

# Lighting up can bring you down in colorectal surgery

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Infection, pneumonia, blood clots and kidney failure are all possible complications after any major surgery. A new study shows that smoking boosts the risk of such complications following some of the most common colorectal procedures, including surgery for colon cancer, diverticulitis or inflammatory bowel disease. Lighting up also increases a patient's risk of death after surgery compared with patients who have never smoked.

The study, published in the *Annals of Surgery*, is unique because it focuses on elective, or non-emergency, surgeries.

"Elective surgeries are planned, so there's a built-in window of opportunity for patients to stop smoking beforehand," said Fergal J. Fleming, M.D., lead study author and assistant professor in the Department of Surgery at the University of Rochester Medical Center. "We know that stopping smoking even as little as six weeks before a procedure can reduce the risk of complications."

Past research has shown that a diagnosis of cancer or the scheduling of [major surgery](#) is a time when patients may be more motivated to quit smoking. Fleming says physicians need to take full advantage of these "teachable moments" and strongly encourage patients to enter a [smoking cessation program](#), as it could go a long way in fending off post-surgical complications.

According to the Centers for Disease Control and Prevention, one in five

American adults smoke, and millions of these patients undergo surgery every year. Physicians have long known that smoking is a risk factor for increased surgical complications, but this is the first large study to focus specifically on the effects of smoking after colorectal surgery.

Fleming's team tapped a large database from the American College of Surgeons to identify patients undergoing major, non-emergency colorectal surgery. More than 47,000 patients were identified; approximately 26,000 had surgery for colorectal cancer, 14,000 for diverticular disease (small, inflamed "pockets" forming along the colon wall) and 7,000 for [inflammatory bowel disease](#). Twenty percent of patients were current smokers, 19 percent were ex-smokers and the rest had never smoked.

After accounting for patient age, body mass index, alcohol use and other health conditions, the team's analysis showed that current smokers still had an estimated 30 percent increased risk of dying or developing complications following colorectal surgery compared with never-smokers. Current smokers, who were younger than never-smokers and ex-smokers, had the highest rates of pneumonia and infection, were more likely to return to the operating room and had much longer hospital stays after surgery.

Researchers also observed that patients with long histories of smoking were at even greater risk: All complications and the risk of death were significantly higher in patients who had smoked two packs a day for more than 30 years.

Building on this research, Fleming plans to study how doctors can better partner with patients to encourage them to quit smoking before planned surgeries.

"Anecdotally, we know that many patients don't take the opportunity to

quit or join a [smoking cessation](#) program before surgery," he said. "We want to find out what motivates patients, how can we make them a major player in their own care, and how can we as physicians do a better job of explaining issues like this to [patients](#)."

Provided by University of Rochester Medical Center

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