

Aspirin -- just for men?

First it was an apple, now it is an aspirin a day that may keep the doctor away. Aspirin has become standard for heart attack prevention, but research published in the online open access journal *BMC Medicine* suggests that this may really be a man's drug.

Scientists have long puzzled over why the protective effects of aspirin vary so widely between clinical trials. Some trials show no difference between aspirin and placebo, whilst others report that aspirin reduces the risk of a heart attack by more than 50%.

This latest study, from The James Hogg iCAPTURE Centre for Cardiovascular and Pulmonary Research, highlights the influence of gender on aspirin's protective powers. Investigators examined the results of 23 previously published clinical trials for the effect for aspirin in heart attack prevention, involving more than 113,000 patients. The authors then analysed how much the ratio of men to women in these trials affected the trials' outcomes.

"Trials that recruited predominantly men demonstrated the largest risk reduction in non-fatal heart attacks," says Dr Don Sin, one of the study's authors. "The trials that contained predominately women failed to demonstrate a significant risk reduction in these non-fatal events. We found that a lot of the variability in these trials seems to be due to the gender ratios, supporting the theory that women may be less responsive to aspirin than men for heart protection."

The mechanisms of this resistance are not yet understood, although recent studies have shown that men and women have major differences in the structure and physiology of the heart's blood vessels.

"From our findings we would caution clinicians on the prescribing aspirin to women, especially for primary prevention of heart attacks," says Dr Sin. "Whether or not other pharmaceutical products would be more effective for women is unclear; more sex-specific studies should now be conducted."

Source: BioMed Central

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