Does aspirin lower colorectal cancer risk in older adults? It depends on when they start.

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Regular aspirin use has clear benefits in reducing colorectal cancer incidence among middle-aged adults, but also comes with some risk, such as gastrointestinal bleeding. And when should adults start taking regular aspirin and for how long?

There is substantial evidence that a daily aspirin can reduce risk of colorectal cancer in adults up to age 70. But until now there was little evidence about whether older adults should start taking aspirin.

A team of scientists set out to study this question. They were led by Andrew T. Chan MD, MPH, a gastroenterologist and chief of the Clinical and Translational Epidemiology Unit at Massachusetts General Hospital (MGH). Their report appears in JAMA Oncology.

The researchers carried out a pooled analysis of two large U.S. cohort studies: The Nurses’ Health Study (January 1980—June 2014) and the Health Professionals Follow-up Study (January 1986—January 2014). These two studies contributed data on more than 94,500 participants' use of aspirin over about 35 years, offering a unique opportunity to understand the effect of aspirin use across the lifespan on cancer risk.

The researchers found that regular aspirin use was linked to lower colorectal cancer risk among people aged 70 or older. However, this advantage was only significant among people who started taking aspirin before the age of 70. People who started regular aspirin use at the age of 70 or older did not seem to reap any benefit.

"There is considerable evidence that aspirin can prevent colorectal cancer in adults between 50 and 70 years old," says Chan. "But it has not been clear whether the effect is similar in older adults."

Aspirin is considered the most well-established agent that protects against colorectal cancer (CRC). It is currently recommended by the U.S. Preventive Services Task Force for people aged 50-59 years with specific cardiovascular risk profiles because of its protective effect against heart disease.

However, the recent Aspirin in Reducing Events in the Elderly (ASPREE) trial reported that participants who took a daily low dose of aspirin (100 mg) after age 70 for about five years actually had an unexpected 30% higher risk of death from cancer. The vast majority of the ASPREE participants (89%) had never taken aspirin regularly before joining the study. Chan's team also recently reported that ASPREE participants on aspirin did not experience an increase or decrease in risk of developing a cancer despite having an increase in risk of death from cancer.

That led to the question: Does regular aspirin benefit or harm people older than 70 and does it matter when aspirin was started?

The current study confirms that initiating aspirin at an older age was not associated with a lower risk of
colorectal cancer. However, importantly, there is a potential benefit of continuing aspirin if is started at an earlier age. These results, the researchers say, "strongly suggest that there is a potential biological difference in the effect of aspirin at older ages which requires further research."

Adds Chan: "As people get older, if they are not already taking aspirin, a discussion is warranted about whether to start aspirin after weighing the benefits against the risks."

**More information:** Chuan-Guo Guo et al. Aspirin Use and Risk of Colorectal Cancer Among Older Adults. *JAMA Oncol.* Published online January 21, 2021. DOI: 10.1001/jamaoncol.2020.7338

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