

**Harvard Medical School Department of
Continuing Education and the Cardiovascular
Division of the Department of Medicine,
Brigham and Women's Hospital**



Cardiology Rounds
August/September 2002

Atherosclerosis in Women: The Role of Gender
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Objectives: This issue of *Cardiology Rounds* addresses the complex and rapidly changing field of atherosclerosis in women. Although coronary artery disease is the leading cause of death in adult women, females do have a lower rate of coronary heart disease than men. This "advantage" is most pronounced in premenopausal women. The objectives of this issue of *Cardiology Rounds* are to describe factors that have been attributed to this female advantage for lower rates of coronary artery disease. The findings of major recent randomized trials examining the influence of endogenous female hormones on clinical events in women are presented. The reader will be expected to understand how these randomized controlled studies have now provided firm evidence that has led to a change in the recommendations for use of oral hormone therapy in women. Indeed, Dr. Gerhard-Herman concludes with her personal recommendation of not prescribing any form of sex hormone replacement therapy for cardiovascular risk reduction.

TEST:

1. Although coronary artery disease is a major cause of death, across different countries the total coronary disease mortality rate is consistently higher in men than in women.
True___ False___
2. Lower coronary disease mortality rates in women can easily be explained by conventional risk factors.
True___ False___
3. Menopause occurring either naturally or following surgical procedures is associated with a major increased risk for atherosclerotic events.
True___ False___
4. Well-done, large, observational (non-randomized) studies have almost consistently shown that women taking supplemental hormone therapy have a reduced risk of experiencing an atherosclerotic coronary event.
True___ False___

5. Mechanistic studies have demonstrated that exogenous administered estrogen has been shown to improve endothelial function in estrogen-deficient women.
True___ False___
6. The Coronary Drug Project randomized men with coronary disease to estrogen therapy or placebo and demonstrated that estrogen was associated with a decreased risk for myocardial infarction.
True___ False___
7. In the Heart and Estrogen/Progestin Replacement Study (HERS), post-menopausal women with heart disease randomized to receive premarin with progesterone experienced a reduction in the risk of myocardial infarction or cardiac death.
True___ False___
8. The Women's Health Initiative was stopped prematurely at the recommendation of the Data Safety Monitoring Board because of a worrisome accumulation of events in the group randomized to receive active hormone therapy.
True___ False___
9. In the Women's Health Initiative, for every 10,000 women treated per year, there was an excess of 8 coronary heart disease events, 8 strokes, 8 pulmonary emboli, and 8 cases of breast cancer per year of treatment; although there were 6 fewer colorectal cancers and 5 fewer hip fractures per 10,000 women treated per year.
True___ False___

To receive AMA category 1 credit, you must correctly answer 60% of the test questions.

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