

MENOPAUSE

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Menopause before the age of 40 years

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Early menopause due to an exhaustion of the ovarian follicles before the age of 40 years occurs in approximately 1% of women in this age range. Clinical signs of estrogen deficiency with amenorrhea and sterility are usually confirmed by hypergonadotropic hypogonadism at laboratory tests. The syndrome is to be differentiated from gonadotrophine resistant ovaries and rare gonadotrope adenomas. Ovary biopsy shows more or less complete destruction of the follicles. There are many causes of early menopause including abnormal number or structure of chromosome X in 15-20 % of the cases. Certain metabolic disorders and viral infections can also be incriminated. Finally surgery, radiotherapy or chemotherapy can be the cause of iatrogenic menopause. To determine prognosis, the woman's follicular capacity must be estimated. Estrogen therapy is currently the best choice to preserve chances for ovulation and pregnancy. When there is no remaining follicular capacity, ovum donation may be a solution. Finally, all patients should be given hormone substitution therapy due to the long-term risk of estrogen- progesterone deficiency.

Endometrial cancer and hormone replacement therapy: Appropriate use of progestins to oppose endogenous and exogenous estrogen

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Endocrinology and Metabolism Clinics of North America (USA), 1997, 26/2 (399-412)

Most instances of endometrial cancer are potentially preventable. Unopposed endogenous estrogen stimulation of the endometrium has been shown to be the predisposing risk factor in most cases. Risk factors have been well-delineated, and it is important to recognize and treat the progesterone- deficient patient. Low-dose oral contraceptive pills in healthy, nonsmoking, older reproductive-aged women are an underutilized treatment modality. The many noncontraceptive benefits of long-term oral contraceptive use until the menopause should be explained to the patient, including the prevention of ovarian and endometrial cancer, the maintenance of bone density, and a reduction in the many surgical procedures performed for menstrual disorders. Progestin therapy in older reproductive-aged women and postmenopausal women with unopposed estrogen production is mandatory to prevent endometrial cancer. Knowledge and skill in simple endometrial sampling techniques performed in patients with known risk factors for endometrial cancer will often detect premalignant lesions that are treatable with progestin therapy or surgery.

