**Table 1**

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| Citation | Study purpose & design | Sample & setting | Independent & Dependent variable | Findings | Strengths & Limitations | Implications for Practice & Research | Quality of Evidence |
| Gaziano et al., (2018).Use of aspirin to reduce risk of initial vascular events in patients at moderate risk of cardiovascular disease (ARRIVE): a randomised, double-blind, placebo-controlled trial  | Purpose: assess how effective aspirin was to reduce risk of cardiovascular eventsDesign: randomized, double-blind, placebo-controlled trial  | Sample size:* N = 12,546
* Aspirin = 6,270
* Placebo = 6,276

Demographics: Aspirin* 29.5% female
* Mean age 63.9
* 28.8% smoke

Placebo* Mean age 63.9
* 29. 6% female
* 28.5% smoke

Sampling Strategy:* Randomized (1:1) computer-generated randomization code

Inclusion criteria: * Men age 55+
* Women age 60+
* Average cardiovascular risk

Exclusion criteria: * High risk of bleeding, diabetes, history of a vascular event, requires antiplatelet therapy
 | Independent variable:* Taking 100 mg aspirin tablets daily or placebo

Dependent variable: * First cardiac event (MI, stroke, unstable angina, cardiovascular death, TIA)

  | Findings* No significant difference between treatment group and placebo
* In the study, aspirin was not shown to lower risk of major cardiovascular events (p = 0.6)
* Statistically significant increase in mild gastrointestinal bleeding and other minor bleeding in the aspirin group (p = 0.0007)
* This study was consistent with findings of previous similar studies

  | Strengths: * Large study
* RCT, double-blind
* 7 countries looks at different populations

Limitations: * Difficult to fully capture all safety events and effectiveness of aspirin in primary care setting
* Follow up was not frequent, could affect reliability of patient reporting events
* Incidence of serious events between the two groups was very low
 | Future research * Aspirin for specific populations
* Aspirin for younger individuals
* Aspirin effect on cancer outcomes, the article tried to address this but was not long enough to assess this outcome
 | Guideline: CONSORTEvaluation: 24/25 criteria met. * No hypothesis
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| Zhao et al., (2020).All-cause mortality following low-dose aspirin treatment for patients with high cardiovascular risk in remote Australian Aboriginal communities: an observational study | Purpose: To look at the benefit from low-dose aspirin in participants with no previous cardiovascular events Design: retrospective cohort study  | Sample size:* N = 8,167
* Aspirin = 1,865
* Nonaspirin = 6,302

Demographics after coarsened exact matching same for aspirin and nonaspirin group : * 48.8% male
* Mean age 44
* 44.4% diabetes
* 87.1% Aboriginal

Sampling Strategy:* Used data from hospitals and primary care settings. Confounding factors were controlled by matching

Setting:* Aboriginal communities in Northern Territory, Australia

Inclusion criteria: * 75-162 mg of aspirin daily, 18 and older

Exclusion criteria:* Previous cardiovascular event, major bleed, anticoagulation or antiplatelet use
 | Independent variable:* Use of 75-62 mg of aspirin daily

Dependent variable: * All cause mortality
* Cardiovascular mortality
* Incidences of cardiovascular events and major bleeds

  | Findings* After coarsened exact matching, aspirin was associated with a lower level of all-cause death (p < 0.001). However, no significance with cardiovascular death (p = 0.5)
* No difference in risk of major bleeding that was statistically significant after propensity score matching (p = 0.82)
 | Strengths: * Real-world setting
* Uses routinely collected clinical data, easy to collect

Limitations: * Aspirin user group was significantly smaller than non-aspirin user group
* Generalizability limited to remote aboriginal population
* Not RCT
* No statistically significant data about reduction in cardiovascular death with aspirin - could be due to small number of events
 | Implications:* Would this research apply to other aboriginal populations
* How does this research apply to the general population
* How does the higher smoking rate in the aboriginal population affect the outcomes and intervention
 | Guideline: STROBEEvaluation: 20/22 criteria met.* No hypothesis
* No mention of how to avoid bias
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| McNeil et al., (2018).Effect of Aspirin on Cardiovascular Events and Bleeding in the Healthy Elderly | Purpose: To evaluate the effect of daily use of 100 mg of enteric-coated aspirin in community-dwelling healthy older adults Design: Randomized control, double-blind, placebo-controlled clinical trial  | Sample Size:* N = 19,114
* Aspirin = 9,525
* Placebo = 9,589

Demographics same for aspirin and placebo group:* Mean age 74 years
* 56% women
* 87% Australian, 13% U.S. residents
* 4% current smokers, 41% former smokers
* 11% diabetes

Sampling Strategy:* Randomization was stratified according to trial center and age

Setting:Inclusion Criteria:* 70+ years of ago
* 65+ years of age among Blacks and Hisapnics in the U.S.
* Living in the U.S. or Australia

