

## Current Abstracts on Heart Disease in Women

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**Title** Modifiable risk factors for the primary prevention of **heart disease** in **women**.

**Source** Journal of the American Medical **Women's** Association {J-Am-Med-Womens-Assoc} 2003 Fall, VOL: 58 (4), P: 278-84, Refs: 88, ISSN: 0098-8421.

### Abstract

Coronary **heart disease** is the leading cause of death in **women** older than 50. This article will discuss the role of modifiable risk factors for the primary prevention of **heart disease** in **women**, including hypertension, smoking, obesity, and exercise. We will also address what is known about the role of psychological factors in the development of **heart disease** in **women**. Cholesterol and diabetes are discussed only in the context of obesity because both are addressed elsewhere in this issue. Finally, this article will review the evidence on the use of low-dose aspirin and antioxidants in the primary prevention of **heart disease** in **women**.

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**Title** Clinical review 162: Cardiovascular endocrinology 3: An epidemiologist looks at hormones and **heart disease** in **women**.

**Source** Journal of Clinical Endocrinology and Metabolism, September 2003, vol. 88, no. 9, p. 4031-4042,

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**Title** Risk factors for coronary **heart disease** in **women** with systemic lupus erythematosus: the Toronto Risk Factor Study.

**Source** Arthritis and rheumatism {Arthritis-Rheum} 2003 Nov, VOL: 48 (11), P: 3159-67, ISSN: 0004-3591.

**Abstract** OBJECTIVE: Because **women** with systemic lupus erythematosus (SLE) are 5-8 times more likely to develop coronary **heart disease** (CHD) than are **women** in the general population, we assessed the prevalence of classic risk factors for CHD in **women** with SLE. METHODS: Consecutive female patients with SLE who were without evidence of CHD and were attending a large lupus clinic in Toronto were studied. The control population was recruited from among age-matched subjects attending a family practice unit for an annual physical examination. The prevalence of classic CHD risk factors and the 10-year risk of a CHD-related event were determined using the Framingham risk assessment formula. Lipid subfractions, other metabolic risk factors, lifestyle variables, and demographic characteristics were also compared between the 2 groups. RESULTS: We studied 250 SLE patients and 250 controls whose mean +/-SD age was 44.8 +/- 12 years and 44.3 +/- 15 years, respectively. Hypertension and diabetes were significantly more common among the SLE patients. Although the SLE patients had a higher mean number of CHD risk factors per patient, the 10-year risk of a CHD-related event, using the Framingham multiple risk factor assessment, was the same in SLE patients and controls (3.2%). Compared with controls, SLE patients had higher levels of very low-density lipoprotein cholesterol and total triglycerides, and had higher levels of homocysteine despite having higher folate levels. Premature menopause, sedentary lifestyle, and an at-risk body habitus were also more prevalent in SLE patients. CONCLUSION: **Women** with SLE have a range of detectable coronary risk factors that are not fully reflected in the Framingham risk factor formula. These factors are likely to contribute to the loss of protection from CHD that has been observed in SLE.

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**Author affiliation** Department of Cardiology, Second XiangYa Hospital, Central South University, 410011, Changsha, China.

**Title** Effect of endogenous estrogen on endothelial function in **women** with coronary **heart disease** and its mechanism.

**Source** Clinica chimica acta; international journal of clinical chemistry {Clin-Chim-Acta} 2004 Jan, VOL: 339 (1-2), P: 183-8, ISSN: 0009-8981.

**Abstract** BACKGROUND: Estrogen promotes and modulates vascular endothelial function, which may be protective against development of atherosclerosis. Asymmetric dimethylarginine (ADMA), an endogenous inhibitor of nitric oxide synthase, has been reported to be associated with the impairment of vascular endothelial function. Recent studies suggested estrogen replacement therapy lowers plasma concentrations of ADMA in healthy postmenopausal **women**. However, the relation between endogenous estrogen and ADMA and their effect on endothelial function in patients with coronary **heart disease** (CHD) remains unclear. METHODS: Flow-mediated dilatation (FMD) and nitroglycerin-induced dilatation (NID) of the brachial arteries were detected by using high-resolution ultrasound in 33 **women** with CHD and 17 healthy controls. Plasma estradiol, ADMA, and lipid concentrations were also measured in all subjects. RESULTS: In comparison with control group, FMD and NID were significantly decreased in the CHD group (1.73+/-1.26% vs. 5.37+/-3.20%, p<0.001 and 12.38+/-

6.70% vs. 20.79 $\pm$ 7.57%,  $p < 0.01$ , respectively). Plasma estradiol concentrations in the CHD group were lower than in controls (27.80 $\pm$ 12.28 vs. 43.83 $\pm$ 14.30 pg/ml,  $p < 0.01$ ), whereas ADMA concentrations in the CHD group were higher than in controls (3.39 $\pm$ 1.07 vs. 1.31 $\pm$ 0.69 micromol/l,  $p < 0.001$ ). Pearson correlation analysis determined that plasma estradiol concentrations were associated with FMD, NID, age, systolic pressure, diastolic pressure and ADMA ( $r = 0.610$ ,  $p < 0.01$ ;  $r = 0.392$ ,  $p < 0.01$ ;  $r = -0.589$ ,  $p < 0.01$ ;  $r = -0.364$ ,  $p < 0.01$ ;  $r = -0.350$ ,  $p < 0.05$ ;  $r = -0.553$ ,  $p < 0.01$ ; respectively). Multiple linear stepwise regression analysis revealed that plasma estradiol concentrations was independently positively correlated with FMD ( $p < 0.005$ ) and negatively correlated with ADMA ( $p < 0.05$ ). **CONCLUSIONS:** Both FMD and NID are impaired in **women** with CHD. The decrease of endogenous estrogen concentrations and the increase of ADMA concentrations may involve the endothelial dysfunction in **women** with CHD.

**Author(s)** [Tecce-Marc-A](#), [Dasgupta-Indranil](#), [Doherty-John-U](#).

**Author affiliation** Jefferson **Heart** Institute, Philadelphia, PA, USA.

**Title** **Heart disease** in older **women**. Gender differences affect diagnosis and treatment.

**Source** Geriatrics {Geriatrics} 2003 Dec, VOL: 58 (12), P: 33-9; quiz 40, ISSN: 0016-867X.

**Abstract** Cardiovascular **disease** continues to be the leading cause of death in **women** over age 50 in the United States. Significant differences exist between men and **women** in the prevalence, incidence, and treatment outcomes of cardiovascular **disease**, particularly coronary artery **disease**. The presenting features of coronary artery **disease** may vary between men and **women**, and the diagnostic evaluations of such symptoms may differ based solely on gender. Outcomes of angioplasty and bypass surgery, although not as extensively studied in **women** as in men, may be less favorable. The impact of risk factor modification may also differ due to the effects of menopause on cardiovascular events. More studies of cardiovascular outcomes in **women** are required, particularly now that hormone replacement therapy has been shown to increase cardiovascular event rates in most of the recent trials. Until such studies are available, our focus should therefore remain on treatment of risk factors where such treatment has clearly been shown to impact favorably on cardiovascular morbidity and mortality.

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**Title** Risk factors and secondary prevention in **women** with **heart disease**.

**Source** Annals of internal medicine {Ann-Intern-Med} 2003 Dec 2, VOL: 139 (11), P: 954, ISSN: 1539-3704.

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