

Popular anti-platelet therapy reduces risk of cardiovascular events in men and women

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A new study, published in the November 17, 2009, issue of the *Journal of the American College of Cardiology*, adds to a growing body of research seeking to evaluate and understand possible sex differences associated with antiplatelet therapies. This study--the first to look at the impact of clopidogrel, one of the most frequently prescribed drugs to prevent and treat heart disease, in women--found it to be effective in reducing cardiovascular (CV) events in both men and women with no statistically significant sex differences in terms of expected clinical benefit or increased harm.

Clopidogrel reduced cardiovascular events by 16 percent in men compared to 7 percent in [women](#); however, this difference was not statistically significant. Although there was a clear reduction in the risk of CV events in both sexes, women derived the most benefit from a decrease in their risk of [heart attack](#) with a nonsignificant reduction in stroke and total death. Data show a small, but real excess risk of major bleeding with clopidogrel therapy in both men and women; adding clopidogrel to [aspirin therapy](#) resulted in a 43 percent and 21 percent increased risk of major bleeding in women and men, respectively.

According to the authors, by treating 1,000 men and 1,000 women with clopidogrel on a background of aspirin for an average of eight months, clinicians can prevent eight cardiovascular events in women and 12 in men; from a safety perspective, there would be five major bleeding incidents in women and two in men.

Researchers performed a meta-analysis of five major clinical trials to evaluate the clinical benefit and risk of this antiplatelet therapy in women and men and determine whether there are sex-based differences in treatment response. Nearly 80,000 individuals with a broad range of CV diseases were enrolled in these trials, 30 percent of whom were women. Lead investigators of the five double-blinded, randomized placebo-controlled trials shared original study data with authors.

Clopidogrel works to disrupt platelet activity and prevents them from clotting and causing heart attacks and strokes. It is typically used in patients with heart attacks, those at increased severity of angina, and in patients following stent implantation. It is also commonly used in those with established CV disease.

Women have traditionally been underrepresented in clinical trials enrollment. As newer, more potent platelet therapies are being developed, it will be important to continue to examine whether sex differences exist in the therapeutic effect of these drugs. According to the accompanying editorial, research to examine the impact of sex on responses to cardiovascular treatment should be ongoing, especially as the decrease in deaths related to [heart disease](#) has been less for women and has actually increased in women younger than 55 years of age since 1980 despite progress in reducing associated morbidity and mortality.

Source: American College of Cardiology ([news](#) : [web](#))

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