. Subodh Verma, a cardiac surgeon and principal author of the paper.

Whether diabetics fare better under <u>coronary artery bypass surgery</u>, known as CABG, or the angioplasty-stent procedure known as percuataneous <u>coronary intervention</u>, or PCI, has been the topic of intense debate, particularly from a scientific, social and financial perspective. Therefore, Dr. Verma and Dr. Jan Friedrich, an intensivist at St. Michael's, decided to conduct a meta-analysis of all existing randomized control trials comparing the two procedures. Their results appeared online in the journal *Lancet Diabetes and Endocrinology* on Friday.

It's not known exactly why diabetic patients live longer after <u>bypass</u> <u>surgery</u> compared to stents, even in the contemporary age of "drugeluting stents," which are coasted with medication that is slowly released to help prevent the growth of <u>scar tissue</u> in the artery lining. Dr. Verma said it may be related to the fact that diabetics have extensive and diffuse blockages that are best treated by bypassing those areas altogether.

They also found that while patients with diabetes did better with CABG, the procedures was associated with an increased risk of non-fatal



strokes. They said this may be related to the fact the heart has to be stopped during the procedure.

"The study represents an important call to action for physicians and patients," Dr. Verma said. "Physicians must disclose this benefit to the patient to truly obtain informed consent."

He noted that the decision to recommend whether diabetic patients undergo one procedure rather than the other usually resides with the cardiologist, who performs <u>stenting</u>. Bypasses are performed by cardiac surgeons.

"Despite guidelines from the American Heart Association and the American College of Cardiology advocating for bypasses over stents, until joint decision-making between a cardiologist and <u>cardiac surgeon</u> is facilitated, these findings will be difficult to translate into clinical practice."

The European Society of Cardiology supports the concept of a Heart Team, whereby a surgeon, interventionalist, cardiologist and other specialties work together to decide on needed treatment.

Provided by St. Michael's Hospital

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