

Is a Colonoscopy Worth the Risk?

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✓ Fact Checked

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STORY AT-A-GLANCE

- › Based on the evidence, an international team of experts is recommending routine colonoscopies only if you have a 3% potential of developing a growth in the next 15 years. If it is less, then the pitfalls associated with the procedure are not worth the risks
- › One study found a 17% risk of a missed cancer diagnosis with a colonoscopy. Other risks include perforation of the colon, which is raised when you have anesthesia with the procedure, gut microbial imbalance from preparation for the procedure, equipment contamination from improper sterilization between patients and death from complications
- › David Lewis, Ph.D., states that up to 80% of hospitals sterilize their endoscopes with glutaraldehyde (Cidex), which exacerbates the issue by preserving human tissue in the endoscope picked up during the procedure. The best method of sterilizing the equipment to date is peracetic acid, which will dissolve protein tissue and clear the endoscope
- › You may significantly reduce your risk of colorectal cancer by making lifestyle changes, including reducing or eliminating alcohol and smoking, maintaining a normal weight, eating a high fiber diet and exercising consistently

This article was previously published October 16, 2019, and has been updated with new information.

Knowing your potential risk for developing cancer can help you weigh the risks against the benefits of different tests for your situation. According to the American Cancer Society,¹ more than 16.9 million people in the U.S. have a history of cancer. At least 1.9

million new cases will be diagnosed in 2022, which does not include a diagnosis of carcinoma in situ (noninvasive cancer).

The society estimates 609,360 people will die from cancer in 2022, which is about 1,670 deaths per day. The four most common types include lung, breast, prostate and colorectal cancer. One of the screening tests commonly prescribed to rule out colorectal cancer is a colonoscopy.

Colorectal cancer can start in the colon or in the rectum but the two types are grouped together since they have many of the same characteristics.² The society estimates that in 2022 there will be 106,180 new cases of colon cancer diagnosed and 44,850 new cases of rectal cancer. Although it remains the third leading cause of cancer-related deaths in men and women, the rate has been dropping for several decades.³

According to the Colorectal Cancer Alliance,⁴ the five-year survival rate has been rising and there are more than 1 million colorectal cancer survivors alive in the U.S. Knowing your risk factors and making lifestyle changes to prevent the development of colorectal cancer are the basis of the most recently published Rapid Recommendation of The BMJ initiative.⁵

In Many Cases Routine Colonoscopies Are Unnecessary

The 2019 practice guidelines published in The BMJ⁶ recommend physicians use a tool to estimate an individual's potential risk for developing colorectal cancer in the next 15 years. The team recommends that only those who have a risk of 3% or greater should undergo screening tests.

Current guidelines recommend screening for everyone over the age of 50, without regard to their individual risk. At the age of 50, this is typically less than 3%.⁷ The international panel reviewed scientific evidence and research data to evaluate the risks versus the benefits of colonoscopies.

They found their recommendations could accurately be applied to healthy people from 50 to 79 years who expected to live another 15 years. The Centers for Disease Control

and Prevention recommends colorectal cancer screening for those over 50.⁸

Using data from across the U.S., they found the number who were up to date with their screening went up 1.4% from 2016 to 2018, representing an additional 3.5 million people.

In addition to asking if screening made a difference in health outcomes, The BMJ initiative team also attempted to differentiate the type of testing best used to screen for colorectal cancer.⁹ They recommended that those with a 3% risk or greater over the following 15 years could choose from one of four screening options.

The first was a fecal immunochemical test (FIT) done every year, or every two years depending upon their risk factors. Patients may also choose a single sigmoidoscopy or, the weakest recommendation from the team, a single colonoscopy.

Possibility of Cancer Compared to Screening Hazards

From their examination of the evidence, the team believed a yearly FIT, sigmoidoscopy or colonoscopy could reduce the incidence of cancer while a FIT every two years may not have an effect on incidence over 15 years. They wrote:

"Based on benefits, harms, and burdens of screening, the panel inferred that most informed individuals with a 15-year risk of colorectal cancer of 3% or higher are likely to choose screening, and most individuals with a risk of below 3% are likely to decline screening. Given varying values and preferences, optimal care will require shared decision making."

The team determined that the risks associated with colorectal cancer screening outweighed the benefits in many cases. For instance, the risk of death from a colonoscopy from one source was 1 in 16,318 procedures evaluated.¹⁰ In the same analysis, the researchers also found 82 suffered serious complications.

