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Should Aspirin Be Used for the Primary Prevention of Cardiovascular Disease in the General Population?

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Dear Editor,

Aspirin, an agent that effectively suppresses platelet aggregation [1], plays an important role in reducing the risk of cardiovascular diseases (CVD) and is therefore commonly used in the general population. In the USA, the regular use of aspirin mostly for the primary prevention of CVD is reported to be 41% among adults aged ≥ 40 years [2], similar to in Canada [3]. However, considering the potential risk of gastrointestinal and intracranial hemorrhage, the high rate of aspirin use has attracted a great deal of attention. Recently, the US Food and Drug Administration (FDA) advised that there is no evidence to support the routine use of aspirin for the primary prevention of heart attacks and strokes in patients without a history of CVD [4].

To our knowledge, the strong evidence of the potential benefits of aspirin therapy substantially outweighs its potential risks, with the role of aspirin in secondary prevention of CVD having been well established. In primary prevention, however, the benefit of aspirin therapy remains inconclusive. In the past 3 decades, 9 major trials have investigated the benefit of aspirin for primary prevention of CVD [5]. A review of these studies indicates that the results were inconclusive. Evidence from most of the trials demonstrated that aspirin could decrease CVD risk (including myocardial infarction and stroke) but had no significant effect on all-cause mortality. It is also worth mentioning that almost all of the trials

were sponsored by pharmaceutical companies, so publication and reporting bias may well exist among these studies. Some published meta-analyses suggest that the benefits of aspirin utilization in primary CVD may outweigh the risk of bleeding [6–8]. Raju et al. [8] reported that aspirin can increase the risk of hemorrhagic stroke (RR 1.36; 95% CI 1.01–1.82), major bleeding (RR 1.66; 95% CI 1.41–1.95) and gastrointestinal bleeding (RR 1.37; 95% CI 1.15–1.62).

Therefore, we concur with the view of the FDA [4], and do not recommend aspirin for the primary prevention of CVD for the general public. Aspirin used for the primary prevention for CVD should only be recommended to the individuals for whom the benefits outweigh the risks.

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