



Use of aspirin in individuals without cardiovascular disease



Cardiovascular disease continues to be a leading killer in the US as well as around the globe. While the number of deaths from cardiovascular disease has reduced over the years, deaths from stroke and myocardial infarction have plateaued in the US. Since the prevalence of cardiovascular disease continues to be both a health and economic burden, the Centers for Disease Control and Prevention and the Centers for Medicare & Medicaid Services have decided to launch a new initiative which they are calling Million Hearts 2022. The goal of this initiative is to prevent cardiovascular events through risk factor optimisation.

One major target of this new initiative will be to improve the use and prescribing of aspirin (acetylsalicylic acid). The benefits of aspirin are well-established in the secondary prevention of stroke and myocardial infarction. However, its use in primary prevention continues to be controversial.

Clinical studies have consistently demonstrated improvements in cardiovascular outcomes in patients who use aspirin but who do not have cardiovascular disease. However, these benefits are more or less countered by the increased risk of bleeding. Thus, the role of aspirin in primary prevention of cardiovascular events continues to be uncertain and this lack of clarity is also evident in the contrasting recommendations offered by different guideline bodies. Lack of concrete evidence and solid guidelines have resulted in a decline in aspirin prescribing for primary prevention over the past 5 to 10 years.

A meta-analysis was conducted to assess the association of aspirin use with cardiovascular events and bleeding events in populations without cardiovascular disease. The analysis included data for 164,225 participants without cardiovascular disease from 13 trials.

Aspirin use was associated with reductions in the composite cardiovascular outcome consisting of cardiovascular mortality, nonfatal myocardial infarction, and nonfatal stroke. But at the same time, its use was also associated with an increased risk of major bleeding, intracranial bleeding, and major gastrointestinal bleeding. This association was observed in both low and high-risk patient populations as well as in patients with diabetes. Thus, aspirin use for primary prevention in patients without cardiovascular disease continues to be controversial compared to its use in patients with established atherosclerotic cardiovascular disease.

Based on the findings of this analysis, it is clear that the cardiovascular benefits associated with aspirin were modest and were balanced off by major bleeding events. But in actual clinical practice, the general consensus has always been that patients with an increased risk of cardiovascular disease could benefit from the preventive use of aspirin. The US Preventive Services Task Force recommends the initiation of low-dose aspirin in adults aged 50 to 69 years with a 10-year cardiovascular risk of 10% or more. But these findings

suggest that the decision to use aspirin should not be based solely on the risk factor but this decision should be made on an individual basis. The patient's risk of bleeding and an overall evaluation of the risk-benefit ratio should be conducted before prescribing aspirin.

Source: [JAMA](#)

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