

USPSTF Recommends Daily Aspirin for CVD and Cancer Prevention

Liam Davenport | September 17, 2015

Adults 50 to 69 years of age should take daily low-dose aspirin for at least 10 years to reduce their risk for cardiovascular disease (CVD) and colorectal cancer, according to a set of draft recommendations from the US Preventive Services Task Force (USPSTF).

The recommendations, which were published online September 15, join a number of guidelines suggesting low-dose aspirin for the primary prevention of CVD.

However, this is the first time that a major medical organization in the United States has recommended aspirin for the primary prevention colorectal cancer in average-risk adults. The American Cancer Society recommends against the use of aspirin as a prevention strategy for colorectal cancer.

The USPSTF statement has drawn criticism from a number of experts as potentially confusing and lacking in clear evidence. Moreover, there are concerns that the recommendations could encourage patients to see aspirin as a "magic bullet" and not follow other risk prevention strategies with proven benefits.

Kirsten Bibbins-Domingo, PhD, MD, vice chair of the USPSTF, defended the recommendations, saying that the challenge was to weigh up the risks and benefits of daily aspirin in healthy adults with multiple risk factors.

"These things are what make the decision to take aspirin complex," she was quoted as saying in the *New York Times*.

However, Steven Nissen, MD, chair of cardiology at the Cleveland Clinic, was scathing about the USPSTF statement.

He told *Medscape Medical News*: "I think the evidence in favor of a benefit for prophylactic aspirin for primary prevention is weak, there is very clear evidence of harm, and I don't think their advice is prudent."

The draft recommendations are open for public comment until October 12, with a final recommendation to be developed after the feedback has been considered.

Details of the Recommendations

CVD and cancer are the leading causes of death in the United States, with CVD responsible for approximately 30% and cancer around 25% of deaths. Colorectal cancer is the third most common cancer in the United States, causing an estimated 50,000 deaths in 2014.

The USPSTF recommends that adults 50 to 59 years of age take low-dose aspirin for the primary prevention of CVD and colorectal cancer.

Individuals should have a 10% or greater risk for CVD, not be at increased risk of bleeding, have a life expectancy of at least 10 years, and be willing to take low-dose aspirin for at least 10 years.

For adults 60 to 69 years of age, the decision to use low-dose aspirin in those with a 10-year CVD risk above 10% should be taken on an individual basis, with the same caveats as in younger individuals.

In both age groups, the USPSTF concluded that there was "moderate certainty" that there was a net benefit with aspirin use, relative to the risk for small to moderate harms, including gastrointestinal bleeding (GI) and hemorrhagic stroke.

For adults younger than 50 years and those older than 70 years, the USPSTF concluded that there is insufficient evidence to balance the potential risks and benefits of aspirin use in CVD and colorectal cancer prevention.

Determining Risk

To determine CVD risk, the USPSTF developed a microsimulation model using a calculator derived from American College of Cardiology/American Heart Association pooled cohort equations, which are the only externally validated risk tools in the United States.

Although the benefits of aspirin use for CVD prevention were assessed with three separate systematic reviews and a decision analysis model, the evidence for colorectal cancer was derived from an update of a review conducted in 2007.

Overall, aspirin appears to reduce the risk for colorectal cancer by 26% to 40%, with at least 5 to 10 years of use required to achieve the reduction. As people with a shorter life expectancy are therefore less likely to see a benefit from prolonged aspirin usage, the USPSTF recommendations say that it is "most likely to have an impact when it is started between the ages of 50 and 59 years."

However, aspirin use is also associated with an increased risk of GI bleeding and hemorrhagic stroke, with risk factors including aspirin dose and older age, as well as a number of conditions and concomitant medication use.

The risk of bleeding or stroke is small in adults 59 years and younger and moderate in those 60 to 69 years. Although the risks could not be determined in adults 70 years and older, the USPSTF says that the potential harms are significant and the benefits in terms of colorectal cancer are lower in this age group.

The USPSTF points out that the optimal dose of aspirin for CVD prevention is unknown, with primary prevention trials showing benefits with a wide range of doses. Given the association between bleeding risk and increasing aspirin dose, they suggest a "pragmatic" dose of 81 mg/day.

The draft recommendations nevertheless recognize that there are a number of "important" research gaps in the use of aspirin for the prevention of CVD and colorectal cancer.

Specifically, they say that more research is needed on the effect of aspirin in different subgroups, the best dosing strategies, the long-term impact of aspirin in patients with previous adenoma, and the durability of aspirin's effects if it is discontinued.

First Recommendation for Cancer Prevention

"I think the real news here is the colon cancer recommendations," commented Ranit Mishori, MD, MHS, FACP, associate professor of family medicine at the Georgetown University School of Medicine in Washington, DC. "It's first time that aspirin is considered for preventive therapy for cancer by an official, highly respected, well-regarded organization," she told *Medscape Medical News*. "I think we're going to be seeing more recommendations for cancer prevention with aspirin in the future, because there are multiple studies going on right now looking at the benefits of aspirin for the prevention of other cancers, including lung cancer, melanoma and prostate cancer," she added. However, Dr Mishori expressed concern that the recommendations would encourage patients to see aspirin as the only prevention strategy they need to follow.

She told *Medscape Medical News*: "There's no magic bullets in health and in medicine, and every time that the headlines make bold statements about 'take this to prevent that,' there's a risk that individuals will take it as, 'All I have to do is take that statin, all I have to do is take aspirin, or all I have to do is take that obesity pill, or whatever you want'."

Dr Mishori continued: "This is just one additional factor in a larger strategy for prevention of cancer or cardiovascular diseases, so nothing should be taken as the only one solution, and that applies here as well."

Another potential issue is that of adherence because of the length of time that patients will have to take aspirin to see a benefit.

She said: "We all know that, when patients are given prescriptions, even for 1 week of antibiotics or 2 weeks, or anything that is actually important for an acute condition, a large percentage of patients may not even fill the prescription and, if they do fill it, they take it for a few days and then they stop."

Dr Nissen believes the draft recommendations could do more harm than good. He said: "Most people who are taking aspirin right now are the worried well. They are not people that should be taking aspirin and I believe that the net harms probably exceed the benefits for many of people."

He explained that there is a lack of randomized controlled trials to support the statements, adding: "So they are speculating. They are kind of taking a guess at who would benefit. I don't think that's good public policy."

"I think you want to have very clear evidence of benefit before you treat large groups of patients with a therapy that has both risks as well as benefits," he said.

The lack of hard evidence has consequently resulted in a series of recommendations that give out a complicated message about who should take aspirin. "I think that, frankly, patients and primary care physicians are going to be very confused by these recommendations," Dr Nissen said.

He continued: "I think that one of the reasons why it's not clear that there's a benefit from aspirin is that other therapies have so significantly lowered the event rate that there isn't a lot of room for benefit from aspirin."

Dr Nissen concluded: "I think these are a very confused, complicated set of recommendations that are not going to clarify for physicians who to treat and who not to treat."

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