Women's hearts are different

Cardiovascular disease accounts for nearly 500,000 deaths in American women each year, half of which may be attributed to coronary heart disease (CHD). However, most women and many primary care physicians are not aware that cardiovascular disease is the leading cause of death of women in the United States. This misperception may have contributed to the relative exclusion of women from early cardiovascular clinical trials; however, the results of these trials have been routinely generalized to women. It is unclear whether cardiovascular diagnostic and therapeutic strategies studied in men may be applied to women, because gender discrepancies may exist in the pathophysiology of cardiovascular symptoms, accuracy of diagnostic testing, efficacies of therapies, and outcomes after cardiac events. Atherosclerosis, the underlying pathophysiologic abnormality in patients with CHD, may cause 'typical' angina by limiting coronary blood flow during periods of increased myocardial oxygen demand (e.g., exertion or emotional stress). The presentation of CHD differs between men and women. The predominant initial manifestation of CHD in women is angina, which occurs in 47% of women with CHD compared with only 32% of men. The predominant presentation of men with CHD is myocardial infarction (MI), which occurs in 46% of men compared with 32% of women. Although angina is the predominant initial manifestation of CHD in women, 58% of women versus 88% of men with 'typical' exertional angina have angiographically defined coronary atherosclerosis. 'Atypical' angina is associated with CHD in only 35% of women versus 67% of men. Therefore the pathophysiology of chest pain is gender-dependent. Indeed, women are more likely to have chest pain caused by abnormal coronary vasomotor tone causing large vessel spasm or inadequate vasodilatation of the coronary microvasculature. Chest pain resulting from coronary atherosclerosis is associated with an increased frequency of adverse cardiac events. Although premenopausal women have a low incidence of CHD, postmenopausal women are at increased risk, suggesting that aggressive atherosclerotic risk factor analysis and treatment is warranted. In addition to gender and menopausal status, traditional atherosclerotic risk factors include hypertension, diabetes, dyslipidemia, cigarette use, and a family history of premature CHD. However, many of these are not independent risk factors because of their associations with gender. The magnitude of the effects of these risk factors also differs between men and women. Because both pathophysiologic mechanisms of chest pain and prevalences of significant CHD are gender-related, it is to be expected that the sensitivities and specificities of cardiovascular tests differ by gender. Indeed, women have higher false-positive rates and lower sensitivities of the treadmill exercise electrocardiographic stress test. Similar findings have been reported for Thallium-201 exercise stress tests. The low specificity of noninvasive evaluations of chest pain in women may contribute to a bias in the clinical evaluation of women. Several studies have demonstrated that women with chest pain or cardiovascular syndromes receive diagnoses and are treated less aggressively than their male counterparts, as manifested by a lower likelihood of referral for diagnostic coronary angiography and percutaneous and surgical coronary revascularization. The under use of invasive diagnostic and therapeutic cardiovascular procedures in women may be related to gender discrepancies in cardiac outcomes. For instance, women who have a myocardial infarction are more likely than men to die in-hospital or within 1 year and to have post-myocardial infarction congestive heart failure and stroke. After being referred for coronary angioplasty or bypass surgery, women fare worse as manifested by increased in-hospital mortality and less relief from angina. These gender discrepancies are at least in part related to older age, increased prevalences of comorbid diseases, and smaller caliber coronary arteries in women. Women may reduce their CHD risk by using postmenopausal hormone replacement therapy. Meta-analyses of clinical studies suggest that postmenopausal hormone replacement is associated with a 35% to 50% decrease in cardiovascular risk. Favorable alteration of the lipid profile accounts for less than half of estrogen's clinical cardio-protective effect. Other proposed mechanisms include direct inhibition of arterial intimal hyperplasia, inhibition of low-density lipoprotein oxidation, and prevention of abnormal coronary vasoconstriction. The latter mechanism suggests that estrogen therapy may be effective in decreasing symptoms of chest pain in postmenopausal women with coronary vasospasm or microvascular angina.

Estrogen and the prevention and treatment of osteoporosis

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Journal of Clinical Rheumatology (USA), 1997, 3/2 Suppl. (S28-S33)

Osteoporosis is a systemic skeletal disease characterized by decreased bone mass and impaired structural integrity of remaining bone. Due to a decline in circulating estrogen, an acceleration of bone loss occurs after the menopause. Osteoclast activity is increased, leading to an imbalance of bone resorption over formation, resulting in a net loss of bone. Estrogen is an effective antiresorptive agent used in both the prevention and treatment of osteoporosis. Estrogen replacement effectively maintains bone mass and prevents fractures. Replacement therapy is most effective when it is initiated soon after the cessation of menses and is continued long term. Historically, there is a low compliance rate with long-term therapy in this country. The addition of a progestin to estrogen replacement is necessary for endometrial protection but negatively affects patient compliance. The identification of other significant medical benefits, such as the reduction of cardiovascular risk and possible amelioration of Alzheimer's dementia, affirm the cost-effectiveness of estrogen replacement and may increase its attractiveness to patients. Clarification of breast cancer risk and improvement of an individual's side effect profile through use of different regimens, hormonal preparations, and routes of

administration may enhance compliance.

Neoadjuvant progesterone therapy for primary breast cancer: Rationale for a clinical trial

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The hormonal milieu at the time of surgery may influence mortality and disease-free survival in patients with primary breast cancer. Indeed, there is evidence that circulating unopposed estrogen is detrimental and that the presence of circulating progesterone results in an improved disease-free and overall survival rate. Thus patients who receive neoadjuvant progesterone therapy may have a better outcome. A randomized controlled trial in which women with primary breast cancer receive either progesterone or placebo before surgery is urgently needed to confirm this hypothesis.

