An assessment of the joint associations of aspirin and statin use with C-reactive protein concentration.

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Abstract

BACKGROUND: The use of aspirin alone and statins alone has been shown to reduce markers of inflammation, including C-reactive protein (CRP); however, their combination has been poorly studied.

METHODS: In a cross-sectional analysis of black and white adults > or =45 years old from the REGARDS cohort, the associations of aspirin and statin use with CRP were examined. Individuals requiring nonsteroidal anti-inflammatory drug therapy or those taking aspirin for reasons other than cardioprotection were excluded from analysis. Participants were classified into 1 of 4 groups: aspirin only (n = 3,673), statin only (n = 1,898), both agents (n = 3,008), or neither agent (n = 7,718).

RESULTS: Estimated mean CRP was 2.78 mg/L for subjects taking neither drug, 2.73 mg/L with aspirin only, 2.29 mg/L with statins only, and 2.03 mg/L for subjects taking both agents. The combined use of both agents was associated with an apparent synergistically lower CRP; the mean CRP level among these combined users was 0.21 mg/L lower than that anticipated from additive association related to aspirin and statins alone (P for interaction = .01). Associations were larger among participants reporting a history of cardiovascular disease. In addition, among statin users, the use of aspirin for >5 years compared
with < or =5 years was associated with apparent significantly lower CRP concentrations (P = .01).

**CONCLUSIONS:** The combined use of aspirin and statins was associated with a synergistically lower CRP concentration, especially among participants taking aspirin for >5 years. Given the limitations of this study and the modest associations, randomized controlled trial evidence is needed to confirm the findings.

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