I Do Not Have Heart Disease—Should I Be Taking Aspirin?

Heart attack and stroke are sudden, symptomatic events that can lead to hospitalization and death.

Primary prevention describes the use of medical treatments to prevent a first heart attack or stroke before any symptoms occur. Although aspirin has established benefit in people with a history of a heart attack or stroke, its role in primary prevention is less clear.

How Does Aspirin Work?
In most instances, heart attacks and strokes occur when cholesterol-rich plaques that are attached to artery walls burst, leading to the formation of blood clots. These clots obstruct normal blood flow in heart or brain arteries, leading to damage. Aspirin reduces the chance of clot formation by preventing platelets (tiny blood constituents in blood clots) from sticking together.

What Are the Benefits of Aspirin?
There have been several large research trials testing the effects of aspirin in people without a history of heart attack or stroke. These studies show that aspirin prevents nonfatal heart attacks and strokes and has a small benefit in preventing death from any cause but no effect on cardiovascular death.

What Are the Potential Adverse Effects of Aspirin?
The biggest potential adverse effect from aspirin is bleeding, and the most common site of bleeding is the stomach or intestines. Bleeding can also occur in more serious locations, like the brain, although this occurs rarely. Aspirin bleeding risks vary from person to person and are higher in men; elderly individuals; people with a history of stomach ulcers; long-term users of anti-inflammatory medications, such as ibuprofen or corticosteroids; and long-term users of anticoagulants, including warfarin and clopidogrel. Risk of bleeding also increases with aspirin dosage, so low-dose aspirin (75 to 100 mg) is generally recommended for primary prevention.

Who Should Take Aspirin?
After a review of the best available evidence, the US Preventive Services Task Force (USPSTF) released guidelines in 2016 for the use of aspirin in primary prevention. Given the uncertainty between the benefits and potential adverse effects of aspirin for primary prevention, these guidelines emphasize the importance of shared decision making between patients and clinicians to personalize treatment decisions after accounting for benefits and potential adverse effects of therapy, patient preferences, and values.

The USPSTF guidelines recommend low-dose aspirin therapy in willing adults aged 50 to 59 years with a 10-year risk of heart attack or stroke of 10% or greater, no increased bleeding risk, and a life expectancy of at least 10 years. For similar adults aged 60 to 69 years, guidelines recommend more individualized decision making to guide aspirin use. The USPSTF identified insufficient evidence to provide a recommendation for adults younger than 50 years or older than 70 years, highlighting areas for future research.

How Do I Find Out My Heart Attack and Stroke Risk?
Risk assessment is an important part of aspirin guidelines. The American Heart Association and American College of Cardiology developed a calculator to estimate a person’s risk of first heart attack or stroke in the next 10 years. These estimates can guide discussions about who can benefit from aspirin use in primary prevention.