

# Use of low-dose aspirin associated with improved performance of test for detecting colorectal cancer

December 7 2010

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Use of low-dose aspirin prior to a newer type of fecal occult blood test is associated with a higher sensitivity for detecting advanced colorectal tumors, compared to no aspirin use, according to a study in the December 8 issue of *JAMA*.

"Screening for colorectal cancer (CRC) and its precursors by fecal occult blood tests (FOBTs), which has been shown to reduce CRC incidence and mortality in [randomized trials](#), is widely recommended and applied in an increasing number of countries. Screening is mostly done in age groups in which use of low-dose [aspirin](#) for primary or secondary prevention of cardiovascular disease is increasingly common. Use of low-dose aspirin increases the likelihood of gastrointestinal bleeding, especially upper gastrointestinal bleeding. Because of the increased risk of bleeding from sources other than colorectal neoplasms [tumors], concerns have been raised regarding possible adverse effects on specificity of FOBT-based screening for CRC," according to background information in the article. Potential false-positive test results due to increased risk of upper gastrointestinal bleeding are expected to be of less concern for increasingly available immunochemical FOBTs (iFOBTs; a type of test to check for blood in the stool), but evidence is sparse about the performance of iFOBTs for patients who use low-dose aspirin.

Hermann Brenner, M.D., M.P.H., of the German Cancer Research

Center, Heidelberg, Germany, and colleagues assessed the association of use of low-dose aspirin with performance of 2 iFOBTs in a large sample of women and men who underwent CRC screening. The study, conducted from 2005 through 2009, included 1,979 patients (average age, 62.1 years): 233 regular users of low-dose aspirin (167 men, 67 women) and 1,746 who never used low-dose aspirin (809 men, 937 women). The researchers analyzed measures of sensitivity and specificity in detecting advanced colorectal neoplasms ([colorectal cancer](#) or advanced adenoma [a tumor that is not cancer]) with 2 quantitative iFOBTs (hemoglobin test and hemoglobin-haptoglobin [a protein] test).

Advanced neoplasms were found in 24 users (10.3 percent) and 181 nonusers (10.4 percent) of low-dose aspirin. The researchers found that for the hemoglobin test, sensitivity was 70.8 percent for low-dose aspirin users compared with 35.9 percent for nonusers; specificity was 85.7 percent for users compared with 89.2 percent for nonusers. For the hemoglobin-haptoglobin test, sensitivity was 58.3 percent for users compared with 32 percent for non-users and specificity was 85.7 percent for users compared with 91.1 percent for nonusers.

"We provide a detailed comparison of the diagnostic performance of 2 quantitative iFOBTs among users and non-users of low-dose aspirin in the target population for CRC screening. For both tests, sensitivity was markedly higher, while specificity was slightly lower among users of low-dose aspirin compared with nonusers," the authors write.

"... our study strongly suggests that use of low-dose aspirin does not hamper testing for [fecal occult blood](#) by immunochemical tests. On the contrary, our findings raise the hypothesis that test performance may be enhanced by temporary use of low-dose aspirin, a hypothesis that needs replication in larger samples and followed up in further research, ideally including randomized trials and different types of FOBTs."

**More information:** *JAMA*. 2010;304[22]:2513-2520.

Provided by JAMA and Archives Journals

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