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Original Article

**Aspirin and Decreased Adult-Onset
 Asthma**

**Randomized Comparisons from the Physicians' Health
 Study**

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Rationale: In an observational cohort study, women who self-selected for frequent aspirin use developed less newly diagnosed asthma than women who did not take aspirin.

Objective: To explore whether low-dose aspirin decreased the risk of newly diagnosed asthma in a randomized, double-blind, placebo-controlled trial.

Methods: The Physicians' Health Study randomized 22,071 apparently healthy male physicians, aged 40–84 yr at baseline and tolerant of aspirin, over an 18-wk run-in period, to 325 mg aspirin or placebo on alternate days. The aspirin component was terminated after 4.9 yr due principally to the emergence of a statistically extreme 44% reduction in risk of first myocardial infarction among those randomly assigned to aspirin.

Measurements: Physicians could self-report an asthma diagnosis on questionnaires at baseline, 6 mo, and annually thereafter. Asthma was not an *a priori* endpoint of the trial.

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Results: Among 22,040 physicians without reported asthma at randomization, there were 113 new asthma diagnoses in the aspirin group and 145 in the placebo group. The hazard ratio was 0.78 (95% confidence interval, 0.61–1.00; $p = 0.045$). This apparent 22% lower risk of newly diagnosed asthma among those assigned to aspirin was not modified by baseline characteristics including smoking, body mass index, or age.

Conclusions: Aspirin reduced the risk of newly diagnosed adult-onset asthma in a large, randomized clinical trial of apparently healthy, aspirin-tolerant men. This result requires replication in randomized trials designed *a priori* to test this hypothesis; it does not imply that aspirin improves symptoms in patients with asthma.

Key Words: asthma • aspirin • NSAIDs • analgesics • obstructive airways disease

AT A GLANCE COMMENTARY

Scientific Knowledge on the Subject

Aspirin is known to worsen symptoms among a minority of patients with asthma. Recent epidemiologic and bench studies, however, suggest that frequent aspirin use might reduce the risk of developing asthma among adults.

What This Study Adds to the Field

This secondary analysis of a large randomized, double-blind, placebo-controlled trial of aspirin-tolerant men showed that randomization to aspirin reduced the risk of adult-onset asthma.

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