of the menstrual flow, the amount of testosterone produced by the aging male does in fact decrease. Recent studies, such as the Massachusetts Male Aging Study show that, between the ages of 40 to 70 years, the mean testosterone level decreases annually by about 1%. Chronic diseases and the use of drugs have a comparable effect. Although it is generally believed that sexual impotence is a major symptom of male menopause, recent investigations have shown that sexual functionability may be preserved into the ninth and tenth decade of life. Sexuality is not merely an instinct or a psychological expression, but is deeply anchored within the personality. Even when, with increasing age, the frequency of sexual dysfunction increases, such changes do not correlate with the decrease in testosterone levels. None of these phenomena take place within an age span that marks them off from the involution processes in other organs. The expression midlife crisis commonly met with in the English literature points up the psycho-social implications. Impotence or a loss of sexuality is not a sequel of aging, but of attitude towards sexuality. The latter is preserved if it is not neglected throughout the course of a lifetime.

95060881

Investigation of local and systemic effects of topical estrogen therapy in menopausal period

Kesim M.; Taser F.F.

3 Kadin Hast. ve Dogum Klinigi, Sisli Etfal Hastanesi, Sisli, Istanbul

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Objective: Local and systemic estrogen preparations are successfully used during menopausal period and side effects are less with local applications. The aim of this study is to investigate systemic and local effects of topical estriol therapy in menopause. Study design: Fifty eight cases between age 38 and 65 in menopausal period with local and systemic complaints due to estrogen deficiency were investigated in our study. Before treatment, blood lipids, FSH, LH, estriol, maturation of vaginal epithelium, subjective menopausal complaints, weight and arterial blood pressure, were taken. 1 mg estriol was applied intravaginally for three weeks. All of the cases were reevaluated for the same parameters after the treatment. Results: It was observed that after the treatment serum FSH, LH levels decreased and estriol levels increased. These differences were statistically significant ($p < 0.001$). The maturation index and spinnbarkeit also improved significantly ($p < 0.05$). The level of serum HDL-cholesterol and triglyceride increased. LDL-cholesterol decreased ($p < 0.001$). Changes in VLDL and triglyceride levels were not statistically significant ($p > 0.05$), the weight and the arterial blood pressure were not changed. There were not noted any side effects after the treatment. Conclusions: Intravaginal application of estriol in the treatment of atrophic vaginitis is as effective as in providing an increase of HDL-cholesterol and triglyceride levels.

95070643

Osteoporosis in men

Orwoll E.S.; Klein R.F.

Endocrinology and Metabolism, Dept. of Veterans Affairs Med. Ctr., 3710 Southwest U.S. Vet. Hosp. Road, Portland, OR 97207

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Osteoporosis has been a disorder almost synonymously associated with women, and as a result the understanding of osteoporosis in men is rudimentary. Nevertheless, there is an emerging recognition of the impact of osteoporosis in men, and the recent tremendous increase in knowledge of the disorder in women should provide a foundation for rapid advances in parallel areas in men. Attention should be focused on elucidating the causation of age-related bone loss and the clinical character and pathophysiology of idiopathic male osteoporosis. Of particular importance are efforts to understand the basic nature of sexual differences in skeletal development and maturation, with the aim of identifying aspects of male skeletal metabolism that require gender-specific clinical consideration. In addition, by understanding the mechanisms underlying the relative fracture prevention afforded the male skeleton, new therapy for both sexes may become possible. Even in advance of the understanding of these basic processes, appropriate clinical paradigms for the evaluation of osteoporosis in men should be developed and validated, and clinical trials of promising approaches to the prevention and treatment of osteoporosis in men need to be undertaken. These should certainly include evaluations of exercise, calcium supplementation, androgen supplementation, and formation and antiresorptive therapies. As newer therapeutic approaches are developed in the future, clinical studies should include male cohorts from their inception.

95067866

Testosterone relaxes rabbit coronary arteries and aorta

Yue P.; Chatterjee K.; Beale C.; Poole-Wilson P.A.; Collins P.

Department of Cardiac Medicine, National Heart and Lung Institute, London SW3 6L

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Background: Until menopause, women appear to be protected from coronary heart disease. Evidence suggests that estrogen may play a role in the protection of the cardiovascular system by exerting a beneficial effect on risk factors such as cholesterol metabolism and by a direct effect on the coronary arteries. To date there has been no evidence linking testosterone with the occurrence of coronary heart disease. Testosterone may affect the cardiovascular system directly, thus partially explaining the difference in the incidence of coronary artery disease in men and premenopausal women. The purpose of this study was to assess the direct effect of testosterone and a number of testosterone analogues on rabbit coronary arteries and aorta in vitro. Methods and Results: Rings of coronary artery and aorta of adult male or nonpregnant female New Zealand White rabbits were suspended in organ baths containing Krebs solution; isometric tension then was measured. The response to testosterone was investigated in prostaglandin F(2) (PGF(2))- and KCl-contracted rings. The effects of endothelium and nitric oxide synthase, prostaglandin synthetase, and guanylate cyclase inhibition on testosterone-induced relaxation were investigated. The effects of ATP-sensitive potassium channels and potassium conductance were also assessed. Relaxing