Colonoscopies Are Not Risk Free

Although a colonoscopy is supposed to help find early tumor growth, one study reported a 17% rate of missed diagnosis.¹¹ Other risks associated with a colonoscopy include worsening stool patterns and contributing to the growth of colorectal polyps or tumors.

Perforation of the colon during the exam has an incidence of 0.2% to 5% and is widely recognized as a serious complication associated with a high morbidity and mortality rate.¹² The risk of perforation rises with the age of the patient and the presence of two or more other health conditions. One study showed 51.9 people per 1,000 whose colons were perforated died within the first 14 days.¹³

Dysbiosis may occur after using harsh laxatives to prepare for a colonoscopy. A study published in *Cell*¹⁴ suggested even a short-term course of laxative use could trigger an immune response. Research on an animal model¹⁵ found treatment eliminated one family of beneficial gut bacteria and allowed another to flourish. Even two weeks after completing the laxatives the bacteria showed reduced diversity.

Many experts agree you should opt for the lightest level of sedation possible, or none at all, as full anesthesia increases risks. Those who have sleep apnea, are obese, have high blood pressure or diabetes are at increased risk from the anesthesia.¹⁶ Across the U.S. 34.4% of those undergoing a colonoscopy used anesthesia.¹⁷

The use of anesthesia was associated with a 13% increased risk of experiencing complications within 30 days of the procedure and specifically associated with an increased risk of perforations of the colon and/or a stroke. The risk of complications varied by area, with those in the Northeast reporting an increase of any complication of 12%, but among those performed in the West this increased to 60%.

Researchers who conducted one study found an increased risk of aspiration pneumonia.¹⁸ Another¹⁹ sought to determine if the procedure could be successfully completed without any sedation. Patients were given the option of undergoing a colonoscopy without premedication and then evaluated immediately following the procedure, two and five days later.

The researchers asked about the severity of pain and willingness to consider the procedure again without sedation. When questioned, only 5% experienced no pain; 41% had mild pain; 34% reported moderate pain and 20% said they experienced severe pain. However, despite the level of pain experienced, 73% were willing to repeat it without sedation and only 18% said they would request sedation the next time.

Equipment Contamination Another Risk of Colonoscopies

A real risk of undergoing an endoscopy of any nature is chance of improper sterilization of the flexible scope. David Lewis, Ph.D., and I discuss this in the short video above. One issue is the inability to thoroughly clean the inside of the scope.

Lewis describes a problem that he states is commonly experienced by physicians. During the examination the physician may be unable to see through the scope and is unsuccessful in the attempt to flush it using the air/water channel as it is clogged with human tissue from a past exam.²⁰ The scope must be retracted and another one used.

Since endoscopes have sensitive equipment attached, they cannot be heat sterilized. Unfortunately, manufacturers have not been made to produce a scope with the ability to be heat sterilized. As Lewis points out:²¹ "We can put a Rover on Mars, surely we can build a flexible endoscope that we can put in an autoclave."

These expensive tools are not disposable but require sterilization between each patient. Lewis reports that up to 80% of hospitals are sterilizing the flexible endoscopes with glutaraldehyde (Cidex). On testing, he finds this has complicated the process as it does not dissolve tissue in the endoscope but rather preserves it.

When sharp biopsy tools are run through the tube, patient material from past testing is scraped off and potentially carried into your body. This is why it's important to find a clinic or hospital that uses peracetic acid to thoroughly sterilize the equipment by dissolving proteins found in the flexible endoscopes. Before scheduling any endoscopic examination call to ask how the equipment is sterilized between patients.

Tailor Lifestyle Choices to Reduce the Risk of Colon Cancer

Like many other types of cancer, colorectal cancer is often preventable. Research suggests only 5% to 10% of all cancer cases are due to genetic defects, while the rest are linked to environmental and lifestyle factors.²² The Mayo Clinic writes that one-third of the most diagnosed cancers in the U.S. could be prevented through diet and nutrition alone, i.e., with plenty of fresh fruits and vegetables.²³

The extent that diet contributes to cancer death varies by the type of cancer, which researchers find is associated by as much as 70% in the case of colorectal cancer.²⁴ For example, long-term exposure to chlorinated drinking water can increase the risk of leukemia, colorectal cancer and bladder cancer.

There are several strategies you can use to lower your risk of developing this potentially deadly disease as it is impacted by your diet, vitamin D levels, exercise and alcohol intake.

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