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Chlamydia and Risk of Coronary Artery Disease

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The presence of a common respiratory pathogen, *Chlamydia pneumoniae*, poses a fourfold risk of secondary cardiac complications following myocardial infarction. Researchers from the St George's Hospital Medical School, London, reported data that suggests that this excess risk can be reduced with a 3-day course of azithromycin.

The researchers studied 213 male postmyocardial infarction (MI) survivors in a randomized placebo-controlled trial of azithromycin. They found that patients with the highest anti-*C pneumoniae* (Cp) antibody titers had four times the risk of post-MI cardiac events such as myocardial

infarction, coronary artery bypass grafting, angioplasty, and angina in the 18 months following their MI compared with similar patients who had no detectable Cp antibodies. Cp-positive patients who received azithromycin had a risk of cardiac events equivalent to that of patients with no detectable Cp antibodies, regardless of possible confounders, such as smoking, diabetes, and aspirin therapy.

The findings of this study may explain, in part, the huge (up to 60%) variation in coronary heart disease prevalence and severity. The authors believe that Cp may be carried in the arteries by the macrophages and promote atherosclerosis either by setting up chronic inflammation or by triggering production of prothrombotic

factors such as tissue factor.

An increase in anti-Cp antibody titers may be a risk factor for further adverse cardiovascular events in post-MI patients. Taking a short course of azithromycin (500 mg per day for 3 to 6 days) may lower this risk, possibly by acting against the *C pneumoniae*. The authors concluded that the study has important implications for prevention of both secondary and primary coronary events, particularly given the safety and low cost of azithromycin.

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