

Climacteric. 2003 Oct;6 Suppl 3:21-8.

## **Hormone therapy and the cardiovascular system: the critical role of progestins.**

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In broad support of the findings of the Heart and Estrogen/progestin Replacement Study (HERS) and other trials, the recently published preliminary findings of the Women's Health Initiative (WHI) study buttress the view that hormone replacement therapy (HRT) with a combination of 0.625 mg/day conjugated equine estrogens (CEE) and 2.5 mg/day medroxyprogesterone acetate (MPA) increases risks of coronary heart disease. Also, on the basis of outcomes for a range of other diseases and adverse events, it was concluded that such treatment had no overall global benefit. In contrast, interim analysis of results for the CEE-only arm of WHI did not suggest an excess of adverse outcomes. Such studies are important in the understanding of the relationships between hormone therapy and cardiovascular disease, but they have not established that all forms of combined HRT, using different progestins and different modes of delivery, necessarily have adverse outcomes for coronary heart disease and related diseases. Animal models provide evidence that MPA--and hence the HERS and WHI--may have unique features, differing from progesterone, that incline it to oppose potentially some beneficial effects of estrogens. Progestins in general, particularly the newer molecules (such as drospirenone, dienogest, Nestorone, nomegestrol acetate and trimegestone), vary widely in their non-progestogenic properties (including anti/androgenic, anti/mineralocorticoid and glucocorticoid actions), and further studies are required to test the implications of HERS and WHI against a range of different HRT combinations and modes of delivery.

Publication Types:

- Review
- Review, Tutorial

PMID: 15018245 [PubMed - indexed for MEDLINE]