Exclusion criteria:* Not living in the community
* Has CVD, dementia, or physical disability
 | Independent variable:* Taking 100 mg enteric coated aspirin or placebo

 Dependent variable:* Death, dementia, or persistent physical disability
* Major hemorrhage
* Cardiovascular disease (defined as fatal coronary heart disease, nonfatal myocardial infarction, fatal or nonfatal stroke, or hospitalization for heart failure)
 | Findings* The rate of prespecified secondary end point of cardiovascular disease did not differ significantly between the aspirin and placebo group (hazard ratio, 0.95; 95% confidence interval, 0.83 to 1.08)
* There was no evidence of a differential effect of aspirin on the risk of cardiovascular disease in any analysis
* The risk of gastrointestinal bleeding and intracranial bleeding was higher in the aspirin group over the placebo group (p < 0.001)
 | Strengths: * Large sample size
* RCT
* RCT, double blinded study
* Good statistical analysis
* Authors list strengths and limitations

Limitations: * Only ⅔ of participants were taking assigned trial intervention by end of the trial, which would have led to underestimation of benefit of aspirin
 | * Additional research on aspirin use in older healthy adults, as there is limited research supporting it yet millions of healthy older adults taking aspirin
* Better education to providers and patients on the prevalence of bleeding risk to healthy older adults who are taking aspirin
 | Guideline: CONSORTEvaluation: 21/25 criteria met* No hypothesis
* Doesn’t specify methods for achieving randomization
* Doesn’t mention how they concealed the sequence until interventions were assigned
* Doesn’t specifically mention who randomized participants
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| Citation | Study purpose & design | Sample & setting | Independent & Dependent variable | Findings | Strengths & Limitations | Implications for Practice & Research | Quality of Evidence |
| Ikeda et al., (2014). Low-Dose Aspirin for Primary Prevention of Cardiovascular Events in Japanese Patients 60 Years or Older With Atherosclerotic Risk Factors. A Randomized Clinical Trial | Purpose: To determine whether daily, low-dose aspirin reduces the incidence of cardiovascular events in older Japanese patients with multiple atherosclerotic risk factorsDesign: Randomized clinical trial | Sample Size:* N = 14,464
* Aspirin = 7,323
* Nonaspirin = 7,335

Demographics: Aspirin/ Non Aspirin * Mean age 70.6/ 70.5
* 42.3% male / 42.4%
* 84.9% HTN/ 84.8%

Sampling Strategy:* Statistician generated random allocation sequence using a central computerized system

Setting:* Japan, in primary care centers

Inclusion criteria:* Met Japanese guideline criteria for HTN, dyslipidemia, or diabetes

Exclusion criteria:* History of coronary artery disease, cerebrovascular disease, atrial fibrillation, atheroscleoritc disease requiring intervention
* Peptic ulcers, bleeding abnormalities, aspirin allergy
* Patients who were receiving antiplatelets, anticoagulants, long term treatment with NSAIDs
 | Independent variables* Receiving 100 mg enteric-coated aspirin or not receiving it

Dependent variables* Death from cardiovascular causes, nonfatal stroke or myocardial infarction
* Death from CVD, noncardiovascular causes, nonfatal stroke, nonfatal myocardial infarction, TIA, angina pectoris, arteriosclerotic diseaes requiring surgery or intervention, and serious extracranial hemorrhage requiring transfusion or hospitalization
 | * Once-daily, low-dose aspirin did not significantly reduce the risk of the composite outcome of cardiovascular death, nonfatal stroke, and nonfatal myocardial infarction among Japanese patients over 60 years or older with atherosclerotic risk factors (p = 0.54)
* Aspirin significant increased risk of extracranial hemorrhage requiring transfusion or hospitalization (p = 0.004)
* Secondary outcomes showed aspirin group specifically had a lower of nonfatal myocardial infarction and TIA (p = 0.04)
 | Strengths:* Large sample population
* RCT
* Clear inclusion and exclusion criteria
* Specific about the follow up and patients lost throughout the study

Limitations:* Increase update of daily aspirin in the nonaspirin group
* Number of patients lost to follow-up
* Overall, few deaths from cardiovascular causes or nonfatal stroke or MI were reported with aspirin or no aspirin - could be due to characteristics of Japanese patients
 | * Aspirin is unlikely to show a clinically important benefit in the population in this study
* Further research should examine if aspirin is beneficial in particular subgroups or specifically in cancer prevention
* At the end of the article it lists other articles which show aspirin to be beneficial in reducing cardiovascular events. However the data is inconsistent, and more research needs to be conducted to determine the effects of aspirin on CVD
 | Guideline: CONSORTEvaluation:23/25 criteria met. * No hypothesis
* Baseline characteristics (race /gender) not provided
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