Cardiovascular pathophysiology of ovarian hormones

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Schweizerische Rundschau für Medizin/Praxis (Switzerland), 1997, 86/5 (138-144)

Epidemiological data indicate that women are less likely to suffer from coronary heart disease (CHD) than men of the same age. This difference vanishes however after menopause suggesting that it is the hormones produced by the ovaries that are responsible for the relative cardioprotection that women enjoy before menopause. In spite of the favorable impact of oral estrogen treatments on the lipid profile it is believed today that estrogens act mainly through direct effects on vessels. Estrogens have vasodilative properties, exert anti proliferative effects on the endothelium and alter the response of vessels to various stimuli (vaso-reactivity) such as Acetylcholine (Ach). Direct assessment of large vessel wall thickness or Intima Media Thickness (IMT) is considered as the most predictive parameter of cardiovascular risk today and may serve to single out women who must receive HRT for cardiovascular reasons.

Hemostasis during hormone replacement therapy

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There is a major difference in the risk of cardiovascular disease between men and women before the age of 50 years. Women have less atherosclerosis until that age which may be related to a more favorable lipid profile. Post menopause, however, atherosclerosis develops rapidly, and a deteriorating lipid profile has been found. Endogenous estrogen and progesterone may exert a protective effect against cardiovascular disease before menopause. In addition to altered lipid profiles, postmenopausal women have changes in the hemostasis system, generally characterized by increased clotting factors, especially fibrinogen and factor VII. These two procoagulants have been identified as independent risk factors for arterial disease. The changes are not specific for postmenopausal women only but rather are a reflection of increasing age. Some anticoagulants, especially antithrombin, also seem to increase with age. These changes in the clotting system are balanced by an overall increase in fibrinolytic activity, although some inhibitors of this system increase with age, suggesting the potential for a hypofibrinolytic state. The hemostatic alterations could be a reflection of the increased development of atherosclerotic vessel disease. Hormone replacement therapy leads to a more favorable lipid profile in postmenopausal women, including reduced lipoprotein(a) levels. Lipoprotein(a) is atherogenic and thrombotic, probably by interfering with the fibrinolytic system. During HRT, fibrinogen and factor VII levels are reduced, whereas most other parameters remain unchanged. The observed reduction in protein S levels is probably clinically meaningless. In most studies, no increases in molecular markers of in vivo hemostasis activation have been found, suggesting that the clotting system is not activated by HRT. The fibrinolytic system seems to be slightly activated, which would counteract any increased clottability. All of these changes are most likely involved in the protection of postmenopausal women who undergo HRT from arterial cardiovascular complications. There seems to be no increased risk for venous thromboembolism with HRT. Exogenous estrogen/progesterone supplementation in the form of HRT in postmenopausal women seems to protect against risks for cardiovascular disease. HRT alters lipid profiles in a more favorable way and activates the fibrinolytic system without adversely affecting the clotting system. There is no evidence that HRT increases the risk for arterial or venous thromboembolic

events.

Androgens and the menopause; a study of 40-60-year-old women

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Objective: The impact of the menopause on androgen production is poorly understood. We have investigated the impact of the menopause, as well as other factors such as age, body mass index (BMI) and cigarette smoking, on ovarian and adrenal androgen levels in women aged 40-60 years.

Design: Cross-sectional study of blood hormones sampled weekly over one month in volunteer 40-60-year-old women.

Subjects: One hundred and forty-one women, aged between 40 and 60, recruited from community sources (non-clinical), not using hormone replacement or steroidal contraceptives, and with a current sexual partner. Fifty were categorized as premenopausal (ovulating), 37 as perimenopausal and 54 as post-menopausal.

Measurements: The following variables were assessed; menopausal status (based on menstrual history and pattern and plasma progesterone), age, BMI, smoking, oestradiol (E2), oestrone (E1), LH, FSH, total testosterone (TT), androstenedione (A), SHBG, free androgen index (FAI), dihydroepiandrosterone (DHEA), dihydroepiandrosterone sulphate (DHEAS) and cortisol.

Results: Results are based on multiple regression analysis. TT was positively related to A, BMI and LH. A was negatively related to age and FSH, and positively to DHEA, DHEAS and premenopausal status. SHBG was negatively related to BMI and positively to E1 and non-smoking. DHEA and DHEAS were negatively related to age and were higher in smokers. Both E1 and E2 were related to menopausal status and to FSH. Surprisingly, E2 was negatively related to BMI.

Conclusions: A variety of factors influence androgen production in this age group. Whereas it is difficult to predict the effect of menopause on androgen levels, LH stimulation of post-menopausal interstitial cells, modulated by a variety of factors including nutrition, and smoking, are likely to be relevant.

