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JOURNAL ARTICLE

Plasma levels of estradiol, testosterone, and DHEAS do not predict risk of coronary artery disease in men

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Prior studies have reported men with coronary artery disease (CAD) to have elevated plasma levels of estrogens and reduced concentrations of dehydroepiandrosterone (DHEA) or DHEA-sulfate (DHEAS). We investigated whether gonadal steroids or DHEAS are risk factors for CAD in men, using a prospective design, in a well characterized population studied at regular intervals. We studied 46 men (Cardiac group) who developed CAD and 124 men (Control group) who remained free of CAD (mean follow-up, 9.5 years). We measured testosterone (T), estradiol (E2), and DHEAS, as well as plasma binding of T and E2, in samples stored before the onset of CAD (Cardiac group) or at matched times (Control group). Body mass index, blood pressure, and total serum cholesterol were measured at each visit. Both systolic blood pressure (SBP; P less than 0.001) and cholesterol (P less than 0.001) were increased in the Cardiac group, but no significant differences were found in total or free T or E2, the ratio of E2/T, or DHEAS between the two groups. The difference in cholesterol was significant only in men less than or equal to 65 years old (P less than 0.001), and SBP only in men greater than 65 years old (P less than 0.005). Cholesterol (P less than 0.05) and E2 (P less than 0.001) appeared to decrease with age in the Cardiac, but not the Control, group. Moreover, total (P less than 0.01) and free E2 (P less than 0.05) were lower only in Cardiac men less than or equal to 55 years old. (ABSTRACT TRUNCATED AT 250 WORDS)

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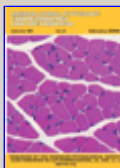
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