Aspirin for primary prevention: It depends

Acetylsalicylic acid has been around for nearly 200 years. It traces its history back to a French chemist (Charles Frederic Gerhardt) and 2 German chemists (Felix Hoffmann and Arthur Eichengrün) who worked at Bayer, the company that launched the pain reliever under the name “aspirin” in 1899. It is now one of the most commonly used medications in the world.

With aspirin’s anti-inflammatory properties in mind, researchers conducted randomized trials for secondary prevention of heart attacks in the 1970s; low-dose aspirin was proven effective in reducing risk for a second myocardial infarction. These trials led to speculation that aspirin might be effective for primary prevention as well. Indeed, in the 1980s the large Physicians’ Health Study found aspirin reduced the incidence of first heart attack in healthy physicians by 44%.1 Unfortunately, there was no reduction in mortality from heart disease and it was only effective for those older than 50.

The downside of aspirin was a slight increase in the incidence of hemorrhagic stroke and bleeding requiring transfusion. Nonetheless, many healthy adults started taking daily aspirin hoping to prevent a heart attack.

In this issue of JFP, Smith and colleagues summarize the 2016 recommendations of the US Preventive Services Task Force (USPSTF) regarding aspirin for primary prevention, as well as the 4 large aspirin prevention trials published in 2018 subsequent to the USPSTF recommendations. (See page 146.) The USPSTF recommended aspirin for adults ages 50 to 59 with a 10-year cardiovascular risk of at least 10% (B recommendation). For those ages 60-69, the USPSTF recommendation for aspirin as primary prevention has a “C” rating, meaning that patient preference is important to consider in balancing benefit and harms. For those 70 and older, the USPSTF gave aspirin an “I” (insufficient evidence) rating because of increased risk for bleeding. It is important to note that the positive B recommendation for those ages 50-59 is based not only on cardiovascular risk reduction but also on a slight risk reduction for colon cancer for those taking aspirin for at least 10 years.

The 4 new, large randomized trials published in 2018, however, cast doubt on the USPSTF recommendations because the results of these trials were negative for the most part. The bottom line is that daily aspirin for prevention is definitely not for everyone and perhaps not for anyone except those who have established vascular disease or are at high risk for vascular disease and low risk for bleeding. No wonder our patients are confused!

Smith recommends that, before prescribing aspirin to healthy adults for prevention, we assess each individual’s personal cardiovascular and bleeding risk using an online decision tool called Aspirin-Guide (www.aspiringuide.com). I agree.