responses in the presence of aromatase inhibition and testosterone receptor blockade were performed. The relaxing responses to the testosterone analogues etiocholan-3-ol-17-one, epiandrosterone, 17-hydroxy-5- androst-1-en-3-one, androst- 16-en-3-ol, and testosterone enanthanate were measured. Testosterone relaxed rabbit coronary arteries and aorta. There was no significant difference between the relaxation effect of testosterone with or without endothelium. Similar results were obtained from male and nonpregnant female rabbits. The relaxing response of testosterone in the coronary artery was significantly greater than in the aorta. The relaxing response of testosterone in the coronary artery was significantly reduced by the potassium channel inhibitor barium chloride but not by the ATP-sensitive potassium channel inhibitor glibenclamide. The relaxing response to testosterone was greater in PGF(2)-contracted rings compared with KCl-contracted rings. Inhibition of nitric oxide synthase, prostaglandin synthetase, and guanylate cyclase did not affect relaxation induced by testosterone. Inhibition of aromatase and testosterone receptors did not affect relaxation. Testosterone did not shift the rabbit coronary arterial calcium concentration-dependent contraction curves, whereas verapamil did. There were, however, significant differences in the relaxing response to testosterone compared with testosterone analogues. Testosterone was the most potent relaxing agent, suggesting that there may be a structure-function relation in the relaxing response. Conclusions: Testosterone induces endothelium-independent relaxation in isolated rabbit coronary artery and aorta, which is neither mediated by prostaglandin I2 or cyclic GMP. Potassium conductance and potassium channels but not ATP-sensitive potassium channels may be involved partially in the mechanism of testosterone-induced relaxation. The in vitro relaxation is independent of sex and of a classic receptor. The coronary artery is significantly more sensitive to relaxation by testosterone than the aorta. Testosterone is a more potent relaxing agent of rabbit coronary artery than other testosterone analogues.

95067590

The effect of acute ethanol ingestion on estrogen levels in postmenopausal women using transdermal estradiol

Ginsburg E.S.; Walsh B.W.; Gao X.; Gleason R.E.; Feltmate C.; Barbieri R.L.

Department of Obstetrics/Gynecology, Brigham and Women's Hospital, 75 Francis Street, Boston, MA 02115

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Objective: To determine whether acute alcohol ingestion raises estradiol (E2) and estrone (E1) levels in a randomized, controlled crossover study on postmenopausal women using transdermal E2. Methods: Healthy, non-smoking postmenopausal women (n = 7) using no medications were enrolled. Transdermal E2, 0.15 mg, was applied 13 h before the subjects ingested alcohol (1 ml/kg 95% ethanol) or isocaloric carbohydrate punch. Serum samples were obtained for 40 min before drink ingestion and 6 h after drink ingestion and were assayed for E2 and E1. Results: Ethanol levels peaked 60 minutes after the start of ethanol-drink ingestion, at 25.4 mmol/l (117 mg/dL). Estradiol levels rose significantly above the mean baseline of 657 pmol/l (179 pg/ml) after ethanol-drink ingestion ($P \leq 0.01$), with a mean peak of 804 pmol/L (219 pg/ml) 35 min after the start of drink ingestion, and were significantly greater than the E2 levels that followed the carbohydrate drink ($P \leq 0.0001$). There were no significant changes in E2 or E1 levels after carbohydrate-drink ingestion. Conclusions: We conclude that ethanol ingestion may acutely raise circulating E2 concentrations in women using transdermal E2.

95074107

Follicle-stimulating hormone concentrations in relation to active and passive smoking

Cooper G.S.; Baird D.D.; Hulka B.S.; Weinberg C.R.; Savitz D.A.; Hughes C.L. Jr.

Epidemiology Branch, MDA3-05, NIEHS, P.O. Box 12233, Research Triangle Park, NC 27709

OBSTET. GYNECOL. 1995 85/3 (407-411)

Objective: To determine the association between various forms of tobacco exposure and ovarian status, as measured by FSH concentrations, in women 38-49 years old. Methods: Two hundred ninety women between 38-49 years old, who had not had hysterectomy or oophorectomy, completed a self-administered questionnaire that included information on tobacco exposure and had serum FSH levels measured on days 2-4 of the menstrual cycle. Linear regression was used to assess the relation between FSH and tobacco exposure. Results: Controlling for age and other factors, FSH concentrations were 66% higher among current smokers (geometric mean FSH 14.0 mIU/ml) and 39% higher among nonsmokers with passive smoke exposure (11.7 mIU/ml), compared to nonsmoking women without passive smoke exposure (8.4 mIU/ml). The estimated increase in FSH for each year of age was greater for current smokers than for nonsmokers (16 versus 6%, respectively). Ex-smokers did not have higher FSH concentrations, and there was no association between prenatal exposure to tobacco smoke and FSH. Conclusion: Both active and passive smoking are associated with elevated FSH concentrations in women 38-49 years old. The effect, limited to women with current exposure, is consistent with a shorter duration of the menopausal transition period.

95077764

Does 'incessant' ovulation increase risk for early menopause?

Cramer D.W.; Xu H.; Harlow B.L.

Ob-Gyn Epidemiology Center, Brigham and Women's Hospital, 221 Longwood Ave., Boston, MA 02115

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Objective: We attempted to determine whether gynecologic histories differ in women who have and have not experienced an early menopause. Study design: A group of 344 'case' women whose average age at menopause was 42.2 years and an age-matched group of 344 'control' women still menstruating or menopausal after age 46 were selected from a survey of 10,606 women aged 45 to 54 years for interviews about their reproductive histoty. Results: Case women were more likely to have had menarche at or before age 11, had shorter cycle lengths, had fewer pregnancies with live births, and had more