Cardiovascular effects of the ovarian hormones

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Women have fewer cardiovascular events before the menopause than men of the same age but this difference disappears after the menopause. This observation suggests that ovarian function may be responsible for the cardiovascular protection. As oral oestrogenic therapy improves the lipid profile, the cardioprotective effect of ovarian function was rapidly attributed to the oestrogens alone. However, it has been recognised that oestrogens have direct effects on the vessels which are probably more important than their effects on the lipids. In all vascular territories studied, oestrogen therapy to ovariectomised women led to different degrees of vasodilatation. All points to the fact that this vasodilator effect of endogenic and exogenic oestrogens is induced by increased NO production by the endothelium. Even more important, is that the oestrogens also modify the vascular response to the action of vasoactive mediators; the hormonal environment is said to affect the vascular reactivity. It has been recognised that acetylcholine which causes vasoconstriction in the absence of oestrogens, has, on the contrary, a vasodilator effect in the presence of oestrogens. Clinically, the effect of oestrogens on vascular reactivity is expressed as a change in the reaction to effort observed in women suffering from angina pectoris. In these women, oestrogenisation increases effort capacity (duration of effort to ST depression), a beneficial effect which is further amplified by the prescription of a cyclic natural progesterone administered non-orally, whereas, in the same conditions, one of the most commonly used progestatives, medroxyprogesterone acetate (MPA), appears to oppose the beneficial effects of oestrogen therapy.

The effect of hormones on the lower urinary tract

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Ageing may be responsible for a wide variety of urogenital symptoms, influencing both the social and mental functioning of elderly women. Some symptoms are related to the menopause, and should therefore be treated with hormone replacement therapy, however, others require further investigation and alternative treatment. There have been few randomized placebocontrolled trials which evaluate the efficacy of estrogen therapy in the treatment of urinary incontinence, leading to much debate over the type, dose and route of administration if, indeed, estrogens are helpful at all. From the evidence available, it would appear that stress incontinence is unlikely to be cured by estrogen replacement therapy alone although benefit may be obtained when used in conjunction with an alpha-adrenergic agent such as phenylpropanolamine. Estrogens alleviate irritative bladder symptoms such as urgency, urge incontinence, frequency, nocturia and dysuria. They may also be of benefit in preventing recurrent urinary tract infections. Estrogen supplementation ameliorates other climacteric symptoms such as hot flashes, mood swings and leads to better sleep patterns. This improves the quality of life of postmenopausal women, making them better able to cope with other problems such as lower urinary tract dysfunction, which may account for the high subjective but low objective improvement rates seen. An holistic approach needs to be taken to the prescription of hormone replacement therapy of which urogenital problems play a significant part.

Hormone substances and their efficacy in hormonal replacement therapy

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Background: The most important steroid hormones produced in the ovary are C 18 (Estradiol, Estron), C 21 (Progesteron) and C 19 (Testosteron, Androstendion). These hormones play an important role in the replacement therapy in menopausal women. They are important substances in the metabolism of the organism.

Methods: In A review the importance of estrogens, gestagen and androgens in the hormonal replacement therapy is summarized.

Results: The lack of estrogens is not only a risk for osteoporosis, but also negative for the lipid metabolism, which caused to high incidence of heart attacks and cardiovascular diseases. Estrogens have a positive effect on the central nervous system. A lack of these hormones influence the cognitive efficiency of the brain in a negative way and is one of the causes for early demenz in later years.

Conclusions: The replacement therapy with estrogens and gestagens should neutralize the negative effects of the missing endogenous estrogens and progesteron production.

The effects of various hormone replacement therapy regimens on bone mineral density after 2 years of treatment

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Marmara Medical Journal (Turkey), 1996, 9/4 (165-168)

Objective: The effects of various hormone replacement therapies on bone mineral density after 2 years of treatment were evaluated in this study.

Methods: A total of 138 patients treated with either conjugated equine estrogen or transdermal 17-beta estradiol alone or in combination with medroxyprogesterone acetate or dydrogesterone had bone mineral density measurements of the first four lumbar vertebrae by using a Dual X-ray Hologic 1000 quantitative digital radiography densitometer.

