

Flexible sigmoidoscopy screening reduces colorectal cancer incidence, rate of death

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Among about 100,000 study participants, screening with flexible sigmoidoscopy resulted in a reduced incidence and rate of death of colorectal cancer, compared to no screening, according to a study in the August 13 issue of *JAMA*.

Colorectal [cancer](#) is the third most commonly occurring cancer worldwide. Most colorectal cancer cases develop from adenomas (benign tumors). Removal of adenomas by colonoscopy or [flexible sigmoidoscopy](#) (a thin flexible lighted tube used for inspection of the inside of the rectum and lower part of the colon) has been endorsed as a primary prevention tool for colorectal cancer, according to background information in the article.

Øyvind Holme, M.D., of the Sorlandet Hospital Kristiansand, Kristiansand, Norway and colleagues randomly assigned [study participants](#) in Norway to receive once-only flexible sigmoidoscopy (n=10,283); a combination of once-only flexible sigmoidoscopy and fecal occult blood testing (FOBT; n=10,289), or no intervention ([control group](#); n=78,220). Screening was performed in 1999-2000 (55-64-year age group) and in 2001 (50-54-year age group), with follow-up ending December 2011. Participants with positive screening test results were offered colonoscopy.

After a median of 11 years, 71 [participants](#) died of colorectal cancer in the screening groups vs 330 in the control group. Colorectal cancer was diagnosed in 253 participants in the screening groups vs 1,086 in the control group. Analysis of the data indicated that compared to no screening, flexible sigmoidoscopy screening reduced colorectal cancer incidence by 20 percent (absolute difference, 28.4 cases/100,000 person years) and colorectal cancer mortality by 27 percent (absolute difference, 11.7 deaths/100,000 person years). There was no significant difference in these outcomes between the flexible sigmoidoscopy only vs the flexible sigmoidoscopy and FOBT screening groups.

Younger participants 50 to 54 years of age seemed to benefit at least as much from the screening interventions as older participants ages 55 to 64 years.

In an accompanying editorial, Allan S. Brett, M.D., of the University of South Carolina School of Medicine, Columbia, S.C., writes that while there may be debate over the use of flexible sigmoidoscopy or colonoscopy for [colorectal cancer screening](#), another screening technique, stool DNA testing, might render this debate moot in the not-too-distant future.

"A large, recently published study examined the performance of a multitarget stool test that identifies several DNA abnormalities associated with colorectal cancer or precancerous adenomas. With colonoscopy as the reference standard, the sensitivity of the stool DNA test was 92 percent for detecting cancer and 42 percent for detecting advanced precancerous lesions; specificity was 90 percent. Notably, the stool DNA test was much more sensitive than a separate fecal immunochemical test for hemoglobin performed for each participant. Repeated at some defined interval, stool DNA testing has potential to reduce colorectal cancer mortality substantially while sharply reducing the number of routine colonoscopies. For now, however, the muddled landscape of [colorectal cancer](#) screening in the United States continues, and the place of flexible sigmoidoscopy among [screening](#) tools remains unsettled."

More information: [DOI: 10.1001/jama.2014.8266](https://doi.org/10.1001/jama.2014.8266)
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