

Continued use of low-dose aspirin may lower pancreatic cancer risk

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Axial CT image with i.v. contrast. Macrocystic adenocarcinoma of the pancreatic head. Credit: public domain

The longer a person took low-dose aspirin, the lower his or her risk for developing pancreatic cancer, according to a study published in *Cancer Epidemiology, Biomarkers & Prevention*, a journal of the American Association for Cancer Research.

"We found that the use of low-dose aspirin was associated with cutting the risk of pancreatic cancer in half, with some evidence that the longer low-dose aspirin was used, the lower the risk," said Harvey A. Risch, MD, PhD, professor of epidemiology in the Department of Chronic Disease Epidemiology at the Yale School of Public Health in New Haven, Connecticut. "Because about one in 60 adults will get pancreatic cancer and the five-year survival rate is less than 5 percent, it is crucial to find ways to prevent this disease."

Men and women who took low-dose aspirin regularly had 48 percent reduction in their risk for

developing pancreatic cancer. Protection against pancreatic cancer ranged from 39 percent reduction in risk for those who took low-dose aspirin for six years or less, to 60 percent reduction in risk for those who took low-dose aspirin for more than 10 years.

"Older studies of aspirin use have been clouded by the use of [regular- or high-dose] aspirin for pain relief from conditions that themselves might be related to the risk for pancreatic cancer. Only recently have people been using low-dose aspirin for long enough times [to prevent cardiovascular disease] that the use might bear on risk of pancreatic cancer development," explained Risch.

"There seems to be enough evidence that people who are considering aspirin use to reduce the risk for cardiovascular disease can feel positive that their use might also lower their risk for pancreatic cancer, and quite certainly wouldn't raise it," Risch added.

Study subjects were recruited from the 30 general hospitals in Connecticut between 2005 and 2009. There were 362 pancreatic cancer cases and 690 controls. Study subjects were interviewed in person to determine when they started using aspirin, the number of years they used aspirin, the type of aspirin they used (low versus regular dose), and when they stopped using aspirin, among other things. Confounding factors, including body mass index, smoking history, and history of diabetes, were taken into account.

Of the study participants, 57 percent were men, about 92 percent were non-Hispanic white, about 49 percent were former or current smokers, and 19 percent had been diagnosed with diabetes within the three years prior to this study.

A dose of 75 to 325 mg of aspirin per day was considered as low-dose aspirin (usually taken for heart-disease prevention), and a dose higher than

that, generally taken every four to six hours, was considered as regular-dose aspirin taken for pain or anti-inflammation purposes.

Of the participants, 96 percent of low-dose aspirin users and 92 percent of regular-dose aspirin users reported daily aspirin use.

The earlier a person started regularly taking low-dose aspirin, the greater the pancreatic cancer risk reduction, ranging from 48 percent reduction in those who started three years before the study, to 60 percent in those who started taking it 20 years before the study. On the other hand, discontinuation of aspirin use within two years prior to the study was associated with a threefold increased risk for pancreatic cancer compared with continuing use.

"People who are developing pancreatic cancer have various physiologic changes, including taste disorders, starting to occur two to three years before pancreatic cancer is diagnosed. Such individuals are more likely to quit using aspirin. So it may be tricky to separate the various aspects of patterns of aspirin use and risk of pancreatic cancer," noted Risch.

"Aspirin use has potential risks of its own, and thus the risks and benefits for each person have to be evaluated based on personal characteristics and considerations," added Risch. "For the small subset of individuals with strong family histories of pancreatic cancer or who otherwise have been evaluated to be at substantially increased risk of [pancreatic cancer](#), [aspirin](#) use could be part of a regimen designed to reduce their risk."

Provided by American Association for Cancer Research

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