Results: After 2 years of treatment, a significant increase in spinal bone mineral density was found in all groups. No significant differences were found among 6 treatment groups.

Conclusion: There were no differences between estrogen replacement therapies and combined hormone replacement therapies. Progesterone did not have any additional effect on bone mineral density.

A randomized, double-blind, placebo-controlled, crossover study on the effect of oral oestradiol on acute menopausal symptoms

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Maturitas (Ireland), 1996, 25/2 (115-123)

Acute menopausal symptoms occur less frequently in Asian than in Caucasian women. Oestrogen replacement therapy has been shown to be effective in controlling acute symptoms in Caucasians, but the effect of oestrogens is not well documented in Asian women. A randomized, double-blind, placebo-controlled, crossover study of the effect of oral oestradiol on the incidence of acute menopausal symptoms was conducted in 83 Hong Kong Chinese women who had experienced a surgical menopause. Although there was a significant increase in the oestradiol concentration with treatment compared with placebo ($P < 0.001$), there were no significant differences in the reporting of symptoms between the treatment and placebo groups. There is no obvious explanation for this apparent lack of effect of oestrogen on acute menopausal symptoms in Chinese women. Whilst it may be related to the generally low incidence of symptoms or to a higher dietary intake of phytoestrogens in Chinese women, further studies are necessary to explain these findings.

The female brain hypoestrogenic continuum from the premenstrual syndrome to menopause: A hypothesis and review of supporting data

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Journal of Reproductive Medicine for the Obstetrician and Gynecologist (USA), 1996, 41/9 (633-639)

OBJECTIVE: To propose a theory to help unify the symptoms of premenstrual syndrome (PMS), postpartum blues and depression, the perimenopausal transition and menopause.

STUDY DESIGN: A review of supporting data is used to explain the possible neuroendocrine mechanism upon which the hypothesis is based.

CONCLUSION: The brain in women has been shown to be an estrogen target organ. Common symptoms are shared by women complaining of PMS, postpartum blues, the perimenopausal transition and menopause: depression, sleep disturbance, irritability, anxiety and panic, memory and cognitive dysfunction and a decreased sense of well-being. The antiestrogens progesterone, progestin and tamoxifen may also elicit these same symptoms. It is proposed that whenever brain estrogen levels fall below the minimum brain estrogen requirement, for whatever reason and at whatever age, brain center dysfunction may ensue.

Treatments for oestoporosis

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Preventive therapy for osteoporosis should theoretically be recommended to women at cessation of menses and to elderly individuals of either sex. However, therapeutic decisions depend heavily on individual factors, primarily bone mass assessed using absorptiometry or other means. Hormone replacement therapy (HRT) with estrogen-progestogen combinations is the most effective treatment for women at menopause but is contraindicated in some patients; the results of some studies that found a small increase in the breast cancer risk in patients receiving HRT are open to criticism. Fluoride therapy has generated considerable controversy but can continue to be used according to reasonable rules. Prophylactic calcitonin therapy is expensive and requires treatment modalities that patients are reluctant to accept. Supplemental calcium and vitamin D therapy is undeniably effective, at least in very elderly subjects. Other treatments are also discussed. Current views held by patients, and perhaps by some physicians, regarding the value of preventive treatment for osteoporosis need to be changed.

Variations in steroid hormone receptor content throughout age and menopausal periods, and menstrual cycle in breast cancer patients

