Aspirin for the primary prevention of cardiovascular disease in the elderly

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The tension between the benefits and harms of anticoagulation is finely balanced. Prophylactic aspirin in healthy, elderly patients provides no benefit and causes harm; clinicians should not use it for primary prevention in otherwise well patients aged over 70.

As the world’s population ages, health in later life has become a public health priority. The prevention of disease is critical to these aims. As a chief cause of morbidity in the elderly,1 the prevention of cardiovascular disease is of particular focus.

The use of aspirin unequivocally benefits patients who have already suffered a cardiovascular event.6–8 However, its role in primary prevention is much more contentious.6,7 The ASPREE trial showed that elderly patients that take aspirin prophylactically will derive only harm. At this stage, clinical practice guidelines should not recommend the use of aspirin for otherwise well patients aged 70 or older (or 65 if African–American or Hispanic). Many guidelines already advise not to use aspirin for primary prevention, including the National Institute for Health and Clinical Excellence guidelines.8 However, other guideline organisations offer more circumspect guidance and acknowledge the previous lack of evidence. For instance, the United States Prevention Task Force currently states: ‘The current evidence is insufficient to assess the balance of benefits and harms of initiating aspirin use for the primary prevention of CVD and CRC in adults aged 70 years or older.9 The ASPREE trial should lead to a change of guidance.

The study authors of the ASPREE trial published two other linked randomised controlled trials investigating the effect of aspirin on all-cause mortality10 and disability-free survival.11 The results of these studies further support the recommendation not to use aspirin prophylactically in the elderly. Patients that took aspirin had higher rates of all-cause mortality (HR, 1.14; 95% CI 1.01 to 1.29); specifically they had higher rates of cancer-related death (HR, 1.31; 95% CI 1.10 to 1.56). Furthermore, the rate of disability (a composite of death, dementia or persistent physical disability) was no different between those that took aspirin and those that took a placebo (HR, 1.01; 95% CI 0.92 to 1.11; p=0.79).

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EBM Verdict: General medicine


In healthy, community-dwelling elderly people aged 70 and older, aspirin does not prevent cardiovascular disease and does increase one’s risk of major haemorrhage. Clinicians should not offer aspirin as primary prevention to otherwise well elderly patients.
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