

Stent, bypass outcomes better for those who stick to medical therapy

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Patients who had a stent procedure or heart bypass surgery and continued with their prescribed medical therapy had significantly better outcomes than non-adherent patients, according to a study published today in the journal *Circulation*.

The study also found that adherence to [medical therapy](#) was a more powerful predictor of adverse event-free survival than the type of revascularization procedure a patient had.

"A great deal of clinical research has been devoted to comparing outcomes in people who have had [bypass surgery](#) or a stent," said Paul Kurlansky, MD, assistant professor of surgery at Columbia University Medical Center, cardiac surgeon at New York-Presbyterian/Columbia, and Associate Director of Columbia's Center for Innovation and Outcomes Research in the Department of Surgery. "But very few studies have looked at what happens to those outcomes when patients do not adhere to their prescribed medical therapy. This is particularly important because roughly one-quarter of revascularization patients eventually stop taking their medications, due to issues such as medication costs, side effects, and a lack of noticeable symptoms."

In [coronary artery bypass](#) (CABG) surgery, blood flow to the heart is rerouted around blocked arteries, using one or more veins or arteries. In percutaneous coronary interventions (PCI), a catheter is threaded through an artery in the groin or wrist to deliver a stent or other medical therapy to the diseased vessel.

The study included 3,228 patients from 8 community hospitals who underwent a revascularization procedure in 2004. Of these, 973 patients had bypass surgery and 2,255 patients had PCI. The researchers followed the participants for 5 to 7 years after treatment, obtaining a detailed medication history and tabulating major adverse coronary events (MACE) for each group, including non-fatal heart attacks, repeat revascularization procedures, and death.

At the end of follow-up period, those who had continued with their prescribed medical therapy were 2.8 times more likely to have survived without a major heart problem compared to those who were non-adherent.

There was no statistically significant difference in MACE-free survival between bypass and PCI patients who had continued with their medications, with more than 90 percent MACE-free survival in patients with similar clinical characteristics. However, non-adherent patients who had PCI were nearly one and a half times more likely than surgery patients to have a major cardiac event.

Optimal medical therapy after revascularization includes antiplatelet therapy (aspirin for bypass patients or one year of double-antiplatelet therapy for PCI patients) and lipid-lowering medications (statins) indefinitely to keep the coronary arteries from becoming clogged again.

"While larger, prospective studies are needed to replicate our results, this study underscores the importance of educating PCI and bypass patients about the need to stick to their prescribed regimens, even if they feel just fine," said Dr. Kurlansky, lead author of the paper. "It also suggests that physicians may need to recommend surgery instead of PCI for [patients](#) who are unlikely to adhere to their prescribed medical therapy."

More information: "CABG vs. PCI: Meds Matter, Impact of

Adherence to Medical Therapy on Comparative Outcomes," *Circulation*, 2016.

Provided by Columbia University Medical Center

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