

A Systematic Evaluation of Aspirin in Primary Prevention: Is It Time for a New Approach?

Introduction:

Low-dose aspirin has been used for many years in the treatment and prevention of CVD. While the clinical benefits of aspirin for secondary prevention are well established, evidence on the role of aspirin for primary prevention is less clear. Existing guidelines on the prophylactic use of aspirin vary widely, sometimes with conflicting recommendations. This may be due to varying interpretations of data from clinical trials of aspirin in primary prevention, which lead to differences in the perceived risk–benefit profile for aspirin. As the overall benefit versus risk ratio is not yet clear, this paper systematically reviews the clinical evidence on the use of aspirin in primary prevention for CVD (with or without diabetes) and cancer.

Aspirin Use in the Prevention of Cardiovascular Disease

**Vascular events
[myocardial infarction (MI),
stroke, or vascular death]**

12%

Non-fatal MI

23%

Prophylactic use of Aspirin in Colorectal Cancer

**Primary prevention of CV
events, during a follow up
period of 4–8 years**

19%

**Cancer-related death
by aspirin**

21%

Guidelines on the use of aspirin in primary prevention

Organization	Recommendation
European Society of Cardiology (ESC)	<ul style="list-style-type: none"> ➤ No recommendation in primary prevention in patients without overt CVD because of increased risk of major bleeding. ➤ Antiplatelet therapy may be considered in hypertensive patients without a history of CVD, but with reduced renal function or at high CV risk.
American Diabetes Association (ADA)	<ul style="list-style-type: none"> ➤ Consider aspirin therapy (75–162 mg/day) as a primary prevention strategy in those with type 1 or type 2 diabetes at increased CV risk (10-year risk [10 %]). In men aged 50 years or women aged 60 years who have at least one additional major risk factor (family history of CVD), hypertension, smoking, dyslipidaemia, or albuminuria
American College of Chest Physicians (ACCP)	<ul style="list-style-type: none"> ➤ Persons aged \geq50 years without symptomatic CVD: low-dose aspirin 75–100 mg daily

Organization	Recommendation
<p>American Heart Association/American Stroke Association (AHA/ASA)</p>	<ul style="list-style-type: none"> » Use of aspirin CV prophylaxis is recommended for persons whose risk is sufficiently high for the benefits to outweigh the risks associated with treatment (i.e., 10-year risk of CV event = 6–10 %) » Aspirin can be useful for the prevention of a first stroke among women whose risk is sufficiently high for the benefits to outweigh the risks associated with treatment. » Aspirin is not useful for preventing a first stroke in persons at low risk and with diabetes or diabetes plus asymptomatic peripheral artery disease in the absence of any other CVD.
<p>United States Preventive Services Task Force (USPSTF)</p>	<ul style="list-style-type: none"> » Encourage men aged 45–79 years and women aged 55–79 years, to use aspirin when the potential benefit of a reduction in MI outweighs the potential harm.

Key Points

Aspirin provide modest benefit in primary prevention of cardiovascular disease.

Data from post hoc analyses of aspirin use in primary prevention of cancer are promising.

To know more about primary prevention by Aspirin, please turn pages all through systematic review from Am J Cardiovasc Drugs (2015) 15:113–133.