

Non-cardiac surgery too soon after stenting raises risk of heart problems

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Patients who can postpone non-cardiac surgery for at least six weeks after receiving a coronary stent are less likely to suffer reduced blood flow to the heart, heart attack and death than those who have surgery sooner, Scottish researchers report in *Circulation: Cardiovascular Interventions*, an American Heart Association journal.

Coronary stents are small tubes of wire-metal mesh that doctors insert into constricted arteries to increase blood flow by permanently holding the arteries open. A common treatment, stents are used in more than 90 percent of angioplasty patients in Scotland, according to the study. Stents are either bare metal or drug-eluting (a metal tube coated with medicine that's slowly released to help reduce the risk of blood clots forming within the stent).

In the broad retrospective study, researchers found that 42 percent of patients undergoing non-cardiac surgery within six weeks of stent implantation were more likely to suffer heart complications, including decreased blood flow to the heart (ischemia), [heart attack](#) and death. In comparison, these complications occurred in 13 percent of patients whose surgeries were performed beyond six weeks post-implantation.

The risk of [heart problems](#) following non-cardiac surgery was even greater among patients whose stents were inserted as treatment for a recent heart attack (occurring in 65 percent of patients) than among those with stable but chronic disease (occurring in 32 percent of patients). The type of stent — bare metal vs. drug-eluting — didn't

affect risk, which was similar for the first two years after stent implantation.

The researchers examined records for 1,953 patients, average age 64, who had received coronary stents in Scotland between April 2003 and March 2007. They used [hospital admission](#) data and information from the Scottish Coronary Revascularization Register.

Previous studies have found that patients who underwent non-cardiac surgery within four to six weeks of bare-metal stent implantation had a greater incidence of serious heart complications. However, those studies did not clarify how long the risk persisted after stent implantation and whether it was the same in patients with drug-eluting stents.

"These findings have important implications for a large number of patients," said Nicholas L.M. Cruden, Ph.D., M.B., first author of the study and cardiology lecturer at the University of Edinburgh in Scotland. "In the current study, 4.4 percent of patients undergoing percutaneous coronary intervention underwent non-cardiac surgery within one year of coronary stent implantation."

Provided by American Heart Association

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