Variations in steroid hormone receptor contents throughout age and menopausal periods define three breast carcinoma groups: younger premenopausal carcinomas (aged up to 45), middle-aged carcinomas (pre-, peri- and postmenopausal aged 45-59) and older postmenopausal carcinomas (aged over 59). Age-related steroid hormone receptor contents within premenopausal and postmenopausal carcinoma groups are characterized by the important increase of both receptor contents, while menopausal-related steroid hormone receptor contents within middle-aged carcinoma group (aged 45-59) are characterized by the important decrease of progesterone receptor content and estrogen receptor functionality. No variations in steroid hormone receptor contents throughout menstrual cycle within the follicular and the luteal phases were obtained. The important decrease of estrogen receptor content in the mid-cycle phase versus the perimenstrual phase was found. Variations in steroid hormone receptor contents throughout age and menopausal periods, as well as throughout menstrual cycle could not be associated with variations in the blood steroid hormone concentrations. However, important association between steroid hormone receptor contents and the blood steroid hormone concentrations was found within the luteal phase carcinoma group and within older postmenopausal carcinoma group. It is interesting that within carcinoma group with the highest concentration of progesterone, progesterone receptor content increases with an increase of the ratio of estradiol and progesterone blood concentrations, while within carcinoma group with the lowest steroid hormone concentration and the highest content of estrogen receptor content, estrogen receptor content decreases with an increase of either the blood estradiol concentration or the ratio of the blood estradiol and progesterone blood concentrations.

Hormone therapy and Phytoestrogens

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As ageing progresses the levels of sex hormones decrease in the human body. In the male population, the decrease or absence of testosterone leads to decreased strength and stamina, thin bones and a low sex drive

- (1). In the female population, the immediate symptoms of menopause include irregular periods, painful sexual intercourse due to vaginal dryness, hot flushes and night sweats
- (2). Lack of oestrogen also leads to the risk of developing osteoporosis and cardiovascular diseases. In this report, the authors will mainly discuss the effects of hormone therapy (HT) in menopausal women. Available current clinical data on the effects of calcium supplementation with and without HT, exercise, exercise plus calcium and exercise with HT on bone loss are presented. The effects of transdermal and oral oestrogen therapy (OT) on serum lipids are discussed. Commercially-available HT products, their indications, dosages, contra-indications, side-effects and drug interactions are compared. Alternative therapies for menopausal symptoms with Chinese traditional herbs, and a comparison of the molecular structures of phytoestrogens with estradiol and diethylstilbestrol are examined (3, 4). A list of medicinal herbs and foods reported to elicit an oestrogenic response in animals is compiled.

The menopause and hormone replacement therapy: Lipids, lipoproteins, coagulation and fibrinolytic factors

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Maturitas (Ireland), 1996, 23/2 (209-216)

Objectives: To review the recent literature concerning the effects of the menopause and hormone replacement therapy (HRT) on the plasma lipoprotein and hemostatic system, as well as on the interaction between these two coronary heart disease (CHD) risk factor systems.

Methods: Collection of information from relevant scientific journals, and by the use of Medline and Current Contents.

Results: The mainly beneficial effects of unopposed oral estrogen replacement on the plasma lipoprotein pattern are preserved to different degrees after addition of progestin to the regimen. Nortestosterone-derived progestins tend to lower HDL cholesterol levels more than progesterone derivatives. The slight triglyceride-elevating effect of conjugated equine estrogens was in a large study not significantly counteracted by progesterone derivatives but can, according to other studies, be reversed by nortestosterone-derived

progestins, a limited number of studies on transdermal administration of estradiol has suggested that the effects on plasma lipoproteins are smaller than during oral administration. There is no convincing evidence that currently used HRT regimens would significantly increase the risk of thrombosis. Nevertheless, the finding in some studies that plasma triglyceride elevations could in theory be associated with impaired fibrinolysis and enhanced coagulation merit further attention as some HRT regimens tend to increase plasma triglyceride levels. From a theoretical point of view, transdermal estrogen delivery would be preferable in women at risk for thrombosis, as they have less pronounced effects on liver functions, including production of hemostatic factors and very-low-density lipoprotein triglycerides.

Conclusions: While the numerous existing HRT regimens provide many alternative and useful possibilities, further studies are needed concerning

- (a) novel progestins with minimal HDL cholesterol lowering effects,
- (b) transdermal and other non-oral routes for HRT,
- (c) possible antioxidative properties of estrogen and
- (d) metabolic links between the lipoprotein and hemostatic risk factor systems.

Prevention of cardiovascular disease by hormone replacement therapy in the postmenopause

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Cardiovascular disease is the most important cause of death even among women. After menopause there is a steep increase in risk factors like LDL-cholesterol and lipoprotein (a) as well as the incidence of hypertension and diabetes mellitus. This is followed by a rise especially in coronary artery disease. Therefore women too have to be included in prevention programs for cardiovascular disease by normalizing risk factors. One means is hormone replacement therapy. Estrogens lower LDL-cholesterol by up to 20% and increase HDL-cholesterol up to 30%. This effect remains even after addition of a suitable progestin. Numerous large scale studies indicate that every other cardiovascular death can be prohibited by the simple measure of hormone replacement therapy. Because of the high rate of cardiovascular disease low incidences of adverse events cannot prevent the marked decrease in total mortality.

Menopause and osteoporosis: The role of HRT

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Journal of the American Pharmaceutical Association (USA), 1996, 36/4 (234-242)

Bone loss resulting from estrogen deficiency is the leading cause of osteoporosis in postmenopausal women. Oral and transdermal estrogen can prevent osteoporosis. For most women, the benefits of hormone replacement therapy (HRT) outweigh any risks that exist. The recurrence of vaginal bleeding is the most common reason that women discontinue HRT.

Characterization of reproductive hormonal dynamics in the perimenopause

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Medical therapy for women in the perimenopausal period is controversial, in part due to varying degrees of ovarian hormone secretion characteristic of this time of life. To extend our understanding of the reproductive endocrine milieu of perimenopausal women, we studied 6 cycling women, aged 47 yr and older, for 6 months with daily collections of first morning voided urine. Five additional older reproductive aged (43-47 yr old) women were studied with daily urine and serum sampling for a single menstrual cycle; their urinary hormone data were combined with the former group for menstrual cycle comparisons. Urine was assayed for LH, FSH, estrone conjugates, and pregnanediol glucuronide and normalized for creatinine (Cr). Eleven midreproductive aged (19-38 yr old) normally cycling women, 5 women with well defined premature ovarian failure, and 5 women aged 54 yr and older who were at least 1 yr postmenopausal were used for comparison. Perimenopausal women had shorter follicular phases (11 plus or minus 2 days vs. 14 plus or minus 1 days; $P = 0.031$) and, hence, shorter menstrual cycles than midreproductive aged controls. FSH

excretion in perimenopausal women was greater than that in younger women (range of means, 4-32 vs. 3-7 IU/g Cr; P = 0.0005). LH secretion was overall greater than that in younger normal subjects (range of means, 1.4-6.8 vs. 1.1-4.2 IU/g Cr; P < 0.026). Overall mean estrone conjugate excretion was greater in the perimenopausal women compared to that in the younger women (76.9 ng/mg Cr (range, 13.1-135) vs. 40.7 ng/mg Cr (range, 22.8-60.3); P = 0.023) and was similarly elevated in both follicular and luteal phases. Luteal phase pregnanediol excretion was diminished in the perimenopausal women compared to that in younger normal subjects (range for integrated pregnanediol, 1.0-8.4 vs. 1.6-12.7 microg/mg Cr/luteal phase; P = 0.015). Compared to postmenopausal women, perimenopausal women had more overall estrone excretion (2.5-6.2 ng/mg Cr in postmenopausal women; P = 0.02) and lower mean FSH (range of means for postmenopause, 24-85 IU/g Cr; P = 0.017) and LH (range for postmenopause, 4.3-14.8 IU/g Cr; P = 0.041). Compared to women with premature menopause, perimenopausal women again had lower FSH (range of means for premature menopause, 36-82 IU/g Cr; P = 0.0022), lower LH (range of means for premature menopause, 5.5-23.8 IU/g Cr; P = 0.0092), borderline higher mean estrone conjugates (range of means for premature menopause, 4-44 ng/mg Cr; P = 0.064), and far longer periods of ovarian activity (one to two cycles in prematurely menopausal women vs. three to six cycles in perimenopausal women). We conclude that altered ovarian function in the perimenopause can be observed as early as age 43 yr and include hyperestrogenism, hypergonadotropism, and decreased luteal phase progesterone excretion. These hormonal alterations may well be responsible for the increased gynecological morbidity that characterizes this period of life.

Effect of menopause and estrogen substitutional therapy on magnesium metabolism

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Miner. Electrolyte Metabol. (Switzerland), 1984, 10/2 (84-87)

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